CVB Feed Table 2019

Chemical composition and nutritional values
of feedstuffs

December 2019

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CVB is an activity of the Federatie Nederlandse Diervoederketen (FND)

With respect to content the activity is carried out by Wageningen Livestock Research (WLR) and the Research Institute for Agriculture, Fisheries and Food (ILVO)

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PREFACE

In comparison with the published editions of the CVB Feed Table in 2016 and 2018 the following changes are made:

a. In the period 2016 – 2019 the analysis results of more than 16,000 samples of feedstuffs were added to the CVB data base. In this edition of teh CVB Feed Table these analysis results were used for updating the chemical composition (Weende analysis parameters, starch, sugar, NDF, ADF, ADL, minerals and trace elements) of 56 compound feedstuffs and 13 high moisture industrial co-products.
b. The by-products of dry milling of common wheat such as wheat flour, wheat feed flour, wheat feed meal, wheat middlings and wheat bran are now combined into one product called “Wheat milling by-products” and classified in 6 classes based on differences in crude fibre contents. The reason for combining these wheat milling by-products into one product is the fact that in practice there is considerable confusion with regard to naming the various types of wheat milling by-products.
c. The classification of sunflower seed meal has been reduced from 4 to 3 classes. The new classification into 3 classes. The new classification is based on a frequency distribution analysis of sunflower seed meal samples that clearly showed that in practise there are only 3 clear classes of sunflower seed meal instead of 4 classes.
d. The laboratory Eurofins Agro has made available for CVB a large number of NIR-analyses of maize silage from the period 2015 – 2019. Based on these analyses the classification of maize silages has been adjusted. As well the chemical composition of the maize silages has been updated.
e. ILVO research has shown that the rumen fermentation of starch and protein in maize silages increases as the ensiling period increases. Based on this research the calculation rules for predicting rumen fermentation of starch and protein in maize silages has been adjusted. Furthermore, it is now possilbe to calculate the feeding value of maize silage using the CVB feed calculator using the ensiling period as an input variable.

December 2019

J.W. Spek and D. Van Wesemael
CVB program

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1. GENERAL INTRODUCTION

1.1 Reader manual

1.1.1 Outline of this publication

At first, an explanation is given for several subjects:

- Chemical composition of feedstuffs (Chapter 2)
- Feed evaluation systems for ruminants (Chapter 3), pigs (Chapter 4), poultry (Chapter 5), rabbits (Chapter 6) and horses (Chapter 7)
- Overview of relevant literature (Chapter 8)
- List of abbreviations (Chapter 9)

Thereafter, Chapter 10 contains the main part of this publication, the information on separate feedstuffs (also see paragraph 1.1.2).

1.1.2 Product information

This Feed Table provides in Chapter 10 information concerning the composition and nutritional value for ruminants, pigs, poultry, rabbits and horses. Depending on the animal species, the following feedstuffs are included:

- Compound feedstuffs
- High moisture industrial co-products
- Roughages and related products
- Miscellaneous

1.1.2.1 Compound feedstuffs and high moisture industrial co-products

For these feedstuffs, all available information is displayed on two pages (front and back of a product sheet). The products are arranged alphabetically. Per product the following data are given:

- Chemical composition: Weende analysis components, structural and non-structural carbohydrates, minerals and trace elements (with standard deviation, when available);
- Contents of fatty acids and amino acids;
- Fermentation products;
- Contents of digestible nutrients and feeding values according to the CVB feed evaluation systems for the animal species mentioned in paragraph 1.1.2.

The contents and values of compound feedstuffs are presented on product basis; those of high moisture industrial co-products on dry matter basis.

1.1.2.2 Roughages and related products

For these feedstuffs the same information is provided (where available) in the same manner.
Also for these feedstuffs the contents and values are given on dry matter basis.

1.1.2.3 Miscellaneous

This concerns mineral feedstuffs, for which the composition is stated, and some pure substances (e.g., organic acids); for both groups relevant feeding value characteristics are given.

1.1.2.4 Points of attention for feedstuffs

With several feedstuffs specific points of attention apply. These points of attention, if applicable to a feedstuff can be found underneath the second page of the productsheet of that particular feedstuff.

1.2 Encoding of feedstuffs

For the purpose of automated data processing, the feedstuffs have been given a code number. The code number consists of four numbers of four, three, one, and one digit(s), respectively. The numbers are separated by a dot (.), and twice a dash (/), respectively. Further explanation of the coding system is given in document RD001 on the CVB-website www.cvbdiervoeding.nl.

1.3 Variability of feedstuffs and feed evaluation

In many feedstuffs (mainly, but not exclusively, roughages) there is considerable variation in the content of one or more nutrients. Especially with varying amounts of crude fibre, this will also result in varying digestibility of other nutrients. Therefore, fluctuations in feeding value may be larger than expected based on variations in nutrient contents.
One of the key competences of CVB is the developing of relationships between variation in chemical composition and variation in nutrient digestibility. More information is provided in the description of the separate feed evaluation systems.

It is emphasized that the product information in this table can only be regarded as a guideline, and not as a faultless representation of contents of the feedstuffs mentioned. To determine the correct contents of a certain batch of a feedstuff, laboratory analysis of samples of that batch is required. This is especially the case for feedstuffs where the standard deviation (sdc) is high.
Furthermore, it is pointed out that in many cases in this table, recalculations have been made from product-based to dry matter-based contents and values, and vice versa. When recalculating the feeding values of the individual feedstuffs, small deviations may occur due to rounding of values.

2 CHEMICAL COMPOSITION OF FEEDSTUFFS

2.1 General

In this chapter, concise information is given on the chemical composition, as stated for the individual feedstuffs. More elaborate information is given in document RD002 on the CVB-website www.cvbdiervoeding.nl

2.2 Origin of data

Since 1985, CVB collects on a continuous and systematic basis data concerning the chemical composition and digestibility of feedstuffs. Before data on chemical composition of feedstuffs are entered in the CVB database, the data are checked for several criteria, like:

- The analytical method(s) used.
- Whether the analytical data fall within the range established for each chemical parameter per feedstuff.

The composition of the feedstuffs in the Feed Table are, as much as possible, based on information from the CVB database. For some chemical parameters, in a limited number of cases, literature values have been used.
The feedstuff itself also has to meet certain criteria, before it can be included in one of the CVB tables. These criteria concerning the nature (and production method) of the feedstuff, the reliability of the available analytical results, the use of the feedstuff and information on the digestibility of chemical components for at least one animal species.

When analytical results of Weende components are available for ten or more samples, the variability (sdc) is added to the mean content. For amino acids, macro-minerals, and micro-minerals, sdc is given when at least five analytical results are available.
When no content is known for a nutrient, the table shows a dash (-). When a value 0 is given in the table, the content of this nutrient is zero.

2.3 Explanation of reported chemical parameters

2.3.1 Crude protein (CP)

To determine the crude protein content, the analyzed nitrogen (N) content is multiplied by a factor 6.25. The crude protein contents in this table are practically all based on the N content analysed according to the Kjeldahl method. Because of the polluting effects of the chemicals used in this method, laboratories nowadays switch to the method according to Dumas. In this method nitrate is included in the determination; this is only to a very limited extent the case when the Kjeldahl method in used. For feedstuffs rich in nitrate (e.g., grass and alfalfa meal), the Dumas procedure therefore results in higher analysed N contents. In other feedstuffs, the difference between the two methods is so small that data from both methods may be combined in one dataset. In this Feed Table we only included Dumas values if this resulted in more robust mean values.

2.3.2 Starch (STAam)

In the CVB feed evaluation systems, the starch content (where appropriate) is determined by using the enzyme amyloglucosidase (STAam) (ISO/DIS 15914, 2004), and not according to the polarimetric method of Ewers (STAew) (ISO/DIS 6493, 2000), as used in the past in the Netherlands, and still in many other countries). Because in practise in most cases the polarimetric method is used, the CVB database contains for almost all feedstuffs more STAew records than STAew records. The CVB database contains for some, but not yet for all, feedstuffs sufficient STAam data to calculate a representative mean value. When insufficient STAam data are available in the database, (feedstuff-specific) regression equations have been used to estimate STAam from STAew. These equations are based on samples, in which both STAam and STAew were determined. Subsequently, the relation between STAam and STA ew was determined by means of regression analysis. The product sheets of this Feed Table contain the calculated STAam values based on the regression equation presented below. In cases were no regression equations were developped but analyzed STAam data was available the mean of the analysed STAam is presented. The estimation equations are meant to calculate STAam from STAew (on dry matter basis). Equations without a constant may also be used directly (on product base). These regression equations may also be used in practice to calculate STAam from STAew. However, it is recommended to determine STAam according to the official analytical procedure. For some feedstuffs rich in starch (e.g. peas and horse beans) no regression equations were developped as (part of the) STAew is an artefact. This is also true for feestuffs such as beet pulp, citrus pulp, and oil containing seeds and their by-products.
Below, the derived estimation equations are given for the various product categories. To be able to use these equations in practice, the minimum and maximum STAew in the database underlying the equations are also given, together with the explained variance and the standard error of the estimation of STAam from STAew.
The regression equations have also been included in the on-line 'CVB feeding value calculator'.

Equation					**Products used to derive the equation**	**To be used in practice for**	
nr	**a* STAew**	**const**	**se**	**R^2**	**NAME**	**CODE**	**NAME**
1	0.9579	0	18.0	0.992	Potato crisps	4001.664	Potato crisps
Database: min-max value: 150-800 g/kg DM					Potato cuttings/chips, raw	4001,636	Potato cuttings/chips, raw
					Potato cuttings/chips, prefried	4001.611	Potatoes, dehydrated
					Potato peelings, steamed	4001.637	Potato cuttings/chips, prefried
1a	1.0389	-32.7			Potato peelings, steamed	4001.638	Potato peelings, steamed
Database: min-max value: 154-718 g/kg DM							
2	0.9357	0	51.6	0.897	Potato starch, dehydrated	4001.201	Potato starch, dehydrated
Database: min-max value: 350-960 g/kg DM					Potato starch, heat treated, dehydrated	4001.232	Potato starch, heat treated, dehydrated
					Potato starch, solid	4001.223	Potato starch, solid
					Potato starch, liquid	4001.222	Potato starch, liquid
					Potato starch, gelatinised	4001.231	Potato starch, gelatinised

Equation					Products used to derive the equation	To be used in practice for	
nr	a* STAew	const	se	R^2	NAME	CODE	NAME
3	0.7649	0	12.4	0.930	Potato pulp, dehydrated	4001.202	Potato pulp, dehydrated
Database: min-max value: 310-475 g/kg DM							
4	0.6207	11.291	5.4	0.939	Brewer's yeast, dehydrated	9001.315	Brewer's yeast, dehydrated
Database: min-max value: 20-90 g/kg DM					Brewer's yeast	9001.314	Brewer's yeast
5	0.9597	0	22.1	0.934	Biscuits, ground	9011.001	Biscuits, ground, CFAT < 120 g/kg
Database: min-max value: 330-620 g/kg DM					Bread meal	9011,002	Biscuits, ground, CFAT > 120 g/kg
						1010.612	Bread meal
6	0.9206	0	33.6	0.956	Barley		
Database: min-max value: 50-760 g/kg DM					Barley feed, high grade	1005.112	Barley feed, high grade
					Barley mill by-product	1005.105	Barley mill by-product
6a	0.9705	0			Barley	1005.000	Barley
Comparison mean STAew and STAam over large dataset from 2005 - 2015							
7	0.9481		32.4	0.976	Oats	1004.000	Oats
Database: min-max value: 40-670 g/kg DM					Oats, peeled	1004.116	Oats, peeled
					Oats husk meal	1004.111	Oats husk meal
					Oats mill feed, high grade	1004.105	Oats mill feed, high grade
8	0.9299	0	26.6	0.981	Maize	1002.000	Maize
Database: min-max value: 160-830 g/kg DM					Maize, heat treated	1002.629	Maize, heat treated
					Maize germ expeller	1002.417	Maize germ expeller
					Maize germ meal	1002.418	Maize germ meal
					Maize germ meal feed expeller	1002.419	Maize germ meal feed expeller
					Maize germ meal feed solvent extracted	1002.420	Maize germ meal feed solvent extracted
					Maize feed flour	1002.103	Maize feed flour
					Maize feed meal, solvent extracted	1002.416	Maize feed meal, solvent extracted
					Maize bran	1002.108	Maize bran
9	0.9967	-33.83	9.4	0.991	Maize glutenfeed, fresh and ensiled	1002.240	Maize glutenfeed, fresh and ensiled
Database: min-max value: 130-450 g/kg DM					Maize glutenfeed	1002.205	Maize glutenfeed

Equation					Products used to derive the equation	To be used in practice for	
nr	**a* STAew**	**const**	**se**	**R^2**	**NAME**	**CODE**	**NAME**
10	1.0293	-35.5	16.6	0.997	Rice	1003.000	Rice
Database: min-max value: 210-890 g/kg DM					Rice husk meal	1003.115	Rice husk meal
					Rice feed meal	1003.122	Rice feed meal
					Rice bran meal, solvent extracted	1003.416	Rice bran meal, solvent extracted
11	0.9174	0	32.8	0.935	Rye middlings	1007.107	Rye middlings
Database: min-max value: 170-790 g/kg DM					Rye	1007.000	Rye
					Triticale	1012.000	Triticale
12	0.8698		9.0	0.535	Sorghum	1008.000	Sorghum
Database: min-max value: 740-775 g/kg DM							
13	0.9588	0	19	0.912	Tapioca, dehydrated	4007.611	Potatoes, sweet, dehydrated
Datasbase: min-max value: 630-850 g/kg DM						4008.611	Tapioca, dehydrated
14	1.00	-29.0			Wheat	1010.000	Wheat
Comparison mean STAew and STAam over large dataset from 1990 - 2018							
14a	0.9261	-19.9	28.5	0.985	Wheat middlings	1010.107	Wheat middlings
Database: min-max value:130-825 g/kg DM					Wheat germs	1010.102	Wheat germs
					Wheat germfeed	1010.114	Wheat germfeed
					Wheat feed flour	1010.103	Wheat feed flour
					Wheat feed meal	1010.105	Wheat feed meal
					Wheat bran	1010.108	Wheat bran
15	0.9692	0	6.0	-	Wheat gluten feed, dehydrated	1010.205	Wheat gluten feed, dehydrated
Database: min-max value: 217-240 g/kg DM							
16	1.0213	-10.75	14.5	0.992	Wheat starch	1010.234	Wheat starch
Database: min-max value: 360-670g/kg DM						1010.236	Wheat starch, French
17	0.9600	0			Pragmatic equation for less frequently used cereal grains	1001.000	Buckwheat
						7009.000	Grass seeds
						1009.000	Canaryseed
						1006.000	Millet
18	0	66				2013.000	Peanuts
						2013.401	Peanut expeller
						2013.407	Peanut extracted

Equation					Products used to derive the equation	To be used in practice for	
nr	a* STAew	const	se	R^2	NAME	CODE	NAME
19	0	12				3015.401 5004.610	Cottonseed expeller Alfalfa meal, dehydrated
20	0	22				3015.407	Cottonseed extracted
21	0	40				3006.407	Linseed extracted
24	1	0				1008.204 4008.201 1010.204	Sorghum gluten meal Tapioca starch Wheat gluten meal

2.3.3 Crude fat (CFAT and CFATh)

The type of crude fat (CFAT or CFATh) to be used for the calculation of energy values for animals depends on the one hand on the type of energy evaluation system and on the other hand on the type of feedstuff. For the calculation of of metabolizable energy for broilers (MEbr), since 2011 for all feedstuffs, the MEbr calculated using the crude fat value that is based on a method where the sample is hydrolysed with acid before analysis on crude fat (CFATh; Method B). For the calculation of NE_{2015} values for pigs also CFATh analysis values are used. For the VEM/VEVI calculation for ruminants, the MEpo and MEla for, respectively, adult poultry and laying hens, the MErab for rabbits, and the EWpa for horses in most cases the crude fat value is used that is based on a crude fat analysis with petroleum ether as an extraction solvent, without a preceding acid hydrolysis step (CFAT; Method A). For these feedstuffs, there is (generally speaking) a small and relatively constant difference between the fat analysis without and with acid hydrolysis.
For certain feedstuffs (e.g., feedstuffs of animal origin, maize gluten feed, many high moisture industrial co-products; see also paragraph 2.4) this is not the case; the energy value is then based on the fat content analysed after acid hydrolysis. An overview of the feedstuffs (only first two numbers of the code number (see paragraph 1.2)) is given in the Table below for which the CFATh value is used for calculation of the energy values for ruminants, horses, rabbits, adult poultry and laying hens:

Overview of feedstuffs (presented as the code number) for which the CFATh value is used for calculation of the energy values for ruminants, horses, rabbits, adult poultry and laying hens

1000.304	1005.324	4001.231	8007.000
1002.204	1010.204	4001.637	8009.000
1002.205	1010.205	4001.638	8009.626
1002.212	1010.234	4001.664	8010.000
1002.240	1010.236	4006.634	8012.000
1002.308	1010.310	8001.001	8023.000
1002.310	1010.612	8001.003	9001.315
1002.517	1010.689	8003.629	9011.001
1002.629	4001.203	8004.000	9011.002
1005.313	4001.223	8005.000	

For many compound feedstuffs, the Feed Table gives the contents of both CFAT (crude fat without acid hydrolysis) and CFATh (crude fat after acid hydrolysis). CVB has performed comparative analyses in a large number of samples of individual feedstuffs to calculate the mean difference between the two methods in order to report mutual consistent CFAT and CFATh contents. The CFAT content on the product sheets is based on analyses from the CVB database; the CFATh content is usually derived from the mean of the analysed CFAT content adding the observed difference between CFATh and CFAT to this CFAT value in order to obtain a CFATh value that is consistent with the reported mean analysed CFAT value.

2.3.4 Nitrogen-free extract (NFE and NFEh)

From the Feed Table 2004 onwards, two ‘NFE contents’ are distinguished: NFE and NFEh. To calculate the NFE content, moisture, ASH, CP, CF and CFAT are subtracted from DM. In the calculation of NFEh, the CFATh content is subtracted instead of the CFAT content.

2.3.5 Cell wall parameters

In the Netherlands, as in most other European countries, the crude fibre (CF) content is mostly used as criterion for the content of cell wall components in practical animal nutrition. In document

RD003 on the website (www.cvbdiervoeding.nl) it is described which cell wall components are actually determined with this method. A better characterisation of cell wall components is obtained with the Van Soest analysis (see document RD003), in which the contents of NDF, ADF (or NDADF) and ADL are determined.
From statistical analysis on sample data on CF, NDF, ADF and/or ADL in the CVB database it appeared that for many feedstuffs there is a reasonable or good relationship between the CF content and the Van Soest parameters (mainly ADF). Because the CVB database usually contains a large number of analytical data for CF for each feedstuff, reliable mean values can be calculated. For the Van Soest parameters, the number of analytical data is relatively small; the stated Van Soest parameters are (where necessary and possible) calculated with the estimation equations developed by CVB. A correct estimation of the NDF content is important for a correct protein validation of the feedstuffs in the framework of the DVE/OEB system 2007 (see paragraph 3.4).

2.3.6 Inositol bound phosphorus (IP)

The stated content of inositol bound phosphorus (IP) is a calculated value: the content of total P is multiplied by the percentage of 'IP/P' : 100. The percentage 'IP/P' for individual feedstuffs is based on analysis of a number of samples in which (total) P and inositol bound P have been determined.

2.3.7 Electrolyte balance (EB) and Cation-anion difference (CAD)

The CAD is often used in practical ruminant feeding. The EB is mainly used for monogastric animals. EB and CAD are relevant parameters for the regulation of the pH of the blood. EB and CAD are calculated according to the following equations:

EB (in meq per kg) = 43.5 Na + 25.6 K - 28.2 Cl

CAD (in meq per kg) = 43.5 Na + 25.6 K - 28.2 Cl - 62.4 (S-i + S-o)

For compound feedstuffs, the EB and CAD values are expressed in meq per kg of product. For high moisture industrial co-products and roughages the EB and CAD values are given in meq per kg DM.

In some feedstuffs, the content of inorganic sulphur (S-i) may vary strongly between batches. This can be seen from the standard deviation (if stated) in S-i content. For certain feedstuffs (e.g., whey powders, molasses, vinasse, and other products from fermentation processes) it is known that the S-i content may vary strongly. In general, high moisture industrial co-products to which acids have been added for concervation purposes require extra attention. An example of an added acid is sulphuric acid; if these feedstuffs containing added sulphuric acid are used to feed monogastric animals the used of the CAD equation is advised.

2.4 Analytical methods

Table 2.1 lists the analytical methods used to determine the chemical parameters as mentioned in the CVB Feed Table. In the previous English 2011 Feed Table edition of CVB references of analytical methods were provided (the so called 'WM' references) that were described in a document of the former Product Board of Animal Feed. These WM references were largely based on EC regulations. In this edition direct EC regulation references are given instead of the WM references. Analysis results will be added to the CVB database in case:

- Analyses are carried out by a certified lab;
- Analyses are carried out according the EC Regulation 152/2009, or the ISO norms specified in the EC Regulation, or adapted methods yielding equivalent results (as shown by the accreditation of the laboratory).

Table 2.1 Overview analytical methods

Analysis	Description	Reference
Dry matter (DM)	Dry feedstuffs The residue after drying at 103 °C until constant weight, except for sugar containing feeds (with > 4% sugars), in which the sample is dried until constant weight at 80 °C under vacuum Moisture rich feedstuffs The residue after drying under vacuum at 80 °C until constant weight. The sample is spread out over a sand bed.	EC Regulation 152/2009; ISO 6496, 1999
Crude ash (ASH)	The residue after incineration at 550 °C	EC Regulation 152/2009; ISO 5984, 2002
Crude protein (CP)	Nitrogen according to Kjeldahl or (except for leaf-rich products such as grass or alfalfa meal) Dumas, multiplied by 6.25	Kjeldahl: EC Regulation 152/2009; ISO 5983-1, 2009 and ISO 5983-2, 2009 Dumas: EC Regulation 152/2009 ISO 16634, 2008 and ISO 16634, 2009
Crude fat (CFAT; CFATh)	The fat is extracted with petroleum ether, boiling range 40 to 60 °C, dried and weighed (= CFAT). Although, according to the EG method, since 1999 crude fat should be analyzed with acid hydrolysis in all feeds (= CFATh) this is not common practice. Therefore, CVB has determined CFAT with and without acid hydrolysis for each feedstuff, to calculate CFATh from CFAT by regression. For gluten products, soy and potato protein, feeds of animal origin, and some wet feedstuffs, CFATh has been analyzed already for many years. In these cases, only the CFATh content is reported, and feeding values should be calculated using this parameter. In the CVB protocols for the execution of digestibility trials, it is prescribed to determine the crude fat content of feed and faeces after pre-treatment with hydrochloric acid (when determining crude fat digestibility).	EC Regulation 152/2009; ISO 6492, 1999
Crude fibre (CF)	The residue after boiling in diluted sulphuric acid and diluted caustic potash is incinerated at approximately 500 °C; the loss after incineration is the CF fraction. For fat rich products (> 100 g/kg), pre-treatment with petroleum ether, boiling range 40 to 60 °C, is required to remove the fat. Products containing more than 5% $CaCO_3$ should be pre-treated with hydrochloric acid.	EC Regulation 152/2009; ISO 6865, 2000
Nitrogen-free extract (NFE and NFEh)	The content of N-free extract is not analyzed, but calculated: NFE(h) = 1000 – (moisture + ASH + CP + CFAT(h) + CF). This implies that all inaccuracies	N.A.

Analysis	Description	Reference
	in the analyses of the five components accumulate in the NFEh content. In some cases this may result in a negative NFEh content. A negative NFEh content may also occur if the factor 6.25 for calculating crude protein from N is not entirely correct for a specific feedstuff.	
Starch (STAew)	The reported STAew contents are based on a polarimetric method, according to the method of Ewers.	EC Regulation 152/2009; ISO 6493, 2000
Starch (STAam)	To determine starch using amyloglucosidase, a new analytical protocol is available: the sample is extracted with 40% ethanol (to remove the sugar fraction), after which the starch in the residue is gelatinized with DMSO and hydrolyzed with amyloglucosidase. The glucose released is then analysed with the enzyme hexokinase.	ISO/DIS 15914, 2004
Glucose oligo-saccharides (GOS)	The amount of GOS (starch fragments up to approximately 10 glucose units) is determined by analysing the amount of glucose units in two samples, as follows: a. Direct analysis of the amount of glucose units according to the Luff-Schoorl method in the 40% ethanol soluble fraction b. Analysis of the amount of glucose units, according to the Luff-Schoorl method in the 40 % ethanol soluble fraction, after incubation with excess amyloglucosidase The content of GOS is: b - a *For this analysis the total content of SUG is determined ass well.*	Smits et al., 1994
Combined determination of STAam and Glucose oligosaccharides (GOS) **(For the individual feedstuffs in Chapter 10, if GOS is present, the sum of STAam and GOS is given as STAtot)**	The combined determination of the content of STAam and GOS is performed by analyzing the content of reducing equivalents (expressed as glucose units) in two samples of the feedstuff: a. Direct determination of the content of reducing equivalents according to the method Luff-Schoorl in the 40% ethanol soluble fraction. This gives the SUG content b. Determination of the content of reducing equivalents, according to the method Luff-Schoorl in a ***watery*** solution of the feedstuff, in which, prior to analysis, all starch and glucose oligosaccharides are converted into free glucose by means of amyloglucosidase, according to ISO/DIS 15914. The difference with ISO/DIS 15914 is, that no extraction of the feedstuff with 40% ethanol takes place prior to the gelatinization with DMSO. After incubation with amyloglucosidase, an inversion takes place according to the method Luff Schoorl, followed by determination of the content of reducing equivalents. This analysis gives the sum of	See document RD004 on the website www.cvbdiervoeding.nl

Analysis	Description	Reference
	STAam, GOS and SUG The content of STAam + GOS is: b - a (see document RD005 on the website www.cvbdiervoeding.nl). The combined determination of STAam and GOS is only relevant for the calculation of the net energy value of (wet) feedstuff for pigs, and may only be applied when it is likely that the starch is digested well by enzymes of the animal itself (in other words, when DCiSTA = 100%).	
Sugars (SUG)	The content of reducing sugars, present in the 40% ethanol soluble fraction, after inversion, determined according to Luff-Schoorl.	71/250/EEC
Neutral Detergent Fibre (NDF)	After boiling in a neutral detergent, the residue is incinerated. The loss after incineration is the NDF content.	NEN-EN-ISO 16472:2006
Acid Detergent Fibre (ADF)	After boiling in an acid detergent (detergent in 0.5 M H_2SO_4), the residue is incinerated. The loss after incineration is the ADF content.	NEN-EN-ISO 13906:2008
Acid Detergent Lignin (ADL)	The ADF is treated with 72% H_2SO_4 (12 Mol H_2SO_4/l) during 3 hours at room temperature. Subsequently, the residue is incinerated and the loss after incineration is the ADL content.	
Non-Starch Polysaccha-rides (NSPh)	The content of NSPh is not analysed, but calculated: NSP = 1000 – (moisture + ASH + CP + CFATh + STAam + GOS + CF_DI*SUG + Glycerol + 0.92*LA + 0.5*(AC + PR + BU). This implies that all inaccuracies in the analyses of the eleven components accumulate in the NSP content. In some cases this may result in a negative NSP content. A negative NSPh content may also occur if the factor 6.25 for calculating crude protein from N is not entirely correct for a specific feedstuff.	N.A.
Residual Non-Starch Polysaccharides (RNSP)	The content of RNSP is not analysed, but calculated: RNSP = 1000 – (moisture + ASH + CP + CFAT + STAam + GOS + CF_DI*SUG + Glycerol + 0.92*LA + 0.5*(AC + PR + BU) + NDF). This implies that all inaccuracies in the analyses of the eleven components accumulate in the RNSP content. In some cases this may result in a negative RNSP content. A negative RNSP content may also occur if the factor 6.25 for calculating crude protein from N is not entirely correct for a specific feedstuff. RNSP is a parameter of importance for the protein evaluation of feedstuffs for ruminants. For most of the ruminant feedstuffs CFAT is the prescribed	N.A.

Analysis	Description	Reference
	method; for feedstuffs where CFATh is the prescribed method the CFATh value instead of the CFAT should be subtracted.	
Potassium (K)	Atomic Absorption Spectroscopy (AAS) or Atomic Emission Spectroscopy (AES) determined content after incineration and treatment of the ashes with hydrochloric acid.	ISO 7485:2000; ISO 6869:2000
Sodium (Na)	Atomic Absorption Spectroscopy (AAS) or Atomic Emission Spectroscopy (AES) determined content after incineration and treatment of the ashes with hydrochloric acid.	ISO 7485:2000; ISO 6869:2000
Phosphorus (P)	Spectral-photometrically determined content after destruction.	EC Regulation 152/2009;ISO 6491, 1998
Magnesium (Mg)	Atomic Absorption Spectroscopy (AAS) determined concent after incineration and treatment of the ashes with hydrochloric acid.	EC Regulation 152/2009;ISO 6869, 2012
Sulphur (S)	In this table two sulphur determination methods are given for dry compound feedstuffs and high moisture industrial co-products: • <u>inorganic S (S-i)</u> This is analysed as sulphate (SO_4) by extracting the sample with HCl, centrifuging and filtering, after which the amount of sulphate is measured, using ion chromatography, followed by suppressed conductivity detection. The S content in sulphate is calculated by dividing by 3: $S/SO_4 = 32/(32+4*16) = 1/3$. • <u>organic S (S-o)</u> This is calculated from the S contents of the amino acids MET and CYS. The calculation is as follows: S-o = 32/149* MET + 32/120 * CYS in which: 32 = atomic mass of S 149 = molecular mass of MET 120 = molecular mass of CYS MET = MET content in g/kg CYS = CYS content in g/kg N.B. It is assumed that the amount of sulphur in other organic compounds is (very) limited.	N.A.
Remaining macro- and micro-elements	Depending on the element and (mainly) the concentration in the feedstuffs, various methods are used.	EC Regulation 152/2009;ISO 6869, 2012
Total inositol bound phosphorus (IP)	The content of P that is released after long-term incubation with excess microbial phytase, multiplied with a factor 1.25. If, for a certain feedstuff, it is experimentally shown that this inositol bound P content differs only slightly from the IP-6 content as	Bos et al., 1993

Analysis	Description	Reference
	determined by HPLC, or if this is likely (based on other information), all HPLC based analytical results have also been incorporated in the calculation of the content of Total inositol-P.	
Amino acids	Most amino acids are determined using an amino acids analyzer, after 22 hours of hydrolysis with 6N hydrochloric acid at 160^{o}C. The amino acids CYS, MET and TRP are analyzed in separate runs. The S-containing amino acids CYS and MET are oxidized with hydrogen peroxide and per-formic acid prior to the hydrolysis. TRP first undergoes an alkaline hydrolysis and is then analyzed by HPLC.	EC Regulation 152/2009;ISO 13903:2005
Fatty acids	The fatty acids composition is analyzed by gas chromatography after alkaline hydrolysis of the fat fraction, followed by methylation. The contents of individual fatty acids are expressed in g/kg product or g/kg DM. The contents are calculated from the proportion of a fatty acid in the total amount of fatty acids and an estimated proportion of the total fatty acids in the crude fat fraction. This percentage is also stated.	ISO/TS 17764-1:2002 and ISO/TS 17764-2:2002
Volatile fatty acids (VFA), ethanol (ETH), lactic acid (LA), acetic acid (AC), propionic acid (PR) and buteric acid (BU)	The contents of the volatile fatty acids acetic acid (AC), propionic acid (PR), and butyric acid (BU), as well as the contents of ethanol (ETH) and lactic acid (LA) are determined by HPLC, in an extract of the fresh product, and then calculated to dry matter.	FAO Animal Production And Health manual: Quality assurance for Animal feed analysis laboratories, J. Baltrup et al., Rome, 2011.

2.5 Classification of carbohydrates

In present-day animal nutrition, more attention is given to the diversity of carbohydrates present in feedstuffs. More information is provided in document RD005 on the CVB website www.cvbdiervoeding.nl.

3 FEED EVALUATION SYSTEMS FOR RUMINANTS

3.1 Feed evaluation systems

In this chapter the feed evaluation systems of CVB for ruminants are described. Ruminants include the different categories of cattle (dairy cattle, female young stock, beef cattle), as well as sheep and goats.

For ruminants there are four feed evaluation systems established by CVB:

- A feed intake model for dairy cattle (paragraph 3.2)
- An energy evaluation system (paragraph 3.3)
- A protein evaluation system (paragraph 3.4)
- A structure value system (paragraph 3.5)

3.2 Feed intake model dairy cattle 2007

The Feed intake model 2007 is an update (developed by Wageningen UR – Livestock Research, by order of CVB) of the previous feed intake system (Zom e.a., 2002), preliminary introduced in October 2002. For more information on the Feed intake model 2007 one is referred to CVB Documentation report nr. 51 (2007) (in Dutch).
To estimate the total dry matter intake per day (TDMI) of a certain ration, the feed intake capacity (FIC) of a cow (expressed in Fill Units ("Verzadigingswaarde" in Dutch) (VW)), and the Satiety Value of the ration (VW_{diet}/kg) need to be calculated. The TDMI is then:

[F.H01] $TDMI = FIC / VW_{diet}$ (kg DM/day)

3.2.1 Feed intake capacity

To estimate the feed intake capacity of the 'standard cow' in the Feed intake model, the following equation is used:

[F.H02] $$FIC = \{[\alpha_0 + \alpha_1 \times (1 - e^{-\rho_\alpha \times a})] \times e^{\beta \times (1 - e^{-\rho_\beta \times d})}\} \times (1 + \delta_{220} \times (g/220)) \quad \text{(VW/day)}$$

In which:

FIC	=	Feed intake capacity (VW/day)
a	=	Lactation age = parity - 1 + days in lactation/365
d	=	Days in lactation
g	=	Days in gestation
α_0	=	Initial feed intake capacity in the 1^{rst} parity (VW/day)
α_1	=	Asymptotic level (maximal increase) (VW/day)
ρ_α	=	Rate parameter for the increase of the basic curve
β	=	Maximal level adaptation with regard to the basic curve
ρ_β	=	Rate parameter for the increase of the feed intake capacity at lactation start
δ_{220}	=	Gestation parameter

From equation F.H02 it appears that the feed intake capacity, except for a number of coefficients derived from statistical analysis, depends on the following animal factors: (lactation) age (a), days in lactation (d), and the number of days that the cow is pregnant (g). These variables must be inserted for each situation to be calculated.

For $\alpha_0, \alpha_1, \rho_\alpha, \beta$ and ρ_β the following values are taken:

α_0 = 8.743 (VW/day)
α_1 = 3.563 (VW/day)
ρ_α = 1.140
β = 0.3156
ρ_β = 0.05889
δ_{220} = -0.05529

Inserting these values for $\alpha_0, \alpha_1, \rho_\alpha, \beta$ and ρ_β in equation F.H02 results in:

[F.H03] $$FIC = [8.743 + 3.563 \times (1 - e^{-1.140 \times a})] \times e^{0.3156 \times (1 - e^{-0.05889 \times d}) \times (1 - 0.05529 \times (g/220))}$$ (VW/day)

3.2.2 Correction of FIC for milk production, milk composition and body weight

While developing the 2007 version of the Feed intake model for dairy cattle, it appeared that the estimation of the feed intake could be improved for operational applications when the actual milk production, milk composition, and body weight were taken into account.
The Feed intake model that was introduced in 2002 (Zom et al, 2002) is in fact one of the modules in the so-called Cow model of Wageningen UR Livestock Research (WUR-LR). This Cow model contains, besides a prediction equation of feed intake capacity (FIC, below abbreviated as $\hat{Ic}$), also equations to predict the milk production in kg per day ($\hat{M}$), the body weight in kg ($\hat{G}$), and percentages milk fat ($\hat{V}$), and milk protein ($\hat{E}$). These equations from the Feed intake model are not given in this publication, but are available from CVB.
The *realized* feed intake Ic, milk production M, the actual weight G and the percentages for milk fat V and milk protein E often deviate from the values *predicted* for the standard cow.
To correct the feed intake, as calculated with the standard equation F.H03, for the effects of the differences between realized and predicted values, the following proportional deviations have been defined:

$$ki = 100\left(\frac{Ic}{\hat{Ic}} - 1\right),\ km = 100\left(\frac{M}{\hat{M}} - 1\right),\ kg = 100\left(\frac{G}{\hat{G}} - 1\right),\ kv = 100\left(\frac{V}{\hat{V}} - 1\right) \text{ en } ke = 100\left(\frac{E}{\hat{E}} - 1\right).$$

In which:

ki = the sum of all proportional corrections (in % units)
km = the proportional correction for milk production (in % units)
kg = the proportional correction for body weight (in % units)
kv = the proportional correction for milk fat content (in % units)
ke = the proportional correction for milk protein content (in % units)

It is assumed that the deviations in feed intake capacity are related to the deviations in milk production and composition, and body weight. This is reflected in the model:

[F.H04] $$ki = \beta_0 + \beta_1 km + \beta_2 kg + \beta_3 kv + \beta_4 ke + \varepsilon_{experiment} + \varepsilon_{experiment\ animal} + \varepsilon_{rest}$$

It is noted that this is not a prediction model to explain a Y variable, but a model developed to reduce the prediction error.
The corrected feed intake capacity (FIC_{corr}) is calculated according to:

[F.H05] $FIC_{corr} = (1 + ki/100) * FIC$

The values for the various k-coefficients are derived from statistical analysis: For all β coefficients, with exception of β_0, statistically significant values were obtained, when the full model, with all mentioned parameters included, was tested. The values for these β coefficients are also not given in this table, but will be made available by CVB on request.

With regard to the effect on the prediction accuracy of the feed intake capacity, it is noted that this improved with 5.2% extra explained variation when actual milk production, milk composition, and body weight were taken into account.

3.2.3 Satiety value of the diet

The satiety value of the diet is estimated by fractional adding of the satiety values of the diet components (VW_p) (f_p = fraction by which the component is included in the diet):

[F.H06] $VW_{diet} = \Sigma\ f_p \times VW_p$ (VW/kg DM)

Combining equations F.H3 (or F.H5) and F.H6 gives :

[F.H07] $$TDMI = \frac{FIC}{\sum_p f_p \times VW_p}$$ (kg DM /day)

In which:

TDMI	=	Total DM intake (kg DM/day)
FIC	=	Feed intake capacity (VW/day)
f_p	=	Fractional amount of the component in the diet
VW_p	=	Satiety value of the diet (VW per kg DM)

For calculating the satiety value of individual diet components, the following general model is used:

[F.H08] $$VW_p = VW_{p0} \times e^{(\lambda_{p11}(x_{p1}-\overline{x_{p1}})+\lambda_{p12}(x_{p1}-\overline{x_{p1}})^2+\ldots+\lambda_{pn1}(x_{pn}-\overline{x_{pn}})+\lambda_{pn2}(x_{pn}-\overline{x_{pn}})^2)}$$ (VW/kg DS)

In which:

VW_p	=	Satiety value of feedstuff *p* (VW/kg DM)
VW_{p0}	=	Satiety value of feedstuff *p* at a mean composition of the feedstuff as used in animal experiments on which the VW is based (VW/kg DM)
$\lambda_{pn1}, \lambda_{pn2}$	=	Linear and quadratic satiety value parameters of feedstuff *p* for feed component *n* (n= 1, 2,…,n)
x_{np}	=	Content of feed component *n* in feedstuff *p* (g/kg DM)
$\overline{x}_{np}$	=	Mean content of feed component *n* in feedstuff *p* in the animal experiments on which the VW is based (VW/kg DM)

3.2.4 Satiety value of forages, compound feeds, and compound feedstuffs

3.2.4.1 Satiety value of forages

For a number of individual forages, a satiety value is reported on the product sheets; this satiety value is calculated using a product-specific estimation equation combined with the chemical composition of that product (also given on the product sheet). Specific estimation equations have been derived for the following forages: Corn Cob Mix (CCM), ensiled; Whole crop silage (cereals); Grass, fresh; Grass silage; Lucerne (alfalfa), fresh; Lucerne (alfalfa), ensiled; Clover,

red, fresh; Clover, red, ensiled; Maize: CCM, ensiled; Green cereals, fresh; Green cereals, ensiled; Maize (fodder maize), fresh; Maize (fodder maize), ensiled.
For the equations concerned, the reader is referred to a separate CVB publication, in which also the calculation rules for all other feed evaluation systems for ruminants are given.
For the other products given in section 9.3 'Roughages and related products' fixed values apply; these are reported on the product sheets.

3.2.4.2 Satiety value of compound feeds and compound feedstuffs

For dry concentrates (all compound feeds and compound feedstuffs) the following applies:

[F.H09] $VW_{concentrate} = 0.317 * e^{(0.001335 * (CF - 140))}$ (VW/kg DM)

3.2.4.3 Satiety value of wet feedstuffs

When deriving the satiety value of wet feedstuffs, the following (fixed) satiety values (VW/kg DM) were obtained: Beet pulp, pressed 0.70; Maize glutenfeed 0.54; Potato pulp, pressed 0.53; Brewer's grains 0.55.
Because of the minor difference between the latter three feedstuffs, it was decided to hold the following satiety values:

Product	Satiety value
Beet pulp, pressed	0.70
Maize glutenfeed	0.55
Potato pulp, pressed	0.55
Brewer's grains	0.55

For the other wet feedstuffs, also a fixed satiety value of 0.55 is assumed, with the exception of:

- Potato peelings, steamed: 0.45 (because this product contains a lot of (largely) gelatinised starch)
- High moisture industrial co-products (potato fruit-juice concentrate, potato starch, brewers' yeast, distillers solubles, cheese whey, maize solubles) and potato starch, solid: for these products a satiety value of 0.30 is assumed. This is slightly higher than calculated using the equation for dry concentrates
- For carrot peelings, steam peeled, the value for fodderbeets is taken.

3.3 Net energy systems for ruminants

For ruminants, two net energy systems are used, both based on the faecal digestibility of the Weende components:

a. The VEM-system (VEM = "Voedereenheid Melk", Feed Unit Milk) for lactating animals and young stock thereof.
b. The VEVI-system (VEVI = "Voedereenheid Vleesvee Intensief", Feed Unit Beef Cattle) for growing animals kept for beef production (with the exception of calves fed on milk replacers).

To calculate the two net energy values (VEM and VEVI value), the following aspects are important:

- The chemical composition of the feedstuff, especially the contents of crude protein, crude fat, crude fibre, and N-free extract.
- The faecal digestibility of these components.
- The general equations of the system.

3.3.1 Chemical composition of the feedstuff

Mean values for the feed components of interest for the calculation of VEM and VEVI of a feedstuff can be found on the respective product sheet. In general, chemical analysis of individual batches is recommended for a more accurate estimation of the energy value.

3.3.2 Faecal digestibility of a feedstuff

3.3.2.1 In vivo determination of the digestibility of a feedstuff for ruminants

To calculate the VEM or VEVI value of a feedstuff, the digestibility determined with wethers (castrated rams) as a model animal is used. In digestibility studies, the digestibility of crude protein, crude fat, crude fibre, and N-free extract is determined in wethers, fed on maintenance level. It is established which proportion of the ingested feed does not appear in the excreted faeces and has therefore been apparently digested. To obtain mutually comparable test results, a CVB protocol was developed for the execution of faecal digestibility studies with wethers.

3.3.2.2 Equations for the calculation of faecal digestible contents

3.3.2.2.1 Database of digestibility studies

Variation in chemical composition within feedstuffs affects the digestibility. When, for a specific feedstuff, sufficient digestibility studies with wethers are available, statistical analysis may be used to derive relationships between digestibility and chemical composition. Therefore, as many digestibility studies as possible have been collected in the CVB database.

3.3.2.2.2 Deriving equations for calculation of faecal digestible contents

For all feedstuffs where net energy values for ruminants are reported, CVB has developed equations for the calculation of the contents of the digestible components DCP, DCFAT, DCF and DNFE, required to calculate VEM and VEVI values. For most feedstuffs, these estimation equations are the result of statistical analysis (regression analysis) of datasets of digestibility studies of individual feedstuffs or combined datasets of comparable feedstuffs that may be combined in one group. For some feedstuffs, no (or not enough) digestibility studies are available to perform statistical analysis. In those cases, the digestibility was estimated by comparing the chemical composition and other characteristics of the feedstuff with other feedstuffs with known wether digestibility. When deriving estimation equations, it is continuously examined by which components the digestibility of a certain component is determined (e.g., CP digestibility is determined by the CP content of a feedstuff, but also by CF content).
When deriving equations for digestible crude protein (DCP) and digestible crude fat (DCFAT), a basal endogenous faecal excretion of 30 g CP per kg DMI and 2.5 g CFAT per kg DMI, respectively, is taken into account. For certain feedstuffs, it is not reasonable to maintain these endogenous excretions; in those cases, a value 0 (zero) is used.
On the product sheets, for each individual feedstuff, digestibility coefficients (%) are given for CP, CFAT, CF and NFE. These coefficients have been calculated by dividing the digestible content of a component (derived according to the procedure explained before) by the mean content of the component as stated on the product sheet of the feedstuff concerned; this ratio is then multiplied by 100. For feedstuff batches of which the composition differs from the mean composition on the product sheet, the digestibility coefficients on the product sheet will not be entirely correct in many cases. This applies mainly to CP and CFAT, where an endogenous excretion is taken into account. It may, however, also apply to CF and NFE, when the estimation equation also contains other parameters. The deviation of the digestibility coefficient will increase with larger deviations from the mean content of the nutrient as stated on the product sheet.
For certain chemical components and certain feedstuffs, some specific remarks - of interest for the energy value - are given below.

3.3.2.3 Products with low CFAT content

For feedstuffs with low crude fat content (≤ 15 g/kg DM) the digestibility coefficient of this component can not be established accurately in digestibility trials. For this type of products, the DCFAT is derived from the CFAT content with the following equation:

[F.H10] DCFAT (g/kg DM) = a/100 x CFAT - 2.5

in which:

a = the true digestibility of the CFAT. For most feedstuffs a=90%, except for leaf-rich plants (e.g., grass meal, lucerne meal), where a = 50%. In leaf-rich plants, a substantial part of CFAT consists of waxes and other substances that are apparently digested, but not utilized.

CFAT = the crude fat content in g/kg DM

2.5 = the above mentioned basal endogenous faecal CFAT excretion (in g/kg DMI)

3.3.2.4 Digestibility of crude fibre in products with low CF content

When the CF content of a feedstuff is low (≤ 15 g/kg DM), the digestibility coefficient of this component cannot be established accurately. The CF digestibility is kept equal to the digestibility of the NFE fraction for those low CF feedstuffs which are not part of a product group also containing feedstuffs with high CF contents, where an estimation equation for CF is derived by statistical analysis.

3.3.2.5 Animal products

Some feedstuffs of animal origin are not allowed to be fed to ruminants, due to EU-regulations. For those products, no digestibility coefficients or feeding value characteristics are reported.

3.3.2.6 Protein-rich products

For some extremely protein-rich feedstuffs, the derived content of NFE(h) is sometimes negative, because of inaccuracies in the calculation of CP from N. The reported NFE(h) digestibility of these feedstuffs is equal to the CP digestibility. The calculation of the energy value of these feeds may thus be performed in the usual manner, hence, without further corrections.

3.3.2.7 Full-fat seeds

Determining the digestibility of full-fat seeds in a digestibility trial with wethers is not easy. Because of the inhibiting action of high fat contents on cellulolytic bacteria in the rumen, only a small proportion of these seeds may be incorporated in experimental diets. Besides, the seed must undergo technological treatment to make the fat accessible for lipases; such treatment is difficult to perform on full-fat seeds. Therefore, it was decided to use the same estimation equations for the digestibility of CFAT in full-fat seeds incorporated in pelleted compound feeds (with the exception of heat treated soybeans) as for expellers and solvent extracted meals manufactured from these seeds.

3.3.3 Calculation of VEM and VEVI values

Gross and digestible contents of CP, CFAT, CF and NFE(h) are required to calculate the VEM and VEVI value. In the previous paragraphs, the chemical composition of a feedstuff and the digestibility of these components have been described.
This paragraph deals with the calculation of energy values using the general equations from the VEM and VEVI system.

The calculation of VEM and VEVI is based on the contents of metabolisable energy (ME) and gross energy (GE). The percentage ME in GE is indicated by the letter q.

3.3.3.1 Establishing GE, ME and q (general equations)

GE, ME and q are calculated as follows (Benedictus, 1977):

[F.H11] GE (kJ/kg) = 24.14 x CP + 36.57 x CFAT + 20.92 x CF + 16.99 x NFE - 0.63 x SUG*

[F.H12] ME (kJ/kg) = 15.90 x DCP + 37.66 x DCFAT + 13.81 x DCF + 14.64 x DNFE - 0.63 x SUG*
* correction for sugars (SUG) only for sugar contents > 80 g sugars per kg dry matter

[F.H13] q = 100 ME / GE

3.3.3.2 Establishing GE, ME and q (fresh and conserved forages)

The GE of forages is also calculated with equation F.H11, with the exception of maize silage. For maize silage, GE is calculated as follows:

[F.H14] GE (kJ/kg DM) = 19456 – 19.456 x ASH

For fresh and conserved forages, the calculation of ME is simplified, according to the following equation (from 2005 onwards):

[F.H15] ME (MJ/kg DM) = 14.94 DOM + 18.98 CFAT – 1.478 CF – 0.97 SUG

3.3.4 Calculation of the net energy value for milk production and of the VEM value

The net energy value for milk production (NE_{lac}) is calculated as follows:

[F.H16] NE_{lac} = 0.6 x (1 + 0.004 x (q-57)) x 0.9752 x ME (in kJ/kg)

VEM is a relative energy measure: it uses barley as a reference material. One kg of air-dried barley with a certain (standardised) composition has a mean net energy value for milk production (NE_{lac}) of 6900 kJ.

The relationship between VEM and NE_{lac} is as follows:

[F.H17] VEM = NE_{lac} / 6900 x 1000

The obtained VEM value therefore indicates how much more or less net energy a certain feed contains compared to the reference material (with a net energy of 6900 kJ per kg).

VEM may be calculated directly from ME and q as follows:

[F.H18] VEM = 0.6 x (1+0.004 x (q-57)) x 0.9752 x ME / 6.90
= (0.0003392 x q + 0.0654656) x ME

Further explanation of this equation is given below.

3.3.4.1 Efficiency for the conversion of ME into NE_{lac}

In equation [F.H18] the figure 0.6 indicates, that 60% of ME supplied above maintenance is converted to net energy (= energy in milk and growth), when a ration with q = 57 is fed. For diets

with higher q, the utilization of ME is somewhat improved, and for diets with lower q, the ME utilization is lower than 60%. This is indicated by the second part of the equation: 1 + 0.004 x (q - 57).

3.3.4.2 Correction factor for feeding level

As the digestion process is somewhat less efficient for ruminants on higher feeding levels, the ME content of a diet or feedstuff decreases with increasing feeding levels. The feeding level is expressed in units compared to maintenance requirements. When an animal consumes twice as much energy as required for maintenance (feeding level = 2x maintenance), the decrease in efficiency amounts to 1.8%. When fed at a level of 3x maintenance, the decrease is 2 x 1.8% = 3.6%, et cetera.
The above mentioned ME values are derived from experiments in which animals were fed at maintenance level. Therefore, these values need to be corrected for feeding level. It was agreed to express the VEM value of feedstuffs for feeding level 2.38. This figure has been derived from standard values for a cow of 550 kg live weight, producing 15 kg 'standard' milk (containing 4% of fat). The net energy system is based on balance experiments of which the majority was executed at (approximately) this feeding level.
At a feeding level of 2.38, a correction of -1.38 X 1.8% = -2.48% is required. This explains the third part of the VEM equation: 1 - 0.0248 = 0.9752.
For practical reasons, the influence of other feeding levels than 2.38x maintenance has been incorporated in the requirements (see CVB Table ruminants 2007 and CVB Tables Animal Nutrition 2007 or a later edition).

3.3.5 Calculating the net energy value for meat production and the VEVI value

For meat production, the net energy (in kJ/kg) (NE_{meat}) is calculated as follows:

[F.H19] $$NE_{meat} = \frac{k_f}{\frac{k_f - k_m}{APL \times k_m} + 1} \times ME$$

VEVI is a relative energy measure; it uses barley as a reference material. One kg of air-dried barley with a certain (standardized) composition has a mean net energy value for meat production (NE_{meat}) of 6900 kJ.
The relationship between VEVI and NE_{meat} is as follows:

[F.H20] $VEVI = NE_{meat} / 6900 \times 1000$

The obtained VEVI value, therefore, indicates how much more or less net energy the feed contains compared to the reference material (with a net energy of 6900 kJ per kg).
VEVI is calculated from ME and q as follows:

[F.H21] $$VEVI = \frac{k_f}{\frac{k_f - k_m}{APL \times k_m} + 1} \times \frac{ME}{6.90}$$

Correction factors are used to account for differences in utilization of ME for maintenance (k_m) and energy deposition (k_f):

[F.H22] $k_m = 0.00287 \times q + 0.554$
[F.H23] $k_f = 0.0078 \times q + 0.006$

3.3.5.1 Calculating APL

The ratio between the amount of net energy for maintenance + production and the amount of net energy for maintenance is called Animal Production Level (APL):

[F.H24] $APL = (NE_{maintenance} + NE_{production}) / NE_{maintenance}$

A growing cow weighing G kg needs 329.6 $G^{3/4}$ kJ 'net energy for maintenance':

[F.H25] $NE_{maintenance} = 329.6 \times G^{3/4}$ (in kJ)

The 'net energy for growth' for a daily weight gain of z kg is:

[F.H26] $NE_{growth} = NE_{production} = \{(500 + 6 \times G) \times z / (1 - 0.3 \times z)\} \times 4.184$ (in kJ)

At an average daily gain of 0.9 kg per day, APL is approximately 1.5; this APL is used in the calculations.

3.3.5.2 VEVI calculation: no correction of ME for feeding level

It is assumed that, with this level of production, the ME content of the diet equals the ME content at maintenance level; the error introduced by this assumption is small, since growing cattle is seldom fed at higher levels and no strong depression in digestion is to be expected.
This means that it is assumed that the feed is digested by beef cattle to the same extent as by the wethers (fed at maintenance level) used in the digestibility trials.

3.3.5.3 Correction for growth rates other than 900 g/day

The derived VEVI value is in fact only valid for a growth rate of 900 g/day. The value may also be applied to other growth rates, provided that the standards for requirements are used, which are reported for animals with growth rates as stated in paragraph 2.4 in the CVB Table ruminants 2007. In these standards, corrections have been incorporated to compensate for the error made by applying the value for a growth rate of 900 g per day to other growth rates.
Incidentally, this correction only applies to diets with a q value of around 60; for other q values, the applied correction is not fully correct.

3.3.5.4 Direct derivation of VEVI from ME for some levels of q

For some q levels VEVI can be simply derived from ME as follows:

q = 50	VEVI = 0.08054 x ME
q = 60	VEVI = 0.08939 x ME
q = 70	VEVI = 0.09728 x ME

3.3.6 Energy value of sugars, starch, organic acids and ethanol

The energy values of substances like organic acids and ethanol - mainly present in preserved feeds (forages) - cannot be established through animal experiments, since high percentages of these products are usually not accepted by the animals. By proceeding from their ATP yielding capacity, the energy value of these products may be approximated.
The maintenance metabolism of an animal is primarily driven by ATP expenditure; in production metabolism, the ATP yielding capacity plays an important role as well.
To estimate energy values through ATP yielding capacity, a certain reference substance is used, to which all products are related. The reference substance in this calculation is “100% rumen undegraded starch” (RUSTA); the ATP yield (mol) per gram of starch is known and set at 100%. The ATP production (mol) per g material of the other substances is expressed as percentage of the ATP production of the standard starch. The energy value is calculated based on this

percentage.
Example: Rumen undegraded starch yields 0.2346 mol ATP per g. Propionic acid yields 0.2432 mol/g, hence 3.7% more. Propionic acid is absorbed as such. For starch, an energy loss of 20% due to fermentation is assumed in these calculations. Proceeding from VEM and VEVI values of 1300 and 1505, respectively, the VEM and VEVI values of “100% rumen undegraded starch” are then 1625 and 1881 per kg, respectively. The VEM and VEVI values of 1 kg pure propionic acid are then 1.037 x 1625 = 1690 and 1.037 x 1881 = 1950, respectively.
As stated earlier, the net energy value of 1 kg of pure starch (the reference) is set for ruminants at 1300 VEM and 1505 VEVI, whereby it is taken into account that 20% of ATP is lost due to fermentation in the fore stomachs. For lactic acid and ethanol, an ATP loss of 10% is assumed. For glucose and saccharose an ATP loss of 30% is assumed.
For glucose, saccharose and starch, the ATP yielding capacity is the same per glucose residue. However, when glucose molecules are polymerized through glucosidic linkages, one water molecule is expelled for each molecule of glucose. Therefore, the ATP yielding capacity of a free glucose molecule is 0.90 x that of a glucose unit in a starch molecule; similarly, for saccharose, a factor of 0.95 is used.
The energy values that have been derived in this way for organic acids, ethanol, glucose and saccharose are given in the table “Other feedstuffs”, which is included in the last section of Chapter 9 (paragraph 9.5) of this publication.

3.4 Protein system for ruminants

In March 2007, a revised protein evaluation system (DVE/OEB 2007) for dairy cattle has been presented, intended as an update of the DVE system that was introduced in 1991 (CVB, 1991). For the calculation of protein values, in the 2007 system more detailed equations are used than in the 1991 system; this applies to the ‘system calculation rules’ as well as to the ‘feedstuff specific equations’. The quality of the calculations is mainly determined by the quality of the databases from *in situ* studies that underlie the product specific equations. It appears that the databases for grass silage and maize silage are of insufficient quality. Therefore, a large research project has been initiated to replace these databases by more recent ones. This is one of the reasons why the DVE/OEB 2007 system is still provisional.

3.4.1 The DVE/OEB system 1991

In 1991, the DVE system was introduced as protein evaluation system for ruminants (CVB, 1991). Per feedstuff two values are calculated:

- Intestinal digestible protein (DVE) (see paragraph 3.4.1.1)
- Rumen degraded protein balance (OEB) (see paragraph 3.4.1.2)

The DVE value represents the protein value of the feedstuff. The OEB value represents the difference between the highest possible microbial protein synthesis based on the nitrogen from rumen degraded protein on the one hand and based on available fermentable organic matter on the other hand.

3.4.1.1 Intestinal digestible protein (DVE)

Essential characteristics for calculating the DVE content are:

- The amount of protein in the feedstuff that will not be degraded in the rumen, but is digestible in the small intestine: intestinal degradable rumen undegradable protein (DRUP);
- The expected amount of intestinal digestible protein, derived from the microbial protein formed in the rumen: intestinal degradable microbial crude protein (DMCP);

- The amount of protein excreted in the faeces, derived from digestive enzymes and cells from the intestinal wall, including the amount of protein required for the biosynthesis of this endogenous protein: intestinal digestible metabolic faecal protein (DMFP):

[F.H27] DVE = DRUP + DMCP - DMFP

The amount of intestinal digestible rumen undegradable dietary protein is calculated as follows:

[F.H28] DRUP = CP * 1.11 * %RUP/100 * %DRUP/100

In intestinal flow studies (*in vivo*) it was found that %RUP was on average 11% higher compared to the value obtained in *in sacco* experiments. The factor 1.11 corrects for this difference.

3.4.1.1.1 Calculation of rumen undegraded protein (%RUP)

The protein 'undegradability' (%RUP) is estimated by incubating small amounts of a feedstuff in nylon bags in the rumen. In this method, the washable protein fraction and the protein fraction not degradable by rumen microbes are determined, as well as the rate of degradation of the potentially degradable fraction. From these data the undegradability can be estimated, assuming a certain rate of passage:

[F.H29] $\%RUP = U + k_p/(k_d+k_p) * D$
(this equation does not apply to ensiled or fermented wet feedstuffs, see next paragraph)

[F.H30] D (%) = 100 – U - W

In which:

U	=	undegradable protein fraction (undigestible) (%)
D	=	potentially degradable protein fraction (digestible) (%)
W	=	washable protein fraction (%)
k_p	=	passage rate of protein from the rumen (% per hour)
k_d	=	degradation rate of protein in the rumen (% per hour)

3.4.1.1.2 Calculation of %RUP for fermented feedstuffs

For ensiled feedstuffs and for high moisture industrial co-products that have been fermented at the time of delivery and feeding (even though they may be called 'fresh'), the washable fraction partly consists of microbial protein formed in this fermentation process. This protein moves along with the liquid phase and will therefore partly escape from rumen degradation. For such products it is assumed that 5% of the washable fraction escapes from rumen degradation. The equation to calculate %RUP for these feedstuffs therefore is as follows:

[F.H31] $\%RUP = U + k_p/(k_d+k_p) * D + 0.05*W$

3.4.1.1.3 Passage rate of feedstuffs

Many uncertainties exist with respect to the passage rate and variation therein. Estimations vary from 3 to 8% per hour. For the feedstuffs contained in this Feed Table a passage rate of 6% per hour is assumed. For 'roughages' (products with a minimum structural value of 1.2 and a mean particle size of at least 8 mm) a passage rate of 4.5% is assumed.

3.4.1.1.4 Origin of data concerning rumen bypass protein

To derive the values reported in this Feed Table, experimental data from nylon bags incubations obtained at the IVVO-DLO research institute (now Wageningen UR – Livestock Research) were used. The results from these experiments were compared to literature data from the Netherlands and other countries. The level of the outcomes often differed, but the ranking of feedstuffs was in

most cases the same as found by IVVO-DLO. Therefore, the results per research institute were calculated back to the Dutch (IVVO-DLO) level, using linear regression. Subsequently, the mean values per feedstuff were calculated (Van Straalen and Tamminga, 1990). For feedstuffs for which no information was available, an estimated value was calculated with the use of comparable feedstuffs.

3.4.1.1.5 Intestinal digestibility of the undegraded protein (%DRUP)

The intestinal digestibility of the undegraded protein (%DRUP) is, in general, derived from measurements using the so-called mobile nylon bags method: A small amount of feedstuff is incubated in the rumen for 12 to 18 hours. Thereafter, the sample is placed in a nylon bag and entered in the small intestine. After passage through the intestinal tract the nylon bag is recovered from the faeces. The amount of N that is lost during the passage through the intestinal tract is assumed to be digested.

3.4.1.1.6 Origin of data concerning %DRUP

The %DRUP values given in the tables were derived from research by the IVVO-DLO research institute (now Wageningen UR – Livestock Research) and from literature data (Van Straalen and Tamminga, 1990). The %DRUP values for forages and some wet feedstuffs have provisionally been calculated from the undegradability and the fraction that is not degraded after prolonged incubation in the rumen (Tamminga and Ketelaar, 1988). When information was missing, %DRUP was estimated from available %DRUP values of similar feedstuffs; for cell wall rich crop residues – like husks/shells – a low %DRUP (50%) was assumed. For feedstuffs of which no data for comparable products were available, the intestinal digestibility is - for now - estimated to be 75%.

3.4.1.1.7 Amount of intestinal digestible microbial protein (DMCP)

The amount of intestinal digestible microbial protein is calculated as follows:

[F.H32] DMCP = 0.0956 * FOM
= 0.0956 * (DOM – CFAT – (CP * %RUP/100) – (STA * %RUSTA/100) – 0.50 * FP)

The rumen fermentable organic matter (FOM) is calculated by subtracting all components that do not supply energy to the micro-organisms in the rumen from DOM. These components are:

- Crude fat (CFAT)
- Rumen undegradable protein (CP * %RUP/100)
- Rumen undegradable starch (STA + %RUSTA/100)
- 50% of the fermentation products (FP = acetic acid + propionic acid + butyric acid + lactic acid + ethanol)

In some cases, where FOM becomes negative, FOM is set to 0 (zero). The DOM (= digestible organic matter) equals the (apparently) digestible crude protein + digestible crude fat + digestible crude fibre + digestible N-free extract.

In the calculation of DMCP it is assumed that 150 g microbial protein (N*6.25) may be formed per kg of fermentable organic matter, that 75% of this microbial protein consists of amino acids, and that 85% of these amino acids is digestible in the small intestine.

Therefore, DMCP may be calculated from FOM using the following factor:

0.150 * 0.75 * 0.85 = 0.0956

In the calculation of the fermentable organic matter of some feedstuffs, a correction has been included for fermentation products that are formed during treatment (e.g., ensiling). The energy value of some fermentation products (lactic acid, ethanol) is 50% of the energy value of

carbohydrates. Therefore, for fermented feedstuffs, 50% of the FP is subtracted from DOM. The data used in this Table were collected by Steg et al. (1990).

3.4.1.1.8 Amount of intestinal degradable microbial crude protein (DMCP)

The amount of intestinal digestible microbial protein is calculated with the equation:

[F.H33] DMCP = 0.075 x iDM = 0.075 * (DM – DOM – DASH)

The inevitable faecal protein losses are assumed to depend on the undegraded dry matter intake (iDM). The undegraded dry matter intake may be calculated from the amount of dry matter minus the amount of digestible organic matter (DOM) and the amount of digestible crude ash (DASH).
The digestibility of crude ash (%DASH) is, depending on the feedstuff, set to 35, 50 or 65. These values were - for each feedstuff - derived from the amounts of Na, K, Cl, Ca, Mg and P in the crude ash. It is further assumed that the digestibility of Na, K and Cl is 100%, and the digestibility of Ca, Mg and P is 50%.
For the calculation method the reader is referred to CVB series nr 7 (1991). The DASH value in equation [F.H33] is calculated as follows:

[F.H34] DASH = %DASH/100 * ASH

This equation may be used provided that the resulting DASH value does not exceed the MDASH value in the CVB Feed Table. In other cases, the MDASH value should be used in the calculation. MDASH is calculated as follows:

[F.H35] MDASH = %DASH/100 * (1.1 * ASH_{table} + 10)

In which ASH_{table} is the crude ash content as given on the product sheet.
Added minerals are supposed to be 50% digestible, without upper limit. Table salt is probably 100% digestible.
The metabolic faecal protein losses are calculated under the assumption that 75 gram of DMCP is lost per kg iDM.

3.4.1.2 The rumen degraded protein balance (OEB)

The rumen undegraded protein balance (in Dutch: Onbestendig Eiwit Balans, OEB) represents the difference – on rumen level – between the maximum potential microbial protein synthesis, based on the available amount of degradable protein on the one hand, and the maximum potential microbial protein synthesis, based on available energy on the other hand. The OEB value of the ration should never be negative (except for beef cattle and youngstock weighing at least 250 kg and provided with above standard DVE supply; for more information see the most recent version of the CVB Tables Animal Nutrition). With a negative OEB value, there is not enough nitrogen available in the rumen to attain the calculated DMCP:

[F.H36] OEB = {CP * (1 – 1.1 * %RUP/100)} – (FOM * 0.150}

3.4.1.3 Intestinal digestible amino acids

In 1998, the CVB Working Group Nutrition Ruminants and Horses established a procedure to calculate the contents of intestinal digestible methionine and lysine (DVMET and DVLYS, respectively) (CVB, 1998a). This report describes the various relevant aspects of a uniform calculation procedure for obtaining DVMET and DVLYS in feedstuffs for ruminants. The calculation is performed according to the calculation rules in the DVE system.
For the contribution of dietary protein to DVMET and DVLYS, the following remarks apply:

- The undegradability of these amino acids from compound feedstuffs appeared to be not significantly different from the undegradability of N or crude protein (CP). For forages, this may be different, but insufficient data are available to suggest another calculation procedure.

- The intestinal digestibility of methionine in rumen incubation residues after 12 to 18 hours of rumen incubation appeared to be – slightly but significantly – higher than the CP digestibility in these residues. For lysine, this was not the case.

To be able to calculate the contribution from microbial protein to the content of intestinal digestible methionine and lysine, an amino acid pattern of microbial protein had to be established. After a literature study of published amino acid patterns, CVB composed its own extended database. Based on this database, the content of methionine and lysine in microbial protein was set to 2.5 and 7.7 g/100 g AA, respectively.

To account for the methionine and lysine losses in DMCP, a pattern was chosen that was calculated from the endogenous excretion as determined in sheep by Van Bruchem et al. (1985). This implies that the methionine and lysine content in DMCP is assumed to be 1.5 and 5.7 g/100 g AA, respectively.

The equations for calculating the content of intestinal digestible methionine (DVMET) then become:

[F.H37] DVMET = DRUMET + DMMET – DMFMET
[F.H38] DRUMET = MET/100 * DRUP/0.96
[F.H39] DMMET = 0.025 * DMP
[F.H40] DMFMET = 0.015 * DMFP

In which:
DRUMET = methionine contribution from intestinal digestible rumen undegraded dietary protein (=DRUP)
DMMET = methionine contribution from intestinal digestible microbial protein (=DMP)
DMFMET = methionine contribution from intestinal digestible metabolic faecal protein (=DMFP)
MET = methionine content in the feedstuff (in g per 16 g N = in g per 100 g CP)

For the calculation of the intestinal digestible lysine content (DVLYS) the following equations apply:

[F.H41] DVLYS = DRULYS + DMLYS – DMFLYS
[F.H42] DRULYS = LYS/100 * DRUP/0.96
[F.H43] DMLYS = 0.077 * DMP
[F.H44] DMFLYS = 0.057 * DMFP

In which:
DRULYS = lysine contribution from intestinal digestible rumen undegraded dietary protein (=DRUP)
DMLYS = lysine contribution from intestinal digestible microbial protein (=DMP)
DMFLYS = lysine contribution from intestinal digestible metabolic faecal protein (=DMFP)
LYS = lysine content in the feedstuff (in g per 16 g N = in g per 100 g CP)

DRUP, DMP and DMFP are calculated according to the calculation rules within the DVE system.

3.4.1.4 Rumen undegraded starch (%RUSTA)

The resistance of starch against degradation in the rumen (%RUSTA) is derived from nylon bags experiments (Tamminga et al., 1989).
The differences found between *in vivo* and *in vitro* measurements call for a correction: it is assumed that 10% of the washable fraction escapes from degradation in the rumen.This washable fraction leaves the bags in the form of small starch granules and these granules are flushed out of the rumen with the liquid phase, or are stored in micro-organisms.
The method of determination also plays a role in starch validation for cattle, as for pigs. It is known that the Ewers method gives an overestimation of the true starch content of some products, like, e.g., soy products. For these types of products a method with amyloglucosidase

(ISO/DIS 15814) yields better results. In cases where the Ewers method results in artefacts, this method should in fact not be used. In *in situ* experiments, an amyloglucosidase method is always used for starch analysis.
In cases where experimental information on starch undegradability is lacking, the rumen undegraded starch was estimated, mostly by comparison with similar feedstuffs. When this was also not feasible, %RUSTA was set at a low level, namely 10%.
Products for which the Ewers method (strongly) overestimates the true starch content are usually products with (extremely) low true starch content. Therefore, data from *in situ* incubations are also lacking. For such products, %RUSTA is set to 0 (zero) in the CVB Feed Table.
The %RUSTA values obtained for compound feedstuffs were multiplied by 0.875 to account for the effect of pelleting on starch undegradability.
In feedstuffs that underwent high temperature and pressure treatment (e.g., extrusion, expansion and pressure cooking), starch will be hydrolysed and %RUSTA will be very low. It is assumed that starch in such products is for 95% degradable in the rumen. %RUSTA is therefore set to 5%.
In cases where %RUSTA is not based on *in situ* incubations in nylon bags, but is estimated, %RUSTA is - after correction for pelleting - rounded to a multiple of five.
On the product sheets, %RUSTA is given, including the correction for pelleting.

3.4.1.5 Rules for the calculation of rumen undegraded protein (%RUP)
From the CVB Feed Table 2000 onwards, an equation for the calculation of rumen undegraded protein based on chemical composition was included for the product potato pulp.
For potato pulp (4001.226/0):

[F.H45] %RUP = 5569 * 1/[CP * (1000/(1000-STAam)) * (1000/(1000-ASH))]

In which:
%RUP as percentage
ASH, CP and STAam in g/kg DM

3.4.1.6 Reported values DVE/OEB system 1991 on product sheets
On the product sheets, for each individual feedstuff, the following values are given: %RUP, %DRUP, %RUSTA, %DASH, MDASH (in g per kg product or DM), and (in g per kg product or DM): FOM, DVE, OEB, DVLYS and DVMET.

3.4.2 The (provisional) DVE/OEB 2007 system
In March 2007 an updated protein evaluation system for dairy cattle (DVE/OEB 2007 system) was presented, to succeed the DVE system that was introduced in 1991 (CVB, 1991). Detailed information concerning the system is given in CVB Documentation report no 52 (CVB, 2007).
For each feedstuff, six values are calculated:

- Intestinal digestible protein (in Dutch: darmverteerbaar eiwit, DVE)
- Rumen degraded protein balance (in Dutch: onbestendig eiwit balans, OEB)
- Fermentable organic matter in the rumen (FOMr, see paragraph 3.4.2.3)
- Rumen degraded protein balance two hours after feed intake (OEB-2, see paragraph 3.4.2.2)
- Fermentable organic matter in the rumen two hours after feed intake (FOMr-2, see paragraph 3.4.2.3)
- The ratio between FOMr-2 and FOMr (FOMr-2/FOMr, see paragraph 3.4.2.3)

The DVE value represents the protein value of the feedstuff and was also included in the DVE/OEB system 1991. The same applies to the OEB value that represents the difference between the maximum potential microbial protein synthesis based on nitrogen from degraded protein on the one hand and the maximum potential microbial protein synthesis based on available fermentable organic matter on the other hand. However, both characteristics are calculated differently: FOMr is the amount of organic matter from a feedstuff that is fermented in

the rumen and FOMr is calculated in a fundamentally different manner than FOM in the DVE/OEB 1991 system. The other three parameters were not included in the DVE/OEB 1991 system and provide insight in the dynamics and rate of fermentation in the rumen.

3.4.2.1 Intestinal digestible protein (DVE)

DVE in the DVE/OEB 2007 system consists of the same components as DVE in the DVE/OEB 1991 system:

- The amount of protein in the feedstuff that will not be degraded in the rumen, but is digestible in the small intestine: intestinal degradable rumen undegraded protein (DRUP)
- The amount of intestinal digestible protein from microbial protein that is produced in the rumen: intestinal degradable microbial protein (DMP)
- The amount of protein excreted with the faeces deriving from digestive enzymes and gut wall cells, including the amount of protein required to synthesize this endogenous protein: intestinal degradable metabolic faecal protein (DMFP)

[F.H45] DVE = DRUP + DMP – DMFP

3.4.2.1.1 Intestinal degradable rumen undegraded protein (DRUP)

The amount of intestinal degradable rumen undegraded feed protein is calculated in the DVE/OEB 2007 system as follows:

[F.H47] DRUP = CP * %RUP/100 * %DRUP/100 [a]

In which:
CP = crude protein (g/kg or g/kg DM)
%RUP = rumen undegradability of the protein (in %)
%DRUP = intestinal digestibility of the undegraded protein (in %)

This calculation slightly differs from the procedure in the DVE/OEB 1991 system (see [F.H28] in paragraph 3.4.1.1.1; the correction factor 1.11 is dropped).

3.4.2.1.2 Calculation of rumen undegradability of protein (%RUP)

The undegradability of protein in the rumen (%RUP) is estimated from the results of nylon bag incubations. Small amounts of a feedstuff are incubated in nylon bags in the rumen. In the residues after various incubation periods the remaining amount of nutrients is determined. A distinction is made between a washable (W) fraction that is washed out of the bags without rumen incubation, an undegradable (U) fraction, and a (calculated) potentially degradable fraction (D). The rate of degradation of the D fraction (k_d) is also determined. In the DVE/OEB 2007 system, the W fraction is divided into a soluble fraction (S, determined at the laboratory) and a remaining fraction consisting of small particles (W-S). The undegradability of compound feedstuffs and wet feedstuffs may be calculated from these data, according to the following equation:

[F.H48] $\%RUP = 11/(200+11)*S + 8/(8+k_{dD})*(W-S) + 6/(6+k_{dD})*D + U$

In which:
S = soluble CP fraction (%)
(W-S) = CP in the small particles fraction
W = washable CP fraction (%)

a For forages and high moisture industrial co-products 'CP´ should be replaced by ´CP_{in}´, the CP content including ammonia. In the DVE calculation of high moisture industrial co-products it is assumed that the ammonia fraction = 0 (and, therefore, that CP = CP_{in}), although (especially after ensilation) a small amount of ammonia is present.

D = potentially degradable CP fraction (%) (D = 100 – W – U)
U = undegradable CP fraction (%)
11 = passage rate from the rumen of the S fraction (% per hour)
8 = passage rate from the rumen of the (W-S) fraction (% per hour)
6 = passage rate from the rumen of the D fraction (% per hour)
200 = rate of CP degradation of the S fraction in the rumen (% per hour)
k_{dD} = rate of CP degradation of the D and the (W-S) fraction in the rumen (% per hour)

For forages the following equation applies:

[F.H49] %RUP = $11/(200+11)*S + 8/(8+k_{dD})*(W-S) + 4.5/(4.5+k_{dD})*D + U$

The only difference being the passage rate of the D fraction; for forages, this passage rate is assumed to be 4.5% per hour. For bulbs and tubulars, this rate is 6% per hour.

3.4.2.1.3 Origin of data concerning protein undegradability (%RUP)

The *in situ* data that underlie the protein values in this table are - with respect to protein undegradability - derived from a CVB dataset, mainly based on nylon bag studies executed by Wageningen UR – Livestock Research in Lelystad. The data have been supplemented by research which was done in 2004 by order of the Product Board Animal Feed on behalf of CVB. Some data from Dutch and foreign literature have also been included.

3.4.2.1.4 Intestinal digestibility of the undegraded protein (%DRUP)

The reference method for determining the intestinal digestibility of undegraded protein (%DRUP) concerns the measuring of the disappearance of the protein from nylon bags using the so-called mobile nylon bags method. In this technique, a small amount of feedstuff is, after 12 to 18 hours of rumen incubation, transferred in a nylon bag at the beginning of the small intestine. After passing through the digestive tract, the bag is collected from the faeces. The amount of N that disappeared during passage is assumed to be digested.
Although the mobile nylon bags method is the reference method, such data are not available for all feedstuffs. In those cases, the %DRUP value is based on nylon bags trials in the rumen. The %DRUP is based on the fraction that is not digested after prolonged rumen incubation.
When information was lacking, values were estimated from similar feedstuffs, if possible. Plant residues rich in cell walls (e.g., husks) were estimated low (50%). When no data on similar feedstuffs were available, the intestinal digestibility was estimated, for the time being, to be 75%.

3.4.2.1.5 Intestinal degradable microbial crude protein (DMP)

The amount of intestinal digestible microbial protein is calculated from the amount of microbial crude protein produced based on rumen available energy (MCPe), according to the same equation as in the DVE/OEB 1991 system:

[F.H50] DMP = 0.75 * 0.85 * MCPe

In which:
0.75 = the amount of true protein in MCPe
0.85 = the intestinal digestibility of the true protein
MCPe = microbial crude protein produced based on the in the rumen available energy (g/kg or g/kg DM)

The calculation of the amount of MCPe in the DVE/OEB 2007 system, however, differs completely from the calculation in the DVE/OEB 1991 system. The amount of MCPe produced in the rumen during fermentation of a feedstuff depends on:

- The type of substrate that is fermented:
  Certain substrates yield much more ATP per gram than others.

- The type of bacteria that ferment the substrate:
  A distinction is made between LAB (= Liquid Associated Bacteria) and PAB (= Particle Associated Bacteria). The S and (W-S) fractions are fermented by LAB; the D fraction by PAB.
- The amount of ATP available for the production of bacterial mass:
  This is the amount of ATP that is released with the fermentation of a certain substrate minus the amount of ATP required for 'bacterial maintenance processes'. This is determined by - on the one hand - the maintenance requirements of the bacteria, and - on the other hand - by the residence time of the bacteria in the rumen (the reciprocal of the passage rate). The maintenance requirement of LAB, expressed as mmol ATP per gram of bacteria per hour, is much higher than the maintenance requirement of PAB. On the other hand, the residence time of PAB in the rumen is much longer than the residence time of LAB, so that PAB use ATP for maintenance for a longer period of time than LAB.
- The proportion of CP per kg of bacterial mass;
- The preying upon bacteria by protozoa.

The following equation is used to calculate the amount of MCPe from an average forage:

[F.H51] $MCPe = 0.174*F_{S}SUG + 0.166*F_{(W-S)}STA + 0.253*F_{D}STA + \underline{0.138}*F_{D}NDF + 0.145*F_{(W-S)}RNSP + \underline{0.168}*F_{D}RNSP + 0.099*F_{S}CP + 0.082*F_{(W-S)}CP + 0.110*F_{D}CP + 0.087*F_{S}FP$

In which:

F = the rumen fermented fraction of a certain feed component (SUG, STA, NDF, RNSP, CP, FP), whereby the subscripts ($_{S, (W-S), D}$) refer to the fraction in the nylon bag procedure.

0.174 = the efficiency factor for the utilization of energy from $F_{S}SUG$ to produce MCPe (similar for all other coefficients)

<u>0.138</u> = this efficiency factor applies to a D-NDF fraction with a mean degradation rate. The kp of D-NDF depends on the kd of this fraction; the efficiency factor of $F_{D}NDF$ therefore depends on the kd. The same applies to the efficiency factor of the $F_{D}RNSP$ (where the efficiency factor of 0.168 refers to a D-RNSP fraction with a mean degradation rate).

<u>Please note</u>: For products containing GOS, the GOS fraction should be included in the calculations in the same manner as the SUG fraction.

The equation for calculating MCPe from a compound feedstuff or a wet feedstuff is similar to F.H51, except for the efficiency coefficients for $F_{D}NDF$ and $F_{D}RNSP$: mean values of 0.168 and 0.175, respectively, are assumed. Further, for the $F_{D}CP$ fraction a coefficient for concentrates of 0.126 is used and 0.110 for roughages.
It is noted that the amount of MCPe, calculated according to [F.H51], will be produced only when OEB is not negative.

3.4.2.1.6 Amount of intestinal degradable metabolic faecal protein (DMFP)

The calculation of the amount of intestinal digestible metabolic faecal protein (DMFP) in the DVE/OEB 2007 system is exactly the same as in the 1991 system. The amount of DMFP is calculated as follows:

[F.H52] DMFP = 0.075 x iDMI = 0.075 x (DM - DOM - DASH)

The inevitable faecal protein losses are supposed to depend on the indigestible dry matter intake (iDMI). The indigestible dry matter intake may be calculated from the amount of dry matter (DM) minus the amounts of digestible organic matter (DOM) and digestible crude ash (DASH).
The digestibility of the crude ash (%dASH) is, depending on the feedstuff, set on 35, 50 or 65. These values were derived per feedstuff from the contents of Na, K, Cl, Ca, Mg and P present in

ASH. It is further assumed that the digestibility of Na, K and Cl is 100%, and that the digestibility of Ca, Mg and P is 50 %.
More information on the calculation method is given in CVB series nr. 7 (1991).
The DASH value in F.H52 is calculated according to:

[F.H53] DASH = %dASH/100 x ASH

This equation may only be used if the resulting DASH value does not exceed the MDASH value form the Feedstuff Table. If the DASH value is higher, one should use the MDASH value, which is calculated as follows:

[F.H54] MDASH = %dASH/100 x (1.1 x ASH_{table} + 10)

in which ASH_{table} is the ASH content on the product sheet.
Added minerals are supposed to be 50% digestible, with no maximum value. For NaCl (table salt) 100% digestibility is likely.

The metabolic faecal protein losses are calculated under the assumption that 75 g DMFP is lost per kg of DM.

3.4.2.2 The rumen degraded protein balance (OEB)

The rumen degraded protein balance (in Dutch: Onbestendig Eiwit Balans, OEB) represents the difference (at rumen level) between the maximum possible microbial protein synthesis, based on the available amount of degradable protein on the one hand, and the maximum possible microbial protein synthesis, based on the available amount of energy on the other. The OEB value of the ration may (with the exception of beef cattle and young stock from 250 kg LW, and a DVE supply above the standard; see the most recent version of the CVB Feed Table) never be negative, because in that case not enough N is available in the rumen to reach the calculated DMP:

[F.H55] OEB = MCPn – MCPe

In which:
MCPn = the maximum possible microbial protein synthesis based on available nitrogen (= CP x (1 - %RUP/100)
MCPe = the maximum possible microbial protein synthesis based on available energy (the calculation of MCPe is explained in F.H51, paragraph 3.4.2.1.5).

The new protein system also offers the opportunity to check the supply of N and energy at the rumen level in the short term. Therefore, the OEB-2 is also reported as a parameter, in addition to OEB as such.

3.4.2.3 Fermentable organic matter in the rumen (FOMr)

In paragraph 3.4.2.1.5, all fractions of rumen fermented organic matter are stated in [F.H51]. When these values are added up, the total amount of rumen fermentable organic matter is obtained (FOMr).
To gain insight in the degradation rate of organic matter in the rumen, the amount of FOMr that is fermented during the first two hours after intake can be calculated (= FOMr2). A more comprehensible parameter is the ratio FOMr2/FOMr. For each product, FOMr2 and FOMr2/FOMr are reported besides FOMr.

3.4.2.4 Intestinal digestible amino acids

The supply of intestinal digestible amino acids is calculated in the DVE/OEB 2007 system according to the rules described in CVB Documentation report nr. 22, in Dutch (CVB, 1998a).

The equations for calculating the content of intestinal digestible methionine (DVMET) are as follows:

[F.H56] DVMET = DRUMET + DMMET – DMFMET
[F.H57] DRUMET = MET/100 x DRUP / 0.96
[F.H58] DMMET = 0.025 x DMP
[F.H59] DMFMET = 0.015 x DMFP

In which:
DRUMET = methionine contribution from DRUP (= Digestible Rumen Undegradable Protein)
DMMET = methionine contribution from DMP (= Digestible Microbial Protein)
DMFMET = methionine contribution from DMFP (= Digestible Microbial Faecal Protein)
MET = methionine content in the feedstuff (in g/16 g N, or in g/100 g CP)

To calculate the content of intestinal digestible lysine (DVLYS), the following equations apply:
[F.H60] DVLYS = DRULYS + DMLYS - DMFLYS
[F.H61] DRULYS = LYS/100 x DRUP
[F.H62] DMLYS = 0.077 x DMP
[F.H63] DMFLYS = 0.057 x DMFP

in which:
DRULYS = lysin contribution from DRUP (= Digestible Rumen Undegradable Protein)
DMLYS = lysin contribution from DMP (= Digestible Microbial Protein)
DMFLYS = lysin contribution from DMFP (= Digestible Microbial Fecal Protein)
LYS = lysin content in the feedstuff (in g/16 g N, or in g/100 g CP)

Calculation of DRUP, DMCP and DMFP is done in conformity with the rules of the DVE system.

3.4.2.5 Sugars, glucose oligosaccharides (GOS) and crude fat in the DVE/OEB 2007 system

In the DVE/OEB 2007 system it is assumed that all sugars and GOS that are present in feedstuffs will end up in the S fraction. This implies that 95% is degraded in the rumen, and 5% escapes rumen degradation through passage from the rumen.
Crude fat is required in the new system to calculate the degradation characteristics of RNSP. The following rules apply: W = 35%; U = 0; Kd_D = 15% per hour. Note: in this case Kd_D is not the degradation rate (CFAT is not fermented in the rumen), but the “rate of disappearance”.

3.4.2.6 Rumen undegraded starch (%RUSTA)

In the DVE/OEB 2007 system, for the degradation of starch a distinction is made between the small particles fraction (W-S) and the D fraction. This distinction was not made in the DVE/OEB 1991 system. The fraction soluble starch (S) is zero or negligible. Therefore (W-S) = W. The degradation rate of the W-S fraction is calculated by:

[F.H64] $kd_W = 2*kd_D + 0.375$.

The kp of the D fraction of starch is for all feedstuffs (including forages) set at 6% per hour.
When compound feeds are (heat) pelleted, the undegradability of starch decreases. In the DVE/OEB 2007 system, the effect of pelleting is taken into account by assuming a decrease of the D fraction, because pelleting is supposed to mainly damage the structure of the particles in the D fraction:
D’ = 0.75 * D and W’ = 100 - D’ (in which D’ = D fraction after pelleting).
For feedstuffs in which the starch is hydrolyzed by heat- or pressure-treatment (e.g., extrusion, expansion, pressure cooking), the %RUSTA will be very low. For products with hydrolyzed

starch, 95% of the starch is supposed to be degraded in the rumen. The %RUSTA is therefore set at 5%.
Feed ingredients for which %RUSTA is not based on *in situ* incubations in nylon bags in the rumen, but on estimations, %RUSTA is (after applying the correction for pelleting) rounded off to a multiple of five. On the product sheets, %RUSTA is given including the correction for pelleting.

3.4.2.7 Degradation characteristics of NDF and RNSP

For NDF, in the DVE/OEB 2007 system a D and a U fraction are distinguished. The W fraction is set to zero.
To determine the degradation curves of RNSP in nylon bags experiments, this fraction should be calculated for each incubation time, by subtracting the still present amounts of CP, CFAT and NDF from the still present amount of OM. Because of the composition of the RNSP fraction, it is likely that this also contains a W fraction, which will partly consist of an S fraction. The latter cannot be quantified, however, it's existence justifies a higher degradation rate for the W fraction of RNSP than for the D fraction:

[F.H65] kd_W-RNSP = 2.5 * kd_D-RNSP

The passage rate (kp) of the D fraction of NDF and RNSP is calculated from the relationship between kp and kd:

[F.H66] For forages: kp_D (% per hour) = 1.39 + 0.1775*kd_D
[F.H67] For concentrates: kp_D (% per hour) = 1.885 + 0.1775*kd_D

With kd_D in % per hour.

3.4.2.8 Statement of DVE/OEB 2007 system values on product sheets

The equations to estimate the various degradable fractions per chemical parameter and per feedstuff are not provided in this document.
On the product sheets, the following values are given: %RUP, %DRUP, %MDASH, MDASH (in g per kg product or g per kg DM), and (in g per kg product or in g per kg DM): FOMr, FOMr2, OEB, OEB-2, DVLYS and DVMET, and the ratio FOMr2/FOMr.

3.5 Structure value (SV)

Rumen acidosis caused by fast rumen fermenation of carbohydrates should be prevented. This can be achieved by setting limits to the 'structure value' (SV) of a ration within a structure value system. Since 1998, the CVB tables make use of the structure value system developed by the "Rijksstation voor de Veevoeding" (at present "Unit Animal" of the "Instituut voor Landbouw- en Visserijonderzoek (ILVO)" in Melle-Gontrode (Belgium) (for more information on this system and the standards, see CVB Documentation report nr. 23 (CVB, 1998b)). In 2002, the Unit Animal of ILVO has implemented some minor adaptations in the equations to calculate SV and in the requirement standards. These adaptations have been incorporated in this table.
In the structure value system, for calculating the structure value of compound feedstuffs, two equations are available: one based on CF and one based on NDF. For many feedstuffs in the Animal Feed Table, the NDF content is based on a limited amount of data. For a number of feedstuffs, CVB developed relations between NDF and CF to estimate the NDF content. Depending on the number of data underlying the NDF content on the product sheet, the former CVB working group Animal Feed Table decided to base calculation of the SV on either an estimation equation with the NDF content, or an equation with the CF content. Because of the relative importance of dry compound feedstuffs, compound feeds and wet feedstuffs for the SV of

the complete ration, it was also decided to use (from 2003 onwards) STAam for the required starch content.
For compound feedstuffs, the SV is, therefore, calculated according to one of the following equations:

[F.H68] SV (per kg DM) = 0.321 + 0.00098*CF + 0.00025*RUSTA – 0.00112*(SUG + a*FSTA)

[F.H69] SV (per kg DM) = 0.175 + 0.00082*NDF + 0.00047*RUSTA – 0.00100*(SUG + a*STA)

In which:
a = 0.9 – 1.3*(%RUSTA/100)
FSTA = fermentable starch (=STA – RUSTA)
STA = STAam
RUSTA = STAam * %RUSTA/100
All contents in g per kg DM

> For the following feedstuffs the SV is calculated according to equation [F.H69]: malt culms; soybeans, heat treated; soybean hulls; soybean expeller; soybean meal, rumen bypass; sorghum; tapioca; tapioca starch.
> For all other products, SV is calculated according to equation [F.H68]

The structure values of compound feedstuffs apply to materials in milled form, processed into pellets.

A number of feedstuffs that consist largely of only one Weende component, like oils, fats and limestone has been assigned a SV of 0.15.
The derived SV for the most relevant wet feedstuffs are given in Table 3.2

Table 3.2 Structure value of most relevant moisture rich industrial co-products for ruminants (SV per kg DM)

Product group	Feedstuff	SV
Corn Cob Mix, as such or ensiled	Corn Cob mix, ensiled	0.75
	CCM, 100% rachis	0.60
	CCM, 50% rachis	0.50
	CCM, 25% rachis	0.40
Byproducts	Potato pulp, pressed	0.80
	Potato cuttings/chips	0.60
	Brewer's grains, ensiled	1.00
	Beet pulp, ensiled	1.05
	Maize glutenfeed, fresh or ensiled	0.60

For the criteria for the structure value of a ration, the reader is referred to CVB Documentation report No 23 (CVB, 1998b), or to the most recent version of the CVB Feed Table.

3.6 Calculation examples

Document RD006 on the CVB-website www.cvbdiervoeding.nl gives a step-by-step explanation of the calculation of feeding values for ruminants within the various systems.

4. FEED EVALUATION SYSTEMS FOR PIGS

4.1 Feed evaluation systems

In this Chapter the feed evaluation systems of CVB for pigs are explained. For pigs, three feed evaluation systems have been established by CVB:

- A net energy system (paragraph 4.2)
- A protein / amino acids system (paragraph 4.3)
- A digestible phosphorus system (paragraph 4.4)

4.2 Net energy system

For the determination of the net energy value for pigs the following aspects are of importance:

- The chemical composition of the feedstuff,
- The faecal digestibility of crude protein, crude fat, and non-starch polysaccharides (NSP).
- The ileal digestibility of starch and the digestibility (enzymatical and fermentative) of sugars,
- The general equations for the calculation of net energy according to this system.

4.2.1 Chemical composition of the feedstuff

Mean values for the feed components of interest in the calculation of the net energy value of a feedstuff can be found on the appropriate product sheets. In general, it is advised to chemically analyze individual batches of feedstuffs for a more accurate estimation of the energy value of that batch.

4.2.2 Digestibility values

4.2.2.1 Determination of the in vivo digestibility of feedstuffs for growing pigs

The faecal digestibility coefficients for crude protein, crude fat, and NSP have been derived from digestibility trials with growing pigs. In these trials it is determined which part of an ingested feed component does not appear in faecal matter and is therefore apparently digested. In this edition of the Feed Table for a substantial number of feedstuffs (and for almost all feedstuffs that are regularly fed to pigs) the digestibility values have been updated based on recently carried out digestibility trials. These trials were carried out according to CVB protocol for growing pigs (2005) using pigs in the weight range of 40 tot 100 kg and using a feed level of around 820 kJ net energy (NE) per kg of metabolic weight ($BW^{3/4}$). This is a feed level of around 2.8 – 2.9 times the maintenance energy requirement. At this feeding level it is expected that the determined digestibility values do not substantially deviate from digestibility values obtained at current field conditions were similar or somewhat high feeding levels are used. Digestibility values presented in earlier editions of CVB Feed Tables were based on animals that were fed at a level of approximately 705 kJ net energy (NE) per kg metabolic weight ($BW^{0.75}$). This corresponds to a feeding level of around 2.4 times maintenance. For further information, the reader is referred to the CVB Protocol for a faecal digestibility trial with growing, intact pigs (2005). For some feeds that are not regularly used in pig feeding no or only limited recent digestibility results have become available. In these cases the digestibility values were estimated using the old data or the combination of old and recent data. A general comparison between old and recent digestibility values suggested a systematic reduction in CP digestibility for the recent dataset of on avarage 4% compared to the old dataset. Therefore, for a number of feedstuffs for which no recent digestibility vales have become available the CP digestibility values were accordingly lowered in

CP digestibility. There was no systematic difference in crude fat digestibility between the old digestibility values and the recently obtained digestibility values, this also was the case for differences in NSP(h) digestibility between the old and the new dataset.

4.2.2.2 Origin of data on faecal digestibility of feedstuffs for growing pigs

In the current Feed Table, as much as possible digestibility results have been used from digestion trials carried out at Schothorst Feed Research (SFR) in Lelstad and the Animal Sciences Group (ASG) in Lelystad. For those feedstuffs were not enough recent data have become available the older results of trials performed in the past by the Food and Nutrition division of Wageningen UR Livestock Research in Lelystad, the Netherlands, (former IVVO-DLO and ILOB TNO) were used. Also, digestibility trials performed by Just (Denmark) and other literature results have been taken into consideration. For more information on how the the old database has been composed please read paragraph 4.2.2.2 in the Feed Table 2011).

4.2.2.3 Derivation of equations for calculating faecal digestible contents of CP, CFATh and NSPh

For all feedstuffs with net energy values for pigs given, equations have been developed for the calculation of the necessary contents of faecal digestible components (DCP, DCFATh and NSPh). These estimation equations are, for most feedstuffs, based on statistical analysis (regression analysis) of databases containing digestibility trials of individual feedstuffs or combined databases of related feedstuffs. For some feedstuffs, no or insufficient digestibility trials were available for statistical analysis. In those cases, the digestibility was estimated by comparing the chemical composition and other characteristics of the feedstuff with related feedstuffs with known digestibility figures obtained with growing pigs.
When deriving estimation equations, it is always investigated which components determine the digestibility of a certain component (e.g., the digestibility of CP is determined by the CP content, but often also by the CF or NDF content).
When deriving equations for digestible crude protein (DCP) and digestible crude fat (DCFATh), a basal endogenous faecal excretion of 12.5 g CP per kg DM and of 5.0 g CFATh per kg DM, respectively, was taken into account. For certain (purified) feedstuffs, basal endogenous faecal excretions were not expected to occur, and therefore were set to zero.

The digestible contents (e.g., DCP), calculated according to the above-mentioned product specific calculation rules, may be divided by the gross nutrient content, and subsequenltly multiplied by 100 (e.g., 100 * DCP/CP), resulting in the digestibility coefficient for that nutrient (in this case: DCCP). On the product sheets, the digestibility coefficient of CP, CFATh and NSPh – applying to the average chemical composition as stated on the product sheet - was calculated according to this procedure. For batches with a different chemical composition, this digestibility coefficient will not be correct. In those cases, the digestible nutrient content is better estimated by using the available specific calculation rules for that product.

For certain chemical components and feedstuffs, some specific remarks concerning the calculation of the energy value are made below.

4.2.2.4 Calculating the content of digestible crude fat

For feedstuffs with a low crude fat content (CFATh ≤ 15 g per kg DM), the digestibility of crude fat cannot be determined accurately in a digestibility trial. For such products, the content of digestible crude fat (DCFATh) is usually calculated with the following - pragmatic - equation:

[F.V01] DCFATh (g/kg DM) = a/100 x CFATh - 5.0

in which:

a	=	the true digestibility of the CFATh. For most feedstuffs it is assumed that a = 90%, except for leaf-rich feedstuffs (e.g., grass pellets or meal, alfalfa pellets or meal), where 'a' is set to 50%, because a substantial part of the CFATh in these feedstuffs consists of waxes and such (which are apparently digested, but are not utilized).
CFATh	=	the crude fat content in g per kg DM.
5.0	=	the above-mentioned endogenous basal faecal CFATh excretion (in g per kg DM).

4.2.2.5 Non-starch polysaccharides (NSPh)

For the energetic evaluation of feedstuffs for pigs, among other factors the calculated fraction 'non-starch polysaccharides' (NSPh) is used. The NSPh fraction consists of all carbohydrates (including pectin and lignin) with the exception of starch, sugars, glucose oligosaccharides (GOS), (volatile) organic acids, and ethanol. The following components are included in the NSPh fraction:

- The cell wall components cellulose, hemi-cellulose (including beta-glucans), pectin, and lignin.
- The non-starch polysaccharides including fructans (like inuline), galactans, and mannans.

4.2.2.5.1 Calculation of (D)NSPh in digestibility trials

The foundation for the NSPh digesibility values used in practise is, just as for CP and CFATh, digestibility studies. It is essential that a correct calculation takes place of NSPh and DNSPHh. Most dry feedstuffs do not contain (volatile) fermentation products. The NSPh fraction in dry feedstuffs therefore kan be calculated using the following equation:

[F.V02] NSPh = OM - CP - CFATh - STAam - GOS - CF_DI*SUG

(contents in g per kg DM)

The factor CF_DI in the equation F.V02 (and other equations) is a correction factor to convert the content of gross total sugars, expressed as glucose equivalents, into the sugar content as present in the product. Further explanation on the use of this correction factor is given in paragraph 4.2.3.5. For the calculation of DNSPh and NSPh always STAam should be used and not STAew (see paragraph 2.3.2).

Maize gluten feed contains substantial (but varying) amounts of lactic acid (LA). For a correct NSPh calculation the quantity of LA should be subtracted as well. Furthermore, DDGS contains besided LA also GLYCEROL and therefore in the calculation of NPSh for DDGS the amounts of LA and GLYCEROL should be subracted. Also dried industrial co-products coming from a wet procedure might contain products from an incomplete fermentation of starch (with a lenght of 2 – 10 glucose units). These are called glucose-oligosaccarides (GOS) and this fraction must be analysed seperately as these products are not detected in both the sugar analysis based on the Luff Schoorl method and the starch analysis based on an amyloglucosidase method or the Ewers method.
A number of high moisture industrial co-products contain substantial, but varying, amounts of fermentation products: lactic acid (LA), acetic acid (AC), propionic acid (PR), buteric acid (BU), ethanol (ETH), and in some cases also GLYCEROL. Also GOS may be present in substantial amounts in high moisture industrial co-products. Depending on the drying method used, part or all of the fermentation products LA, AC, PR, BU and ETH may evaporate during the drying process. In digestibility studies high moisture industrial co-products are freeze dried. The freeze drying method prevents the evaporation of LA although ETH evaporates completely. Furthermore, using the freeze drying proces only minimal amounts of the products AC, PR and BU evaporate and the degree of evaporation can be ranked as follows: BU > PR > AC. The ranking of the amount or presence of these fermentation products in high moisture industrial co-products is as follows: LA

> AC > PR. Considering the inaccuracy of the method used for analysing these fermentation products, these producs could be analysed in the freeze dried product. However, usually LA, AC, PR, BU and ETH are analysed in the non-dried product and then these analysed values are calculated to a DM basis. In order to do this it is important to realise that the accuracy of the DM method becomes more important at lower DM contents. The concentrations of GLYCEROL and GOS are, just as for ASH, CP, CFATh, SUG and STAam, analysed in the freeze dried product. The content of NSHPh in the freeze dried products of high moisture industrial co-products is calculated using the following equation:

[F.V03] NSPh = OM - CP - CFATh - STAam - GOS - CF_DI*SUG – LA – AC – PR – BU - GLYCEROL

- (contents in g per kg DM)
- (contents of LA, AC, PR and BU are normally analysed in the non-dried product and then calculated to concentrations on a dry matter basis.

The following nutrients are considered to be 100% digestible: STAam, GOS, SUG, LA, AC, PR, BU and GLYCEROL. For the calculation of the content of digestible NSPh (DNSPh) the starting point is the concentration of digestible organic matter (DOM) and from this DOM the digestible fractions of nutrients are subtracted.

For the dry feedstuffs without LA and GLYCEROL the following equation applies:

[F.V04] DNSPh = DOM - DCP - DCFATh - STAam - CF_DI*SUG

(contents in g per kg DM)

For moisture rich industrial co-products the equation is:

[F.V05] DNSPh = DOM - DCP - DCFATh - STAam - GOS - CF_DI*SUG - LA – AC – PR – BU - GLYCEROL

- (contents in g per kg DM)
- (contents of LA, AC, PR and BU are normally analysed in the non-dried product and then calculated to concentrations on a dry matter basis.

In digestibility trials, the digestibility coefficient of the NSPh fraction (DCNSPh) is always calculated according to the equation:

[F.V06] DCNSPh = 100 x (DNSPh / NSPh)

(contents in g per kg DM, DCNSPh in %)

4.2.2.5.2 Calculation of (D)NSPh in dry compound feedstuff samples in practice

In compound feedstuffs the presence of LA, GOS, GLYCEROL and volatile substances is not taken into account except for some exeptions. For the calculation of the NSPh content equation [F.V02] can be used: NSPh = OM - CP - CFATh - STAam - GOS - CF_DI*SUG. For the previously named feedstuffs maize gluten feed and DDGS also LA and LA + GLYCEROL should be subtracted, respectively.

4.2.2.5.3 Calculation of (D)NSPh in high moisture industrial co-product samples in practice

Analysis of high moisture industrial co-products in practise usually happens on samples that are not freeze dried but oven dried (see paragraph 2.4). the components ASH, CP, CFATh, STAam,

GOS and SUG are analysed in the dried product whereas the fermentation products are analysed in the non-dried product. The analysed fermentation components in the non-dried product are then converted to values expressed in the dry matter. The drying methods used in pracise results in the evaporation of part of the fermentation products. As a rule of thumb around 8% of LA and 50% of AC, PR and BU evaporate whereas GLYCEROL does not evaporate at all. For the calculation of the NSPh content than the following equation applies:

[F.V07] NSPh = OM - CP - CFATh - STAam - GOS - CF_DI*SUG – 0.92*LA – 0.5*(AC + PR + BU) - GLYCEROL

(contents in g per kg DM)

For the calculation of the DNSPh content the calculated NSPh using equation [F.V07] must be multiplied with the DCNSPh value (given on the product sheet) / 100.

4.2.3 Net energy values

This paragraph is divided in a number of subparagraphs, successively dealing with the calculation of net energy values for growing pigs (NE = net energy for growth), the NE value for sugar beet pulp products, rules for the calculation of DCP, DCFATh and DNSPh per feedstuff, and finally the energy value EW.

4.2.3.1 New equation for net energy for growth (NE_{2015})

This CVB Feed Table edtion starts with a new net energy equation to calculate net energy values (NE_{2015}) for feedstuffs. This equation has been derived from a dataset containg feed digestibility results of growing pigs from climate respiration chambers. This dataset has been given to CVB by J. Noblet from INRA (France). For more information on the development of this nieuw NE equation one can read CVB documentation reports 56 and 57 (2015). The new NE_{2015} equation is as follows:

[F.V08] NE_{2015} (kJ/kg DM) =
11.7*DCP + 35.74*DCFATh + 14.14*(STAam-e + GOS + 0.90*SUG-e) +
+ 9.74*FCH + 10.61*AC + 14.62*PR + 19.52*BU + 20.75*ETH +
12.02*LA + 13.83*GLYCEROL

The parameters used in equation [F.V08] are explained in Table 4.1.

Table 4.1 Explanation of parameters used in Equation [F.V08].

Parameter	Explanation	Calculation method per feedstuff
DCP	Digestible crude protein	Calculated based on analyzed CP content, using product specific equations or the digestibility coefficent presented on the product sheet / 100
DCFATh	Digestible crude fat (crude fat analyzed after acid hydrolysis)	In this new NE_{2015} the standard is CFATh. DCFATh is calculated based on the analyzed CFATh content, using product specific equations or the digestibility coefficent presented on the product sheet / 100
STAam-e	Enzymatically digestible starch	Only for potato products with (partly) native starch an enzymatical (ileal)

Parameter	Explanation	Calculation method per feedstuff
		digestibility of less than 100% is assumed (see also paragraph 3.2.3.4)
STAam-f	Fermentative degradable starch	STAam-f = STAam – STAam-e
SUG-e	Enzymatically digestible sugars	The content of enzymatically digestible SUG can be calculated by the equation: SUG-e = SUG*DCe-SUG/100. DCe-SUG is not mentioned in this Feed Table but can be calculated as follows: DCe-SUG = (SUG-e/SUG)*100 (see also paragraph 4.2.3.6)
SUG-f	Fermented sugars	SUG-f = SUG – SUG-e
CF_DI	Correction factor to convert the sugar content, expressed in glucose equivalents, into the sugar mass as present in the product	Value presented on the product sheet
FCH	Sum of fermented degradable carbohydrates	FCH = DNSPh + CF_DI*SUG-f + STAam-f
GOS	Glucose oligosaccharides	Value presented on the product sheet
AC	Acetic Acid	Only to be analyzed if a substantial content is expected, e.g., for certain high moisture industrial co-products
LA	Lactic Acid	
PR	Propionic Acid	
BU	Butyric Acid	
ETH	Ethanol	
GLYCEROL	Glycerol (Glycerine)	
DNSPh	Digestible non-starch polysaccharides	Calculated based on the calculated NSPh content, using product specific equations or the digestibility coefficent presented on the product sheet / 100

4.2.3.2 Explanation for the contribution of glucose oligosaccharides and fermentation products to NE_{2015}

Hereafter an explanation is given of the parameters GOS and the fermentation products AC, LA, PR, BU and ETH in equation [F.V08].

GOS consists of fragments of up to approximately 10 glucose units originating from an incomplete enzymatic degradation of starch. The net energy value of GOS equals that of starch. During the drying of a feedstuff no evaporation occurs.

For the stated organic acids, ethanol and GLYCEROL, the net energy value has been derived by comparing its ATP yielding potential with that of starch and by relating the proportion of the two to the NE_{2015} value of starch (see Table 4.2).

The contents of the organic acids and ethanol, as mentioned on the product sheets (also refer to paragraph 10.2), are determined in the non-dried ('fresh') product, and after that accounted for in the amount of dry matter that remains after drying of the sample. The above mentioned percentages of evaporation were estimated using literature data, and may in reality deviate from these values, due to the influence of factors like pH, method of drying and concentration. Currently there are not enough data available to estimate the extent of evaporation more accurately. These volatile components are only relevant for a number of high moisture industrial co-products feedstuffs and for maize gluten feed and DDGS.

Table 4.2 Net energy value and assumed evaporation during drying of some components mentioned in Equation [F.V08].

Component	Description	Real contribution NEv (MJ/kg)	Evaporation during drying of sample
GOS	Glucose oligosaccharides	14.14	0 %
AC	Acetic Acid	10.61	50 %
LA	Lactic Acid	12.02	8 %
PR	Propionic Acid	14.62	50 %
BU	Butyric Acid	19.52	50 %
ETH	Ethanol	20.75	100 %
GLYCEROL	Glycerol (Glycerine)	13.83	0 %

4.2.3.3 Compound feedstuffs generaly do not contain fermentation products

For the calculation of NE_{2015} according to [F.V08], the contents analysed in dry matter should be used. In dry compound feedstuffs fermentation products do not - or hardly – occur, and therefore the components AC, PR, BU, LA, ETH and GLYCEROL can be neglected. Also, GOS is not present in these materials in substantial quantities. The NE_{2015} equation [F.V08] can therefore be simplified:

[F.V09] NE_{2015} (kJ/kg product or g/kg DM) =
11.70*DCP + 35.74*DCFATh + 14.14*(STAam-e + 0.90*SUG-e) + 9.74*FCH

This equation results in NE_{2015} values expressed in kJ and can be used for the calculation of NE_{2015} on dry matter basis as well as on product basis (only if nutrient contents are expressed on a similar basis).

4.2.3.4 Native starch in potato products

The energetic coefficient for starch in the NE_{2015} equation (14.14 MJ/kg) is based on the assumption that all starch will be (enzymatically) degraded before reaching the terminal end of the small intestine (ileum).
One of the few starch types for which this definitely is not true is native or raw potato starch. Starch in potato products may be present as so-called "native" starch. Pigs are unable to digest native potato starch enzymatically, leaving it to be fermented (mainly in the large intestine). For products where this is the case, the starch content is corrected using a fixed factor (DCiSTA) to determine the NE_{2015}.
Depending on the treatment (especially heat treatments) that may be applied to potato products, starch will be more or less gelatinized and therefore better degradable in the small intestine. In this Table, potato products are divided into three categories:

1. Products in which the starch is completely gelatinized and 100% (enzymatically) degraded in the small intestine: DCiSTA = 100. This starch has an energetic coefficient of 14.14 MJ/kg.
2. Products in which half of the starch is (enzymatically) degraded in the small intestine and the other half is fermented in the large intestine: DCiSTA = 50. This implies that half of the starch is accounted for with the starch coefficient of 14.14 MJ/kg. The other half is integrated in the fermentative degradable remaining fraction; thus, this part is accounted for using a coefficient of 9.74 MJ/kg.
3. Products in which virtually all starch is in the native form, which is degraded exclusively by fermentation in the large intestine: DCiSTA = 0. The energetic coefficient equals 9.74 MJ/kg.

4.2.3.5 Correction factor for sugar (CF_DI)

In all CVB Tables (including this one), the sugar content is expressed in glucose equivalents. The content of crude total sugars (SUG) is determined according to Luff Schoorl. In this method the content of reducing sugars, soluble in 40% ethanol, is determined after hydrolysis with a diluted acid. With the hydrolysis of di- and oligosaccharides into monosaccharides, water molecules are bound, increasing the mass. In feedstuffs in which sugar is not solely present as monosaccharides, this will lead to an overestimation of the SUG content. The factor CF_DI was introduced to solve this problem: CF_DI is a correction factor for the conversion of the crude total sugar content, expressed in glucose equivalents, into the content in sugars as present in the feedstuff. For each feed ingedient CF_DI has a fixed value of at least 0.94 and at most 1.00. The value that is assigned to CF_DI for each feedstuff was derived from HPLC analyses of the crude total sugar content, yielding values for individual monosaccharides, disaccharides, trisaccharides and oligosaccharides. CF_DI is used for the correction of SUG in the equations for the calculation of NSPh [F.V02], [F.V03] and [F.V07] and DNSPh [F.V04] and [F.V05], and for the correction of SUG-f in the corresponding NE_{2015} equations [F.V08] and [F.V09].

4.2.3.6 Digestibility of sugars

SUG-e consists of the sum of glucose and other sugars that are digestible by digestive enzymes of the pig (sucrose, lactose, maltose). In comparative analyses, it has been observed for a number of feedstuffs that the content of reducing sugars, determined by Luff Schoorl, differs from the sum of glucose content and sucrose content (and maltose content). If this is the case, the reducing sugar content determined according to Luff Schoorl is corrected, using the factor SUG-e/SUG from the table. When both contents do not differ, SUG-e/SUG is set to 1.0.
In lactose containing products a SUG-e/SUG value of 1.0 will also be used. Growing and finishing pigs (25 kg and over) do not produce any lactase if the ration does not contain any lactose. If lactose is introduced to these pigs, lactase synthesis is induced again. The adaptation period to rations that contain lactose is approximately 7 days. Consequently, the factor of 1.0 will only apply if lactose containing diets are regularly provided.

4.2.3.7 The NE_{2015} equation is based on respiratory trials with growing pigs

The until recently used NEv equation was, just as the earlier NEv equation of Schiemann et al., (1971) (where the carbohydrate fraction was partitioned in digestible CF and digestible NFE), based on results from respiratory metabolism trials with heavy pigs that mainly deposited fat (Schieman et al., 1971). These NEv equations resulted in overprediction of the true deposited energy when being used for a more modern pig (Van der Honing et al., 1984). This NE2015 equation is based on respiratory metabolism trials carried out by J. Noblet from INRA (France) with growing pigs (CVB documentation report 56, 2015).

4.2.4 The NEv value of sugar beet pulp products

Research on growing pigs receiving rations containing 0 - 15 % pressed sugar beet pulp (ensiled), on a feeding level of 2.5 times maintenance level, showed that an increasing beet pulp fraction in the ration resulted in a decrease of the physical activity of the animals, and therefore

also the maintenance requirements. Similar research showed that feeding dried sugar beet pulp also reduced physical activity. Therefore, the energy value of sugar beet pulp products in practice is higher than calculated with equation [F.V08] or [F.V09]. For rations containing up to 15 % dried sugar beet pulp or pressed sugar beet pulp (fresh and ensiled), the energy value should be calculated as follows:

[F.V10] Energetic utility value = NE_{2015} (calculated according to [F.V08] or [F.V09] + 3.9 x DNSPh

with Energetic utility value and NE_{2015} in kJ/kg, DNSPh in g/kg (dried sugar beet pulp), or Energetic utility value and NE_{2015} in kJ/kg DM and DNSPh in g/kg DM (pressed sugar beet pulp)

The NE_{2015} and EW_{2015} values, as mentioned on the product sheets of sugar beet pulp products, have been calculated using this equation.

4.2.5 The EW value

The energy value of feedstuffs for pigs can be expressed as NE_{2015}, but also as a proportional number EW_{2015} (EW = Dutch abreviation of energy value), where the NE_{2015} of the feedstuff is divided by the mean net energy value of one kg of a compound pig feed as commonly produced around 1970 (NEv = 8.8 MJ/kg):

[F.V11] $EW_{2015} = NE_{2015}$ (in MJ) / 8.8 MJ

Although the calculated NE_{2015} value of a diet is higher than the NEv value of the same diet it has still been decided to maintain the in the old NEv system used conversion factor of 8.8.

4.2.6 The energy value of fermentation products and amino acids

4.2.6.1 Estimation of the energy value of fermentation products based on their ATP yielding capacity

The energy values of fermentation products cannot be determined in animal trials, since this kind of study requires high contents in the ration and because high amounts of these products are mostly not accepted by the animals. One method to estimate the energy value of these products is to estimate their theoretical ATP yielding capacity and compare this value with the ATP yielding capacity of starch.
The maintenance metabolism of an animal is mainly a matter of ATP expenditure and also in production metabolism the ATP yielding potential plays a role.
For the estimation of energy values based on the ATP potential, a certain compound is used as a reference, to which all products are compared. The reference compound used in this calculation is starch; the ATP yield (moles) per gram of starch is known and set to 100%. The ATP yield (moles) per gram of the other compounds is expressed as a percentage of the ATP yield of starch. Based on this percentage, the energy value is calculated.
For example: Starch has an ATP yielding capacity of 0.2222 moles of ATP per gram matter. The ATP yielding capacity of propionic acid is 0.2297 moles per gram, so 3.38% more. The energy value of 1 kg of pure starch for pigs is 14.14 MJ NE_{2015}. The energy value of 1 kg of pure propionic acid is, therefore, 1.0338 x 14.14 = 14.62 MJ NE_{2015}.
For glucose, sucrose and starch, the ATP potential per glucose unit is equal. During polymerisation of glucose molecules through glucosidic bindings, however, one water molecule is removed from each glucose molecule. Therefore, the ATP potential of a free glucose molecule is 0.90 x that of a glucose molecule within a starch molecule; likewise, for sucrose a factor 0.95 applies.
The energy values that are derived in this way for fermentation products, glucose and sucrose for different animal categories are given in paragraph 10.5 ‘Miscellaneous’.

4.2.6.2 Estimation of the energy value of synthetic amino acids

For synthetic amino acids, also the estimated ATP yielding capacity is used as a starting point. By comparing the ATP yield of these amino acids with the ATP yield of starch, the energy value can be calculated. For the calculation of the NE_{2015} vaules of amino acids the publication of van Milgen (2012) is used. See further paragraph 10.5 'Miscellaneous'.

4.3 Protein value

When equationting a diet, it is of importance, as far as protein is concerned, to take into consideration a number of aspects:

- First, for the conversion of feed protein into body protein, it's not the content of protein as such that is relevant, but the amino acid profile of the protein in a feed.
- Second, it is not the amino acid profile as such that is important, but the digestibility of the various amino acids. In feedstuffs with a low crude protein digestibility, the digestibility of the separate amino acids may vary substantially.
- Third, only the amino acids that have been digested and absorbed before the end of the small intestine (=ileum) can be utilised by the pig. Amino acids that pass the small intestines into the large intestine with the digesta, can be degraded, or converted into other amino acids by means of microbial fermentation in the large intestines, but do not contribute to the provision of amino acids to the animal.
- Fourth, it should be emphasized that a digestibility trial using a test diet always yields apparent digestibility. This means that the digesta collected at the terminal ileum not only contains undigested feed protein, but also undigested protein of endogenous origin.

Especially the third aspect has resulted in the introduction in 1990 by CVB of the 'intestinal digestible amino acids' system for the determination of protein values in feedstuffs for pigs. This system was based on the apparent small intestinal (or ileal) digestibility of amino acids in feedstuffs:

[F.V12] Apparent ileal digestibility AA (%) =
{(AA intake) - (AA that leave the ileum undigested)} x 100 / (AA intake)

4.3.1 Determination of apparent ileal digestible amino acids in cannulated pigs

In research performed in the Netherlands, the determination of the contents of apparent ileal digestible amino acids was, and still is, done in pigs that have been fitted with a cannula at the end of the ileum. With this technique, it is possible to collect digesta at the end of the ileum. The apparent ileal digestibility of an amino acid is the fraction of the amino acid in the ingested feed that is not retrieved from the digesta collected at the end of the ileum, plus the amount of undigested endogenous protein present in the digesta.
The digesta is not collected quantitatively. In order to be able to relate this non-quantitatively collected amount to a certain amount of ingested feed, an inert marker is added to the feed. Using the contents of this marker in feed and digesta, the 'apparent ileal digestibility' can be calculated.

4.3.2 Endogenous losses

4.3.2.1 Origin of endogenous losses

The digesta not only contains amino acids from undigested feed protein, but also from undigested proteins of endogenous origin.
The non-digested endogenous protein fraction is composed of proteins from:

- undigested enzymes from digestive juices,

- desquamated epithelium cells,
- the mucus,
- bacterial protein, arising from fermentation.

4.3.2.2 Basal endogenous protein vs specific endogenous protein

The endogenous protein excreted into the gastrointestinal tract can be separated into:

a. basal endogenous protein
b. endogenous protein, induced by feed-specific factors, also known as 'specific endogenous protein'

Therefore, the undigested endogenous protein that leaves the small intestine, can be subdivided as follows:

[F.V13] $uCP_{i\text{-}endogenous}$ (g/kg feed) = $uCP_{i\text{-}basal}$ + $uCP_{i\text{-}specific}$

where:

$uCP_{i\text{-}endogenous}$ = total amount of undigested endogenous protein that passes the ileum.

$uCP_{i\text{-}basal}$ = amount of undigested basal endogenous protein (expressed as g/kg ingested feed) at the end of ileum.

$uCP_{i\text{-}specific}$ = amount of undigested endogenous protein (g/kg feed), induced by feed specific factors, at the end of the ileum.

The 'basal endogenous protein' is the endogenous protein that is secreted into the gastrointestinal tract due to the passage of "feed". More information on how to take the excretion of undigested basal endogenous protein into consideration when evaluating ileal protein and amino acids is given in paragraph 4.3.4.

In the feed, factors may be present that induce an additional secretion of (specific) digestive enzymes, the production of more mucus proteins that cover the epithelium of the intestinal lumen, and/or an extra sloughing off of the epithelium of the small intestine. The most important feed specific factors that cause the secretion of specific endogenous proteins, belong to the so-called "Anti Nutritional Factors" (ANF's), that can be found in, for instance, legume seeds. Also, fibre-rich feedstuffs cause damage to the mucus layer and hence will lead to an increase in undigested mucus proteins.
Currently it is not possible, in practice, to correct for the amount and the amino acid profile of the undigested specific endogenous protein, when evaluating ileal protein and amino acids, with the use of specific calculation rules.

4.3.3 True ileal digestibility of amino acids

After adjusting the amount of undigested amino acids at the end of the ileum for the amount of undigested amino acids of endogenous origin, only the amount of undigested amino acids from the feed remains. The difference between the amount of ingested amino acids and the amount of amino acids from the feed that is excreted in the digesta is considered to be truly digested (see [F.V14]). As there is no practical method yet to calculate the excretion of undigested specific endogenous protein adequately, the true ileal digestibility has not yet been implemented in practice.

[F.V14] True ileal digestibility (AA) (%) =

$$\frac{\{(\text{AA intake}) - (\text{AA that leave the ileum undigested} - \text{AA endogenous})\} \times 100}{(\text{AA intake})}$$

4.3.4 Standardized ileal digestibility amino acids

It is possible to adjust the apparent digestibility for the excretion of undigested basal endogenous protein. This fraction is generally related to the amount of dry matter intake. For a number of years, the composition of basal endogenous protein has been used based on on a literature study (Jansman et al., 1997; Jansman et al., 2002). The German "Gesellschaft für Tierernährungsphysiologie" (2005), however, stated that two of the research techniques included by Jansman et al. should be omitted. In 2006, the former CVB Working Group Feed Table agreed with the German argumentation, and decided to make use of the composition of endogenous protein as given in Table 4.3.

Table 4.3 Composition of basal endogenous protein that leaves the terminal ileum undigested (contents in g/kg dry matter intake).

Crude protein	11.43	Leucine	0.47
Lysine	0.39	Tyrosine	0.29
Methionine	0.11	Valine	0.53
Cystine	0.21	Alanine	0.49
Threonine	0.59	Aspartic Acid	0.78
Tryptophan	0.14	Glutamic Acid	1.17
Isoleucine	0.37	Glycine	0.90
Arginine	0.39	Proline	1.10
Phenylalanine	0.32	Serine	0.65
Histidine	0.18		

The apparent protein or amino acid digestibility that has been corrected for the excretion of undigested basal endogenous protein is usually called 'standardized digestibility' (see [F.V15]):

[F.V15] Standardized ileal digestibility amino acids (AA) (DSta-i-AA, in %) =

$$\frac{\{(\text{AA intake}) - (\text{AA undigested at end ileum} - \text{AA undigested basal endogenous protein})\} \times 100}{(\text{AA intake})}$$

With the amino acid content and apparent digestibility determined in digestibility trials, and the above-mentioned amino acid losses through basal endogenous protein, the values for the standardized ileal digestibility (StaVCi) of the crude protein and the amino acids have been calculated for the various feedstuffs for pigs. In this table, for each individual feedstuff, the content of 'standardized ileal digestible protein/AA' and the content of 'apparent ileal digestible protein/AA' both are given.

4.3.5 Origin of the data on ileal digestible amino acids in feedstuffs

The data in this table are based on a thorough screening of literature by ILOB-TNO, by order of Degussa AG (Germany), in 1997/1998. The collected data, and the calculations performed on them, have been made available unconditionally to CVB. The former CVB Working Group Feedstuff Table has tested objectively if the data were useful for the revision of amino acids evaluation for pigs. The accumulated trials were checked for a number of criteria on their reliability before being included in the database.

After it became clear that the data obtained with the so-called Ileal Rectal Anastomosis (IRA) technique (whereby the end of the ileum is surgically connected to the rectum; often used in France) did not substantially differ from data obtained with the cannulation technique, these trials were also entered in the database.

In literature a large number of digestibility trials has been described where the raw material to be studied was the only source of protein in the diet. By adjusting the apparent ileal digestibility of the *diet* in these cases for the basal endogenous production that is caused by the fraction of

protein free feedstuffs, the apparent ileal digestibility of the *examined protein source* is obtained. After this correction, these data were also included in the database.
Different digestibility trials in the database, conducted with different batches of the same feedstuff, show some variation with respect to the apparent digestibility of amino acids. This is partly due to differences in digestibility between batches. For another part the variation is due to differences in protein content and the analyzed amino acid profile in different batches. Assuming an equal digestibility for the feed protein, these last differences lead to variations in the contribution of the undigested endogenous protein in the total pool of undigested protein in the digesta. By converting the reported apparent digestibility to standardized digestibility, values are obtained for the digestibility of protein/amino acids that do not depend on the fluctuations of protein or amino acids contents in the feedstuff, at an equal digestibility of the feed protein.
For each raw material, the standardized digestibility of protein and amino acids has been calculated according to this method.
Because of the fact that the passage of dry matter leads to (at least) the excretion of undigested basal endogenous protein, for protein free materials (such as fat, starch, sugar), a negative value - instead of zero digestibility - is obtained for the digestibility. This negative digestibility value equals the basal ileal endogenous excretion.
Apart from the above-mentioned literature screening by ILOB-TNO, for some feedstuffs additional information has become available and incorporated in the database.
For a number of feedstuffs, (practically) no data were available. In those cases where also equations are given for the calculation of NEv, the ileal crude protein and amino acids digestibility of these feedstuffs has been estimated. In all cases, this applies to feedstuffs that are quantitatively less important in pig feeds.

Based on the data that are available at present, it may be assumed that separately added free amino acids have a true ileal digestibility of 100%. A correction per kg for the excretion of basal endogenous protein is needed to make comparisons based on apparent ileal digestibility. Also, the fact that synthetic amino acids are sometimes put on the market in the form of salts should be taken into account: In these cases, only part of the product consists of the amino acid, and one should proceed from the amino acid content in the product, as guaranteed by the manufacturer.

4.3.6 Contents of standardized and apparent ileal digestible amino acids

In order to reach an accurate estimation of the ileal digestibility of amino acids for pigs, based on the available digestibility trials, the standardized digestibility of the various trials was calculated and averaged for each feedstuff and each amino acid.
Thus, for each amino acid, the content of standardized ileal digestible amino acid can be calculated, provided that the amino acids contents in the feedstuff are known. The contents of standardized ileal digestible amino acids are given on the product sheets of the separate feedstuffs.
In the Netherlands - as opposed to other countries - until now, apparent ileal digestible amino acid contents have always been used in practice to evaluate feedstuffs and to calculate amino acid requirements. That is why these contents are also included in the product sheets.
The content of apparent ileal digestible amino acid (in dry matter) can simply be calculated by subtracting the content of basal endogenous amino acid (see Table 4.3) from the content of standardized ileal digestible amino acid (also expressed on dry matter basis), as follows:

[F.V16] Content of apparent ileal digestible AAx =
Content of standardized ileal digestible AAx - Content of basal endogenous AAx
(contents in g per kg DM)

4.3.7 Requirements of standardized and apparent ileal digestible amino acids

For the requirements of standardized and apparent ileal digestible amino acids for pigs in various stages of growth and production, please refer to the most recent version of the CVB Tables Animal Nutrition.
It is up to the user of this Table to decide whether he will use standardized or apparent ileal digestible amino acids in diet equationtion. **However, it is emphasized that one has to make one and the same choice for both the supply of ileal digestible amino acids by the feed, and the requirements of the animals.**

4.4 Digestibility of phosphorus

In the Netherlands (and other countries) it is quite common to take into account the (faecal) digestibility of P in determining the phosphorus (= P) requirements in pigs. The P digestibility may vary greatly between feedstuffs.
Untill the CVB Feed Table edition of 2011 'apparent fecal digestible P' was used. Internationally, in most cases for digestible P 'standardized fecal digestible P' is used in which the apparent fecal digestible P is corrected for endogenous P losses. In order to join the international conventional method of using standardized fecal digestible P it was decided to use in the CVB Feed Table 2016 edition standardized fecal digestible P values as well. An extra reason for changing to standardized P values was the fact that in the previously by CVB used apparent P digestible system part of the endogenous P losses was accounted for in the P requirement recommendations resulting in a double counting of endogenous P. Simultaneously, with the change to standardized digestible P (StaDCP) also the requirement recommendations for StaDCP and Ca will become updated and described in an upcoming WUR-LR report.
In the P digestibility research feedstuffs of vegetable and animal origin were considered, as well as inorganic hosphates. Recent digestibility studies have resulted in extra data on P digestibility of mainly plant based feedstuffs. This means that the database with in vivo data on P-digestibility has been extended considerably. The StaDCP for all digestibility studies was calculated from the measured apparent digestible P and the dietary P content of the feedstuff of interest:

[F.V17] $StaDCP = ((AppDCP*P - 0{,}20) / P)*100.$

StaDCP in %, AppDCP (apparent digestibility coefficient of P) in %, P in g/kg DM

Then the experimental StaDCP values per feedstuff were averaged and the average values are presented on the product sheets. In case, for a feedstuff, there were less than 5 records the average value was rounded to the closest fivesome.
To make a comparison possible between digestible P values used in previous editions and the present StaDCP values as well the apparent digestible coefficents (AppDCP) are presented. These AppDCP were calculated as follows: a) the P concentration on the product sheet in g/kg is calculated based on the DM content presented on the product sheet to concentration of P in g/kg DM; b) using the presented StaDCP and the P content expressed in g/kg DM the concentration of standardized digestible P (StaDP is calculated; c) from the StaDP the quantity of endogenous P (0.20 g/kg DM) is subtracted in order to calculate the concentration of apparent digestible P (AppDP) is calculated; d) using the P concentration in g/kg DM and the value for AppDP the percentage of apparent digestible P (AppDCP) can be calculated.
For a number of feedstuffs, that are less relevant for pigs, little or no observational data concerning digestibility of P are known; sometimes the digestibility of P was estimated and derived from that of related feedstuffs.
Information on dietary phosphates is included in paragraph 10.4 (Mineral feedstuffs). A distinction has been made between mono- and dicalcium phosphates (hydrous and anhydrous), and other dietary phosphates.
Some vegetable feedstuffs contain considerable amounts of the enzyme phytase, which is capable of (partially) releasing inositol bound phosphorus and thus making it absorbable. Also, products have been available, for several years now, containing phytase of microbial origin.

Phytase has a strong positive effect on the P digestibility of feedstuffs of vegetable origin. However, the temperature sensitivity and pH dependence of these enzymes has to be taken into consideration. When during steam pelleting the temperature of the pellet exceeds 80^{o}C, the phytase activity may decrease strongly, depending on the type of phytase preparation (e.g., whether the enzyme is coated or not). The pH dependence can be of importance when organic acids are added to the compound feed or ration, or when wet feedstuffs are provided that contain wet fermented feedstuffs. The exact relationship between the pH in the ration and the effectiveness of vegetable phytase in the relevant pH range, however, is not yet known. With respect to the relationship between pH of the ration and microbial phytase, one should consult the supplier of the phytase product concerned.
In the values, as listed in the Table, it is assumed that there is no endogenous phytase activity present in the feedstuff. This approach is of importance for barley, rye, wheat, triticale and their co-products. Whenever values for the digestibility of P without pelleting were available (and therefore in the presence of natural phytase activity), these are noted as a comment on the product sheet.

4.5 Calculation examples

For calculation examples, with step-wise explanation of the calculation of the feeding values within the various systems for pigs, see document RD007 on the CVB website: www.cvbdiervoeding.nl.

5. FEED EVALUATION SYSTEMS FOR POULTRY

5.1 Feed evaluation systems

In this Chapter the feed evaluation systems of CVB for poultry are described. For poultry, three types of feed evaluation systems have been established by CVB:

- Energy systems (paragraph 5.2)
- A protein / amino acids system (paragraph 5.3)
- A digestible phosphorus system (paragraph 5.4)

5.2 Energy systems

5.2.1 Metabolizable energy system for adult animals

5.2.1.1 Digestibility figures

The digestibility coefficients given in the tables for crude protein, crude fat, and nitrogen free extract have been derived from experiments with adult cocks, in which it was determined which part of the ingested feedstuff does not appear in the faeces, and is therefore apparently digested. The energy contribution of crude fibre is assumed to be negligible, since crude fibre is indigestible by poultry.
The energy value (ME = Metabolizable Energy) determined in adult cocks is expressed by the abbreviation MEpo (= ME poultry). This value may also be used for other types of poultry, like turkeys and ducks. MEpo is also often applied as a declaration of the energy value when exporting poultry feeds.
Digestibility figures are mostly derived from research at the former Centre for Research and Information for the Poultry Industry (COVP-DLO). Literature data have also been used.

The experiments performed to establish the MEpo-value of feedstuffs were also used to verify the digestibility coefficients derived from the available data. When the equation:

[F.P01] MEpo (MJ/kg) = (18.03 x DCP + 38.83 x DCFAT + 17.32 x DNFE) / 1000

or

[F.P02] MEpo (kcal/kg) = 4.31 x DCP + 9.28 x DCFAT + 4.14 x DNFE

(with the contents of DCP, DCFAT and DNFE in grams per kg)

led to an MEpo differing from the value derived from animal experiments, the digestibility figures were adjusted in the CVB Feed Table according to the deviation.

For most feedstuffs it is common practice to predict the MEpo value directly from their chemical composition, using a product specific regression equation. Nevertheless, also for these feedstuffs, the product sheet states the digestibility coefficients in the column ‘Cocks’. When these digestibility coefficients are adequately attuned to the product composition, equation F.P01 or F.P02 should result in approximately the same MEpo value as the product specific regression equation. However, from 1991 onwards, the composition of many feedstuffs has more or less changed. Because in many cases information on nutrient digestibility was no longer available, digestible nutrient contents could no longer be updated according to these data. Instead, an adjustment of the digestible nutrient contents based on a rational approach was pursued, to

obtain similarity between the MEpo value calculated using equation F.P01 or F.P02, and the MEpo value calculated via the product specific equation.
Calculation of the ME value with the product specific equations remains the preferred method.
In some cases, also the digestible nutrient contents have been adjusted of products for which no product specific equation exists, because the formerly in CVB tables stated values (mostly based on limited research) could not always be rationally explained.
Adjustment of the digestible crude protein content according to the method described above, and deriving (faecal) amino acids digestibility from crude protein digestibility, also leads to an adjustment of the stated content of (fecal) digestible amino acids.

5.2.1.2 Energy value for adult roosters

Digestibility trials with adult roosters have been the basis for deriving ME values of feedstuffs for adult roosters and laying hens already for many years. In these trials, the combustion value (Gross Energy content) of the ingested feedstuff and the combustion value of faeces and urine, corrected for N balance, have been determined.
Depending on the available information, different procedures were subsequently followed to develop equations for calculating ME for adult roosters.

A. Regression analysis based on animal experiments with (mainly) Weende analysis parameters as explanatory variables.

Results of animal trials performed by COVP-DLO, INRA (Tours, France) and PRC (Rosslin, Scotland) could be used for this analysis.
When the MEpo value for a feedstuff was calculated using a product specific regression equation, derived in this way, equations F.P01 or F.P02 were subsequently used to adjust the digestibility coefficients to this MEpo value.
The regression equations below apply to MEpo values and contents (g per kg DM).

- Barley

[F.P03] MEpo (MJ) = (9258 – 9.258*ASH + 7.709*STAam) / 1000

- Oats

[F.P04] MEpo (MJ) = (12980 – 12.98*ASH + 48.82*CFAT – 25.50*CF) / 1000

- Barley products (excluding barley)

[F.P05] MEpo (MJ) = (13740 – 13.74*ASH – 35.58*CF + 2.988*STAam) / 1000

- Products from maize milling industry and maize starch production

[F.P06] MEpo (MJ) = (17538 – 17.54*ASH – 7.569*CP + 17.27*CFAT – 75.42*CF) / 1000

- Rice products (including rice)

[F.P07] MEpo (MJ) = (19540 – 19.54*ASH – 29.1*CP + 17.97*CFAT – 34.29*CF) / 1000

- Wheat products (excluding wheat)

[F.P08] MEpo (MJ) = (16780 – 16.78*ASH – 69.20*CF) / 1000

- Tapioca

[F.P09] MEpo (MJ) = (16380 – 16.38*ASH – 34.64*CF) / 1000

- Sunflowerseed products (CF < 280 g/kg DM)

[F.P10] MEpo (MJ) = (2626 – 2.62*ASH +10.62*CP + 26.20*CFAT) / 1000

- Meat meal and meat and bone meal

[F.P11] MEpo (MJ) = (14200 – 19.15*ASH + 25.1*CFAT) / 1000

- Soybean meal and soybean expeller (for 154 ≤ CP ≤ 706; 29 ≤ CF ≤ 369; 4 ≤ CFAT ≤ 85 (in g/kg DM)

[F.P12] MEpo (MJ) = (7690 – 7.69*ASH + 6.464*CP + 29.43*CFAT – 16.09*CF) / 1000

B. In a number of cases, the digestibility data were not suitable for regression calculation. The chemical composition could be divided into, e.g., three groups that were sufficiently representative for some qualities. By solving equations, a linear curve was calculated using the means of those three groups. This curve was then used to estimate the MEpo value

- Fullfat peanuts and peanut products

[F.P13] MEpo (MJ) = (12420 + 25.50*CFAT – 25.47*CF) / 1000

- Cottonseed products

[F.P14] MEpo (MJ) = (8898 + 19.72*CFAT – 12.91*CF) / 1000

C. Processing of results of French research, determining the MEpo value of different batches of sorghum with varying contents of tannins, resulting in the following regression equation:

- Sorghum

[F.P15] MEpo (MJ) = 16.13 – 1.65*%tannins
(tannins content determined according to Kuhla and Ebmeyer, 1981)

This regression line could not be included in the Table. It was, however, used to calculate the MEpo value of the low tannin sorghum type that have been included in this Table.

D. Other equations:

- Molasses (sugarcane and sugarbeet)
  For these products the energy value is calculated based on the sugar content (expressed as glucose units) according to the following equation:

[F.P16] MEpo (MJ) = (16.45*SUG) / 1000 (SUG in g/kg)

- Calculation equation for fat from Dutch destruction plants

[F.P17] MEpo (MJ) = 83.9 – 0.0962*IV – 0.1335*(C16:0) – 0.06418*(C18:0)

In which: IV = Iodine value

C16:0 = g palmitic acid per 1000 g total fatty acids
C18:0 = g stearic acid per 1000 g total fatty acids

This equation applies to the MEpo calculation of fats and oils, and not for mixtures of fatty acids.

5.2.1.3 Energy value for laying hens

From comparative research on adult roosters and laying hens by Scheele et al. (1985) it appears that the utilization of the ME from fat for maintenance and production is approximately 15% higher for laying hens compared to roosters.
In 1986, it was decided to express this difference in feeding value calculation and to refer to the energy value standard for laying hens as “MEla”.
For raw materials of which the MEla is calculated from digestibility coefficients, equations F.P01 and F.P02 were adjusted as follows:

[F.P18] MEla (MJ/kg) = (18.03 x DCP + 44.65 x DCFAT + 17.32 x DNFE) / 1000

or

[F.P19] MEla (kcal/kg) = 4.31 x DCP + 10.67 x DCFAT + 4.14 x DNFE

(with contents of DCP, DCFAT and DNFE in grams per kg)

in which the coefficient for the factor DCFAT equals:

in MJ: 38.83 x 1.15 = 44.65.
in kcal: 9.28 x 1.15 = 10.67

To convert the calculated MEpo to MEla, the MEpo should be increased

- In MJ by: (0.15 x 38.83 x DCFAT) / 1000 = 5.8 x DCFAT / 1000
- In kcal by: (0.15 x 9.28 x DCFAT) / 1000 = 1.39 x DFAT / 1000

5.2.2 Broilers

5.2.2.1 General

From comparative research at the former COVP-DLO (Beekbergen, The Netherlands) it appeared that the feeding value of fat for broilers is lower than for adult roosters. Also for other materials differences in ME values were found between broilers and adult roosters, although these differences were generally smaller than for fat. In 1990, this has led to the implementation of a separate ME evaluation (MEbr) for broilers (CVB series no 1, 1990). The table published at that time included the results of the digestibility research from COVP-DLO on raw materials that were the main constituents of practical broiler diets. In practice, however, doubts existed concerning the valuation for various feedstuffs. In the nineties, this led to extensive basic research, aimed at the equationtion of a standard protocol for digestibility trials with broilers. After completion of this protocol, the faecal nutrient digestibility of a large number of feedstuffs has been determined. In this edition of the Feed Table, the results of four projects studying the digestibility of feedstuffs for broilers have been implemented, to obtain a better estimation of MEbr for the feedstuffs concerned. In this Table, the MEbr equation that was introduced in 1991 is abandoned, and a new equation is introduced with the same energetic coefficients as used in the MEpo equation (see paragraph 5.2.2.3.1). A third adjustment that is introduced from this edition onwards concerns the calculation of the digestible carbohydrates fraction (see paragraph 5.5.5.3.2).

5.2.2.2 Digestibilities

The digestibility coefficients are derived from trials with young broilers, executed by order of CVB, according to the CVB protocol for faecal digestibility trials with broilers. In this study, the digestibility of organic matter (OM), crude protein (CP), crude fat (CFATh) and - in many cases - also starch (STA) was determined. The feedstuffs investigated in this study have been analysed for DM, ASH, CP, CFATh, CF, SUG, and STAam.

5.2.2.3 Energy value

5.2.2.3.1 Metabolizable energy value of digestible crude protein

Up to the previous edition of the Feed Table (2007), the MEbr of feedstuffs was calculated according to the following equation:

[F.P20] MEbr (MJ/kg) = (15.56 * DCP + 38.83 * DCFATh + 17.32 * DNFEh) / 1000

Or:

[F.P21] MEbr (kcal/kg) = 3.72 * DCP + 9.28* DCFATh + 4.14 * DNFEh

(with contents of DCP, DCFATh and DNFEh in g per kg)

This equation is derived from multiple regression analysis on the results of a COVP-DLO study, executed in the nineteen eighties, investigating the nutritional value of 15 important feedstuffs. In this study, the digestibility of CP, CFATh and NFE was determined, and the ME value (corrected to N balance) was also assessed. The regression model contained the amounts of digestible crude protein, crude fat and N-free extract as explanatory variables. From this study it was found, that the coefficients for digestible fat and digestible N-free extract did not differ markedly from the coefficients that had been derived from a comparable study with adult roosters.

Ever since the introduction of the above-mentioned MEbr equation, discussion has arisen concerning the correctness of the energetic coefficient for DCP in this equation – this coefficient cannot be explained physiologically. Assuming a gross energy content for protein of 23.6 MJ/kg, a complete metabolisation of protein to water, carbon dioxide, uric acid (and urea), a complete excretion of uric acid (and urea) with excreta, and a ‘gross energy value of uric acid, calculated to CP’ of 5.6 MJ/kg, the ME coefficient for protein should amount to approximately 18 MJ/kg. It is also unlikely that the ME value for digestible crude protein with broilers – assuming complete metabolisation – should differ from that with adult roosters and laying hens.
Multiple regression on the results of the various trials that were performed by order of CVB to establish the digestibility and ME value of feedstuffs for broilers, and regression analysis on the total database, revealed that the derived energetic coefficient was always higher than the previously used coefficient of 15.56 (equation [F.P20]). It should also be stressed that this coefficient was always lower than 18.03, the energetic coefficient for DCP in the MEpo equation. Although no satisfactory explanation was found for the latter, it was decided to calculate MEbr using an energetic coefficient for DCP of 18.03 MJ/kg.

When determining the fat digestibility, crude fat was analysed in feed and in excreta after acid hydrolysis. To calculate MEbr, one should always use CFATh.

5.2.2.3.2 New classification of carbohydrates fraction for calculating MEbr

Concerning the carbohydrates fraction, in the past it was always assumed that the digestibility of crude fibre was negligible (DCCF = 0), and only the digestibility of the N-free extract was taken into account. However, within different batches of one and the same feedstuff, the proportion of starch, sugars and fibrous components varies. Of these carbohydrates, starch and sugars are (very) highly digestible, whereas the digestibility of the fibrous fraction will be low. Using one fixed

digestibility coefficient for the NFE fraction does not account for the variation in composition of the NFE fraction.
At first, CVB aimed to divide the NFE fraction in a starch fraction (STA), a sugars fraction (SUG), and a non starch polysaccharides fraction (NSP), according to the procedure used for pigs. In poultry, however, the digestibility of the NSP fraction is low. Also, the (D)NSP fraction is a calculated fraction, implying that all (mainly analytical) errors accumulate in the (D)NSP fraction. Thirdly, the factor 6.25, used to calculate crude protein content from analysed N content, is too high for a number of feedstuffs. This implies that part of the NSP fraction is contained in the CP fraction. Especially in protein-rich feedstuffs, this may be a considerable amount. For these reasons, this option was abandoned.

The SUG fraction in feedstuffs consists of enzymatically digestible and fermentative degradable sugars. Excreta of animals fed with a relatively SUG-rich feed contain hardly any sugars, indicating that the SUG fraction is highly digestible. Of dietary starch, also only a few percents were recovered from the excreta. It was assumed that all glucose equivalents retrieved from the excreta were derived fron undigested starch. It is, however, not clear whether the fermentation products - that are formed in the caeca as a result of microbial degradation of fermentable sugars and of ileal undigestible starch – are completely absorbed, or partly excreted with the excreta. Also, in the caeca, some fermentation will occur of (mainly water soluble components in) the NSP fraction. Based on these considerations, it was decided to define the digestibility of the carbohydrates fraction as follows:

[F.P22] DC(STAam+SUG) = (DOM–DCP–DCFATh) / (STAam+CF_Di*SUG) * 100%

5.2.2.3.3 Presence of fermentation products in feedstuffs for poultry

From analysis it appeared that considerable amounts of lactic acid (LA) are present in wheat glutenfeed, and especially in maize glutenfeed. Also, small amounts of acetic acid are found in these feedstuffs. Fermentation products should be accounted for in the calculation of the energy value of such feedstuffs. Because the level of acetic acid is very low, the amount of acetic acid is added to the lactic acid content. The metabolizable energy value of lactic acid is derived from the ATP-yielding capacity of lactic acid compared to starch. This results in a MEbr value for lactic acid of 14.55 MJ/kg.

5.2.2.3.4 New MEbr equation

From the above, a new equation for the calculation of MEbr was derived:

[F.P23] MEbr (MJ/kg) = (18.03*DCP + 38.83*DCFATh + 17.32*D(STA+SUG) + 14.72*LA) / 1000

Or:

[F.P24] MEbr (kcal/kg) = 4.31*DCP + 9.28*DCFATh + 4.14*D(STA+SUG) + 3.52*LA

(with contents of DCP, DCFATh. V(STA+SUG) and LA in g/kg)

5.2.2.4 Calculation rules for calculating DCP, DCFATh and D(STA+SUG)

For all feedstuffs – for which a MEbr value for broilers is given – equations have been developed for the calculation of the required contents of fecal digestible components DCP, DCFATh and D(STA+SUG). The estimation equations are - for most feedstuffs - derived from statistical analysis (regression analysis) of datasets containing digestibility trials of individual feedstuffs, or combined datasets containing data of comparable feedstuffs. For some feedstuffs, insufficient or no digestibility trials were available to perform statistical analysis. In those cases, the digestibility was based on the mean values from one or a limited number of observation(s). For some feedstuffs – rarely used in poultry diets, and for which no digestibility trials were available – the

digestibility was estimated by comparing the chemical composition and other characteristics of that feedstuff to comparable feedstuffs of which sufficient digestibility data with broilers were available. These detailed calculation rules are not provided in the Feed Table, but have been included – together with other calculation rules for feed evaluation of poultry – in a separate CVB publication, entitled 'CVB Calculation Rules Feed Evaluation Systems Poultry 2011' (Documentation report no 57).
In developing the estimation equations, it was always investigated which other components affect the digestibility of a certain component. In developing equations for digestible crude protein (DCP), also a basal endogenous faecal excretion of 9.7 g CP per kg DMI was always accounted for.

Dividing the digestible contents (e.g., DCP) – as calculated by means of the above-mentioned product-specific calculation rules – by the gross nutrient content, and subsequently multiplying by 100 (e.g., DCP/CP*100), the digestibility coefficient of that nutrient (e.g., DCCP) is obtained. On the product sheets, the digestibility coefficients for CP, CFAT and (STA+SUG) is given, belonging to the average chemical composition as also stated on the product sheet. For batches with a deviant composition, this digestibility coefficient is not entirely correct; in those cases, the digestibility coefficient is better estimated by using the specific calculation rules for that product.

The digestibility of pure fats is strongly dependent on the fatty acid composition. Based on a study, commissioned by the CVB, it appeared that the digestibility of fat (DCCFAT) could be predicted well with the following formula:

[F.P25] DCCFAT (%) = 96.1 – 0.3746 * (C16:0 + C18:0)

With (C16:0 + C18:0) in percent units of the total fatty acid fraction

For animal products (meat meal, fish meal) it is assumed that the NFEh fraction is largely an artefact. Many times negative values are calculated for the NFEh fraction. These negative values for NFEh can be the result of converting an analysed nitrogen content to a CP value (CP = 6.25 * N) as this conversion value of 6.25 may not be correct. In all evaluation systems in which the NFEh fraction is used for calculating energy values it is assumed that the DCNFEh of animal products is equal to the DCCP value. In the updated MEbr system a basal fecal endogenous loss of CP is assumed of 9.7 g per kg DM. Therefore it is not correct to use the the DCCP value of animal products also as a value for DCNFEh because in that case the calculated basal fecal endogenou CP loss is used twice in the same feed. Therefore, for broilers the following calculation rule is used. First a combined DCP and DNFEh fraction is estimated: (DCP + DNFEh) = a*(CP + NFEh) – 9.7 (all values expressed in DM and where a = the standardized digestibility of the animal product). Then the combined DC(CP + NFEh) is calculated: DC(CP + NFEh) = (DCP + DNFEh) / (CP + NFEh) * 100. This means that the value for DCCP for animal products is the value for DC(CP + NFEh).

5.3 Protein value for poultry

5.3.1 Feedstuffs

In 2017 two CVB documentation reports (CVB documentation reports nr. 60 and 61) were published. In CVB documentation report nr. 60 the amount and amino acid composition of basal endogenous losses at the terminal ileum of broilers were estimated based on a meta-analysis on a large number of published scientific studies. In CVB documentation report nr. 61 a Table is published with standardized ileal digestible amino acid coefficients for a wide range of feedstuffs for poultry. This Table is based on 1) a large dataset of published studies in which amino acid digestibilities for a large number of feedstuffs for poultry were determined and 2) on the in CVB documentation report nr. 60 established amount and amino acid composition of basal endogenous losses at the terminal ileum of broilers.

These standardized ileal digestible amino acid coefficient values for a wide range of feedstuffs for poultry are presented in this Table and replace the apparent fecal digestibility amino acid values of feedstuffs for poultry that were shown in the CVB Feed Tables since 1979.

Synthetic amino acids

When synthetic amino acids are added to a compound feed, these substances may be regarded as fully digestible. Just as for feedstuffs that do not contain protein the basal ileal loss of amino acids is not taken into account.

Furthermore, synthetic amino acids are sometimes sold in the form of salts. Even if these salts have a high degree of purity, it should be taken into account that they do not consist entirely of the amino acid concerned. Therefore, one should proceed from the content of the amino acid, as guaranteed by the producer.

5.4 Digestibility of phosphorus

In 1997 the system “Digestible phosphorus for poultry” has been implemented (CVB, 1997). The P-digestibility of feedstuffs for poultry is based on research done by ID-DLO (now part of the Animal Sciences Group, Lelystad), measuring the absorption coefficient in broilers under standard conditions (a balance period between days 21 and 24 of age, fed a semi-synthetic diet with an (estimated) digestible P (DPpo) content of 1.8 g/kg and a Ca content of 5.0 g/kg). With this marginal DPpo content the P supply is so low that the P excretion via the urine is negligible and all excreted P is (apparently) not absorbed P from the feed.

From the research done by ID-DLO it was determined that broilers are capable of (partially) releasing P from inositol phosphate present in feedstuffs of vegetable origin. Furthermore, it was established that this breakdown depends on the DPpo (and Ca) level in the feed; this implies that a correction is needed to convert the P digestibility values as measured under standardized conditions (DPpo) into P digestibility values for practical conditions (diets containing 3.0 DPpo/kg and 6.8 g Ca/kg) (cDPpo). For this correction, relationships are applied that have been derived from ID-DLO research, where the faecal P digestibility under standard conditions was compared to the ileal P digestibility at practical DPpo and Ca levels for eight feedstuffs (CVB, 1997). For feedstuffs of animal origin and for feed phosphates, such a correction is not needed.

The (c)DPpo values given in this Table have all been based on research by ID-DLO. Feedstuffs of vegetable and of animal origin, as well as feed phosphates were included in this study. For a number of feedstuffs, little to no observations concerning the P digestibility are known. In those cases, the P digestibility was derived from related feed ingedients, or was estimated. The estimation was based on an P digestibility value for non-inositol-bound P of 80% and usually a low breakdown of inositol-phosphate was assumed.

Information on feed phosphates is included in this Table in a separate Appendix. In general, a distinction is made between mono- and dicalcium phosphates (water containing or dry), and other feed phosphates.

Some feedstuffs of vegetable origin contain considerable amounts of the enzyme phytase, which is capable of (partially) releasing P from inositol phosphate. This may have a favourable effect on the P digestibility of these feedstuffs. One should, however, take into account the temperature sensitivity and pH dependency of the enzyme. Steam pelleting, leading to pellet temperatures above 80 ^{o}C, causes the endogenous phytase activity to drop dramatically.

The table values are based on the assumption that no phytase is present in the feedstuff. This approach is of interest for barley, rye, rye products, wheat, wheat by-products and triticale. The P digestibility values that apply when these products are offered without prior heat pelleting processes are given in a section ‘Points of attention’, given after the product sheets for compound feedstuffs.

Although the P digestibility values are based on broiler research, they are also applied for other types of poultry. In the case of laying hens, comparative research is the foundation for the application of these values and for the determination of requirements.

Concerning P requirements, refer to the CVB Documentation report no 20, where the final digestible P system is described (CVB, 1997).

On the product sheets, the content of digestible phosphorus (DPpo) is stated in the column “Roosters/Laying hens”; this value is of course also applicable for broilers.

5.5 Calculation examples

For calculation examples, with step-wise explanation of the calculation of the feeding values within the various systems for poultry, see document RD008 on the CVB website: www.cvbdiervoeding.nl.

6. FEED EVALUATION SYSTEM FOR RABBITS

6.1 Feed evaluation for rabbits

For the energy evaluation of feedstuffs for rabbits, in the past different systems have been used, derived from evaluation systems for ruminants, pigs, or poultry. Research has shown, however, that none of these systems can predict the relative proportion in energy values for rabbits in a reliable way.
In 1988, the then ACV (Stichting Afnemers Controle op Veevoeder) took the initiative to develop a separate feeding values table for rabbits. Thanks to the cooperation of the then COVP-DLO (now part of the Animal Sciences Group, Lelystad), the then Rijksstation voor Kleinveeteelt in Merelbeke, België (now part of the Institute for Agricultural and Fisheries Research, ILVO, Belgium) and the Dutch compound feed industry (Janssen et al., 1990), this has led to a preliminary OE Table Rabbits in 1990 (CVB, 1990). Thereafter, this table has been incorporated in the CVB Feedstuff Table.

6.2 Energy value

6.2.1 Digestibility figures

In eighties of the 20th century, the Rijksstation voor Kleinveeteelt (Merelbeke, Belgium) has performed many studies on the feeding value of feedstuffs for rabbits. These values were usually implemented. Apart from the data provided by the Rijksstation voor Kleinveeteelt, information in literature was scarce. The stated values on digestibility of crude fat are approximations, based on fat extraction with petroleum ether after acid hydrolysis (feed ingredient and faeces). Some values derived from the Rijksstation voor Kleinveeteelt had to be adjusted accordingly.

6.2.2 Energy evaluation system

At first, an energy evaluation system for rabbits was chosen that had been developed by dr ir L. Maertens of the Rijksstation voor Kleinveeteelt. This system is based on the apparent digestibility of nutrients (apparent digestible energy rabbits, ADEr). The equation below has in fact been developed for compound feeds, but has later been accepted for the calculation of the energy value of raw materials.

[F.K.01] ADEr (MJ) = (23.85 x DCP + 37.8 x DCFAT + 16.3 x DCF + 17.1 x DNFE) / 1000

The value of protein is overestimated in this system: the factor 23.85 MJ per kg DCP assumes that all digestible amino acids are deposited in body protein. In reality, the digested protein is only partly (30-50%) deposited in body protein, while the remaining nitrogen is excreted via the urine, mainly as urea. The digestible energy, corrected for N balance, may be calculated using the following equation:

[F.K.02] OEk (MJ) = (19.0 x DCP + 37.8 x DCFAT + 16.3 x DCF + 17.1 x DNFE)/1000
OEk in MJ/kg; the contents of DCP, DCFAT, DCF and DNFE in g per kg

This equation was used to calculate the energy value of feedstuffs in this Table.

Only for alfalfa meal or pellets it proved possible to derive a reliable relation between variation in chemical composition and nutrient digestibility. This equation is also used for grass meal or pellets.
For the other feedstuffs, it was not possible to relate quality and chemical composition on the one hand, and nutrient digestibility on the other hand. For the relevant by-products of maize and

wheat, the digestibilities of nutrients have been related to the crude fibre content (based on a limited amount of data), as has been done for other animal species. For various feedstuffs no digestibility figures have been determined using rabbits. In those cases, estimated values are given, by comparison with related feedstuffs and/or other animal species.

6.3 Calculation examples

For calculation examples, with step-wise explanation of the calculation of the feeding values for rabbits, see document RD009 on the CVB website: www.cvbdiervoeding.nl.

7. FEED EVALUATION SYSTEM FOR HORSES

7.1 Feed evaluation systems

In the past, the feed evaluation system for horses was based on the VEM and DCP system for ruminants. In 1996, two evaluation systems were developed especially for horses: the VEP system (a net energy evaluation system, with VEP 'Voedereenheid Paarden' as characteristic) and the DCPh system (a protein evaluation system: DCPh = digestible crude protein horses). These systems were developed based on the French UFC system.
In September 2004, the VEP system was replaced by a new net energy system, the EWpa (= Energy value Horses). The feed evaluation within this system has also been derived from the French UFC system. From January 1st 2005, the EWpa system has officially been implemented. For a full explanation of the EWpa system and the (partly revised) DCPh system, the reader is referred to CVB Documentation report no 31 `The EWpa system and the DCPh system` (CVB, 2004a). From edition 2005 of the Feed Table onwards, the feed evaluation for horses has been incorporated according to these systems, as described in this publication, and in CVB series no 28 (CVB, 2004b).

7.2 Energy value

The EWpa is derived as follows:

7.2.1 Gross energy (GE)

The gross energy content of all feedstuffs is estimated according to the equation from the VEM system (CVB, 1994):

[FE.01] GE (kJ/kg DM) = 24.14*CP + 36.57*CFAT + 20.92*CF + 16.99*NFE – 0.63*SUG*

* The subtraction for sugars only applies to feedstuffs with more than 80 g sugars per kg DM. CP, CFAT, CF, NFE and SUG are expressed in g/kg DM

For fodder maize a separate calculation applies:

[FE.02] GE (kJ/kg DM) = 19456 – 19.456*ASH

In which ASH is expressed in g/kg DM

7.2.2 Digestible energy (DE)

The equations for calculating the digestible energy content are as follows:

- Forages

[FE.03] DE (kJ/kg DM) = (0.034 – 1.1 + 0.9477*DCOM) / 100*GE

- Concentrates

[FE.04] DE (kJ/kg DM) = (0.034 + 1.1 + 0.9477*DCOM) / 100*GE

In which DCOM = digestibility coefficient of organic matter for horses (in %)

During the development of the EWpa system, a critical evaluation has taken place with respect to

the digestibility coefficients of organic matter for horses (%dOMh) that were obtained.
For feedstuffs with known OM digestibility – obtained from digestibility studies with horses – the *in vivo* established %dOMh was used to calculate the digestibility of gross energy. This concerns lucerne (alfalfa), red clover, and some compound feedstuffs.

The existing equation from the VEP system (CVB Documentation report no 15, 1996) was used by CVB internally as an aid to estimate the %dOMh of wheat and wheat byproducts.

During re-evaluation of the existing database, new estimation equations were developed within the EWpa system to estimate the %dOMh of lucerne (alfalfa) and for artificially dried grass, based on chemical parameters:

- Lucerne (alfalfa) (fresh, silage, hay)

[FE.05] DCOM (%) = 98.5 – 0.123*CF (CF in g/kg DM)

- Artificially dried grass and lucerne (alfalfa) (mash, pellets, and pressed in bales)

[FE.06] DCOM (%) = 82.1 – 0.087*CF (CF in g/kg DM)

For a number of feedstuffs or groups of feedstuffs, however, insufficient digestibility trials with horses have been performed to follow this procedure. In those cases, the digestibility of the organic matter was estimated based either on results of digestibility trials with wethers or pigs (see below), or by comparison of the feedstuff with similar feedstuffs.
For the estimation of DCOM from wether data, the following equation for fresh grass and hay has been developed, based on results from digestibility trials with wethers and horses in the Netherlands and France:

[FE.07] DCOM (%) = -16.71 + 1.1436*DCOMw

In which: DCOMw = digestibility coefficient of organic matter for wethers (%)

This equation is used to estimate DCOM for fresh grass and hay, because the equation has been derived from these feedstuffs, but also for grass silage.

By comparing the outcome of this equation to the available data on digestibility of fodder maize for horses, the following equation has been derived for fodder maize (fresh and ensiled):

[FE.08] DCOM (%) = -12.27 + 1.1436*DCOMw

In drafting the feedstuffs table, equation [FE.07] was also applied for a number of products with unknown DCOM, but with a known DCOMw. In this respect, however, there is a difference with the previous VEP system: in the VEP system, this equation was used for all feedstuffs with unknown *in vivo* determined DCOM, but known DCOMw. In the EWpa system, care was exercised in applying equation [FE.05] in those cases where the chemical composition of the feedstuff differed markedly from that of fresh grass and grass hay. In each case, the calculated value of DCOM was compared with the DCOMw (the basis for the calculation), and with the DCOMp (= digestibility coefficient of organic matter for pigs). In cases where this comparison led to the conclusion that the calculated DCOM did not yield a logical value, the DCOMw and the DCOMp were regarded as more valuable than the outcome of equation [FE.07].

In Tables 2 and 3 (Chapter 5), a '*' sign is used to indicate that the stated coefficients have not been established with horses, and the stated value should be regarded as indicative.

7.2.3 Metabolisable energy (ME)

Metabolisable energy is digestible energy minus energy lost through methane and urine. The extent of these losses is affected by the composition of the ration, the crude fibre content of the diet, and the protein content.

For all feedstuffs, the following equation applies:

[FE.09] ME (kJ/kg DM) = DE * (93.96 – 0.02356*CF – 0.0217*CP) / 100

In which CP and CF are expressed in g/kg DM

7.2.4 Utilization of metabolizable energy for maintenance (k_m)

Part of metabolizable energy is still lost. The required energy for feed intake and heat production caused by feed consumption and processing do not benefit the maintenance or production of the animal. The value of k_m (the proportion of ME that is used for maintenance processes) depends on the endproducts of digestion.
The method of calculation of k_m varies depending on the product group. For products that may not be placed in a certain group, and for groups containing only a limited number of feedstuffs, a k_m value is estimated based on the k_m of comparable products, and/or based on the k_m value in other animal species.
Equations [FE.15] and [FE.16] were not derived from the UFC system. Equation [FE.15] is added to prevent undervaluation of pure fats.

Forages
[FE.10] k_m = (65.21 – 0.0178*CF + 0.0181*CP + 0.0452*(STA+SUG)) / 100

Cereal grains and seeds
[FE.11] k_m = (72.34 + 0.0119*CF – 0.0081*CP + 0.0112*(STA+SUG)) / 100

Cereal byproducts
[FE.12] k_m= (94.41 – 0.0237*OM – 0.0022*CP + 0.0121*(STA+SUG)) / 100

Byproducts from oil processing (1): peanut products, cottonseed products, coconut products, palm kernel products, sunflower seed products
[FE.13] k_m = (67.03 – 0.004261*CP + 0.01566*(STA+SUG)) / 100

Byproducts from oil processing (2): linseed products, rapeseed products, soy products
[FE.14] k_m = (68.04 – 0.004261*CP + 0.01566*SUG) / 100

Fats of animal and vegetal origin
[FE.15] k_m = 0.80

Glucose, saccharose, starch
[FE.16] k_m = 0.85

In which all contents are expressed in gram per kg DM

When an equation contains STA, the STAam content (in g/kg DM) should be used. The calculated k_m may be very high for products containing large amounts of sugars or starch, therefore, it was decided to set a maximum value for k_m of 0.85, the same value as for glucose and lactic acid.

7.2.5 Net energy for maintenance (NEm)

Multiplying the calculated ME by the calculated k_m yields the net energy of the feedstuff: NE = ME * k_m.

During the development of the VEP system it appeared that fat-rich feedstuffs were underestimated in the UFC system. Incorporating the ME of CFAT with a k_m of 0.80 (instead of the k_m calculated for the complete feedstuff) gives a better valuation of CFAT. The ME content of

CFAT is calculated as follows:

MEcfat = GEcfat * %dEcfat * ME/DEcfat = 36.6 * 0.9 * 0.95 = 31.3 kJ

The equation for calculating NEm, therefore, becomes:

[FE.17] NEm (MJ/kg DM) = (k_m * (ME – 31.3*CFAT) + 0.80*31.3*CFAT) / 1000

In which: k_m = the k_m for the complete feedstuff
ME = the calculated ME content of the feedstuff in kJ/kg DM
CFAT = the CFAT content of the feedstuff in g/kg DM

Equation [FE.17] is applied to all feedstuffs, with the exception of vegetable and animal fat; for these feedstuffs a fixed k_m (0.80) is applied as follows:

[FE.18] NEm (MJ/kg DM) = (0.80 * ME)/1000

In accordance with the approach taken in the VEM system and EW system for ruminants and pigs, respectively, this net energy value is calculated - for application in practice - to an energy value for horses (EWpa). EWpa is calculated with the energy value of oats as a reference. One kg of oats of average quality contains 8.93 MJ NEm per kg DM. The EWpa of 1 kg oats dry matter is set to 1.000. The EWpa of any given feedstuff is then derived as follows:

[FE.19] EWpa (per kg DM) = NEm / 8.93

In which: NEm = Net Energy in the feedstuff (in MJ/kg DM)
8.93 = Net Energy in 1 kg oats dry matter of average quality (in MJ/kg DM)

Because all calculations are performed with contents in the DM, the outcome of equation [FE.19] should be corrected with the DM content of the product, to yield the EWpa per kg of product:

[FE.20] EWpa (per kg product) = EWpa (per kg DM) * DM/1000

In which DM = dry matter content of the product (in g/kg)

7.2.6 How to calculate EWpa

In contrast with the feeding value calculation for other aninal species in the Feed Table, the equation code stated with the horses data does not refer to one single equation, but to a series of equations that are applied subsequently. The Table below represents the various calculation methods, as shown on the separate product sheets. For each group of products, it is stated which equations have been used to calculate values for GE ([FE.01] or [FE.02]), DE ([FE.03] or [FE.04]), k_m ([FE.10] until [FE.16]), and NEm ([FE.17] or [FE.18]). The following calculation steps are the same for all feedstuffs: for the calculation of the ME/DE ratio ([FE.09]), the conversion from NEm (in DM) to EWpa (in DM) ([FE.19]), and the conversion fo the EWpa in DM to EWpa on product basis ([FE.20]). The various combinations of formulas used to calculate EWpa are shown in Table 1.

Table 1 Overview of equations used to calculate EWpa

Calculation method	GE	DE	ME/DE	k_m	NEm	NEm -> EWpa	EWpa (DM) -> EWpa (product)
1	FE.01	FE.03	FE.9	FE.10	FE.17	FE.19	FE.20
2	FE.01	FE.04	FE.9	FE.11	FE.17	FE.19	FE.20
3	FE.01	FE.04	FE.9	FE.12	FE.17	FE.19	FE.20
4	FE.01	FE.04	FE.9	FE.13	FE.17	FE.19	FE.20
5	FE.01	FE.04	FE.9	FE.14	FE.17	FE.19	FE.20
6	FE.02	FE.03	FE.9	FE.10	FE.17	FE.19	FE.20
7	FE.01	FE.04	FE.9	FE.15	FE.17	FE.19	FE.20
8	FE.01	FE.04	FE.9	FE.16	FE.17	FE.19	FE.20

7.3 Protein value

INRA took the digestive physiology of the horse as starting point for their protein evaluation system. However, available base data to develop this system are very scarce and many assumptions were made. Therefore, it was decided not to adopt the French MADC system.
For the time being, the DCP system will remain in place to estimate the protein value of feedstuffs for horses. In cases where data were available on the digestibility of crude protein for horses, these values were used to calculate DCP. In other cases, the %dCP was derived from the CP digestibility for ruminants and pigs.
For all feedstuffs the following applies:

[FE.21] DCP (in g/kg DM) = CP * DCCP/100 (in g/kg DM)

In which: CP is expressed in g/kg DM
DCCP is expressed in %

7.4 Calculation examples

For calculation examples, with step-wise explanation of the calculation of the feeding values for horses, see document RD010 on the CVB website: www.cvbdiervoeding.nl.

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9. LIST OF ABBREVIATIONS

Abbreviation	Unit	Description
%DASH	%	Digestibility of Crude Ash
%DRUP	%	Intestinal digestibility of rumen undegraded dietary protein
%FA	%	Percentage of a certain fatty acid in total fatty acids
%RUP	%	Undegradability of dietary protein; percentage rumen undegraded protein
%RUSTA	%	Undegradability of starch; percentage rumen undegraded starch
%StaiDC	%	Standardized ileal digestibility coefficient
<=C10	g	Fatty acids with 10 C atoms or less
>=C20	g	Fatty acids with 20 C atoms or more
AA	g	Amino acid(s)
AC	g	Acetic acid
ADEr		Apparent digestible energy rabbits
ADF	g	Acid detergent fibre
ADL	g	Acid detergent lignin
ALA	g	Alanine
ANF		Antinutritional factor(s)
APL		Animal production level
ARG	g	Arginine
ASH	g	Crude ash
ASP	g	Aspartic acid
ATP	mol	Adenosine triphosphate
BU	g	Butyric acid
BW	kg	Body weight
$BW^{0.75}$	kg	Metabolic body weight
C12:0	g	Lauric acid
C14:0	g	Myristic acid
C16:0	g	Palmitic acid
C16:1	g	Palmitoleic acid
C18:0	g	Stearic acid
C18:1	g	Oleic acid
C18:2	g	Linolic acid
C18:3	g	Linolenic acid
Ca	g	Calcium
CAD	meq/kg	Cation-anion difference
cDPpo		Corrected digestible Phosphorus poultry
CF	g	Crude fibre
CF_DI		Correction factor for disaccharides
CFAT	g	Crude fat
CFATh	g	Crude fat after acid hydrolysis
Cl	g	Chlorine

Abbreviation	Unit	Description
Co	g	Cobalt
CP	g	Crude protein
Cu	g	Copper
CYS	g	Cystine
D	%	Potentially degradable fraction
DASH	g	Digestible ash
DC	%	Digestibility Coefficient
DCCF	%	Digestibility of Crude Fibre
DCCFAT	%	Digestibility of Crude Fat
DCCFATh	%	Digestibility of Crude Fat after acid hydrolisis
DCCP	%	Digestibility of Crude Protein
DCCPh	%	Digestibility of Crude Protein in horses
DCiSTA	%	Ileal Digestibility of STAam
DCNFE	%	Digestibility of NFE
DCNFEh	%	Digestibility of NFEh
DCOM	%	Digestibility of Organic Matter
DCOMp	%	Digestibility of Organic Matter for pigs
DCOMw	%	Digestibility of Organic Matter for wethers
DCPpi	%	Digestibility of P (Phosphorus) in pigs
DCPpo	%	Digestibility of P (Phosphorus) in poultry
DC(S+S)	%	Digestibility of (STAam + SUG)
DE	MJ	Digestible energy
DM	g	Dry matter
DMCP		Intestinal degradable microbial crude protein
DMFLYS		Lysine contribution from DMFP
DMFMET		Methionine contribution from DMFP
DMFP	g	Intestinal digestible metabolic faecal protein; that part of DVE that is lost in endogenous faecal protein
DMI	kg	Dry matter intake
DMLYS		Lysine contribution from DMP
DMMET		Methionine contribution from DMP
DMP	g	Intestinal digestible microbial protein; (part of DVE)
DMSO		Dimethyl Sulphoxide
DPpi	g	(Faecal) digestible Phosphorus in pigs
DPpo	g	(Faecal) digestible Phosphorus in poultry
DRULYS		Lysine contribution from DRUP
DRUMET		Methionine contribution from DRUP
DVE	g	DarmVerteerbaar Eiwit; intestinal digestible protein
DVLYS	g	DarmVerteerbaar Lysine; Intestinal digestible lysine
DVMET	g	DarmVerteerbaar Methionine; Intestinal digestible methionine
EB	meq/kg	Electrolyte Balance
ETH	g	Ethanol
EW		Energy value pigs = NEv (in MJ) / 8.8 MJ
EW_{2015}		Energy value pigs = NE_{2015} (in MJ) / 8.8 MJ

Abbreviation	Unit	Description
EWpa		Energy value horses = NEm (in MJ) / 8.93 MJ
FA		Fatty acids
Fe	g	Iron
FCH	g	Fermentative degradable carbohydrates
FIC		Feed intake capacity
FOM	g	Fermentable Organic Matter (Calculated from DOM, from which rumen undegraded protein, rumen undegraded starch and crude fat are subtracted)
FOMr	g	Fermentable organic matter in the rumen (Based on the quantification of rumen fermentable components from *in situ* experiments)
FOMr2	g	Organic matter that is fermented in the rumen during the first two hours in the rumen
FOMr2/FOMr	g	Ratio between FOMr2 and FOMr
FSTA	g	Fermentable starch (= STA - RUSTA)
FP	g	Fermentation products (LA+AC+PR+BU)
FTU		Phytase units
g		Gram
GE	MJ	Gross energy
GLU	g	Glutamic acid
GLY	g	Glycine
GOS	g	Glucose oligosaccharides
HIS	g	Histidine
HPLC		High performance liquid chromatography
iDM	g	Indigestible dry matter
iDMI		Indigestible dry matter intake
ILE	g	Isoleucine
IP	g	Inositol bound phosphorus
IP/P	%	Inositol bound phosporus as a percentage of total phosphorus
IV		Iodine value
J	g	Iodine
K	g	Potassium
kcal		Kilocalories
k_f		ME-utilization for energy growth
kg		Kilogram
kJ		Kilojoule
k_m		ME-utilization for maintenance
LA	g	Lactic acid
LAB		Liquid associated bacteria
LEU	g	Leucine
LYS	g	Lysine
MCPe		Microbial CP produced, based on the available energy in the rumen
MCPn		Microbial CP produced, based on available nitrogen in the rumen
MDASH	g	Maximal amount of digestible crude ash
ME	MJ / kcal	Metabolizable energy
MEbr	MJ / kcal	Metabolizable energy for broilers

Abbreviation	Unit	Description
MEla	MJ / kcal	Metabolizable energy for laying hens
MEpo	MJ / kcal	Metabolizable energy for poultry
meq		milli equivalents
MET	g	Methionine
MFP		Metabolic faecal protein
mg		Milligram
Mg	g	Magnesium
MJ		Megajoule
Mn	g	Manganese
Mo	g	Molybdeen
N	g	Nitrogen
Na	g	Sodium
NDADF		ADF content in NDF
NDF	g	Neutral detergent fibre
NE	MJ	Net energy
NE_{lac}	MJ	Net energy value for milk production
NE_{meat}	MJ	Net energy value for meat production
NEm	MJ	Net energy value for maintenance
NEv	MJ	Net energy value for fat accretion in pigs
NE_{2015}	MJ	Net energy value for pigs for growth; introduced in 2015
NFE	g	N-free extracts, with CFAT subtracted (so: 1000 – (moisture + ASH + CP + CFAT + CF)
NFEh	g	N-free extracts, with CFATh subtracted
NPN	g	Non protein nitrogen
NSP	g	Non starch polysaccharides = 1000 – (moisture + ASH + CP + CFAT + STAam + GOS + CF_DI*SUG + 0.92*LA + 0.5*(AC+PR+BU) + GLYCEROL)
NSPh	g	Non starch polysaccharides = 1000 – (moisture + ASH + CP + CFATh + STAam + GOS + CF_DI*SUG + 0.92*LA + 0.5*(AC+PR+BU) + GLYCEROL)
OEB	g	Onbestendig Eiwit Balans; rumen degraded protein balance
OEB-2	g	OEB two hours after feed intake
OEk		Metabolisable energy for rabbits
OM	g	Organic matter
P	g	Phosphorus
PAB		Particle associated bacteria
PDV		Product Board Animal Feed
PHE	g	Phenylalanine
PR	g	Propionic acid
PRO	g	Proline
q		%ME in GE
RNSP	9	Remainder NSP fraction, after subtracting NDF from NSP (RNSP = NSP – NDF)
RNSPh	9	Remainder NSPh fraction, after subtracting NDF from NSPh (RNSP = NSPh – NDF)
RUP	g	Rumen undegraded dietary protein

Abbreviation	Unit	Description
RUSTA	g	Rumen undegraded starch
S	g	Sulphur
S	%	Soluble fraction
sd		Standard deviation
sdc		Corrected standard deviation
SER	g	Serine
S-i	g	Inorganic sulphur
S-o	g	Organic sulphur
STA		Starch
STAam	g	Starch determined by amyloglucosidase
STAam-e	g	Enzymatically digestible starch
STAam-f	g	Fermentable degradable starch
STAew	g	Starch determined according to Ewers
STAtot	g	STAam plus GOS
SUG	g	Sugars
SUGe	g	Enzymatically digestible sugars
SUGe/SUG	%	Ratio indicating which percentage of the total SUG content consists of enzymatically digestible SUG
SUGf	g	Fermentable degradable sugars (= SUG – SUGe)
SW		Structuurwaarde; Structure Unit
TDMI		Total dry matter intake
THR	g	Threonine
TRP	g	Tryptofaan
TYR	g	Tyrosine
U	%	Undegradable fraction
$uCP_{i\text{-}basal}$	g/kg	Amount of undigested basal endogenous protein (expressed as g/kg ingested feed) at the end of ileum
$uCP_{i\text{-}endogenous}$		Total amount of undigested endogenous protein that passes the ileum
$uCP_{i\text{-}specific}$		Amount of undigested endogenous protein (g/kg feed), induced by feed specific factors, at the end of the ileum
VAL	g	Valine
VEM		Voedereenheden voor melkproductie; Feed unit milk production
VEVI		Voedereenheden voor vleesproductie; Feed unit meat production
VFA		Volatile fatty acids (sum of Ac, Pr and Bu)
VW		VerzadigingsWaarde; Fill Unit
W	%	Washable fraction
Zn	g	Zinc

10. CHEMICAL COMPOSITION AND FEEDING VALUES OF FEEDSTUFFS

In this chapter information is given for the following categories of feedstuffs:

10.1 Compound feedstuffs
10.2 High moisture industrial co-products
10.3 Roughages and related products
10.4 Mineral feedstuffs
10.5 Miscellaneous

Compound feedstuffs

Barley 1005.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	873	21	102	18	27	47	685	677
sdc	8	2	8	2	1	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	517	503	-	22	141	56	13	209	68
sdc	16	-	-	4	15	7	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.5	3.2	2.4	1.1	4.9	0.1	1.0	0.1	1.0
sdc	0.1	0.3	-	0.1	0.7	0.0	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	51	16	30	4	0.8	0.1	0.3
sdc	16	4	7	1	-	-	-

IP/P	75	SUGe/SUG	75	EB (meq/kg)	100	
		CF_DI	0.96	CAD (meq/kg)	33	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	74		DCCP	74	DCCP	70	DCCP	65
DCCFAT	83		DCCFATh	56	DCCFAT	64	DCCFAT	85
DCCF	35		DCCF	15	DCNFE	84	DCCF	15
DCNFE	90		DCNFE	93	DCPpo	38	DCNFE	87
DCOM	85		DCOM	85				
			DCNSPh	57	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	71	DCCP	80
%RUP	30	35	StaDCP	35	DCCFATh	54	DCOM	84
%DRUP	91	91	AppDCP	30	DC(S+S)	98		
%RUSTA	12	12			DCNFEh	75		
%DASH	50	50			DCPpo	38		
DASHmax	16	16						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	980 /kg	NE2015	9.88 MJ/kg	MEpo	11.76 MJ/kg	MErab	12.15 MJ/kg
VEVI	1070 /kg	NE2015	2361 kcal/kg	MEpo	2812 kcal/kg	MErab	2904 kcal/kg
FOM-91	611 g/kg	EW2015	1.12 /kg	MEla	11.83 MJ/kg		
FOMr-07	629 g/kg	StaDP	1.1 g/kg	MEla	2828 kcal/kg		
FOMr2-07	386 g/kg	AppDP	1.0 g/kg	DPpo	1.2 g/kg		
FOMr2/FOMr	0.61 /kg						
DVE-91	79 g/kg			**Broilers**		**Horses**	
DVE-07	101 g/kg			MEbr	10.69 MJ/kg	NEm	9.04 MJ/kg
OEB-91	-24 g/kg			MEbr	2555 kcal/kg	NEm	2160 kcal/kg
OEB-07	-59 g/kg			DPpo	1.2 g/kg	EWpa	1.012 /kg
OEB2-07	-50 g/kg					DCPho	81 g/kg
DVMET-91	1.8 g/kg						
DVLYS-91	5.0 g/kg						
DVMET-07	2.4 g/kg						
DVLYS-07	6.7 g/kg						
SW	-0.05 /kg						
VW	0.25 /kg						

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Barley 1005.000/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			102	80	-	70	71	-	-
LYS	3.6	0.3	3.7	76	2.8	66	2.4	81	3.0
MET	1.7	0.1	1.7	82	1.4	77	1.3	91	1.6
CYS	2.2	0.2	2.2	80	1.8	72	1.6	76	1.7
THR	3.4	0.2	3.5	79	2.7	64	2.2	75	2.6
TRP	1.2	0.1	1.2	77	0.9	67	0.8	79	1.0
ILE	3.5	0.2	3.6	82	2.9	73	2.6	82	2.9
ARG	4.9	0.3	5.0	84	4.2	77	3.9	78	3.9
PHE	5.0	0.3	5.1	84	4.3	79	4.0	81	4.1
HIS	2.2	0.2	2.2	82	1.8	75	1.7	79	1.8
LEU	6.9	0.3	7.0	82	5.8	76	5.3	81	5.7
TYR	3.1	0.2	3.2	83	2.6	75	2.4	75	2.4
VAL	4.9	0.3	5.0	80	4.0	71	3.6	80	4.0
ALA	4.1	0.3	4.2	72	3.0	62	2.6	75	3.1
ASP	6.0	0.5	6.1	75	4.6	64	3.9	72	4.4
GLU	23.5	1.7	23.9	89	21.3	85	20.3	87	20.8
GLY	4.0	0.2	4.1	77	3.1	58	2.4	72	2.9
PRO	10.8	0.9	11.0	91	10.1	83	9.1	83	9.1
SER	4.2	0.2	4.3	85	3.6	72	3.1	78	3.3
Sum AA	95.2		97	-	81	-	73	-	78

Fatty acids	% FA	g/kg
CFAT(h)		18.2
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.1
C16:0	23.0	2.9
C16:1	0.4	0.1
C18:0	1.0	0.1
C18:1	13.0	1.7
C:18:2	56.0	7.1
C18:3	6.0	0.8
>=C20	-	0.0
Sum FA	99.8	12.7
% FA in CFAT-fraction		70

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Barley:

1. The StaDCP of barley including endogenous phytase activity is 43%.

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Barley feed, high grade 1005.112/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	884	55	133	45	-	108	544	-
sdc	10	13	12	14	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	254	234	-	50	268	129	-	370	102
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.7	6.3	4.7	2.7	8.0	0.2	1.0	0.1	1.2
sdc	-	1.0	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	186	38	55	8	0.7	0.1	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	75	EB (meq/kg)	184	
		CF_DI	0.98	CAD (meq/kg)	100	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	78	DCCP	72	DCCP	71	DCCP	-
DCCFAT	90	DCCFATh	73	DCCFAT	75	DCCFAT	-
DCCF	35	DCCF	15	DCNFE	55	DCCF	-
DCNFE	78	DCNFE	73	DCPpo	27	DCNFE	-
DCOM	73	DCOM	65				
		DCNSPh	35	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	29	35	StaDCP	30	DCCFATh	-	DCOM	-
%DRUP	80	80	AppDCP	27	DC(S+S)	-		
%RUSTA	11	11			DCNFEh	-		
%DASH	50	50			DCPpo	27		
DASHmax	35	35						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	853 /kg	NE2015	7.43 MJ/kg	MEpo	8.27 MJ/kg	MErab	-
VEVI	891 /kg	NE2015	1777 kcal/kg	MEpo	1976 kcal/kg	MErab	-
FOM-91	497 g/kg	EW2015	0.84 /kg	MEla	8.46 MJ/kg		
FOMr-07	497 g/kg	StaDP	1.9 g/kg	MEla	2023 kcal/kg		
FOMr2-07	280 g/kg	AppDP	1.7 g/kg	DPpo	1.7 g/kg		
FOMr2/FOMr	0.56 /kg						
DVE-91	63 g/kg			**Broilers**		**Horses**	
DVE-07	75 g/kg			MEbr	-	NEm	-
OEB-91	15 g/kg			MEbr	-	NEm	-
OEB-07	-2 g/kg			DPpo	1.7 g/kg	EWpa	-
OEB2-07	-17 g/kg					DCPho	-
DVMET-91	1.6 g/kg						
DVLYS-91	4.1 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	4.9 g/kg						
SW	0.16 /kg						
VW	0.27 /kg						

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Barley feed, high grade 1005.112/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			133	68	-	60	80	-	-
LYS	4.3	0.3	5.7	68	3.9	62	3.5	71	4.0
MET	1.9	0.2	2.5	68	1.7	64	1.6	70	1.8
CYS	2.0	0.1	2.7	68	1.8	61	1.6	60	1.6
THR	3.6	0.3	4.8	68	3.2	57	2.7	67	3.2
TRP	1.1	-	1.5	68	1.0	60	0.9	64	0.9
ILE	3.5	0.2	4.6	68	3.1	61	2.8	70	3.2
ARG	5.8	0.4	7.7	68	5.2	63	4.9	62	4.8
PHE	4.3	0.1	5.7	68	3.9	63	3.6	69	3.9
HIS	1.9	0.1	2.5	68	1.7	61	1.5	63	1.6
LEU	6.6	0.1	8.8	68	5.9	63	5.5	68	6.0
TYR	3.1	-	4.1	68	2.8	62	2.5	63	2.6
VAL	5.0	0.3	6.6	68	4.5	61	4.0	68	4.5
ALA	4.8	0.2	6.4	68	4.3	61	3.9	71	4.5
ASP	6.9	0.4	9.1	68	6.2	60	5.5	68	6.2
GLU	18.1	1.1	24.0	68	16.2	63	15.2	66	15.8
GLY	4.6	0.2	6.1	68	4.1	55	3.3	67	4.1
PRO	7.2	0.7	9.5	68	6.5	57	5.5	55	5.3
SER	4.4	0.2	5.8	68	3.9	58	3.4	64	3.7
Sum AA	89.1		118	-	80	-	72	-	78

Fatty acids	% FA	g/kg
CFAT(h)		44.9
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.1
C16:0	23.0	7.2
C16:1	0.4	0.1
C18:0	1.0	0.3
C18:1	13.0	4.1
C:18:2	56.0	17.6
C18:3	6.0	1.9
>=C20	-	0.0
Sum FA	99.8	31.4
% FA in CFAT-fraction		70

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Barley feed, high grade:

1. The StaDCP of barley feed, high grade includes endogenous phytase activity.

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Barley, mill by-product 1005.105/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	886	64	118	38	-	138	529	-
sdc	5	17	11	5	-	11	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	220	202	-	23	330	166	-	442	113
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.6	4.1	3.1	1.7	7.7	0.2	1.4	0.2	1.1
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	859	57	35	6	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	75	EB (meq/kg)	165
		CF_DI	0.96	CAD (meq/kg)	83

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	73	DCCP	64	DCCP	70	DCCP	-
DCCFAT	89	DCCFATh	71	DCCFAT	74	DCCFAT	-
DCCF	35	DCCF	15	DCNFE	48	DCCF	-
DCNFE	73	DCNFE	62	DCPpo	27	DCNFE	-
DCOM	67	DCOM	55				
		DCNSPh	28	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	-	DCCP	73
%RUP	29	StaDCP	30	DCCFATh	-	DCOM	65
%DRUP	80	AppDCP	26	DC(S+S)	-		
%RUSTA	10			DCNFEh	-		
%DASH	50			DCPpo	27		
DASHmax	39						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	754 /kg	NE2015	6.18 MJ/kg	MEpo	7.01 MJ/kg	MErab	-
VEVI	765 /kg	NE2015	1478 kcal/kg	MEpo	1676 kcal/kg	MErab	-
FOM-91	460 g/kg	EW2015	0.70 /kg	MEla	7.18 MJ/kg		
FOMr-07	456 g/kg	StaDP	1.2 g/kg	MEla	1715 kcal/kg		
FOMr2-07	243 g/kg	AppDP	1.0 g/kg	DPpo	1.1 g/kg		
FOMr2/FOMr	0.53 /kg						
DVE-91	52 g/kg			**Broilers**		**Horses**	
DVE-07	61 g/kg			MEbr	-	NEm	6.70 MJ/kg
OEB-91	11 g/kg			MEbr	-	NEm	1600 kcal/kg
OEB-07	-3 g/kg			DPpo	1.1 g/kg	EWpa	0.750 /kg
OEB2-07	-13 g/kg					DCPho	86 g/kg
DVMET-91	1.4 g/kg						
DVLYS-91	3.4 g/kg						
DVMET-07	1.6 g/kg						
DVLYS-07	4.0 g/kg						
SW	0.24 /kg						
VW	0.29 /kg						

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Barley, mill by-product 1005.105/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			118	65	-	56	66	-	-
LYS	4.3	0.3	5.1	65	3.3	58	2.9	68	3.4
MET	1.9	0.2	2.2	65	1.5	61	1.4	67	1.5
CYS	2.0	0.1	2.4	65	1.5	57	1.3	57	1.3
THR	3.6	0.3	4.2	65	2.7	52	2.2	64	2.7
TRP	1.1	-	1.3	65	0.8	55	0.7	61	0.8
ILE	3.5	0.2	4.1	65	2.7	57	2.3	67	2.8
ARG	5.8	0.4	6.8	65	4.4	60	4.1	59	4.0
PHE	4.3	0.1	5.1	65	3.3	59	3.0	66	3.3
HIS	1.9	0.1	2.2	65	1.4	57	1.3	60	1.3
LEU	6.6	0.1	7.8	65	5.0	59	4.6	65	5.0
TYR	3.1	-	3.6	65	2.4	58	2.1	60	2.2
VAL	5.0	0.3	5.9	65	3.8	57	3.3	65	3.8
ALA	4.8	0.2	5.7	65	3.7	57	3.2	68	3.8
ASP	6.9	0.4	8.1	65	5.2	56	4.6	65	5.3
GLU	18.1	1.1	21.3	65	13.8	60	12.7	63	13.4
GLY	4.6	0.2	5.4	65	3.5	50	2.7	64	3.5
PRO	7.2	0.7	8.5	65	5.5	53	4.5	52	4.4
SER	4.4	0.2	5.2	64	3.3	53	2.8	61	3.2
Sum AA	89.1		105	-	68	-	60	-	66

Fatty acids	% FA	g/kg
CFAT(h)		38.0
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.1
C16:0	23.0	6.1
C16:1	0.4	0.1
C18:0	1.0	0.3
C18:1	13.0	3.5
C:18:2	56.0	14.9
C18:3	6.0	1.6
>=C20	-	0.0
Sum FA	99.8	26.5
% FA in CFAT-fraction		70

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Biscuits, ground CFATh < 120 g/kg 9011.001/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	930	24	91	103	113	6	706	696
sdc	9	4	7	10	10	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	415	399	-	115	-	-	-	192	192
sdc	46	-	-	21	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.9	1.5	0.4	0.4	2.6	3.7	3.9	0.1	0.8
sdc	0.8	0.1	-	0.1	0.4	0.9	0.8	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	41	6	8	2	-	-	-
sdc	-	1	1	1	-	-	-

IP/P	30	SUGe/SUG	100	EB (meq/kg)	120
		CF_DI	0.96	CAD (meq/kg)	63

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	75	DCCP	78	DCCP	-
DCCFAT	-	DCCFATh	91	DCCFAT	82	DCCFAT	-
DCCF	-	DCCF	16	DCNFE	91	DCCF	-
DCNFE	-	DCNFE	98	DCPpo	42	DCNFE	-
DCOM	-	DCOM	95				
		DCNSPh	92	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	82	DCCP	-
%RUP	-	-	StaDCP	50	DCCFATh	82	DCOM	-
%DRUP	-	-	AppDCP	37	DC(S+S)	98		
%RUSTA	-	-			DCNFEh	71		
%DASH	-	-			DCPpo	42		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	13.30 MJ/kg	MEpo	15.84 MJ/kg	MErab	-
VEVI	-	NE2015	3178 kcal/kg	MEpo	3787 kcal/kg	MErab	-
FOM-91	-	EW2015	1.51 /kg	MEla	16.38 MJ/kg		
FOMr-07	-	StaDP	0.7 g/kg	MEla	3915 kcal/kg		
FOMr2-07	-	AppDP	0.6 g/kg	DPpo	0.6 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	13.55 MJ/kg	NEm	-
OEB-91	-			MEbr	3238 kcal/kg	NEm	-
OEB-07	-			DPpo	0.6 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Biscuits, ground CFATh < 120 g/kg 9011.001/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			91	93	-	81	74	-	-
LYS	2.5	0.3	2.3	92	2.1	76	1.7	70	1.6
MET	1.5	0.2	1.4	93	1.3	86	1.2	81	1.1
CYS	2.1	0.1	1.9	88	1.7	78	1.5	77	1.5
THR	3.3	0.4	3.0	91	2.7	73	2.2	72	2.2
TRP	1.0	-	0.9	91	0.8	77	0.7	75	0.7
ILE	3.6	0.1	3.3	94	3.1	83	2.7	79	2.6
ARG	4.1	0.6	3.7	94	3.5	84	3.1	79	3.0
PHE	4.6	0.5	4.2	90	3.8	82	3.5	78	3.3
HIS	2.4	0.2	2.2	93	2.0	85	1.9	74	1.6
LEU	6.6	0.1	6.0	94	5.6	86	5.2	81	4.9
TYR	2.8	-	2.6	95	2.4	84	2.1	77	2.0
VAL	4.5	0.4	4.1	93	3.8	81	3.3	76	3.1
ALA	3.7	0.3	3.4	93	3.1	79	2.7	75	2.5
ASP	5.8	0.5	5.3	91	4.8	78	4.1	72	3.8
GLU	27.7	1.3	25.3	95	23.9	90	22.8	88	22.2
GLY	3.9	0.3	3.6	92	3.3	69	2.4	71	2.5
PRO	9.7	0.2	8.8	92	8.1	80	7.1	81	7.2
SER	4.7	0.3	4.3	94	4.0	80	3.4	78	3.3
Sum AA	94.5		86	-	80	-	72	-	69

Fatty acids	% FA	g/kg
CFAT(h)		112.7
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Biscuits, ground CFATh > 120 g/kg 9011.002/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	919	18	81	153	162	7	660	650
sdc	15	2	6	-	24	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	425	407	-	198	-	-	-	60	60
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.7	1.4	0.4	0.4	2.3	4.3	6.8	0.1	0.7
sdc	0.2	0.2	-	0.1	0.3	0.7	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	41	6	11	3	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	30	SUGe/SUG	100	EB (meq/kg)	55
		CF_DI	0.96	CAD (meq/kg)	4

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	74	DCCP	78	DCCP	-
DCCFAT	-		DCCFATh	92	DCCFAT	82	DCCFAT	-
DCCF	-		DCCF	16	DCNFE	91	DCCF	-
DCNFE	-		DCNFE	98	DCPpo	42	DCNFE	-
DCOM	-		DCOM	94				
			DCNSPh	67	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	81	DCCP	-
%RUP	-	-	StaDCP	50	DCCFATh	83	DCOM	-
%DRUP	-	-	AppDCP	37	DC(S+S)	98		
%RUSTA	-	-			DCNFEh	90		
%DASH	-	-			DCPpo	42		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	14.73 MJ/kg	MEpo	16.56 MJ/kg	MErab	-
VEVI	-	NE2015	3520 kcal/kg	MEpo	3958 kcal/kg	MErab	-
FOM-91	-	EW2015	1.67 /kg	MEla	17.34 MJ/kg		
FOMr-07	-	StaDP	0.7 g/kg	MEla	4143 kcal/kg		
FOMr2-07	-	AppDP	0.5 g/kg	DPpo	0.6 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	16.52 MJ/kg	NEm	-
OEB-91	-			MEbr	3948 kcal/kg	NEm	-
OEB-07	-			DPpo	0.6 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Biscuits, ground CFATh > 120 g/kg 9011.002/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			81	93	-	80	65	-	-
LYS	2.5	0.3	2.0	92	1.9	74	1.5	70	1.4
MET	1.5	0.2	1.2	93	1.1	85	1.0	81	1.0
CYS	2.1	0.1	1.7	88	1.5	77	1.3	77	1.3
THR	3.3	0.4	2.7	91	2.4	71	1.9	72	1.9
TRP	1.0	-	0.8	91	0.7	75	0.6	75	0.6
ILE	3.6	0.1	2.9	94	2.7	82	2.4	79	2.3
ARG	4.1	0.6	3.3	94	3.1	83	2.8	79	2.6
PHE	4.6	0.5	3.7	90	3.3	82	3.0	78	2.9
HIS	2.4	0.2	1.9	93	1.8	84	1.6	74	1.4
LEU	6.6	0.1	5.4	94	5.0	86	4.6	81	4.3
TYR	2.8	-	2.3	95	2.1	83	1.9	77	1.7
VAL	4.5	0.4	3.7	93	3.4	79	2.9	76	2.8
ALA	3.7	0.3	3.0	93	2.8	78	2.3	75	2.3
ASP	5.8	0.5	4.7	91	4.3	76	3.6	72	3.4
GLU	27.7	1.3	22.5	95	21.3	90	20.2	88	19.8
GLY	3.9	0.3	3.2	92	2.9	66	2.1	71	2.2
PRO	9.7	0.2	7.9	92	7.2	79	6.2	81	6.4
SER	4.7	0.3	3.8	94	3.6	79	3.0	78	3.0
Sum AA	94.5		77	-	71	-	63	-	61

Fatty acids

	% FA	g/kg
CFAT(h)		162.4
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Bloodmeal, spray dried 8002.657/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	919	17	903	-	5	7	-	-13
sdc	17	3	19	-	3	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	-6	-6
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.5	1.7	-	0.2	2.7	5.8	3.4	-	5.2
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	2383	3	36	11	-	0.8	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	225	
		CF_DI	0.96	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	86	DCCP	80	DCCP	-
DCCFAT	-	DCCFATh	2	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	80	DCCF	-
DCNFE	-	DCNFE	86	DCPpo	80	DCNFE	-
DCOM	-	DCOM	85				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	- -	StaDCP	70	DCCFATh	-	DCOM	-
%DRUP	- -	AppDCP	59	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	- -			DCPpo	80		
DASHmax	- -						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	9.00 MJ/kg	MEpo	12.85 MJ/kg	MErab	-
VEVI	-	NE2015	2152 kcal/kg	MEpo	3070 kcal/kg	MErab	-
FOM-91	-	EW2015	1.02 /kg	MEla	12.85 MJ/kg		
FOMr-07	-	StaDP	1.2 g/kg	MEla	3070 kcal/kg		
FOMr2-07	-	AppDP	1.0 g/kg	DPpo	1.3 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	1.3 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Bloodmeal, spray dried 8002.657/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			903	88	-	87	786	-	-
LYS	8.9	0.4	80.4	94	75.3	93	74.9	90	72.3
MET	1.2	0.2	10.8	88	9.5	87	9.4	89	9.6
CYS	1.2	0.2	10.8	88	9.5	86	9.3	80	8.7
THR	4.4	0.5	39.7	88	35.1	87	34.6	85	33.8
TRP	1.5	0.2	13.5	91	12.3	90	12.2	85	11.5
ILE	1.2	0.3	10.8	75	8.1	72	7.8	61	6.6
ARG	4.3	0.3	38.8	95	36.7	94	36.4	88	34.2
PHE	6.9	0.4	62.3	92	57.6	92	57.3	91	56.7
HIS	6.4	0.4	57.8	95	54.7	94	54.5	87	50.3
LEU	12.8	0.6	115.6	93	107.9	93	107.5	90	104.0
TYR	2.9	0.4	26.2	88	23.0	87	22.8	88	23.0
VAL	8.6	0.6	77.7	93	72.1	92	71.6	88	68.3
ALA	7.9	0.4	71.3	88	62.8	87	62.3	86	61.3
ASP	11.0	0.4	99.3	88	87.4	87	86.7	88	87.4
GLU	9.3	0.5	84.0	88	73.8	87	72.7	84	70.5
GLY	4.5	0.2	40.6	88	35.7	86	34.9	88	35.8
PRO	3.9	0.4	35.2	88	31.0	85	29.9	86	30.3
SER	5.0	0.3	45.1	88	39.7	87	39.1	88	39.7
Sum AA	101.9		920	-	832	-	824	-	804

Fatty acids	% FA	g/kg
CFAT(h)		5.2
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Bloodmeal, spray dried:

1. Processing this product in feeds for pigs and poultry is allowed in the EU, providing it is not originating from ruminants; processing this product in feeds for ruminants is prohibited.

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Bone meal 8005.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	948	463	402	-	51	-	-	32
sdc	14	19	11	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	32	32
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	177.7	82.3	-	3.2	2.2	6.4	10.0	-	1.8
sdc	8.4	3.5	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	467	17	117	4	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	50
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	88	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	81	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	83	DCPpo	-	DCNFE	-
DCOM	-		DCOM	87				
			DCNSPh	83	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	77	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	77	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	5.87 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	1403 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	0.67 /kg	MEla	-		
FOMr-07	-	StaDP	63.4 g/kg	MEla	-		
FOMr2-07	-	AppDP	63.2 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Bone meal 8005.000/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			402	83	-	80	322	-	-
LYS	4.4	0.6	17.7	82	14.5	80	14.2	-	-
MET	1.2	0.3	4.8	87	4.2	85	4.1	-	-
CYS	0.7	0.2	2.8	61	1.7	54	1.5	-	-
THR	2.9	0.4	11.7	88	10.2	83	9.7	-	-
TRP	0.3	-	1.2	83	1.0	72	0.9	-	-
ILE	2.5	0.4	10.0	85	8.6	82	8.2	-	-
ARG	6.3	1.2	25.3	82	20.8	81	20.4	-	-
PHE	3.0	0.5	12.1	84	10.2	82	9.9	-	-
HIS	1.4	0.3	5.6	83	4.7	80	4.5	-	-
LEU	5.2	0.7	20.9	85	17.7	82	17.2	-	-
TYR	1.8	0.4	7.2	82	5.9	78	5.7	-	-
VAL	4.0	0.5	16.1	86	13.7	82	13.2	-	-
ALA	8.4	0.6	33.8	84	28.2	82	27.7	-	-
ASP	6.9	0.4	27.7	81	22.6	79	21.8	-	-
GLU	11.5	1.3	46.2	84	38.9	82	37.8	-	-
GLY	13.6	3.9	54.6	83	45.3	81	44.4	-	-
PRO	10.2	1.6	41.0	86	35.2	83	34.2	-	-
SER	3.6	0.2	14.5	87	12.6	83	12.0	-	-
Sum AA	87.9		353	-	296	-	287	-	-

Fatty acids	% FA	g/kg
CFAT(h)		51.2
<=C10	-	0.0
C12:0	1.0	0.4
C14:0	3.0	1.2
C16:0	26.0	10.6
C16:1	3.0	1.2
C18:0	16.0	6.6
C18:1	36.0	14.7
C:18:2	7.0	2.9
C18:3	1.0	0.4
>=C20	3.0	1.2
Sum FA	96.0	39.3
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Bread (remains) 1010.612/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	897	27	124	44	54	11	691	680
sdc	18	2	7	10	9	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	520	499	-	68	47	14	3	126	80
sdc	20	-	-	12	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.7	1.9	0.6	0.6	2.7	6.8	11.3	0.2	1.1
sdc	0.1	0.2	-	-	0.3	0.6	0.9	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	45	11	16	4	0.7	0.7	-
sdc	-	-	-	-	-	-	-

IP/P	30	SUGe/SUG	100	EB (meq/kg)	44
		CF_DI	0.96	CAD (meq/kg)	-37

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	77	DCCP	79	DCCP	83	DCCP	-
DCCFAT	86	DCCFATh	87	DCCFAT	78	DCCFAT	-
DCCF	75	DCCF	16	DCNFE	91	DCCF	-
DCNFE	92	DCNFE	97	DCPpo	40	DCNFE	-
DCOM	89	DCOM	93				
		DCNSPh	77	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	85	DCCP	84
%RUP	27	StaDCP	50	DCCFATh	79	DCOM	88
%DRUP	80	AppDCP	41	DC(S+S)	98		
%RUSTA	5			DCNFEh	81		
%DASH	65			DCPpo	40		
DASHmax	25						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1141 /kg	NE2015	11.70 MJ/kg	MEpo	14.22 MJ/kg	MErab	-
VEVI	1271 /kg	NE2015	2797 kcal/kg	MEpo	3399 kcal/kg	MErab	-
FOM-91	662 g/kg	EW2015	1.33 /kg	MEla	14.47 MJ/kg		
FOMr-07	685 g/kg	StaDP	0.9 g/kg	MEla	3458 kcal/kg		
FOMr2-07	545 g/kg	AppDP	0.8 g/kg	DPpo	0.8 g/kg		
FOMr2/FOMr	0.79 /kg						
DVE-91	85 g/kg			**Broilers**		**Horses**	
DVE-07	108 g/kg			MEbr	13.11 MJ/kg	NEm	10.14 MJ/kg
OEB-91	-13 g/kg			MEbr	3133 kcal/kg	NEm	2424 kcal/kg
OEB-07	-48 g/kg			DPpo	0.8 g/kg	EWpa	1.136 /kg
OEB2-07	-74 g/kg					DCPho	104 g/kg
DVMET-91	1.9 g/kg						
DVLYS-91	5.2 g/kg						
DVMET-07	2.5 g/kg						
DVLYS-07	7.0 g/kg						
SW	-0.22 /kg						
VW	0.26 /kg						

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Bread (remains) 1010.612/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			124	93	-	84	104	-	-
LYS	2.5	0.3	3.1	92	2.8	80	2.5	70	2.2
MET	1.5	0.2	1.9	93	1.7	88	1.6	81	1.5
CYS	2.1	0.1	2.6	88	2.3	81	2.1	77	2.0
THR	3.3	0.4	4.1	92	3.7	79	3.2	72	2.9
TRP	1.0	-	1.2	91	1.1	81	1.0	75	0.9
ILE	3.6	0.1	4.4	94	4.2	86	3.8	79	3.5
ARG	4.1	0.6	5.1	94	4.8	87	4.4	79	4.0
PHE	4.6	0.5	5.7	90	5.1	85	4.8	78	4.4
HIS	2.4	0.2	3.0	93	2.7	87	2.6	74	2.2
LEU	6.6	0.1	8.2	94	7.6	89	7.2	81	6.6
TYR	2.8	-	3.5	95	3.3	87	3.0	77	2.7
VAL	4.5	0.4	5.6	93	5.2	84	4.7	76	4.2
ALA	3.7	0.3	4.6	93	4.2	83	3.8	75	3.4
ASP	5.8	0.5	7.2	91	6.6	82	5.9	72	5.2
GLU	27.7	1.3	34.2	95	32.4	92	31.4	88	30.1
GLY	3.9	0.3	4.8	93	4.5	76	3.7	71	3.4
PRO	9.7	0.2	12.0	92	11.0	83	10.0	81	9.7
SER	4.7	0.3	5.8	95	5.5	84	4.9	78	4.5
Sum AA	94.5		117	-	109	-	101	-	94

Fatty acids

	% FA	g/kg
CFAT(h)		54.5
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Brewer's grains, dried 1005.301/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	915	46	248	67	70	132	423	420
sdc	31	5	32	5	2	16	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	49	40	-	9	496	199	-	506	11
sdc	25	-	-	-	77	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	3.5	4.6	3.0	1.8	0.5	0.1	0.1	0.2	2.3
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	253	39	66	20	-	-	0.1
sdc	-	-	33	3	-	-	-

IP/P	65	SUGe/SUG	50	EB (meq/kg)	16	
		CF_DI	0.96	CAD (meq/kg)	-138	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	75	DCCP	71	DCCP	-	DCCP	-
DCCFAT	85	DCCFATh	58	DCCFAT	-	DCCFAT	-
DCCF	43	DCCF	26	DCNFE	-	DCCF	-
DCNFE	64	DCNFE	41	DCPpo	-	DCNFE	-
DCOM	65	DCOM	48				
		DCNSPh	31	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	69
%RUP	49 58	StaDCP	35	DCCFATh	-	DCOM	55
%DRUP	93 93	AppDCP	31	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	50 50			DCPpo	-		
DASHmax	30 30						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	821 /kg	NE2015	5.70 MJ/kg	MEpo	-	MErab	-
VEVI	823 /kg	NE2015	1361 kcal/kg	MEpo	-	MErab	-
FOM-91	382 g/kg	EW2015	0.65 /kg	MEla	-		
FOMr-07	324 g/kg	StaDP	1.6 g/kg	MEla	-		
FOMr2-07	77 g/kg	AppDP	1.4 g/kg	DPpo	-		
FOMr2/FOMr	0.24 /kg						
DVE-91	137 g/kg			**Broilers**		**Horses**	
DVE-07	139 g/kg			MEbr	-	NEm	6.13 MJ/kg
OEB-91	57 g/kg			MEbr	-	NEm	1465 kcal/kg
OEB-07	58 g/kg			DPpo	-	EWpa	0.686 /kg
OEB2-07	14 g/kg					DCPho	171 g/kg
DVMET-91	3.0 g/kg						
DVLYS-91	6.2 g/kg						
DVMET-07	3.0 g/kg						
DVLYS-07	6.0 g/kg						
SW	0.37 /kg						
VW	0.29 /kg						

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Brewer's grains, dried 1005.301/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			248	74	-	70	172	-	-
LYS	3.8	0.6	9.4	77	7.2	73	6.9	-	-
MET	1.9	0.2	4.7	84	4.0	82	3.9	-	-
CYS	1.9	0.3	4.7	74	3.5	70	3.3	-	-
THR	3.7	0.3	9.2	79	7.2	73	6.7	-	-
TRP	1.2	0.2	3.0	79	2.3	75	2.2	-	-
ILE	4.0	0.2	9.9	85	8.4	81	8.1	-	-
ARG	4.9	0.8	12.1	91	11.0	88	10.7	-	-
PHE	5.0	0.9	12.4	87	10.8	84	10.5	-	-
HIS	2.3	0.2	5.7	81	4.6	78	4.4	-	-
LEU	7.9	1.7	19.6	83	16.2	81	15.8	-	-
TYR	3.1	0.7	7.7	91	7.0	87	6.7	-	-
VAL	5.4	0.4	13.4	82	11.0	78	10.5	-	-
ALA	5.3	0.7	13.1	74	9.7	71	9.3	-	-
ASP	6.8	0.7	16.8	74	12.4	70	11.7	-	-
GLU	18.4	3.5	45.6	74	33.6	71	32.6	-	-
GLY	4.0	0.3	9.9	74	7.3	65	6.5	-	-
PRO	8.9	0.7	22.0	74	16.3	69	15.3	-	-
SER	4.3	0.3	10.6	74	7.9	68	7.3	-	-
Sum AA	92.8		230	-	180	-	172	-	-

Fatty acids	% FA	g/kg
CFAT(h)		66.7
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Brewer's yeast, dried 9001.315/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	924	65	459	8	26	18	375	357
sdc	22	7	36	4	-	16	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	92	68	-	27	-	-	-	282	282
sdc	38	-	-	8	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.0	10.6	-	1.8	18.1	3.3	1.6	0.3	2.9
sdc	-	1.2	-	-	1.7	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	77	8	105	7	1.1	-	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	25	EB (meq/kg)	561
		CF_DI	0.94	CAD (meq/kg)	360

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	82		DCCP	79	DCCP	83	DCCP	-
DCCFAT	53		DCCFATh	49	DCCFAT	57	DCCFAT	-
DCCF	-		DCCF	92	DCNFE	55	DCCF	-
DCNFE	80		DCNFE	98	DCPpo	-	DCNFE	-
DCOM	79		DCOM	86				
			DCNSPh	97	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	55	60	StaDCP	50	DCCFATh	-	DCOM	-
%DRUP	75	75	AppDCP	48	DC(S+S)	-		
%RUSTA	10	8			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	52	52						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	909 /kg	NE2015	8.56 MJ/kg	MEpo	10.84 MJ/kg	MErab	-
VEVI	936 /kg	NE2015	2045 kcal/kg	MEpo	2590 kcal/kg	MErab	-
FOM-91	389 g/kg	EW2015	0.97 /kg	MEla	10.92 MJ/kg		
FOMr-07	404 g/kg	StaDP	5.3 g/kg	MEla	2611 kcal/kg		
FOMr2-07	133 g/kg	AppDP	5.1 g/kg	DPpo	-		
FOMr2/FOMr	0.33 /kg						
DVE-91	233 g/kg			**Broilers**		**Horses**	
DVE-07	228 g/kg			MEbr	-	NEm	-
OEB-91	118 g/kg			MEbr	-	NEm	-
OEB-07	126 g/kg			DPpo	-	EWpa	-
OEB2-07	22 g/kg					DCPho	-
DVMET-91	4.2 g/kg						
DVLYS-91	16.1 g/kg						
DVMET-07	4.1 g/kg						
DVLYS-07	15.8 g/kg						
SW	0.23 /kg						
VW	0.27 /kg						

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Brewer's yeast, dried 9001.315/0/0

Amino acids	g/16g N			Ileal digestible AA pigs				Standardized ileal digestible AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			459	85	-	83	381	-	-
LYS	6.7	0.8	30.7	88	27.2	87	26.8	90	27.7
MET	1.6	0.1	7.3	82	6.0	80	5.9	84	6.2
CYS	1.1	0.2	5.0	69	3.5	66	3.3	80	4.0
THR	4.8	0.5	22.0	83	18.3	81	17.7	81	17.8
TRP	1.2	0.1	5.5	85	4.7	83	4.6	86	4.7
ILE	4.6	0.4	21.1	84	17.7	82	17.4	85	17.9
ARG	4.4	0.7	20.2	92	18.5	90	18.1	88	17.8
PHE	4.2	0.3	19.3	86	16.6	85	16.3	86	16.6
HIS	2.1	0.2	9.6	84	8.1	83	8.0	82	7.9
LEU	6.8	0.4	31.2	85	26.7	84	26.2	85	26.5
TYR	3.3	0.4	15.1	89	13.4	87	13.1	87	13.2
VAL	5.3	0.4	24.3	85	20.6	83	20.1	84	20.4
ALA	6.3	0.5	28.9	86	24.7	84	24.3	88	25.4
ASP	9.0	1.0	41.3	86	35.5	84	34.8	85	35.1
GLU	12.6	1.3	57.8	89	51.5	87	50.4	88	50.9
GLY	4.5	0.3	20.6	85	17.6	81	16.8	85	17.5
PRO	4.1	0.7	18.8	90	17.0	85	15.9	85	16.0
SER	5.0	0.4	22.9	85	19.4	82	18.8	82	18.8
Sum AA	87.6		402	-	347	-	339	-	344

Fatty acids

	% FA	g/kg
CFAT(h)		25.9
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Canary seed 1009.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	874	55	150	56	-	68	545	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	422	405	-	13	-	-	-	195	195
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.4	4.5	2.9	1.5	3.6	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	95	49	31	5	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	65	SUGe/SUG	60	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	78	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	78	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	4	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	84	DCPpo	-	DCNFE	-
DCOM	-		DCOM	76				
			DCNSPh	22	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	35	DCCFATh	-	DCOM	-
%DRUP	80	-	AppDCP	31	DC(S+S)	-		
%RUSTA	10	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	9.25 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	2210 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.05 /kg	MEla	-		
FOMr-07	-	StaDP	1.6 g/kg	MEla	-		
FOMr2-07	-	AppDP	1.4 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Canary seed 1009.000/0/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			150	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids

	% FA	g/kg
CFAT(h)		55.9
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Carob pods 7008.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	897	30	42	8	-	67	749	-
sdc	50	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	32	-	-	421	252	-	-	411	159
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	4.0	0.5	0.0	0.6	8.3	0.1	1.8	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	31	8	6	3	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	5	SUGe/SUG	90	EB (meq/kg)	167
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	2		DCCP	-2	DCCP	-	DCCP	-
DCCFAT	62		DCCFATh	34	DCCFAT	-	DCCFAT	-
DCCF	47		DCCF	21	DCNFE	-	DCCF	-
DCNFE	80		DCNFE	74	DCPpo	-	DCNFE	-
DCOM	73		DCOM	66				
			DCNSPh	39	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	34	36	StaDCP	65	DCCFATh	-	DCOM	67
%DRUP	80	80	AppDCP	32	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	21	21						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	785 /kg	NE2015	6.89 MJ/kg	MEpo	-	MErab	-
VEVI	819 /kg	NE2015	1646 kcal/kg	MEpo	-	MErab	-
FOM-91	614 g/kg	EW2015	0.78 /kg	MEla	-		
FOMr-07	618 g/kg	StaDP	0.3 g/kg	MEla	-		
FOMr2-07	437 g/kg	AppDP	0.2 g/kg	DPpo	-		
FOMr2/FOMr	0.71 /kg						
DVE-91	53 g/kg			**Broilers**		**Horses**	
DVE-07	61 g/kg			MEbr	-	NEm	6.99 MJ/kg
OEB-91	-66 g/kg			MEbr	-	NEm	1670 kcal/kg
OEB-07	-79 g/kg			DPpo	-	EWpa	0.783 /kg
OEB2-07	-64 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-0.12 /kg						
VW	0.26 /kg						

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Carob pods 7008.000/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			42	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		8.1
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Casein 8010.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	916	32	872	-	11	-	-	2
sdc	20	18	19	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	2	2
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.8	5.3	-	0.2	1.2	0.5	1.6	-	6.5
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	34	6	37	1	-	-	-
sdc	24	-	14	1	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	7
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	95		DCCP	95	DCCP	-	DCCP	-
DCCFAT	79		DCCFATh	48	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	95		DCNFE	95	DCPpo	-	DCNFE	-
DCOM	95		DCOM	95				
			DCNSPh	95	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	15	15	StaDCP	85	DCCFATh	-	DCOM	-
%DRUP	90	90	AppDCP	82	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	29	29						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1176 /kg	NE2015	9.91 MJ/kg	MEpo	-	MErab	-
VEVI	1245 /kg	NE2015	2367 kcal/kg	MEpo	-	MErab	-
FOM-91	700 g/kg	EW2015	1.13 /kg	MEla	-		
FOMr-07	743 g/kg	StaDP	4.5 g/kg	MEla	-		
FOMr2-07	615 g/kg	AppDP	4.3 g/kg	DPpo	-		
FOMr2/FOMr	0.83 /kg						
DVE-91	191 g/kg			**Broilers**		**Horses**	
DVE-07	163 g/kg			MEbr	-	NEm	-
OEB-91	624 g/kg			MEbr	-	NEm	-
OEB-07	664 g/kg			DPpo	-	EWpa	-
OEB2-07	552 g/kg					DCPho	-
DVMET-91	5.6 g/kg						
DVLYS-91	15.2 g/kg						
DVMET-07	4.8 g/kg						
DVLYS-07	13.0 g/kg						
SW	0.29 /kg						
VW	0.26 /kg						

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Casein 8010.000/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			872	97	-	96	838	-	-
LYS	8.0	0.4	69.8	98	68.7	98	68.3	-	-
MET	3.0	0.1	26.2	99	25.8	98	25.7	-	-
CYS	0.4	0.1	3.5	92	3.2	86	3.0	-	-
THR	4.3	0.2	37.5	96	35.9	94	35.4	-	-
TRP	1.3	0.1	11.3	98	11.1	97	11.0	-	-
ILE	5.2	0.2	45.3	96	43.5	95	43.1	-	-
ARG	3.6	0.3	31.4	99	31.1	98	30.8	-	-
PHE	5.2	0.1	45.3	99	45.0	99	44.8	-	-
HIS	3.1	0.1	27.0	99	26.6	98	26.5	-	-
LEU	9.7	0.3	84.6	99	83.5	98	83.1	-	-
TYR	5.6	0.5	48.8	100	48.7	99	48.5	-	-
VAL	6.7	0.4	58.4	96	56.2	95	55.8	-	-
ALA	3.2	0.3	27.9	97	27.0	95	26.6	-	-
ASP	7.3	0.4	63.6	98	62.1	97	61.4	-	-
GLU	22.0	0.9	191.8	97	185.4	96	184.3	-	-
GLY	2.0	0.2	17.4	99	17.3	94	16.5	-	-
PRO	11.2	1.1	97.7	99	96.6	98	95.6	-	-
SER	5.7	0.3	49.7	92	45.8	91	45.2	-	-
Sum AA	107.5		937	-	914	-	906	-	-

Fatty acids	% FA	g/kg
CFAT(h)		11.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Chicory pulp, dried 4015.209/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	897	74	83	17	-	192	531	-
sdc	15	17	5	6	-	15	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	158	6	-	85	410	217	12	635	226
sdc	8	-	-	22	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	10.9	1.2	-	1.0	5.3	0.8	0.4	0.5	0.4
sdc	2.9	0.4	-	0.2	1.0	0.4	0.1	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	950	34	31	6	0.8	-	0.2
sdc	297	3	4	1	-	-	0.0

IP/P	-	SUGe/SUG	-	EB (meq/kg)	159	
		CF_DI	0.96	CAD (meq/kg)	99	

Digestibility coëfficients (%)

Ruminants			**Pigs**			**Roosters/Laying hens**			**Rabbits**	
DCCP	56		DCCP	-		DCCP	-		DCCP	-
DCCFAT	76		DCCFATh	-		DCCFAT	-		DCCFAT	-
DCCF	82		DCCF	-		DCNFE	-		DCCF	-
DCNFE	90		DCNFE	-		DCPpo	-		DCNFE	-
DCOM	84		DCOM	-						
			DCNSPh	-		**Broilers**			**Horses**	
DVE	**1991**	**2007**	DCiSTA	-		DCCP	-		DCCP	-
%RUP	53	53	StaDCP	-		DCCFATh	-		DCOM	-
%DRUP	85	85	AppDCP	-		DC(S+S)	-			
%RUSTA	-	-				DCNFEh	-			
%DASH	35	35				DCPpo	-			
DASHmax	32	32								

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	908 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	975 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	634 g/kg	EW2015	-	MEla	-		
FOMr-07	559 g/kg	StaDP	-	MEla	-		
FOMr2-07	195 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.35 /kg						
DVE-91	88 g/kg			**Broilers**		**Horses**	
DVE-07	88 g/kg			MEbr	-	NEm	-
OEB-91	-61 g/kg			MEbr	-	NEm	-
OEB-07	-61 g/kg			DPpo	-	EWpa	-
OEB2-07	-19 g/kg					DCPho	-
DVMET-91	1.9 g/kg						
DVLYS-91	6.0 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	6.0 g/kg						
SW	0.37 /kg						
VW	0.31 /kg						

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Chicory pulp, dried 4015.209/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			83	-	-	-	-	-	-
LYS	5.0	-	4.1	-	-	-	-	-	-
MET	1.4	-	1.2	-	-	-	-	-	-
CYS	0.8	-	0.7	-	-	-	-	-	-
THR	3.5	-	2.9	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	3.4	-	2.8	-	-	-	-	-	-
ARG	6.4	-	5.3	-	-	-	-	-	-
PHE	3.0	-	2.5	-	-	-	-	-	-
HIS	1.8	-	1.5	-	-	-	-	-	-
LEU	5.5	-	4.6	-	-	-	-	-	-
TYR	2.0	-	1.7	-	-	-	-	-	-
VAL	4.4	-	3.6	-	-	-	-	-	-
ALA	3.6	-	3.0	-	-	-	-	-	-
ASP	6.8	-	5.6	-	-	-	-	-	-
GLU	8.2	-	6.8	-	-	-	-	-	-
GLY	3.5	-	2.9	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	3.5	-	2.9	-	-	-	-	-	-
Sum AA	62.8		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		16.6
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Citrus pulp 6022.305/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	912	66	64	21	23	127	636	633
sdc	6	8	5	3	3	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	73	10	-	178	236	176	13	579	344
sdc	33	-	-	39	59	32	3	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	14.9	1.0	0.4	1.2	9.5	0.4	0.4	0.4	0.4
sdc	1.8	0.2	-	0.2	-	0.3	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	123	10	9	6	0.3	0.1	-
sdc	32	4	2	1	-	-	-

IP/P	40	SUGe/SUG	90	EB (meq/kg)	251
		CF_DI	0.97	CAD (meq/kg)	206

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	49		DCCP	34	DCCP	-	DCCP	70
DCCFAT	80		DCCFATh	42	DCCFAT	-	DCCFAT	80
DCCF	78		DCCF	69	DCNFE	-	DCCF	82
DCNFE	91		DCNFE	86	DCPpo	-	DCNFE	90
DCOM	86		DCOM	78				
			DCNSPh	78	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	45
%RUP	36	36	StaDCP	35	DCCFATh	-	DCOM	79
%DRUP	91	91	AppDCP	16	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	35	35			DCPpo	-		
DASHmax	29	29						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	969 /kg	NE2015	7.32 MJ/kg	MEpo	-	MErab	12.95 MJ/kg
VEVI	1056 /kg	NE2015	1749 kcal/kg	MEpo	-	MErab	3094 kcal/kg
FOM-91	684 g/kg	EW2015	0.83 /kg	MEla	-		
FOMr-07	625 g/kg	StaDP	0.3 g/kg	MEla	-		
FOMr2-07	304 g/kg	AppDP	0.2 g/kg	DPpo	-		
FOMr2/FOMr	0.49 /kg						
DVE-91	77 g/kg			**Broilers**		**Horses**	
DVE-07	79 g/kg			MEbr	-	NEm	7.95 MJ/kg
OEB-91	-64 g/kg			MEbr	-	NEm	1901 kcal/kg
OEB-07	-70 g/kg			DPpo	-	EWpa	0.891 /kg
OEB2-07	-25 g/kg					DCPho	29 g/kg
DVMET-91	1.7 g/kg						
DVLYS-91	4.9 g/kg						
DVMET-07	1.8 g/kg						
DVLYS-07	5.3 g/kg						
SW	0.21 /kg						
VW	0.29 /kg						

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Citrus pulp 6022.305/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			64	37	-	21	13	-	-
LYS	2.6	0.2	1.7	37	0.6	16	0.3	-	-
MET	1.0	0.1	0.6	38	0.2	22	0.1	-	-
CYS	1.3	0.2	0.8	38	0.3	15	0.1	-	-
THR	2.9	0.2	1.8	37	0.7	8	0.1	-	-
TRP	0.8	0.1	0.5	38	0.2	13	0.1	-	-
ILE	2.8	0.2	1.8	37	0.7	19	0.3	-	-
ARG	3.6	0.6	2.3	38	0.9	22	0.5	-	-
PHE	3.6	0.4	2.3	37	0.9	24	0.6	-	-
HIS	1.8	0.4	1.1	37	0.4	23	0.3	-	-
LEU	5.1	0.3	3.2	37	1.2	24	0.8	-	-
TYR	2.2	0.2	1.4	37	0.5	18	0.3	-	-
VAL	3.8	0.4	2.4	38	0.9	18	0.4	-	-
ALA	4.0	0.2	2.5	38	1.0	20	0.5	-	-
ASP	9.6	0.6	6.1	37	2.3	26	1.6	-	-
GLU	8.3	0.9	5.3	36	1.9	16	0.8	-	-
GLY	4.0	0.2	2.5	37	0.9	5	0.1	-	-
PRO	8.7	1.5	5.5	37	2.1	19	1.1	-	-
SER	3.7	0.2	2.4	37	0.9	12	0.3	-	-
Sum AA	69.8		44	-	17	-	8	-	-

Fatty acids	% FA	g/kg
CFAT(h)		20.6
<=C10	-	0.0
C12:0	0.8	0.1
C14:0	0.8	0.1
C16:0	27.0	3.1
C16:1	-	0.0
C18:0	5.0	0.6
C18:1	25.0	2.8
C:18:2	36.0	4.1
C18:3	6.0	0.7
>=C20	-	0.0
Sum FA	100.6	11.4
% FA in CFAT-fraction		55

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Copra cake-CFAT < 100 g/kg 3015.401/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	907	61	204	85	89	113	444	440
sdc	16	2	6	8	-	11	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	14	11	-	100	456	233	54	449	-7
sdc	-	-	-	9	54	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.8	5.5	2.8	3.1	21.2	0.6	6.2	0.4	1.5
sdc	0.2	0.2	-	0.2	1.2	0.1	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	500	71	46	32	-	-	0.2
sdc	-	-	-	3	-	-	-

IP/P	50	SUGe/SUG	80	EB (meq/kg)	395	
		CF_DI	0.97	CAD (meq/kg)	281	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	72	DCCP	63	DCCP	71	DCCP	58
DCCFAT	97	DCCFATh	87	DCCFAT	89	DCCFAT	90
DCCF	66	DCCF	73	DCNFE	25	DCCF	59
DCNFE	87	DCNFE	86	DCPpo	48	DCNFE	65
DCOM	82	DCOM	79				
		DCNSPh	79	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	74
%RUP	60 67	StaDCP	27	DCCFATh	-	DCOM	81
%DRUP	92 92	AppDCP	24	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	65 65			DCPpo	48		
DASHmax	50 50						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1066 /kg	NE2015	9.05 MJ/kg	MEpo	7.46 MJ/kg	MErab	11.16 MJ/kg
VEVI	1152 /kg	NE2015	2164 kcal/kg	MEpo	1784 kcal/kg	MErab	2668 kcal/kg
FOM-91	483 g/kg	EW2015	1.03 /kg	MEla	7.90 MJ/kg		
FOMr-07	424 g/kg	StaDP	1.5 g/kg	MEla	1889 kcal/kg		
FOMr2-07	169 g/kg	AppDP	1.3 g/kg	DPpo	2.6 g/kg		
FOMr2/FOMr	0.40 /kg						
DVE-91	158 g/kg			**Broilers**		**Horses**	
DVE-07	158 g/kg			MEbr	-	NEm	8.48 MJ/kg
OEB-91	-5 g/kg			MEbr	-	NEm	2026 kcal/kg
OEB-07	-5 g/kg			DPpo	2.6 g/kg	EWpa	0.949 /kg
OEB2-07	-4 g/kg					DCPho	151 g/kg
DVMET-91	2.9 g/kg						
DVLYS-91	5.9 g/kg						
DVMET-07	2.9 g/kg						
DVLYS-07	5.9 g/kg						
SW	0.28 /kg						
VW	0.28 /kg						

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Copra cake-CFAT < 100 g/kg 3015.401/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			204	57	-	52	106	-	-
LYS	2.5	0.3	5.1	58	2.9	51	2.6	60	3.1
MET	1.5	0.1	3.1	58	1.8	55	1.7	68	2.1
CYS	1.5	0.1	3.1	58	1.8	52	1.6	62	1.9
THR	3.0	0.1	6.1	58	3.5	49	3.0	62	3.8
TRP	0.7	0.1	1.4	58	0.8	49	0.7	67	1.0
ILE	3.2	0.2	6.5	58	3.8	53	3.4	69	4.5
ARG	10.9	0.7	22.2	58	12.9	56	12.5	71	15.8
PHE	4.2	0.3	8.5	58	4.9	54	4.6	68	5.8
HIS	1.8	0.1	3.7	58	2.1	53	2.0	62	2.3
LEU	6.2	0.2	12.6	58	7.3	54	6.9	69	8.7
TYR	2.4	0.1	4.9	58	2.8	52	2.6	65	3.2
VAL	4.8	0.2	9.8	58	5.7	53	5.2	69	6.7
ALA	4.2	0.2	8.5	58	4.9	53	4.5	67	5.7
ASP	7.9	0.3	16.1	58	9.3	53	8.6	62	10.0
GLU	18.2	0.8	37.0	58	21.4	55	20.3	64	23.7
GLY	4.2	0.2	8.5	58	4.9	48	4.1	64	5.5
PRO	3.5	0.2	7.1	57	4.1	43	3.1	57	4.1
SER	4.2	0.2	8.5	58	4.9	51	4.3	62	5.3
Sum AA	84.9		173	-	100	-	92	-	113

Fatty acids	% FA	g/kg
CFAT(h)		84.9
<=C10	13.0	8.3
C12:0	48.0	30.6
C14:0	18.0	11.5
C16:0	9.0	5.7
C16:1	-	0.0
C18:0	3.0	1.9
C18:1	7.0	4.5
C:18:2	2.0	1.3
C18:3	-	0.0
>=C20	-	0.0
Sum FA	100.0	63.7
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Copra cake-CFAT > 100 g/kg 3015.401/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	941	63	210	122	126	127	420	415
sdc	9	2	6	9	-	16	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	14	11	-	75	457	237	52	463	6
sdc	-	-	-	17	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.0	5.4	2.7	3.1	21.1	0.8	6.2	0.5	1.5
sdc	0.3	0.4	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	505	71	46	29	-	-	-
sdc	-	-	-	2	-	-	-

IP/P	50	SUGe/SUG	80	EB (meq/kg)	401	
		CF_DI	0.97	CAD (meq/kg)	277	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	72		DCCP	63	DCCP	71	DCCP	58
DCCFAT	97		DCCFATh	88	DCCFAT	90	DCCFAT	90
DCCF	66		DCCF	73	DCNFE	25	DCCF	59
DCNFE	87		DCNFE	85	DCPpo	48	DCNFE	65
DCOM	82		DCOM	79				
			DCNSPh	79	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	69
%RUP	60	67	StaDCP	27	DCCFATh	-	DCOM	82
%DRUP	92	92	AppDCP	24	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	48		
DASHmax	51	51						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1191 /kg	NE2015	10.11 MJ/kg	MEpo	8.76 MJ/kg	MErab	12.34 MJ/kg
VEVI	1297 /kg	NE2015	2417 kcal/kg	MEpo	2094 kcal/kg	MErab	2949 kcal/kg
FOM-91	471 g/kg	EW2015	1.15 /kg	MEla	9.40 MJ/kg		
FOMr-07	413 g/kg	StaDP	1.5 g/kg	MEla	2246 kcal/kg		
FOMr2-07	153 g/kg	AppDP	1.3 g/kg	DPpo	2.6 g/kg		
FOMr2/FOMr	0.37 /kg						
DVE-91	160 g/kg			**Broilers**		**Horses**	
DVE-07	161 g/kg			MEbr	-	NEm	9.31 MJ/kg
OEB-91	-1 g/kg			MEbr	-	NEm	2224 kcal/kg
OEB-07	-1 g/kg			DPpo	2.6 g/kg	EWpa	1.042 /kg
OEB2-07	0 g/kg					DCPho	145 g/kg
DVMET-91	2.9 g/kg						
DVLYS-91	5.9 g/kg						
DVMET-07	2.9 g/kg						
DVLYS-07	5.9 g/kg						
SW	0.33 /kg						
VW	0.30 /kg						

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Copra cake-CFAT > 100 g/kg 3015.401/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			210	57	-	52	109	-	-
LYS	2.5	0.3	5.3	58	3.0	51	2.7	60	3.2
MET	1.5	0.1	3.2	58	1.8	55	1.7	68	2.1
CYS	1.5	0.1	3.2	58	1.8	52	1.6	62	2.0
THR	3.0	0.1	6.3	58	3.6	49	3.1	62	3.9
TRP	0.7	0.1	1.5	58	0.9	49	0.7	67	1.0
ILE	3.2	0.2	6.7	58	3.9	53	3.5	69	4.6
ARG	10.9	0.7	22.9	58	13.3	56	12.9	71	16.3
PHE	4.2	0.3	8.8	58	5.1	54	4.8	68	6.0
HIS	1.8	0.1	3.8	58	2.2	53	2.0	62	2.3
LEU	6.2	0.2	13.0	58	7.5	54	7.1	69	9.0
TYR	2.4	0.1	5.0	58	2.9	52	2.6	65	3.3
VAL	4.8	0.2	10.1	58	5.8	53	5.3	69	7.0
ALA	4.2	0.2	8.8	58	5.1	53	4.7	67	5.9
ASP	7.9	0.3	16.6	58	9.6	53	8.9	62	10.3
GLU	18.2	0.8	38.3	58	22.1	55	21.0	64	24.5
GLY	4.2	0.2	8.8	58	5.1	48	4.3	64	5.7
PRO	3.5	0.2	7.4	57	4.2	43	3.2	57	4.2
SER	4.2	0.2	8.8	58	5.1	51	4.5	62	5.5
Sum AA	84.9		179	-	103	-	95	-	117

Fatty acids	% FA	g/kg
CFAT(h)		121.7
<=C10	13.0	11.9
C12:0	48.0	43.8
C14:0	18.0	16.4
C16:0	9.0	8.2
C16:1	-	0.0
C18:0	3.0	2.7
C18:1	7.0	6.4
C:18:2	2.0	1.8
C18:3	-	0.0
>=C20	-	0.0
Sum FA	100.0	91.3
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Copra meal 3015.407/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	910	69	227	23	27	129	462	458
sdc	5	1	4	4	-	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	14	9	-	77	464	242	64	507	43
sdc	-	-	-	30	30	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.5	5.7	2.8	3.3	21.0	0.6	6.3	0.5	1.6
sdc	-	0.3	-	-	-	-	0.7	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	501	60	54	31	0.6	1.3	0.2
sdc	-	-	-	-	-	-	-

IP/P	50	SUGe/SUG	80	EB (meq/kg)	388	
		CF_DI	0.97	CAD (meq/kg)	254	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	74		DCCP	64	DCCP	71	DCCP	-
DCCFAT	90		DCCFATh	75	DCCFAT	75	DCCFAT	-
DCCF	66		DCCF	73	DCNFE	26	DCCF	-
DCNFE	87		DCNFE	85	DCPpo	48	DCNFE	-
DCOM	80		DCOM	77				
			DCNSPh	79	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	77
%RUP	60	67	StaDCP	27	DCCFATh	-	DCOM	80
%DRUP	92	92	AppDCP	24	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	48		
DASHmax	56	56						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	904 /kg	NE2015	7.35 MJ/kg	MEpo	5.66 MJ/kg	MErab	-
VEVI	952 /kg	NE2015	1757 kcal/kg	MEpo	1354 kcal/kg	MErab	-
FOM-91	515 g/kg	EW2015	0.84 /kg	MEla	5.77 MJ/kg		
FOMr-07	454 g/kg	StaDP	1.5 g/kg	MEla	1378 kcal/kg		
FOMr2-07	177 g/kg	AppDP	1.4 g/kg	DPpo	2.7 g/kg		
FOMr2/FOMr	0.39 /kg						
DVE-91	174 g/kg			**Broilers**		**Horses**	
DVE-07	174 g/kg			MEbr	-	NEm	7.53 MJ/kg
OEB-91	-1 g/kg			MEbr	-	NEm	1799 kcal/kg
OEB-07	-1 g/kg			DPpo	2.7 g/kg	EWpa	0.843 /kg
OEB2-07	-2 g/kg					DCPho	175 g/kg
DVMET-91	3.2 g/kg						
DVLYS-91	6.5 g/kg						
DVMET-07	3.2 g/kg						
DVLYS-07	6.4 g/kg						
SW	0.32 /kg						
VW	0.29 /kg						

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Copra meal 3015.407/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			227	57	-	53	119	-	-
LYS	2.5	0.3	5.7	58	3.3	52	2.9	60	3.4
MET	1.5	0.1	3.4	58	2.0	55	1.9	68	2.3
CYS	1.5	0.1	3.4	58	2.0	52	1.8	62	2.1
THR	3.0	0.1	6.8	58	3.9	50	3.4	62	4.2
TRP	0.7	0.1	1.6	58	0.9	50	0.8	67	1.1
ILE	3.2	0.2	7.3	58	4.2	53	3.9	69	5.0
ARG	10.9	0.7	24.8	58	14.3	57	14.0	71	17.6
PHE	4.2	0.3	9.5	58	5.5	55	5.2	68	6.5
HIS	1.8	0.1	4.1	58	2.4	54	2.2	62	2.5
LEU	6.2	0.2	14.1	58	8.1	55	7.7	69	9.7
TYR	2.4	0.1	5.5	58	3.2	53	2.9	65	3.5
VAL	4.8	0.2	10.9	58	6.3	53	5.8	69	7.5
ALA	4.2	0.2	9.5	58	5.5	53	5.1	67	6.4
ASP	7.9	0.3	17.9	58	10.4	54	9.7	62	11.1
GLU	18.2	0.8	41.3	58	23.9	55	22.8	64	26.5
GLY	4.2	0.2	9.5	58	5.5	49	4.7	64	6.1
PRO	3.5	0.2	7.9	58	4.6	45	3.6	57	4.5
SER	4.2	0.2	9.5	58	5.5	51	4.9	62	5.9
Sum AA	84.9		193	-	111	-	103	-	126

Fatty acids	% FA	g/kg
CFAT(h)		23.3
<=C10	13.0	2.0
C12:0	48.0	7.3
C14:0	18.0	2.7
C16:0	9.0	1.4
C16:1	-	0.0
C18:0	3.0	0.5
C18:1	7.0	1.1
C:18:2	2.0	0.3
C18:3	-	0.0
>=C20	-	0.0
Sum FA	100.0	15.1
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Cotton seed meal, expeller-dehulled, CF < 140 g/kg 3018.401/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	932	63	416	105	-	129	219	-
sdc	24	6	34	20	-	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	36	11	-	39	265	169	-	300	35
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.4	11.2	8.4	5.2	14.7	0.1	0.3	0.5	3.3
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	149	22	71	16	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	35	EB (meq/kg)	373
		CF_DI	0.96	CAD (meq/kg)	137

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	80		DCCP	70	DCCP	61	DCCP	-
DCCFAT	98		DCCFATh	82	DCCFAT	75	DCCFAT	-
DCCF	41		DCCF	18	DCNFE	29	DCCF	-
DCNFE	69		DCNFE	54	DCPpo	30	DCNFE	-
DCOM	74		DCOM	60				
			DCNSPh	31	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	80
%RUP	44	46	StaDCP	30	DCCFATh	-	DCOM	68
%DRUP	87	87	AppDCP	28	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	30		
DASHmax	51	51						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1036 /kg	NE2015	7.98 MJ/kg	MEpo	8.68 MJ/kg	MErab	-
VEVI	1077 /kg	NE2015	1906 kcal/kg	MEpo	2075 kcal/kg	MErab	-
FOM-91	354 g/kg	EW2015	0.91 /kg	MEla	9.14 MJ/kg		
FOMr-07	379 g/kg	StaDP	3.4 g/kg	MEla	2184 kcal/kg		
FOMr2-07	138 g/kg	AppDP	3.2 g/kg	DPpo	3.4 g/kg		
FOMr2/FOMr	0.36 /kg						
DVE-91	190 g/kg			**Broilers**		**Horses**	
DVE-07	181 g/kg			MEbr	-	NEm	7.57 MJ/kg
OEB-91	161 g/kg			MEbr	-	NEm	1810 kcal/kg
OEB-07	172 g/kg			DPpo	3.4 g/kg	EWpa	0.848 /kg
OEB2-07	59 g/kg					DCPho	333 g/kg
DVMET-91	3.5 g/kg						
DVLYS-91	8.7 g/kg						
DVMET-07	3.3 g/kg						
DVLYS-07	8.3 g/kg						
SW	0.37 /kg						
VW	0.29 /kg						

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Cotton seed meal, expeller-dehulled, CF < 140 g/kg 3018.401/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			416	81	-	78	324	-	-
LYS	4.1	0.3	17.0	70	11.9	68	11.5	58	9.9
MET	1.6	0.1	6.7	80	5.3	79	5.2	77	5.1
CYS	1.7	0.1	7.1	80	5.7	77	5.5	71	5.0
THR	3.2	0.2	13.3	76	10.1	72	9.6	66	8.8
TRP	1.2	0.1	5.0	82	4.1	80	4.0	77	3.8
ILE	3.1	0.2	12.9	79	10.2	77	9.9	69	8.9
ARG	10.7	0.6	44.5	92	40.9	91	40.5	86	38.3
PHE	5.2	0.3	21.6	86	18.6	85	18.3	80	17.3
HIS	2.7	0.2	11.2	81	9.1	79	8.9	75	8.4
LEU	5.9	0.3	24.5	78	19.2	77	18.8	71	17.4
TYR	2.9	0.3	12.1	82	9.9	80	9.6	77	9.3
VAL	4.4	0.3	18.3	83	15.1	80	14.6	71	13.0
ALA	4.1	0.3	17.0	79	13.5	76	13.0	70	11.9
ASP	9.3	0.4	38.7	83	31.9	81	31.2	75	29.0
GLU	18.9	0.8	78.6	90	71.0	89	69.9	83	65.2
GLY	4.2	0.2	17.5	85	14.8	80	13.9	70	12.2
PRO	3.7	0.3	15.4	89	13.6	82	12.6	74	11.4
SER	4.3	0.2	17.9	86	15.4	83	14.8	73	13.0
Sum AA	91.2		379	-	320	-	312	-	288

Fatty acids

	% FA	g/kg
CFAT(h)		104.6
<=C10	-	0.0
C12:0	0.4	0.3
C14:0	1.0	0.8
C16:0	24.0	18.8
C16:1	1.0	0.8
C18:0	2.0	1.6
C18:1	19.0	14.9
C:18:2	51.0	40.0
C18:3	0.4	0.3
>=C20	1.0	0.8
Sum FA	99.8	78.3
% FA in CFAT-fraction		75

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Cotton seed meal, expeller-partly dehulled, CF 140 - 210 g/kg
3018.401/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	933	60	363	74	-	170	266	-
sdc	14	8	29	15	-	15	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	34	11	-	38	320	-	-	388	68
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.2	10.2	7.6	5.1	14.4	-	0.3	0.5	2.9
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	149	23	71	16	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	35	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	79	DCCP	70	DCCP	61	DCCP	79
DCCFAT	97	DCCFATh	80	DCCFAT	79	DCCFAT	80
DCCF	41	DCCF	18	DCNFE	27	DCCF	10
DCNFE	69	DCNFE	52	DCPpo	30	DCNFE	56
DCOM	70	DCOM	55				
		DCNSPh	31	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	78
%RUP	44 46	StaDCP	30	DCCFATh	-	DCOM	62
%DRUP	87 87	AppDCP	28	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	65 65			DCPpo	30		
DASHmax	49 49						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	919 /kg	NE2015	6.83 MJ/kg	MEpo	7.56 MJ/kg	MErab	10.51 MJ/kg
VEVI	934 /kg	NE2015	1633 kcal/kg	MEpo	1808 kcal/kg	MErab	2511 kcal/kg
FOM-91	378 g/kg	EW2015	0.78 /kg	MEla	7.90 MJ/kg		
FOMr-07	383 g/kg	StaDP	3.0 g/kg	MEla	1889 kcal/kg		
FOMr2-07	132 g/kg	AppDP	2.9 g/kg	DPpo	3.0 g/kg		
FOMr2/FOMr	0.35 /kg						
DVE-91	168 g/kg			**Broilers**		**Horses**	
DVE-07	159 g/kg			MEbr	-	NEm	6.61 MJ/kg
OEB-91	130 g/kg			MEbr	-	NEm	1580 kcal/kg
OEB-07	142 g/kg			DPpo	3.0 g/kg	EWpa	0.740 /kg
OEB2-07	50 g/kg					DCPho	283 g/kg
DVMET-91	3.1 g/kg						
DVLYS-91	7.8 g/kg						
DVMET-07	3.0 g/kg						
DVLYS-07	7.4 g/kg						
SW	0.41 /kg						
VW	0.31 /kg						

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Cotton seed meal, expeller-partly dehulled, CF 140 - 210 g/kg
3018.401/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			363	81	-	78	282	-	-
LYS	4.1	0.3	14.9	70	10.4	67	10.0	58	8.6
MET	1.6	0.1	5.8	80	4.7	78	4.5	77	4.5
CYS	1.7	0.1	6.2	80	4.9	77	4.7	71	4.4
THR	3.2	0.2	11.6	76	8.8	71	8.3	66	7.7
TRP	1.2	0.1	4.4	82	3.6	79	3.5	77	3.4
ILE	3.1	0.2	11.2	79	8.9	76	8.6	69	7.8
ARG	10.7	0.6	38.8	92	35.7	91	35.3	86	33.4
PHE	5.2	0.3	18.9	86	16.2	85	15.9	80	15.1
HIS	2.7	0.2	9.8	81	7.9	79	7.7	75	7.3
LEU	5.9	0.3	21.4	78	16.8	76	16.3	71	15.2
TYR	2.9	0.3	10.5	82	8.6	79	8.3	77	8.1
VAL	4.4	0.3	16.0	83	13.2	79	12.7	71	11.3
ALA	4.1	0.3	14.9	79	11.7	76	11.3	70	10.4
ASP	9.3	0.4	33.7	82	27.8	80	27.1	75	25.3
GLU	18.9	0.8	68.6	90	62.0	89	60.9	83	56.9
GLY	4.2	0.2	15.2	85	12.9	79	12.1	70	10.7
PRO	3.7	0.3	13.4	89	11.9	81	10.9	74	9.9
SER	4.3	0.2	15.6	86	13.4	82	12.8	73	11.4
Sum AA	91.2		331	-	279	-	271	-	251

Fatty acids	% FA	g/kg
CFAT(h)		74.0
<=C10	-	0.0
C12:0	0.4	0.2
C14:0	1.0	0.6
C16:0	24.0	13.3
C16:1	1.0	0.6
C18:0	2.0	1.1
C18:1	19.0	10.5
C:18:2	51.0	28.3
C18:3	0.4	0.2
>=C20	1.0	0.6
Sum FA	99.8	55.4
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Cotton seed meal, expeller-non-dehulled, CF > 210 g/kg 3018.401/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	921	51	307	61	-	230	273	-
sdc	-	5	-	-	-	14	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	6	11	-	39	399	312	-	455	56
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.3	10.3	7.7	5.2	14.5	-	0.3	0.5	2.4
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	148	22	71	16	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	77		DCCP	-	DCCP	60	DCCP	-
DCCFAT	96		DCCFATh	-	DCCFAT	79	DCCFAT	-
DCCF	41		DCCF	-	DCNFE	24	DCCF	-
DCNFE	66		DCNFE	-	DCPpo	30	DCNFE	-
DCOM	66		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	74
%RUP	44	46	StaDCP	-	DCCFATh	-	DCOM	59
%DRUP	87	87	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	30		
DASHmax	32	32						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	827 /kg	NE2015	-	MEpo	6.43 MJ/kg	MErab	-
VEVI	821 /kg	NE2015	-	MEpo	1537 kcal/kg	MErab	-
FOM-91	377 g/kg	EW2015	-	MEla	6.71 MJ/kg		
FOMr-07	375 g/kg	StaDP	-	MEla	1604 kcal/kg		
FOMr2-07	125 g/kg	AppDP	-	DPpo	3.1 g/kg		
FOMr2/FOMr	0.33 /kg						
DVE-91	141 g/kg			**Broilers**		**Horses**	
DVE-07	133 g/kg			MEbr	-	NEm	6.10 MJ/kg
OEB-91	101 g/kg			MEbr	-	NEm	1459 kcal/kg
OEB-07	111 g/kg			DPpo	3.1 g/kg	EWpa	0.684 /kg
OEB2-07	40 g/kg					DCPho	227 g/kg
DVMET-91	2.7 g/kg						
DVLYS-91	6.7 g/kg						
DVMET-07	2.5 g/kg						
DVLYS-07	6.3 g/kg						
SW	0.47 /kg						
VW	0.34 /kg						

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Cotton seed meal, expeller-non-dehulled, CF > 210 g/kg 3018.401/3/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			307	-	-	-	-	-	-
LYS	4.1	0.3	12.6	-	-	-	-	58	7.3
MET	1.6	0.1	4.9	-	-	-	-	77	3.8
CYS	1.7	0.1	5.2	-	-	-	-	71	3.7
THR	3.2	0.2	9.8	-	-	-	-	66	6.5
TRP	1.2	0.1	3.7	-	-	-	-	77	2.8
ILE	3.1	0.2	9.5	-	-	-	-	69	6.6
ARG	10.7	0.6	32.8	-	-	-	-	86	28.2
PHE	5.2	0.3	15.9	-	-	-	-	80	12.8
HIS	2.7	0.2	8.3	-	-	-	-	75	6.2
LEU	5.9	0.3	18.1	-	-	-	-	71	12.8
TYR	2.9	0.3	8.9	-	-	-	-	77	6.8
VAL	4.4	0.3	13.5	-	-	-	-	71	9.6
ALA	4.1	0.3	12.6	-	-	-	-	70	8.8
ASP	9.3	0.4	28.5	-	-	-	-	75	21.4
GLU	18.9	0.8	58.0	-	-	-	-	83	48.1
GLY	4.2	0.2	12.9	-	-	-	-	70	9.0
PRO	3.7	0.3	11.3	-	-	-	-	74	8.4
SER	4.3	0.2	13.2	-	-	-	-	73	9.6
Sum AA	91.2		280	-	-	-	-	-	212

Fatty acids	% FA	g/kg
CFAT(h)		60.8
<=C10	-	0.0
C12:0	0.4	0.2
C14:0	1.0	0.5
C16:0	24.0	10.9
C16:1	1.0	0.5
C18:0	2.0	0.9
C18:1	19.0	8.7
C:18:2	51.0	23.3
C18:3	0.4	0.2
>=C20	1.0	0.5
Sum FA	99.8	45.5
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Cotton seeds-delinted, CF < 100 g/kg 3018.000/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	935	44	403	308	-	28	152	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	27	-	-	41	-	-	-	141	141
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.2	7.5	5.6	5.0	9.4	-	-	-	3.2
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	80		DCCP	-	DCCP	60	DCCP	-
DCCFAT	99		DCCFATh	-	DCCFAT	78	DCCFAT	-
DCCF	41		DCCF	-	DCNFE	17	DCCF	-
DCNFE	75		DCNFE	-	DCPpo	30	DCNFE	-
DCOM	84		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	28	30	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	85	85	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	30		
DASHmax	37	37						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1682 /kg	NE2015	-	MEpo	14.02 MJ/kg	MErab	-
VEVI	1883 /kg	NE2015	-	MEpo	3352 kcal/kg	MErab	-
FOM-91	330 g/kg	EW2015	-	MEla	15.42 MJ/kg		
FOMr-07	374 g/kg	StaDP	-	MEla	3686 kcal/kg		
FOMr2-07	180 g/kg	AppDP	-	DPpo	2.2 g/kg		
FOMr2/FOMr	0.48 /kg						
DVE-91	127 g/kg			**Broilers**		**Horses**	
DVE-07	121 g/kg			MEbr	-	NEm	-
OEB-91	228 g/kg			MEbr	-	NEm	-
OEB-07	235 g/kg			DPpo	2.2 g/kg	EWpa	-
OEB2-07	111 g/kg					DCPho	-
DVMET-91	2.4 g/kg						
DVLYS-91	6.2 g/kg						
DVMET-07	2.3 g/kg						
DVLYS-07	5.9 g/kg						
SW	0.28 /kg						
VW	0.27 /kg						

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Cotton seeds-delinted, CF < 100 g/kg 3018.000/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			403	-	-	-	-	-	-
LYS	4.1	0.3	16.5	-	-	-	-	-	-
MET	1.6	0.1	6.4	-	-	-	-	-	-
CYS	1.7	0.1	6.9	-	-	-	-	-	-
THR	3.2	0.2	12.9	-	-	-	-	-	-
TRP	1.2	0.1	4.8	-	-	-	-	-	-
ILE	3.1	0.2	12.5	-	-	-	-	-	-
ARG	10.7	0.6	43.1	-	-	-	-	-	-
PHE	5.2	0.3	21.0	-	-	-	-	-	-
HIS	2.7	0.2	10.9	-	-	-	-	-	-
LEU	5.9	0.3	23.8	-	-	-	-	-	-
TYR	2.9	0.3	11.7	-	-	-	-	-	-
VAL	4.4	0.3	17.7	-	-	-	-	-	-
ALA	4.1	0.3	16.5	-	-	-	-	-	-
ASP	9.3	0.4	37.5	-	-	-	-	-	-
GLU	18.9	0.8	76.2	-	-	-	-	-	-
GLY	4.2	0.2	16.9	-	-	-	-	-	-
PRO	3.7	0.3	14.9	-	-	-	-	-	-
SER	4.3	0.2	17.3	-	-	-	-	-	-
Sum AA	91.2		368	-	-	-	-	-	-

Fatty acids

	% FA	g/kg
CFAT(h)		307.6
<=C10	-	0.0
C12:0	0.2	0.6
C14:0	1.0	2.9
C16:0	24.0	70.1
C16:1	1.0	2.9
C18:0	2.0	5.8
C18:1	19.0	55.5
C:18:2	51.0	149.0
C18:3	0.2	0.6
>=C20	1.0	2.9
Sum FA	99.4	290.5
% FA in CFAT-fraction		95

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Cotton seeds-whole, CF > 100 g/kg 3018.000/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	911	40	207	192	-	236	236	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	19	-	-	29	-	-	-	444	444
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.4	6.8	5.1	3.2	11.1	2.9	-	-	1.6
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	73		DCCP	-	DCCP	-	DCCP	-
DCCFAT	99		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	41		DCCF	-	DCNFE	-	DCCF	-
DCNFE	64		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	68		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	28	30	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	85	85	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	35	35						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1138 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1202 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	340 g/kg	EW2015	-	MEla	-		
FOMr-07	334 g/kg	StaDP	-	MEla	-		
FOMr2-07	118 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.35 /kg						
DVE-91	65 g/kg			**Broilers**		**Horses**	
DVE-07	61 g/kg			MEbr	-	NEm	-
OEB-91	91 g/kg			MEbr	-	NEm	-
OEB-07	98 g/kg			DPpo	-	EWpa	-
OEB2-07	53 g/kg					DCPho	-
DVMET-91	1.4 g/kg						
DVLYS-91	3.5 g/kg						
DVMET-07	1.3 g/kg						
DVLYS-07	3.2 g/kg						
SW	0.49 /kg						
VW	0.34 /kg						

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Cotton seeds-whole, CF > 100 g/kg 3018.000/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			207	-	-	-	-	-	-
LYS	4.1	0.3	8.5	-	-	-	-	-	-
MET	1.6	0.1	3.3	-	-	-	-	-	-
CYS	1.7	0.1	3.5	-	-	-	-	-	-
THR	3.2	0.2	6.6	-	-	-	-	-	-
TRP	1.2	0.1	2.5	-	-	-	-	-	-
ILE	3.1	0.2	6.4	-	-	-	-	-	-
ARG	10.7	0.6	22.1	-	-	-	-	-	-
PHE	5.2	0.3	10.8	-	-	-	-	-	-
HIS	2.7	0.2	5.6	-	-	-	-	-	-
LEU	5.9	0.3	12.2	-	-	-	-	-	-
TYR	2.9	0.3	6.0	-	-	-	-	-	-
VAL	4.4	0.3	9.1	-	-	-	-	-	-
ALA	4.1	0.3	8.5	-	-	-	-	-	-
ASP	9.3	0.4	19.2	-	-	-	-	-	-
GLU	18.9	0.8	39.1	-	-	-	-	-	-
GLY	4.2	0.2	8.7	-	-	-	-	-	-
PRO	3.7	0.3	7.7	-	-	-	-	-	-
SER	4.3	0.2	8.9	-	-	-	-	-	-
Sum AA	91.2		189	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		192.2
<=C10	-	0.0
C12:0	0.2	0.4
C14:0	1.0	1.8
C16:0	24.0	43.8
C16:1	1.0	1.8
C18:0	2.0	3.7
C18:1	19.0	34.7
C:18:2	51.0	93.1
C18:3	0.2	0.4
>=C20	1.0	1.8
Sum FA	99.4	181.5
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Cottonseed meal, extracted-dehulled, CF < 140 g/kg 3018.407/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	898	65	437	31	-	120	245	-
sdc	14	5	53	6	-	10	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	27	20	-	28	259	166	-	319	61
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.2	10.7	8.0	5.9	15.7	0.5	0.4	0.5	3.5
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	143	21	68	15	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	35	EB (meq/kg)	415
		CF_DI	0.96	CAD (meq/kg)	165

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	80	DCCP	71	DCCP	65	DCCP	-
DCCFAT	93	DCCFATh	72	DCCFAT	62	DCCFAT	-
DCCF	41	DCCF	18	DCNFE	28	DCCF	-
DCNFE	71	DCNFE	50	DCPpo	30	DCNFE	-
DCOM	72	DCOM	57				
		DCNSPh	31	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	30	31	StaDCP	30	DCCFATh	-	DCOM	-
%DRUP	87	87	AppDCP	28	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	30		
DASHmax	52	52						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	826 /kg	NE2015	5.93 MJ/kg	MEpo	7.03 MJ/kg	MErab	-
VEVI	829 /kg	NE2015	1417 kcal/kg	MEpo	1681 kcal/kg	MErab	-
FOM-91	443 g/kg	EW2015	0.67 /kg	MEla	7.14 MJ/kg		
FOMr-07	461 g/kg	StaDP	3.2 g/kg	MEla	1708 kcal/kg		
FOMr2-07	178 g/kg	AppDP	3.0 g/kg	DPpo	3.2 g/kg		
FOMr2/FOMr	0.39 /kg						
DVE-91	148 g/kg			**Broilers**		**Horses**	
DVE-07	139 g/kg			MEbr	-	NEm	-
OEB-91	227 g/kg			MEbr	-	NEm	-
OEB-07	238 g/kg			DPpo	3.2 g/kg	EWpa	-
OEB2-07	97 g/kg					DCPho	-
DVMET-91	2.8 g/kg						
DVLYS-91	7.3 g/kg						
DVMET-07	2.7 g/kg						
DVLYS-07	6.9 g/kg						
SW	0.36 /kg						
VW	0.28 /kg						

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Cottonseed meal, extracted-dehulled, CF < 140 g/kg 3018.407/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			437	81	-	78	342	-	-
LYS	4.1	0.3	17.9	70	12.5	68	12.1	58	10.4
MET	1.6	0.1	7.0	80	5.6	79	5.5	77	5.4
CYS	1.7	0.1	7.4	80	5.9	77	5.7	71	5.3
THR	3.2	0.2	14.0	76	10.6	72	10.1	66	9.2
TRP	1.2	0.1	5.2	82	4.3	80	4.2	77	4.0
ILE	3.1	0.2	13.5	79	10.7	77	10.4	69	9.3
ARG	10.7	0.6	46.7	92	42.9	91	42.6	86	40.2
PHE	5.2	0.3	22.7	86	19.5	85	19.3	80	18.2
HIS	2.7	0.2	11.8	81	9.5	79	9.4	75	8.8
LEU	5.9	0.3	25.8	78	20.2	77	19.8	71	18.3
TYR	2.9	0.3	12.7	82	10.4	80	10.1	77	9.7
VAL	4.4	0.3	19.2	83	15.9	80	15.4	71	13.6
ALA	4.1	0.3	17.9	79	14.1	76	13.7	70	12.5
ASP	9.3	0.4	40.6	83	33.5	81	32.8	75	30.4
GLU	18.9	0.8	82.5	90	74.6	89	73.5	83	68.5
GLY	4.2	0.2	18.3	85	15.5	80	14.7	70	12.8
PRO	3.7	0.3	16.2	89	14.3	83	13.3	74	12.0
SER	4.3	0.2	18.8	86	16.1	83	15.6	73	13.7
Sum AA	91.2		398	-	336	-	328	-	302

Fatty acids

	% FA	g/kg
CFAT(h)		30.5
<=C10	-	0.0
C12:0	0.4	0.1
C14:0	1.0	0.2
C16:0	24.0	4.8
C16:1	1.0	0.2
C18:0	2.0	0.4
C18:1	19.0	3.8
C:18:2	51.0	10.1
C18:3	0.4	0.1
>=C20	1.0	0.2
Sum FA	99.8	19.8
% FA in CFAT-fraction		65

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Cottonseed meal, extracted-partly dehulled, CF 140 - 200 g/kg 3018.407/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	896	63	364	25	-	166	277	-
sdc	10	5	26	10	-	21	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	30	20	-	45	325	238	-	381	56
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.0	10.2	7.7	5.6	15.2	0.7	0.4	0.5	2.9
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	144	21	68	15	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	35	EB (meq/kg)	411
		CF_DI	0.96	CAD (meq/kg)	196

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	79	DCCP	70	DCCP	65	DCCP	79
DCCFAT	91	DCCFATh	69	DCCFAT	61	DCCFAT	70
DCCF	41	DCCF	18	DCNFE	27	DCCF	10
DCNFE	69	DCNFE	54	DCPpo	30	DCNFE	56
DCOM	69	DCOM	54				
		DCNSPh	31	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	30 31	StaDCP	30	DCCFATh	-	DCOM	-
%DRUP	87 87	AppDCP	28	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	65 65			DCPpo	30		
DASHmax	51 51						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	763 /kg	NE2015	5.51 MJ/kg	MEpo	6.32 MJ/kg	MErab	9.06 MJ/kg
VEVI	754 /kg	NE2015	1317 kcal/kg	MEpo	1511 kcal/kg	MErab	2165 kcal/kg
FOM-91	439 g/kg	EW2015	0.63 /kg	MEla	6.41 MJ/kg		
FOMr-07	448 g/kg	StaDP	3.1 g/kg	MEla	1532 kcal/kg		
FOMr2-07	176 g/kg	AppDP	2.9 g/kg	DPpo	3.1 g/kg		
FOMr2/FOMr	0.39 /kg						
DVE-91	125 g/kg			**Broilers**		**Horses**	
DVE-07	118 g/kg			MEbr	-	NEm	-
OEB-91	179 g/kg			MEbr	-	NEm	-
OEB-07	187 g/kg			DPpo	3.1 g/kg	EWpa	-
OEB2-07	76 g/kg					DCPho	-
DVMET-91	2.5 g/kg						
DVLYS-91	6.3 g/kg						
DVMET-07	2.3 g/kg						
DVLYS-07	5.9 g/kg						
SW	0.38 /kg						
VW	0.30 /kg						

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Cottonseed meal, extracted-partly dehulled, CF 140 - 200 g/kg
3018.407/2/0

Amino acids

	g/16g N			Ileal digestible AA pigs				Standardized ileal digestible AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			364	81	-	78	283	-	-
LYS	4.1	0.3	14.9	70	10.4	67	10.0	58	8.7
MET	1.6	0.1	5.8	80	4.7	78	4.6	77	4.5
CYS	1.7	0.1	6.2	80	4.9	77	4.8	71	4.4
THR	3.2	0.2	11.6	76	8.9	72	8.3	66	7.7
TRP	1.2	0.1	4.4	82	3.6	80	3.5	77	3.4
ILE	3.1	0.2	11.3	79	8.9	76	8.6	69	7.8
ARG	10.7	0.6	38.9	92	35.8	91	35.4	86	33.5
PHE	5.2	0.3	18.9	86	16.3	85	16.0	80	15.1
HIS	2.7	0.2	9.8	81	7.9	79	7.8	75	7.4
LEU	5.9	0.3	21.5	78	16.8	76	16.4	71	15.2
TYR	2.9	0.3	10.6	82	8.6	79	8.4	77	8.1
VAL	4.4	0.3	16.0	83	13.2	80	12.7	71	11.4
ALA	4.1	0.3	14.9	79	11.8	76	11.3	70	10.4
ASP	9.3	0.4	33.8	82	27.9	80	27.2	75	25.4
GLU	18.9	0.8	68.8	90	62.2	89	61.1	83	57.1
GLY	4.2	0.2	15.3	85	12.9	79	12.1	70	10.7
PRO	3.7	0.3	13.5	89	11.9	81	10.9	74	10.0
SER	4.3	0.2	15.6	86	13.4	82	12.9	73	11.4
Sum AA	91.2		332	-	280	-	272	-	252

Fatty acids

	% FA	g/kg
CFAT(h)		25.3
<=C10	-	0.0
C12:0	0.4	0.1
C14:0	1.0	0.2
C16:0	24.0	3.9
C16:1	1.0	0.2
C18:0	2.0	0.3
C18:1	19.0	3.1
C:18:2	51.0	8.4
C18:3	0.4	0.1
>=C20	1.0	0.2
Sum FA	99.8	16.4
% FA in CFAT-fraction		65

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Cottonseed meal, extracted-non-dehulled, CF > 200 g/kg 3018.407/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	945	50	296	38	-	217	344	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	24	21	-	37	371	286	-	505	134
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.1	10.8	8.1	6.0	16.0	0.6	0.4	0.5	2.4
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	143	22	68	15	-	-	0.2
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	-	EB (meq/kg)	423	
		CF_DI	0.96	CAD (meq/kg)	246	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	77	DCCP	-	DCCP	-	DCCP	-
DCCFAT	94	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	41	DCCF	-	DCNFE	-	DCCF	-
DCNFE	69	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	66	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	30 31	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	87 87	AppDCP	-	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	50 50			DCPpo	-		
DASHmax	32 32						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	800 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	789 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	465 g/kg	EW2015	-	MEla	-		
FOMr-07	444 g/kg	StaDP	-	MEla	-		
FOMr2-07	159 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.36 /kg						
DVE-91	104 g/kg			**Broilers**		**Horses**	
DVE-07	96 g/kg			MEbr	-	NEm	-
OEB-91	129 g/kg			MEbr	-	NEm	-
OEB-07	139 g/kg			DPpo	-	EWpa	-
OEB2-07	60 g/kg					DCPho	-
DVMET-91	2.1 g/kg						
DVLYS-91	5.5 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	5.0 g/kg						
SW	0.45 /kg						
VW	0.34 /kg						

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Cottonseed meal, extracted-non-dehulled, CF > 200 g/kg 3018.407/3/0

Amino acids

	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			296	-	-	-	-	-	-
LYS	4.1	0.3	12.1	-	-	-	-	58	7.0
MET	1.6	0.1	4.7	-	-	-	-	77	3.6
CYS	1.7	0.1	5.0	-	-	-	-	71	3.6
THR	3.2	0.2	9.5	-	-	-	-	66	6.2
TRP	1.2	0.1	3.5	-	-	-	-	77	2.7
ILE	3.1	0.2	9.2	-	-	-	-	69	6.3
ARG	10.7	0.6	31.6	-	-	-	-	86	27.2
PHE	5.2	0.3	15.4	-	-	-	-	80	12.3
HIS	2.7	0.2	8.0	-	-	-	-	75	6.0
LEU	5.9	0.3	17.5	-	-	-	-	71	12.4
TYR	2.9	0.3	8.6	-	-	-	-	77	6.6
VAL	4.4	0.3	13.0	-	-	-	-	71	9.2
ALA	4.1	0.3	12.1	-	-	-	-	70	8.5
ASP	9.3	0.4	27.5	-	-	-	-	75	20.6
GLU	18.9	0.8	55.9	-	-	-	-	83	46.4
GLY	4.2	0.2	12.4	-	-	-	-	70	8.7
PRO	3.7	0.3	10.9	-	-	-	-	74	8.1
SER	4.3	0.2	12.7	-	-	-	-	73	9.3
Sum AA	91.2		270	-	-	-	-	-	205

Fatty acids

	% FA	g/kg
CFAT(h)		37.8
<=C10	-	0.0
C12:0	0.4	0.1
C14:0	1.0	0.2
C16:0	24.0	5.9
C16:1	1.0	0.2
C18:0	2.0	0.5
C18:1	19.0	4.7
C:18:2	51.0	12.5
C18:3	0.4	0.1
>=C20	1.0	0.2
Sum FA	99.8	24.5
% FA in CFAT-fraction		65

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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DDGS, Maize 1002.310/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	903	44	268	125	129	67	400	395
sdc	9	3	10	9	8	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	41	29	4	17	288	119	35	317	29
sdc	15	-	-	8	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.2	8.2	2.5	3.1	11.4	2.3	-	-	1.9
sdc	0.0	0.6	-	-	0.9	0.6	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	102	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	30	SUGe/SUG	80	EB (meq/kg)	-
		CF_DI	-	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	83	DCCP	66	DCCP	-	DCCP	-
DCCFAT	89	DCCFATh	84	DCCFAT	-	DCCFAT	-
DCCF	64	DCCF	34	DCNFE	-	DCCF	-
DCNFE	84	DCNFE	66	DCPpo	-	DCNFE	-
DCOM	83	DCOM	66				
		DCNSPh	44	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	51 71	StaDCP	58	DCCFATh	-	DCOM	-
%DRUP	93 94	AppDCP	56	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	65 65			DCPpo	-		
DASHmax	37 37						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1182 /kg	NE2015	9.23 MJ/kg	MEpo	-	MErab	-
VEVI	1285 /kg	NE2015	2206 kcal/kg	MEpo	-	MErab	-
FOM-91	395 g/kg	EW2015	1.05 /kg	MEla	-		
FOMr-07	376 g/kg	StaDP	4.8 g/kg	MEla	-		
FOMr2-07	162 g/kg	AppDP	4.6 g/kg	DPpo	-		
FOMr2/FOMr	0.43 /kg						
DVE-91	166 g/kg			**Broilers**		**Horses**	
DVE-07	198 g/kg			MEbr	-	NEm	-
OEB-91	57 g/kg			MEbr	-	NEm	-
OEB-07	28 g/kg			DPpo	-	EWpa	-
OEB2-07	10 g/kg					DCPho	-
DVMET-91	2.2 g/kg						
DVLYS-91	5.6 g/kg						
DVMET-07	2.5 g/kg						
DVLYS-07	5.9 g/kg						
SW	0.31 /kg						
VW	0.26 /kg						

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DDGS, Maize 1002.310/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			268	73	-	69	185	-	-
LYS	2.4	-	6.4	58	3.7	53	3.4	61	3.9
MET	1.0	-	2.7	86	2.3	82	2.2	81	2.2
CYS	1.8	-	4.8	66	3.2	62	3.0	73	3.5
THR	3.6	-	9.6	73	7.0	67	6.5	66	6.4
TRP	0.7	-	1.9	77	1.4	70	1.3	78	1.5
ILE	4.0	-	10.7	79	8.5	76	8.1	74	7.9
ARG	4.1	-	11.0	84	9.2	81	8.9	78	8.6
PHE	5.0	-	13.4	85	11.4	83	11.1	79	10.6
HIS	2.5	-	6.7	78	5.2	76	5.1	73	4.9
LEU	11.9	-	31.9	86	27.4	85	27.0	83	26.4
TYR	-	-	-	-	-	-	-	80	-
VAL	5.0	-	13.4	80	10.7	76	10.2	72	9.6
ALA	7.2	-	19.3	82	15.8	80	15.4	80	15.4
ASP	6.8	-	18.2	67	12.2	63	11.5	63	11.5
GLU	18.1	-	48.5	84	40.7	82	39.6	81	39.2
GLY	3.9	-	10.4	60	6.3	52	5.5	69	7.2
PRO	7.9	-	21.1	67	14.2	62	13.2	76	16.1
SER	4.6	-	12.3	84	10.3	79	9.8	77	9.5
Sum AA	90.5		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		129.3
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	34	-
LA	34	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	72.0	-
	% of CP	
NH3	-	

Remarks

DDGS, Maize:

1. For the calculation of NE2015 and EW2015 the nutrient contents of LA and Glycerol should be included.

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DDGS, Wheat 1010.310/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	916	46	324	-	68	71	-	408
sdc	18	3	26	-	4	6	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	11	5	49	305	166	77	360	55
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	8.4	2.5	-	-	-	-	-	2.5
sdc	-	0.6	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	30	SUGe/SUG	95	EB (meq/kg)	-
		CF_DI	-	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	84		DCCP	66	DCCP	-	DCCP	-
DCCFAT	88		DCCFATh	71	DCCFAT	-	DCCFAT	-
DCCF	64		DCCF	34	DCNFE	-	DCCF	-
DCNFE	84		DCNFE	69	DCPpo	-	DCNFE	-
DCOM	83		DCOM	66				
			DCNSPh	53	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	42	58	StaDCP	58	DCCFATh	-	DCOM	-
%DRUP	91	94	AppDCP	56	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	39	39						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1071 /kg	NE2015	7.65 MJ/kg	MEpo	-	MErab	-
VEVI	1146 /kg	NE2015	1829 kcal/kg	MEpo	-	MErab	-
FOM-91	486 g/kg	EW2015	0.87 /kg	MEla	-		
FOMr-07	416 g/kg	StaDP	4.9 g/kg	MEla	-		
FOMr2-07	166 g/kg	AppDP	4.7 g/kg	DPpo	-		
FOMr2/FOMr	0.40 /kg						
DVE-91	172 g/kg			**Broilers**		**Horses**	
DVE-07	202 g/kg			MEbr	-	NEm	-
OEB-91	99 g/kg			MEbr	-	NEm	-
OEB-07	77 g/kg			DPpo	-	EWpa	-
OEB2-07	24 g/kg					DCPho	-
DVMET-91	3.1 g/kg						
DVLYS-91	5.8 g/kg						
DVMET-07	3.5 g/kg						
DVLYS-07	5.7 g/kg						
SW	0.30 /kg						
VW	0.27 /kg						

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DDGS, Wheat 1010.310/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			324	77	-	74	239	-	-
LYS	2.1	-	6.8	57	3.9	52	3.5	49	3.3
MET	1.5	-	4.9	81	3.9	79	3.8	77	3.7
CYS	1.7	-	5.5	79	4.3	76	4.2	67	3.7
THR	3.2	-	10.4	74	7.7	69	7.1	63	6.5
TRP	0.9	-	2.9	84	2.4	80	2.3	78	2.3
ILE	3.6	-	11.6	80	9.3	77	9.0	74	8.6
ARG	4.0	-	12.9	84	10.9	81	10.5	75	9.7
PHE	4.5	-	14.6	87	12.7	85	12.4	81	11.8
HIS	2.0	-	6.5	79	5.1	76	4.9	71	4.6
LEU	7.5	-	24.3	83	20.1	81	19.7	79	19.2
TYR	-	-	-	-	-	-	-	79	-
VAL	4.3	-	13.9	77	10.7	74	10.2	71	9.9
ALA	4.3	-	13.9	73	10.2	70	9.7	72	10.0
ASP	5.4	-	17.5	62	10.8	58	10.1	56	9.8
GLU	23.7	-	76.7	88	67.5	87	66.4	83	63.6
GLY	3.9	-	12.6	69	8.7	62	7.9	65	8.2
PRO	8.5	-	27.5	80	22.0	76	21.0	82	22.6
SER	4.4	-	14.2	80	11.4	76	10.8	71	10.1
Sum AA	85.5		-	-	-	-	-	-	-

Fatty acids

	% FA	g/kg
CFAT(h)		67.7
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg	sdc
FP	18	-
LA	18	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	44.0	-
	% of CP	
NH3	-	

Remarks

DDGS, Wheat:

1. For the calculation of NE2015 and EW2015 the nutrient contents of LA and Glycerol should be included.

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Fat/oil, Animal fat- 8006.000/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	994	1	-	993	993	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	0.2	0.4	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	9	2	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.96	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	90		DCCFATh	90	DCCFAT	92	DCCFAT	90
DCCF	-		DCCF	-	DCNFE	0	DCCF	-
DCNFE	-		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	90		DCOM	90				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	79	DCOM	90
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3264 /kg	NE2015	31.82 MJ/kg	MEpo	35.47 MJ/kg	MErab	33.78 MJ/kg
VEVI	3843 /kg	NE2015	7606 kcal/kg	MEpo	8478 kcal/kg	MErab	8074 kcal/kg
FOM-91	-99 g/kg	EW2015	3.62 /kg	MEla	40.79 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	9750 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-17 g/kg			**Broilers**		**Horses**	
DVE-07	-7 g/kg			MEbr	30.59 MJ/kg	NEm	23.59 MJ/kg
OEB-91	15 g/kg			MEbr	7311 kcal/kg	NEm	5638 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.642 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Animal fat- 8006.000/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		993.0
<=C10	0.1	0.6
C12:0	0.1	0.6
C14:0	2.1	18.6
C16:0	26.4	236.3
C16:1	2.7	23.8
C18:0	18.3	163.8
C18:1	38.2	341.0
C:18:2	6.0	53.6
C18:3	3.6	32.3
>=C20	2.6	23.2
Sum FA	100.0	893.7
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Animal fat- 8006.000/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	994	1	-	993	993	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	0.2	0.4	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	9	2	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	90		DCCFATh	90	DCCFAT	92	DCCFAT	90
DCCF	-		DCCF	-	DCNFE	0	DCCF	-
DCNFE	-		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	90		DCOM	90				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	81	DCOM	90
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3264 /kg	NE2015	32.08 MJ/kg	MEpo	35.47 MJ/kg	MErab	33.78 MJ/kg
VEVI	3843 /kg	NE2015	7668 kcal/kg	MEpo	8478 kcal/kg	MErab	8074 kcal/kg
FOM-91	-99 g/kg	EW2015	3.65 /kg	MEla	40.79 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	9750 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-17 g/kg			**Broilers**		**Horses**	
DVE-07	-7 g/kg			MEbr	31.13 MJ/kg	NEm	23.59 MJ/kg
OEB-91	15 g/kg			MEbr	7440 kcal/kg	NEm	5638 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.642 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Animal fat- 8006.000/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		993.0
<=C10	0.2	2.1
C12:0	0.2	2.1
C14:0	2.1	18.5
C16:0	25.3	226.5
C16:1	3.0	26.5
C18:0	15.7	140.2
C18:1	41.1	367.4
C:18:2	9.0	80.4
C18:3	1.8	16.4
>=C20	1.5	13.6
Sum FA	100.0	893.7
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Coconut oil 3015.421/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	995	-	-	995	995	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	95		DCCFATh	95	DCCFAT	92	DCCFAT	95
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	95		DCOM	95				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	92	DCOM	95
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3514 /kg	NE2015	33.82 MJ/kg	MEpo	35.54 MJ/kg	MErab	35.73 MJ/kg
VEVI	4191 /kg	NE2015	8083 kcal/kg	MEpo	8495 kcal/kg	MErab	8540 kcal/kg
FOM-91	-49 g/kg	EW2015	3.84 /kg	MEla	40.88 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	9770 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-8 g/kg			**Broilers**		**Horses**	
DVE-07	-4 g/kg			MEbr	35.39 MJ/kg	NEm	24.94 MJ/kg
OEB-91	7 g/kg			MEbr	8459 kcal/kg	NEm	5959 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.792 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Coconut oil 3015.421/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		995.0
<=C10	13.0	122.9
C12:0	48.0	453.7
C14:0	18.0	170.1
C16:0	9.0	85.1
C16:1	0.0	0.0
C18:0	3.0	28.4
C18:1	7.0	66.2
C:18:2	2.0	18.9
C18:3	0.0	0.0
>=C20	0.0	0.0
Sum FA	100.0	945.3
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Fish oil 8015.425/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	994	1	-	993	993	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	0.2	0.4	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	9	2	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	-	DCCP	-	DCCP	-
DCCFAT	90	DCCFATh	93	DCCFAT	-	DCCFAT	90
DCCF	-	DCCF	-	DCNFE	-	DCCF	-
DCNFE	-	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	90	DCOM	93				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	88	DCOM	90
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3264 /kg	NE2015	32.87 MJ/kg	MEpo	-	MErab	33.78 MJ/kg
VEVI	3843 /kg	NE2015	7855 kcal/kg	MEpo	-	MErab	8074 kcal/kg
FOM-91	-99 g/kg	EW2015	3.73 /kg	MEla	-		
FOMr-07	0 g/kg	StaDP	-	MEla	-		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-17 g/kg			**Broilers**		**Horses**	
DVE-07	-7 g/kg			MEbr	33.87 MJ/kg	NEm	23.59 MJ/kg
OEB-91	15 g/kg			MEbr	8096 kcal/kg	NEm	5638 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.642 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Fish oil 8015.425/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		993.0
<=C10	0.0	0.0
C12:0	0.0	0.0
C14:0	9.8	87.1
C16:0	18.9	168.7
C16:1	19.5	174.4
C18:0	3.1	28.1
C18:1	13.0	115.9
C:18:2	1.6	14.6
C18:3	5.7	51.2
>=C20	28.4	253.7
Sum FA	100.0	893.7
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Groundnut oil 2013.421/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	995	-	-	995	995	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**			**Roosters/Laying hens**			**Rabbits**	
DCCP	-		DCCP	-		DCCP	-		DCCP	-
DCCFAT	95		DCCFATh	95		DCCFAT	92		DCCFAT	95
DCCF	-		DCCF	-		DCNFE	-		DCCF	-
DCNFE	-		DCNFE	-		DCPpo	-		DCNFE	-
DCOM	95		DCOM	95						
			DCNSPh	-		**Broilers**			**Horses**	
DVE	**1991**	**2007**	DCiSTA	-		DCCP	-		DCCP	-
%RUP	-	-	StaDCP	-		DCCFATh	91		DCOM	95
%DRUP	-	-	AppDCP	-		DC(S+S)	-			
%RUSTA	-	-				DCNFEh	-			
%DASH	-	-				DCPpo	-			
DASHmax	-	-								

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3514 /kg	NE2015	33.81 MJ/kg	MEpo	35.54 MJ/kg	MErab	35.73 MJ/kg
VEVI	4191 /kg	NE2015	8082 kcal/kg	MEpo	8495 kcal/kg	MErab	8540 kcal/kg
FOM-91	-49 g/kg	EW2015	3.84 /kg	MEla	40.88 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	9770 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-8 g/kg			**Broilers**		**Horses**	
DVE-07	-4 g/kg			MEbr	35.24 MJ/kg	NEm	24.94 MJ/kg
OEB-91	7 g/kg			MEbr	8422 kcal/kg	NEm	5959 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.792 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Groundnut oil 2013.421/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		995.0
<=C10	0.0	0.0
C12:0	0.0	0.0
C14:0	0.0	0.0
C16:0	10.1	95.0
C16:1	1.0	9.5
C18:0	3.0	28.5
C18:1	47.7	451.2
C:18:2	30.2	285.0
C18:3	1.0	9.5
>=C20	7.0	66.5
Sum FA	100.0	945.3
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Lard 8050.425/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	994	1	-	993	993	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	0.2	0.4	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	9	2	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.96	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	90		DCCFATh	90	DCCFAT	92	DCCFAT	90
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	90		DCOM	90				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	79	DCOM	90
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3264 /kg	NE2015	31.90 MJ/kg	MEpo	35.32 MJ/kg	MErab	33.78 MJ/kg
VEVI	3843 /kg	NE2015	7624 kcal/kg	MEpo	8441 kcal/kg	MErab	8074 kcal/kg
FOM-91	-99 g/kg	EW2015	3.63 /kg	MEla	40.61 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	9707 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-17 g/kg			**Broilers**		**Horses**	
DVE-07	-7 g/kg			MEbr	30.63 MJ/kg	NEm	23.59 MJ/kg
OEB-91	15 g/kg			MEbr	7321 kcal/kg	NEm	5638 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.642 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Lard 8050.425/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		993.0
<=C10	0.1	0.9
C12:0	0.2	1.8
C14:0	1.8	16.5
C16:0	27.2	242.7
C16:1	2.4	21.1
C18:0	17.3	154.8
C18:1	38.9	348.0
C:18:2	10.5	93.4
C18:3	1.0	9.2
>=C20	0.6	5.5
Sum FA	100.0	893.7
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Linseed oil 3006.437/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	995	-	-	995	995	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	95		DCCFATh	95	DCCFAT	92	DCCFAT	95
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	95		DCOM	95				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	92	DCOM	95
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3514 /kg	NE2015	33.87 MJ/kg	MEpo	35.54 MJ/kg	MErab	35.73 MJ/kg
VEVI	4191 /kg	NE2015	8094 kcal/kg	MEpo	8495 kcal/kg	MErab	8540 kcal/kg
FOM-91	-49 g/kg	EW2015	3.85 /kg	MEla	40.88 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	9770 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-8 g/kg			**Broilers**		**Horses**	
DVE-07	-4 g/kg			MEbr	35.53 MJ/kg	NEm	24.94 MJ/kg
OEB-91	7 g/kg			MEbr	8491 kcal/kg	NEm	5959 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.792 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Linseed oil 3006.437/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		995.0
<=C10	0.0	0.0
C12:0	0.0	0.0
C14:0	0.1	1.0
C16:0	7.0	66.6
C16:1	0.1	1.0
C18:0	4.0	38.1
C18:1	18.1	171.3
C:18:2	16.1	152.3
C18:3	54.4	514.0
>=C20	0.1	1.0
Sum FA	100.0	945.2
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Maize oil 1002.421/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	995	-	-	995	995	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	95		DCCFATh	95	DCCFAT	97	DCCFAT	95
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	95		DCOM	95				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	91	DCOM	95
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3514 /kg	NE2015	33.81 MJ/kg	MEpo	37.48 MJ/kg	MErab	35.73 MJ/kg
VEVI	4191 /kg	NE2015	8080 kcal/kg	MEpo	8957 kcal/kg	MErab	8540 kcal/kg
FOM-91	-49 g/kg	EW2015	3.84 /kg	MEla	43.10 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	10300 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-8 g/kg			**Broilers**		**Horses**	
DVE-07	-4 g/kg			MEbr	35.09 MJ/kg	NEm	24.94 MJ/kg
OEB-91	7 g/kg			MEbr	8388 kcal/kg	NEm	5959 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.792 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Maize oil 1002.421/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		995.0
<=C10	0.0	0.0
C12:0	0.2	1.8
C14:0	0.2	1.8
C16:0	12.0	107.9
C16:1	0.2	1.8
C18:0	2.0	18.0
C18:1	28.1	251.7
C:18:2	55.2	494.5
C18:3	1.0	9.0
>=C20	1.0	9.0
Sum FA	100.0	895.5
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Olive oil 7001.421/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	995	-	-	995	995	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	95		DCCFATh	95	DCCFAT	92	DCCFAT	95
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	95		DCOM	95				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	90	DCOM	95
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3514 /kg	NE2015	33.75 MJ/kg	MEpo	35.54 MJ/kg	MErab	35.73 MJ/kg
VEVI	4191 /kg	NE2015	8066 kcal/kg	MEpo	8495 kcal/kg	MErab	8540 kcal/kg
FOM-91	-49 g/kg	EW2015	3.84 /kg	MEla	40.88 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	9770 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-8 g/kg			**Broilers**		**Horses**	
DVE-07	-4 g/kg			MEbr	34.84 MJ/kg	NEm	24.94 MJ/kg
OEB-91	7 g/kg			MEbr	8327 kcal/kg	NEm	5959 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.792 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Olive oil 7001.421/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		995.0
<=C10	0.0	0.0
C12:0	0.0	0.0
C14:0	0.0	0.0
C16:0	12.8	121.0
C16:1	1.4	13.2
C18:0	3.0	28.4
C18:1	62.3	588.9
C:18:2	15.3	144.6
C18:3	3.0	28.4
>=C20	2.2	20.8
Sum FA	100.0	945.3
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Palm oil, chemically refined 3001.437/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	995	-	-	995	995	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	-	DCCP	-	DCCP	-
DCCFAT	95	DCCFATh	89	DCCFAT	92	DCCFAT	95
DCCF	-	DCCF	-	DCNFE	-	DCCF	-
DCNFE	-	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	95	DCOM	89				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	78	DCOM	95
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3514 /kg	NE2015	31.79 MJ/kg	MEpo	35.54 MJ/kg	MErab	35.73 MJ/kg
VEVI	4191 /kg	NE2015	7597 kcal/kg	MEpo	8495 kcal/kg	MErab	8540 kcal/kg
FOM-91	-49 g/kg	EW2015	3.61 /kg	MEla	40.88 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	9770 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-8 g/kg			**Broilers**		**Horses**	
DVE-07	-4 g/kg			MEbr	30.25 MJ/kg	NEm	24.94 MJ/kg
OEB-91	7 g/kg			MEbr	7231 kcal/kg	NEm	5959 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.792 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Palm oil, chemically refined 3001.437/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		995.0
<=C10	0.0	0.0
C12:0	0.1	1.0
C14:0	0.9	8.9
C16:0	42.7	403.7
C16:1	0.3	3.0
C18:0	4.8	45.3
C18:1	38.2	361.4
C:18:2	11.1	105.4
C18:3	0.3	3.0
>=C20	1.5	13.8
Sum FA	100.0	945.3
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Palmkernel oil, chemically refined 3001.421/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	995	-	-	995	995	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**			**Roosters/Laying hens**			**Rabbits**	
DCCP	-		DCCP	-		DCCP	-		DCCP	-
DCCFAT	95		DCCFATh	95		DCCFAT	92		DCCFAT	95
DCCF	-		DCCF	-		DCNFE	-		DCCF	-
DCNFE	-		DCNFE	-		DCPpo	-		DCNFE	-
DCOM	95		DCOM	95						
			DCNSPh	-		**Broilers**			**Horses**	
DVE	**1991**	**2007**	DCiSTA	-		DCCP	-		DCCP	-
%RUP	-	-	StaDCP	-		DCCFATh	92		DCOM	95
%DRUP	-	-	AppDCP	-		DC(S+S)	-			
%RUSTA	-	-				DCNFEh	-			
%DASH	-	-				DCPpo	-			
DASHmax	-	-								

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3514 /kg	NE2015	33.84 MJ/kg	MEpo	35.54 MJ/kg	MErab	35.73 MJ/kg
VEVI	4191 /kg	NE2015	8087 kcal/kg	MEpo	8495 kcal/kg	MErab	8540 kcal/kg
FOM-91	-49 g/kg	EW2015	3.85 /kg	MEla	40.88 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	9770 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-8 g/kg			**Broilers**		**Horses**	
DVE-07	-4 g/kg			MEbr	35.38 MJ/kg	NEm	24.94 MJ/kg
OEB-91	7 g/kg			MEbr	8457 kcal/kg	NEm	5959 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.792 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Palmkernel oil, chemically refined 3001.421/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		995.0
<=C10	7.0	66.5
C12:0	47.2	446.5
C14:0	15.1	142.5
C16:0	9.0	85.5
C16:1	0.0	0.0
C18:0	3.0	28.5
C18:1	16.1	152.0
C:18:2	2.0	19.0
C18:3	0.5	4.7
>=C20	0.0	0.0
Sum FA	100.0	945.3
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Poultry fat 8051.425/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	999	1	-	998	998	-	0	0
sdc	0	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	0.2	0.4	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	9	2	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.96	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	90		DCCFATh	93	DCCFAT	97	DCCFAT	90
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	90		DCOM	93				
			DCNSPh	0	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	86	DCOM	90
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3281 /kg	NE2015	33.17 MJ/kg	MEpo	37.59 MJ/kg	MErab	33.96 MJ/kg
VEVI	3864 /kg	NE2015	7928 kcal/kg	MEpo	8984 kcal/kg	MErab	8118 kcal/kg
FOM-91	-99 g/kg	EW2015	3.77 /kg	MEla	43.23 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	10332 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.87 /kg						
DVE-91	-17 g/kg			**Broilers**		**Horses**	
DVE-07	-7 g/kg			MEbr	33.36 MJ/kg	NEm	23.72 MJ/kg
OEB-91	15 g/kg			MEbr	7973 kcal/kg	NEm	5670 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.657 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Poultry fat 8051.425/0/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids

	% FA	g/kg
CFAT(h)		998.4
<=C10	0.0	0.0
C12:0	0.7	6.3
C14:0	0.9	8.4
C16:0	21.5	193.1
C16:1	4.6	41.4
C18:0	5.3	48.0
C18:1	37.4	336.4
C:18:2	21.9	196.5
C18:3	2.3	20.3
>=C20	5.4	48.1
Sum FA	100.0	898.5
% FA in CFAT-fraction		90

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Rapeseed oil 3009.437/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	995	-	-	995	995	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	95		DCCFATh	95	DCCFAT	92	DCCFAT	95
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	95		DCOM	95				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	93	DCOM	95
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3514 /kg	NE2015	33.89 MJ/kg	MEpo	35.54 MJ/kg	MErab	35.73 MJ/kg
VEVI	4191 /kg	NE2015	8099 kcal/kg	MEpo	8495 kcal/kg	MErab	8540 kcal/kg
FOM-91	-49 g/kg	EW2015	3.85 /kg	MEla	40.88 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	9770 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-8 g/kg			**Broilers**		**Horses**	
DVE-07	-4 g/kg			MEbr	36.10 MJ/kg	NEm	24.94 MJ/kg
OEB-91	7 g/kg			MEbr	8629 kcal/kg	NEm	5959 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.792 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Rapeseed oil 3009.437/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		995.0
<=C10	0.0	0.0
C12:0	0.2	1.9
C14:0	0.2	1.9
C16:0	5.1	48.4
C16:1	0.4	3.9
C18:0	2.0	19.4
C18:1	56.7	542.3
C:18:2	22.3	213.0
C18:3	9.1	87.2
>=C20	4.0	38.7
Sum FA	100.0	956.7
% FA in CFAT-fraction		96

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Safflower oil 3013.425/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	995	-	-	995	995	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	95		DCCFATh	95	DCCFAT	97	DCCFAT	95
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	95		DCOM	95				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	92	DCOM	95
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3514 /kg	NE2015	33.88 MJ/kg	MEpo	37.48 MJ/kg	MErab	35.73 MJ/kg
VEVI	4191 /kg	NE2015	8097 kcal/kg	MEpo	8957 kcal/kg	MErab	8540 kcal/kg
FOM-91	-49 g/kg	EW2015	3.85 /kg	MEla	43.10 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	10300 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-8 g/kg			**Broilers**		**Horses**	
DVE-07	-4 g/kg			MEbr	35.70 MJ/kg	NEm	24.94 MJ/kg
OEB-91	7 g/kg			MEbr	8532 kcal/kg	NEm	5959 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.792 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Safflower oil 3013.425/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		995.0
<=C10	0.0	0.0
C12:0	0.1	0.9
C14:0	0.2	1.9
C16:0	7.0	66.3
C16:1	0.1	0.9
C18:0	2.9	27.1
C18:1	13.2	125.0
C:18:2	74.3	702.6
C18:3	0.9	8.4
>=C20	1.3	12.1
Sum FA	100.0	945.3
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Soya oil 3012.421/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	995	-	-	995	995	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	95		DCCFATh	95	DCCFAT	97	DCCFAT	95
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	95		DCOM	95				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	90	DCOM	95
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3514 /kg	NE2015	33.78 MJ/kg	MEpo	37.48 MJ/kg	MErab	35.73 MJ/kg
VEVI	4191 /kg	NE2015	8074 kcal/kg	MEpo	8957 kcal/kg	MErab	8540 kcal/kg
FOM-91	-49 g/kg	EW2015	3.84 /kg	MEla	43.10 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	10300 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-8 g/kg			**Broilers**		**Horses**	
DVE-07	-4 g/kg			MEbr	34.95 MJ/kg	NEm	24.94 MJ/kg
OEB-91	7 g/kg			MEbr	8354 kcal/kg	NEm	5959 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.792 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Soya oil 3012.421/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		995.0
<=C10	0.0	0.0
C12:0	0.0	0.0
C14:0	0.2	1.9
C16:0	11.0	104.2
C16:1	0.2	1.9
C18:0	4.0	37.9
C18:1	22.0	208.4
C:18:2	54.1	511.5
C18:3	8.0	75.8
>=C20	0.4	3.8
Sum FA	100.0	945.3
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Sunflower oil, refined 3003.421/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	995	-	-	995	995	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	-	DCCP	-	DCCP	-
DCCFAT	95	DCCFATh	95	DCCFAT	92	DCCFAT	95
DCCF	-	DCCF	-	DCNFE	-	DCCF	-
DCNFE	-	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	95	DCOM	95				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	92	DCOM	95
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3514 /kg	NE2015	33.87 MJ/kg	MEpo	35.54 MJ/kg	MErab	35.73 MJ/kg
VEVI	4191 /kg	NE2015	8094 kcal/kg	MEpo	8495 kcal/kg	MErab	8540 kcal/kg
FOM-91	-49 g/kg	EW2015	3.85 /kg	MEla	40.88 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	9770 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-8 g/kg			**Broilers**		**Horses**	
DVE-07	-4 g/kg			MEbr	35.53 MJ/kg	NEm	24.94 MJ/kg
OEB-91	7 g/kg			MEbr	8492 kcal/kg	NEm	5959 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.792 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Sunflower oil, refined 3003.421/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		995.0
<=C10	0.1	0.9
C12:0	0.2	1.9
C14:0	0.3	2.8
C16:0	7.0	66.4
C16:1	0.3	2.8
C18:0	4.0	38.0
C18:1	22.1	208.8
C:18:2	65.3	616.9
C18:3	0.4	3.8
>=C20	0.3	2.8
Sum FA	100.0	945.2
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fat/oil, Tallow 8020.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	994	1	-	993	993	-	0	0
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	0.2	0.4	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	9	2	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.96	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	-	DCCP	-	DCCP	-
DCCFAT	90	DCCFATh	89	DCCFAT	75	DCCFAT	90
DCCF	-	DCCF	-	DCNFE	-	DCCF	-
DCNFE	-	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	90	DCOM	89				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	79	DCOM	90
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	3264 /kg	NE2015	31.73 MJ/kg	MEpo	29.10 MJ/kg	MErab	33.78 MJ/kg
VEVI	3843 /kg	NE2015	7583 kcal/kg	MEpo	6955 kcal/kg	MErab	8074 kcal/kg
FOM-91	-99 g/kg	EW2015	3.61 /kg	MEla	33.46 MJ/kg		
FOMr-07	0 g/kg	StaDP	-	MEla	7998 kcal/kg		
FOMr2-07	0 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-17 g/kg			**Broilers**		**Horses**	
DVE-07	-7 g/kg			MEbr	30.38 MJ/kg	NEm	23.59 MJ/kg
OEB-91	15 g/kg			MEbr	7262 kcal/kg	NEm	5638 kcal/kg
OEB-07	0 g/kg			DPpo	-	EWpa	2.642 /kg
OEB2-07	0 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.32 /kg						
VW	0.29 /kg						

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Fat/oil, Tallow 8020.000/0/0

Amino acids	g/16g N			Ileal digestible AA pigs				Standardized ileal digestible AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		993.0
<=C10	0.0	0.0
C12:0	0.0	0.0
C14:0	2.1	18.6
C16:0	26.9	240.0
C16:1	2.5	22.8
C18:0	19.3	172.7
C18:1	37.0	331.0
C:18:2	4.9	43.4
C18:3	4.3	38.3
>=C20	3.0	26.9
Sum FA	100.0	893.7
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Feather meal, hydrolysed 8003.629/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	938	24	833	-	93	13	-	-25
sdc	18	6	20	-	11	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	-12	-12
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	5.0	2.8	-	0.4	1.0	0.8	1.6	0.1	12.4
sdc	0.8	0.7	-	0.1	0.3	0.2	0.6	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	484	18	141	13	-	-	-
sdc	105	2	16	2	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	14	
		CF_DI	0.96	CAD (meq/kg)	-763	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	79	DCCP	77	DCCP	-
DCCFAT	-		DCCFATh	75	DCCFAT	62	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	77	DCCF	-
DCNFE	-		DCNFE	79	DCPpo	70	DCNFE	-
DCOM	-		DCOM	79				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	78	DCCP	-
%RUP	-	-	StaDCP	85	DCCFATh	50	DCOM	-
%DRUP	-	-	AppDCP	78	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	70		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	10.10 MJ/kg	MEpo	13.48 MJ/kg	MErab	-
VEVI	-	NE2015	2414 kcal/kg	MEpo	3221 kcal/kg	MErab	-
FOM-91	-	EW2015	1.15 /kg	MEla	13.81 MJ/kg		
FOMr-07	-	StaDP	2.3 g/kg	MEla	3301 kcal/kg		
FOMr2-07	-	AppDP	2.2 g/kg	DPpo	1.9 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	13.14 MJ/kg	NEm	-
OEB-91	-			MEbr	3140 kcal/kg	NEm	-
OEB-07	-			DPpo	1.9 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Feather meal, hydrolysed 8003.629/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			833	66	-	65	543	-	-
LYS	2.5	0.4	20.8	49	10.2	47	9.8	74	15.4
MET	0.7	0.1	5.8	58	3.4	56	3.3	72	4.2
CYS	5.0	0.6	41.7	64	26.7	64	26.5	69	28.7
THR	4.7	0.1	39.2	69	27.0	68	26.5	67	26.2
TRP	0.7	0.1	5.8	56	3.3	54	3.1	70	4.1
ILE	4.8	0.2	40.0	80	32.1	79	31.8	68	27.2
ARG	6.9	0.3	57.5	80	45.9	79	45.5	78	44.8
PHE	4.9	0.2	40.8	81	33.1	80	32.8	67	27.3
HIS	1.0	0.3	8.3	63	5.2	61	5.1	74	6.2
LEU	8.3	0.2	69.1	76	52.6	75	52.2	69	47.7
TYR	3.1	0.1	25.8	70	18.2	69	17.9	65	16.8
VAL	7.3	0.4	60.8	78	47.3	77	46.8	66	40.1
ALA	4.7	0.2	39.2	71	27.9	70	27.4	74	29.0
ASP	7.0	0.3	58.3	48	28.0	47	27.2	71	41.4
GLU	10.9	0.5	90.8	78	70.6	77	69.5	75	68.1
GLY	7.7	0.4	64.1	80	51.3	79	50.4	72	46.2
PRO	9.6	0.7	80.0	87	69.5	86	68.4	71	56.8
SER	10.7	0.6	89.1	80	71.5	80	70.9	72	64.2
Sum AA	100.5		837	-	624	-	615	-	594

Fatty acids	% FA	g/kg
CFAT(h)		93.1
<=C10	2.8	1.6
C12:0	1.0	0.6
C14:0	2.3	1.3
C16:0	26.7	14.9
C16:1	2.5	1.4
C18:0	13.5	7.5
C18:1	32.2	18.0
C:18:2	11.7	6.5
C18:3	0.8	0.4
>=C20	3.3	1.8
Sum FA	96.8	54.1
% FA in CFAT-fraction		60

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Feather meal, hydrolysed:

1. Processing this product in feeds for ruminants is not allowed in the EU; in the Netherlands the processing of this product in feeds for pigs and poultry is forbidden as well.

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Feed beans, heat treated 2001.616/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	862	52	229	16	-	45	521	-
sdc	9	8	10	2	-	4	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	361	326	-	40	175	75	-	201	26
sdc	17	-	-	5	23	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.6	4.6	2.3	1.8	15.2	0.1	0.4	0.2	1.2
sdc	0.2	0.4	-	-	-	-	0.4	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	87	29	32	9	-	-	-
sdc	-	-	3	1	-	-	-

IP/P	50	SUGe/SUG	100	EB (meq/kg)	383	
		CF_DI	0.96	CAD (meq/kg)	294	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	78	DCCP	70	DCCP	79	DCCP	80
DCCFAT	67	DCCFATh	54	DCCFAT	60	DCCFAT	60
DCCF	81	DCCF	73	DCNFE	74	DCCF	30
DCNFE	95	DCNFE	94	DCPpo	51	DCNFE	90
DCOM	89	DCOM	85				
		DCNSPh	78	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	85
%RUP	34	39	StaDCP	40	DCCFATh	-	DCOM	83
%DRUP	90	90	AppDCP	36	DC(S+S)	-		
%RUSTA	20	20			DCNFEh	-		
%DASH	50	50			DCPpo	51		
DASHmax	33	33						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	977 /kg	NE2015	8.82 MJ/kg	MEpo	10.32 MJ/kg	MErab	12.09 MJ/kg
VEVI	1064 /kg	NE2015	2108 kcal/kg	MEpo	2466 kcal/kg	MErab	2888 kcal/kg
FOM-91	561 g/kg	EW2015	1.00 /kg	MEla	10.38 MJ/kg		
FOMr-07	561 g/kg	StaDP	1.8 g/kg	MEla	2480 kcal/kg		
FOMr2-07	263 g/kg	AppDP	1.7 g/kg	DPpo	2.4 g/kg		
FOMr2/FOMr	0.47 /kg						
DVE-91	123 g/kg			**Broilers**		**Horses**	
DVE-07	136 g/kg			MEbr	-	NEm	8.37 MJ/kg
OEB-91	58 g/kg			MEbr	-	NEm	1999 kcal/kg
OEB-07	39 g/kg			DPpo	2.4 g/kg	EWpa	0.937 /kg
OEB2-07	8 g/kg					DCPho	195 g/kg
DVMET-91	2.1 g/kg						
DVLYS-91	8.5 g/kg						
DVMET-07	2.4 g/kg						
DVLYS-07	9.5 g/kg						
SW	0.10 /kg						
VW	0.25 /kg						

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Feed beans, heat treated 2001.616/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			229	53	-	49	112	-	-
LYS	6.3	0.2	14.4	68	9.8	65	9.4	78	11.3
MET	1.1	0.2	2.5	55	1.4	52	1.3	66	1.7
CYS	1.1	0.1	2.5	45	1.1	38	1.0	59	1.5
THR	4.2	0.4	9.6	55	5.3	50	4.8	67	6.5
TRP	1.0	0.2	2.3	55	1.3	50	1.1	67	1.5
ILE	4.4	0.2	10.1	54	5.4	50	5.1	67	6.8
ARG	7.2	1.3	16.5	72	11.8	70	11.5	78	12.9
PHE	5.3	0.7	12.1	43	5.3	41	5.0	64	7.8
HIS	2.8	0.2	6.4	58	3.7	55	3.5	68	4.4
LEU	7.7	0.5	17.7	55	9.6	52	9.2	69	12.2
TYR	3.2	0.5	7.3	55	4.1	52	3.8	67	4.9
VAL	5.0	0.3	11.5	53	6.1	49	5.6	66	7.6
ALA	4.2	0.1	9.6	54	5.2	50	4.8	70	6.7
ASP	11.5	0.6	26.4	47	12.5	45	11.8	65	17.1
GLU	15.7	0.6	36.0	56	20.1	53	19.1	72	25.9
GLY	4.0	0.2	9.2	50	4.5	41	3.8	64	5.9
PRO	3.9	0.4	8.9	60	5.3	49	4.4	68	6.1
SER	5.8	0.5	13.3	57	7.6	53	7.0	69	9.2
Sum AA	94.4		216	-	120	-	112	-	150

Fatty acids	% FA	g/kg
CFAT(h)		16.4
<=C10	0.5	0.1
C12:0	0.5	0.1
C14:0	0.5	0.1
C16:0	18.0	2.2
C16:1	0.5	0.1
C18:0	3.0	0.4
C18:1	13.0	1.6
C:18:2	34.0	4.2
C18:3	29.0	3.6
>=C20	2.0	0.2
Sum FA	101.0	12.4
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Fish meal, treated-CP < 600 g/kg 8015.000/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	911	194	561	-	142	-	-	13
sdc	5	46	20	-	31	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	13	13
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	40.1	26.4	-	2.3	6.4	10.5	15.2	0.7	4.7
sdc	-	-	-	0.4	-	2.9	4.9	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	347	17	82	7	0.5	2.4	1.8
sdc	101	6	12	3	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	190	
		CF_DI	0.96	CAD (meq/kg)	-150	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	87	DCCP	88	DCCP	90
DCCFAT	-		DCCFATh	92	DCCFAT	84	DCCFAT	90
DCCF	-		DCCF	-	DCNFE	88	DCCF	-
DCNFE	-		DCNFE	87	DCPpo	74	DCNFE	90
DCOM	-		DCOM	88				
			DCNSPh	87	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	88	DCCP	-
%RUP	-	-	StaDCP	77	DCCFATh	87	DCOM	-
%DRUP	-	-	AppDCP	76	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	74		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	10.51 MJ/kg	MEpo	13.74 MJ/kg	MErab	14.63 MJ/kg
VEVI	-	NE2015	2512 kcal/kg	MEpo	3284 kcal/kg	MErab	3497 kcal/kg
FOM-91	-	EW2015	1.19 /kg	MEla	14.44 MJ/kg		
FOMr-07	-	StaDP	20.3 g/kg	MEla	3450 kcal/kg		
FOMr2-07	-	AppDP	20.2 g/kg	DPpo	19.5 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	13.74 MJ/kg	NEm	-
OEB-91	-			MEbr	3285 kcal/kg	NEm	-
OEB-07	-			DPpo	19.5 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Fish meal, treated-CP < 600 g/kg 8015.000/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			561	85	-	83	465	-	-
LYS	7.6	0.5	42.6	89	38.1	89	37.8	85	36.2
MET	2.8	0.2	15.7	89	14.0	88	13.9	83	13.0
CYS	0.9	0.1	5.0	74	3.7	70	3.5	71	3.6
THR	4.2	0.2	23.6	88	20.8	86	20.3	81	19.1
TRP	1.1	0.1	6.2	86	5.3	84	5.2	79	4.9
ILE	4.2	0.3	23.6	90	21.2	89	20.9	83	19.6
ARG	5.9	0.4	33.1	92	30.4	91	30.1	85	28.1
PHE	3.9	0.3	21.9	87	19.0	86	18.7	82	17.9
HIS	2.6	0.5	14.6	87	12.6	85	12.5	80	11.7
LEU	7.3	0.4	41.0	90	36.7	89	36.3	85	34.8
TYR	3.1	0.3	17.4	88	15.3	86	15.0	82	14.3
VAL	4.9	0.4	27.5	89	24.6	88	24.1	83	22.8
ALA	6.3	0.3	35.3	90	31.7	89	31.3	83	29.3
ASP	9.3	0.5	52.2	79	41.1	77	40.4	74	38.6
GLU	13.0	0.7	72.9	90	65.8	89	64.8	82	59.8
GLY	6.5	0.7	36.5	87	31.8	85	31.0	77	28.1
PRO	4.4	0.5	24.7	98	24.2	94	23.2	82	20.2
SER	4.0	0.3	22.4	89	20.0	87	19.4	78	17.5
Sum AA	92.0		516	-	456	-	448	-	420

Fatty acids	% FA	g/kg
CFAT(h)		142.2
<=C10	0.1	0.1
C12:0	-	0.0
C14:0	7.0	8.0
C16:0	16.0	18.2
C16:1	7.0	8.0
C18:0	2.0	2.3
C18:1	15.0	17.1
C:18:2	1.0	1.1
C18:3	1.0	1.1
>=C20	45.0	51.2
Sum FA	94.1	107.1
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Fish meal, treated-CP < 600 g/kg:

1. In the EU, processing of this product in feeds for pigs and poultry is allowed but it is forbidden to process this product in feeds for ruminants.

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Fish meal, treated-CP 600 - 650 g/kg 8015.000/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	913	168	629	98	112	-	18	4
sdc	8	16	9	15	17	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	4	4
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	40.3	26.0	-	2.3	8.1	10.5	15.2	0.7	5.3
sdc	6.2	3.6	-	0.4	1.8	2.9	4.9	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	348	17	82	7	0.5	2.4	1.8
sdc	102	6	12	3	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	234	
		CF_DI	0.96	CAD (meq/kg)	-142	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	87	DCCP	88	DCCP	90
DCCFAT	-		DCCFATh	91	DCCFAT	84	DCCFAT	90
DCCF	-		DCCF	-	DCNFE	88	DCCF	-
DCNFE	-		DCNFE	87	DCPpo	74	DCNFE	90
DCOM	-		DCOM	88				
			DCNSPh	87	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	87	DCCP	-
%RUP	-	-	StaDCP	77	DCCFATh	87	DCOM	-
%DRUP	-	-	AppDCP	76	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	74		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	10.11 MJ/kg	MEpo	13.70 MJ/kg	MErab	14.63 MJ/kg
VEVI	-	NE2015	2417 kcal/kg	MEpo	3273 kcal/kg	MErab	3497 kcal/kg
FOM-91	-	EW2015	1.15 /kg	MEla	14.24 MJ/kg		
FOMr-07	-	StaDP	20.0 g/kg	MEla	3404 kcal/kg		
FOMr2-07	-	AppDP	19.9 g/kg	DPpo	19.3 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	13.66 MJ/kg	NEm	-
OEB-91	-			MEbr	3264 kcal/kg	NEm	-
OEB-07	-			DPpo	19.3 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Fish meal, treated-CP 600 - 650 g/kg 8015.000/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			629	85	-	83	523	-	-
LYS	7.6	0.5	47.8	89	42.7	89	42.4	85	40.6
MET	2.8	0.2	17.6	89	15.7	88	15.6	83	14.6
CYS	0.9	0.1	5.7	74	4.2	71	4.0	71	4.0
THR	4.2	0.2	26.4	88	23.3	86	22.8	81	21.4
TRP	1.1	0.1	6.9	86	6.0	84	5.8	79	5.5
ILE	4.2	0.3	26.4	90	23.8	89	23.5	83	21.9
ARG	5.9	0.4	37.1	92	34.1	91	33.8	85	31.5
PHE	3.9	0.3	24.5	87	21.3	86	21.1	82	20.1
HIS	2.6	0.5	16.4	87	14.2	86	14.0	80	13.1
LEU	7.3	0.4	45.9	90	41.2	89	40.7	85	39.0
TYR	3.1	0.3	19.5	88	17.1	86	16.9	82	16.0
VAL	4.9	0.4	30.8	89	27.5	88	27.1	83	25.6
ALA	6.3	0.3	39.6	90	35.6	89	35.1	83	32.9
ASP	9.3	0.5	58.5	79	46.1	78	45.3	74	43.3
GLU	13.0	0.7	81.8	90	73.8	89	72.8	82	67.1
GLY	6.5	0.7	40.9	87	35.6	85	34.8	77	31.5
PRO	4.4	0.5	27.7	98	27.1	94	26.1	82	22.7
SER	4.0	0.3	25.2	89	22.4	87	21.8	78	19.6
Sum AA	92.0		579	-	512	-	504	-	470

Fatty acids

	% FA	g/kg
CFAT(h)		111.9
<=C10	0.1	0.1
C12:0	-	0.0
C14:0	7.0	6.3
C16:0	16.0	14.3
C16:1	7.0	6.3
C18:0	2.0	1.8
C18:1	15.0	13.4
C:18:2	1.0	0.9
C18:3	1.0	0.9
>=C20	45.0	40.3
Sum FA	94.1	84.2
% FA in CFAT-fraction		80

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Fish meal, treated-CP 600 - 650 g/kg:

1. In the EU, processing of this product in feeds for pigs and poultry is allowed but it is forbidden to process this product in feeds for ruminants.

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Fish meal, treated-CP 650 - 690 g/kg 8015.000/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	911	164	654	93	105	-	-1	-13
sdc	7	10	9	19	12	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	-13	-13
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	38.0	24.9	-	2.3	9.4	10.5	15.2	0.7	5.5
sdc	5.4	1.8	-	0.4	2.0	2.9	4.9	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	347	17	82	7	0.5	2.4	1.8
sdc	101	6	12	3	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	267	
		CF_DI	0.96	CAD (meq/kg)	-121	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	87	DCCP	88	DCCP	90
DCCFAT	-		DCCFATh	91	DCCFAT	84	DCCFAT	90
DCCF	-		DCCF	-	DCNFE	88	DCCF	-
DCNFE	-		DCNFE	87	DCPpo	74	DCNFE	90
DCOM	-		DCOM	88				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	87	DCCP	-
%RUP	-	-	StaDCP	77	DCCFATh	87	DCOM	-
%DRUP	-	-	AppDCP	76	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	74		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	10.01 MJ/kg	MEpo	13.62 MJ/kg	MErab	14.58 MJ/kg
VEVI	-	NE2015	2392 kcal/kg	MEpo	3256 kcal/kg	MErab	3484 kcal/kg
FOM-91	-	EW2015	1.14 /kg	MEla	14.14 MJ/kg		
FOMr-07	-	StaDP	19.1 g/kg	MEla	3379 kcal/kg		
FOMr2-07	-	AppDP	19.0 g/kg	DPpo	18.4 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	13.57 MJ/kg	NEm	-
OEB-91	-			MEbr	3242 kcal/kg	NEm	-
OEB-07	-			DPpo	18.4 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Fish meal, treated-CP 650 - 690 g/kg 8015.000/3/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			654	85	-	83	544	-	-
LYS	7.6	0.5	49.7	89	44.4	89	44.1	85	42.3
MET	2.8	0.2	18.3	89	16.3	88	16.2	83	15.2
CYS	0.9	0.1	5.9	74	4.4	71	4.2	71	4.2
THR	4.2	0.2	27.5	88	24.2	86	23.7	81	22.3
TRP	1.1	0.1	7.2	86	6.2	84	6.1	79	5.7
ILE	4.2	0.3	27.5	90	24.8	89	24.4	83	22.8
ARG	5.9	0.4	38.6	92	35.5	91	35.1	85	32.8
PHE	3.9	0.3	25.5	87	22.2	86	21.9	82	20.9
HIS	2.6	0.5	17.0	87	14.7	86	14.6	80	13.6
LEU	7.3	0.4	47.8	90	42.8	89	42.4	85	40.6
TYR	3.1	0.3	20.3	88	17.8	87	17.6	82	16.6
VAL	4.9	0.4	32.1	89	28.7	88	28.2	83	26.6
ALA	6.3	0.3	41.2	90	37.0	89	36.6	83	34.2
ASP	9.3	0.5	60.8	79	47.9	78	47.2	74	45.0
GLU	13.0	0.7	85.1	90	76.8	89	75.7	82	69.7
GLY	6.5	0.7	42.5	87	37.1	85	36.2	77	32.7
PRO	4.4	0.5	28.8	98	28.2	95	27.2	82	23.6
SER	4.0	0.3	26.2	89	23.3	87	22.8	78	20.4
Sum AA	92.0		602	-	532	-	524	-	489

Fatty acids	% FA	g/kg
CFAT(h)		105.3
<=C10	0.1	0.1
C12:0	-	0.0
C14:0	7.0	5.9
C16:0	16.0	13.5
C16:1	7.0	5.9
C18:0	2.0	1.7
C18:1	15.0	12.6
C:18:2	1.0	0.8
C18:3	1.0	0.8
>=C20	45.0	37.9
Sum FA	94.1	79.3
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Fish meal, treated-CP 650 - 690 g/kg:

1. In the EU, processing of this product in feeds for pigs and poultry is allowed but it is forbidden to process this product in feeds for ruminants.

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Fish meal, treated-CP > 690 g/kg 8015.000/4/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	917	132	707	91	101	-	-14	-24
sdc	11	19	13	25	15	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	-24	-24
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	27.2	21.9	-	2.3	14.7	10.5	15.3	0.7	5.9
sdc	9.7	2.5	-	0.4	2.9	2.9	5.0	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	349	18	83	7	0.6	2.4	1.8
sdc	102	6	12	3	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	403	
		CF_DI	0.96	CAD (meq/kg)	-14	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	88	DCCP	88	DCCP	90
DCCFAT	-		DCCFATh	91	DCCFAT	84	DCCFAT	90
DCCF	-		DCCF	-	DCNFE	88	DCCF	-
DCNFE	-		DCNFE	88	DCPpo	74	DCNFE	90
DCOM	-		DCOM	88				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	87	DCCP	-
%RUP	-	-	StaDCP	77	DCCFATh	87	DCOM	-
%DRUP	-	-	AppDCP	76	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	74		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	10.32 MJ/kg	MEpo	14.16 MJ/kg	MErab	15.17 MJ/kg
VEVI	-	NE2015	2467 kcal/kg	MEpo	3384 kcal/kg	MErab	3625 kcal/kg
FOM-91	-	EW2015	1.17 /kg	MEla	14.65 MJ/kg		
FOMr-07	-	StaDP	16.9 g/kg	MEla	3502 kcal/kg		
FOMr2-07	-	AppDP	16.7 g/kg	DPpo	16.2 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	14.09 MJ/kg	NEm	-
OEB-91	-			MEbr	3367 kcal/kg	NEm	-
OEB-07	-			DPpo	16.2 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Fish meal, treated-CP > 690 g/kg 8015.000/4/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			707	85	-	83	588	-	-
LYS	7.6	0.5	53.7	89	48.0	89	47.7	85	45.7
MET	2.8	0.2	19.8	89	17.6	88	17.5	83	16.4
CYS	0.9	0.1	6.4	74	4.7	71	4.5	71	4.5
THR	4.2	0.2	29.7	88	26.2	86	25.7	81	24.0
TRP	1.1	0.1	7.8	86	6.7	85	6.6	79	6.1
ILE	4.2	0.3	29.7	90	26.8	89	26.4	83	24.6
ARG	5.9	0.4	41.7	92	38.4	91	38.0	85	35.4
PHE	3.9	0.3	27.6	87	24.0	86	23.7	82	22.6
HIS	2.6	0.5	18.4	87	15.9	86	15.7	80	14.7
LEU	7.3	0.4	51.6	90	46.3	89	45.8	85	43.9
TYR	3.1	0.3	21.9	88	19.2	87	19.0	82	18.0
VAL	4.9	0.4	34.6	89	31.0	88	30.5	83	28.7
ALA	6.3	0.3	44.5	90	40.0	89	39.5	83	37.0
ASP	9.3	0.5	65.7	79	51.8	78	51.0	74	48.6
GLU	13.0	0.7	91.9	90	83.0	89	81.9	82	75.3
GLY	6.5	0.7	45.9	87	40.0	85	39.2	77	35.4
PRO	4.4	0.5	31.1	98	30.5	95	29.5	82	25.5
SER	4.0	0.3	28.3	89	25.2	87	24.6	78	22.1
Sum AA	92.0		650	-	575	-	567	-	529

Fatty acids	% FA	g/kg
CFAT(h)		101.3
<=C10	0.1	0.1
C12:0	-	0.0
C14:0	7.0	5.7
C16:0	16.0	13.0
C16:1	7.0	5.7
C18:0	2.0	1.6
C18:1	15.0	12.2
C:18:2	1.0	0.8
C18:3	1.0	0.8
>=C20	45.0	36.5
Sum FA	94.1	76.3
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Fish meal, treated-CP > 690 g/kg:

1. In the EU, processing of this product in feeds for pigs and poultry is allowed but it is forbidden to process this product in feeds for ruminants.

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Grass meal-CP < 140 g/kg 5010.610/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	929	108	122	25	25	235	439	439
sdc	15	22	14	7	-	29	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	13	-	122	460	272	-	543	84
sdc	-	-	-	28	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	5.3	3.2	0.2	2.0	24.1	2.6	7.3	3.4	0.7
sdc	1.0	0.6	-	0.4	5.6	1.0	4.5	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	799	88	36	9	1.7	0.0	0.7
sdc	367	26	7	1	0.9	0.0	0.3

IP/P	5	SUGe/SUG	45	EB (meq/kg)	521
		CF_DI	0.96	CAD (meq/kg)	262

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	59	DCCP	27	DCCP	45	DCCP	71
DCCFAT	-	DCCFATh	31	DCCFAT	40	DCCFAT	51
DCCF	-	DCCF	51	DCNFE	23	DCCF	15
DCNFE	-	DCNFE	70	DCPpo	75	DCNFE	69
DCOM	72	DCOM	57				
		DCNSPh	55	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	66	DCCP	59
%RUP	50	57	StaDCP	30	DCCFATh	28	DCOM	60
%DRUP	65	65	AppDCP	24	DC(S+S)	100		
%RUSTA	-	-			DCNFEh	30		
%DASH	35	35			DCPpo	75		
DASHmax	45	45						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	737 /kg	NE2015	5.08 MJ/kg	MEpo	3.13 MJ/kg	MErab	7.00 MJ/kg
VEVI	742 /kg	NE2015	1214 kcal/kg	MEpo	748 kcal/kg	MErab	1674 kcal/kg
FOM-91	501 g/kg	EW2015	0.58 /kg	MEla	3.19 MJ/kg		
FOMr-07	442 g/kg	StaDP	1.0 g/kg	MEla	762 kcal/kg		
FOMr2-07	182 g/kg	AppDP	0.8 g/kg	DPpo	2.4 g/kg		
FOMr2/FOMr	0.41 /kg						
DVE-91	69 g/kg			**Broilers**		**Horses**	
DVE-07	67 g/kg			MEbr	3.98 MJ/kg	NEm	5.44 MJ/kg
OEB-91	-21 g/kg			MEbr	952 kcal/kg	NEm	1299 kcal/kg
OEB-07	-17 g/kg			DPpo	2.4 g/kg	EWpa	0.609 /kg
OEB2-07	-4 g/kg					DCPho	72 g/kg
DVMET-91	1.5 g/kg						
DVLYS-91	4.1 g/kg						
DVMET-07	1.5 g/kg						
DVLYS-07	3.9 g/kg						
SW	0.38 /kg						
VW	0.34 /kg						

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Grass meal-CP < 140 g/kg 5010.610/1/0

Amino acids				Ileal digestible				Standardized ileal digestible
				AA pigs				AA poultry
	g/16g N			standardized		apparent		
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			122	48	-	39	48	-	-
LYS	3.9	0.6	4.7	48	2.3	40	1.9	47	2.2
MET	1.5	0.2	1.8	63	1.1	57	1.0	48	0.9
CYS	1.0	0.2	1.2	33	0.4	17	0.2	44	0.5
THR	4.1	0.4	5.0	48	2.4	37	1.8	45	2.2
TRP	1.4	0.1	1.7	48	0.8	40	0.7	45	0.8
ILE	3.8	0.3	4.6	48	2.2	40	1.9	46	2.1
ARG	4.1	0.5	5.0	48	2.4	41	2.0	44	2.2
PHE	4.3	0.6	5.3	48	2.5	42	2.2	45	2.4
HIS	1.9	0.3	2.3	48	1.1	40	0.9	45	1.1
LEU	6.9	0.5	8.4	48	4.0	43	3.6	45	3.8
TYR	2.7	0.3	3.3	48	1.6	40	1.3	45	1.5
VAL	5.2	0.6	6.4	48	3.0	40	2.6	46	2.9
ALA	6.4	0.8	7.8	48	3.7	42	3.3	47	3.7
ASP	9.1	1.1	11.1	48	5.3	41	4.6	45	5.0
GLU	10.0	1.0	12.2	47	5.8	38	4.7	46	5.6
GLY	4.6	0.5	5.6	48	2.7	33	1.8	47	2.6
PRO	4.6	0.6	5.6	47	2.7	29	1.7	46	2.6
SER	4.0	0.4	4.9	48	2.3	35	1.7	45	2.2
Sum AA	79.4		97	-	46	-	38	-	44

Fatty acids		
	% FA	g/kg
CFAT(h)		25.0
<=C10	-	0.0
C12:0	0.2	0.0
C14:0	2.0	0.3
C16:0	16.0	2.0
C16:1	2.0	0.3
C18:0	2.0	0.3
C18:1	3.0	0.4
C:18:2	13.0	1.6
C18:3	60.0	7.5
>=C20	-	0.0
Sum FA	98.2	12.3
% FA in CFAT-fraction		50

Fermentation products		
	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Grass meal-CP < 140 g/kg:

1. This product may be contaminated with sand / soil; this is the case when the ASH content is higher than approximately 75 g/kg DM.

2. The content of sugar may vary considerably, depending on conditions for growth and harvesting.

3. The botanical composition of this product class mostly differs from the other classes. therefore, for this class the values of VEM and VEVI are calculated differently from the other classes.

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Grass meal-CP 140 - 160 g/kg 5010.610/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	928	123	151	32	32	212	410	410
sdc	16	21	7	6	-	21	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	13	-	106	414	245	-	507	93
sdc	-	-	-	27	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	5.3	3.6	0.2	2.4	27.3	2.6	7.3	3.4	0.9
sdc	1.0	0.4	-	0.3	4.4	1.0	4.5	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	799	88	36	9	2.1	0.0	0.7
sdc	367	26	7	1	0.8	0.0	0.3

IP/P	5	SUGe/SUG	45	EB (meq/kg)	603
		CF_DI	0.96	CAD (meq/kg)	334

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	64	DCCP	43	DCCP	45	DCCP	71
DCCFAT	-	DCCFATh	36	DCCFAT	40	DCCFAT	51
DCCF	-	DCCF	57	DCNFE	23	DCCF	15
DCNFE	-	DCNFE	73	DCPpo	75	DCNFE	69
DCOM	74	DCOM	62				
		DCNSPh	60	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	67	DCCP	64
%RUP	47	54	StaDCP	30	DCCFATh	28	DCOM	62
%DRUP	65	65	AppDCP	25	DC(S+S)	100		
%RUSTA	-	-			DCNFEh	28		
%DASH	35	35			DCPpo	75		
DASHmax	51	51						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	770 /kg	NE2015	5.47 MJ/kg	MEpo	3.36 MJ/kg	MErab	7.90 MJ/kg
VEVI	786 /kg	NE2015	1307 kcal/kg	MEpo	804 kcal/kg	MErab	1888 kcal/kg
FOM-91	493 g/kg	EW2015	0.62 /kg	MEla	3.44 MJ/kg		
FOMr-07	434 g/kg	StaDP	1.1 g/kg	MEla	822 kcal/kg		
FOMr2-07	175 g/kg	AppDP	0.9 g/kg	DPpo	2.7 g/kg		
FOMr2/FOMr	0.40 /kg						
DVE-91	77 g/kg			**Broilers**		**Horses**	
DVE-07	75 g/kg			MEbr	4.18 MJ/kg	NEm	5.67 MJ/kg
OEB-91	-1 g/kg			MEbr	999 kcal/kg	NEm	1354 kcal/kg
OEB-07	1 g/kg			DPpo	2.7 g/kg	EWpa	0.634 /kg
OEB2-07	8 g/kg					DCPho	89 g/kg
DVMET-91	1.6 g/kg						
DVLYS-91	4.4 g/kg						
DVMET-07	1.6 g/kg						
DVLYS-07	4.2 g/kg						
SW	0.37 /kg						
VW	0.33 /kg						

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Grass meal-CP 140 - 160 g/kg 5010.610/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			151	48	-	41	62	-	-
LYS	3.9	0.6	5.9	48	2.8	42	2.4	47	2.8
MET	1.5	0.2	2.2	63	1.4	58	1.3	48	1.1
CYS	1.0	0.2	1.5	33	0.5	20	0.3	43	0.7
THR	4.1	0.4	6.2	48	2.9	39	2.4	45	2.8
TRP	1.4	0.1	2.1	48	1.0	42	0.9	44	0.9
ILE	3.8	0.3	5.7	48	2.7	42	2.4	46	2.6
ARG	4.1	0.5	6.2	48	3.0	42	2.6	44	2.7
PHE	4.3	0.6	6.6	48	3.1	43	2.8	45	3.0
HIS	1.9	0.3	2.9	48	1.4	42	1.2	45	1.3
LEU	6.9	0.5	10.4	48	5.0	44	4.6	45	4.7
TYR	2.7	0.3	4.1	48	1.9	41	1.7	45	1.8
VAL	5.2	0.6	7.9	48	3.8	42	3.3	46	3.6
ALA	6.4	0.8	9.7	48	4.6	43	4.2	47	4.5
ASP	9.1	1.1	13.8	48	6.6	42	5.8	45	6.2
GLU	10.0	1.0	15.1	47	7.1	40	6.1	46	6.9
GLY	4.6	0.5	6.9	48	3.3	36	2.5	47	3.3
PRO	4.6	0.6	7.0	47	3.3	33	2.3	46	3.2
SER	4.0	0.4	6.0	48	2.9	37	2.3	45	2.7
Sum AA	79.4		120	-	57	-	49	-	55

Fatty acids	% FA	g/kg
CFAT(h)		32.4
<=C10	-	0.0
C12:0	0.2	0.0
C14:0	2.0	0.3
C16:0	16.0	2.6
C16:1	2.0	0.3
C18:0	2.0	0.3
C18:1	3.0	0.5
C:18:2	13.0	2.1
C18:3	60.0	9.7
>=C20	-	0.0
Sum FA	98.2	15.9
% FA in CFAT-fraction		50

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Grass meal-CP 140 - 160 g/kg:

1. This product may be contaminated with sand / soil; this is the case when the ASH content is higher than approximately 75 g/kg DM.
2. The content of sugar may vary considerably, depending on conditions for growth and harvesting.
3. In calculating the feeding value for ruminants the cutting date is assumed to be first of July (day 91).

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Grass meal-CP 160 - 200 g/kg 5010.610/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	929	121	177	38	38	211	384	384
sdc	17	18	9	8	-	21	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	13	-	90	411	243	-	495	84
sdc	-	-	-	31	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	5.3	3.8	0.2	2.6	29.1	2.6	7.3	3.4	1.0
sdc	1.0	0.4	-	0.3	4.4	1.0	4.5	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	800	88	36	9	2.5	0.0	0.7
sdc	368	26	7	1	1.3	0.0	0.3

IP/P	5	SUGe/SUG	45	EB (meq/kg)	650
		CF_DI	0.96	CAD (meq/kg)	371

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	68		DCCP	50	DCCP	68	DCCP	79
DCCFAT	-		DCCFATh	38	DCCFAT	43	DCCFAT	51
DCCF	-		DCCF	57	DCNFE	35	DCCF	20
DCNFE	-		DCNFE	72	DCPpo	75	DCNFE	74
DCOM	75		DCOM	62				
			DCNSPh	60	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	68	DCCP	68
%RUP	44	52	StaDCP	30	DCCFATh	28	DCOM	62
%DRUP	75	75	AppDCP	25	DC(S+S)	100		
%RUSTA	-	-			DCNFEh	26		
%DASH	35	35			DCPpo	75		
DASHmax	50	50						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	789 /kg	NE2015	5.61 MJ/kg	MEpo	4.50 MJ/kg	MErab	8.44 MJ/kg
VEVI	806 /kg	NE2015	1340 kcal/kg	MEpo	1077 kcal/kg	MErab	2016 kcal/kg
FOM-91	488 g/kg	EW2015	0.64 /kg	MEla	4.60 MJ/kg		
FOMr-07	436 g/kg	StaDP	1.1 g/kg	MEla	1099 kcal/kg		
FOMr2-07	171 g/kg	AppDP	1.0 g/kg	DPpo	2.9 g/kg		
FOMr2/FOMr	0.39 /kg						
DVE-91	90 g/kg			**Broilers**		**Horses**	
DVE-07	91 g/kg			MEbr	4.31 MJ/kg	NEm	5.76 MJ/kg
OEB-91	18 g/kg			MEbr	1031 kcal/kg	NEm	1378 kcal/kg
OEB-07	17 g/kg			DPpo	2.9 g/kg	EWpa	0.645 /kg
OEB2-07	19 g/kg					DCPho	117 g/kg
DVMET-91	1.8 g/kg						
DVLYS-91	4.9 g/kg						
DVMET-07	1.8 g/kg						
DVLYS-07	4.8 g/kg						
SW	0.39 /kg						
VW	0.33 /kg						

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Grass meal-CP 160 - 200 g/kg 5010.610/3/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			177	48	-	42	74	-	-
LYS	3.9	0.6	6.9	48	3.3	43	2.9	62	4.3
MET	1.5	0.2	2.6	63	1.6	59	1.5	62	1.6
CYS	1.0	0.2	1.8	33	0.6	22	0.4	57	1.0
THR	4.1	0.4	7.2	48	3.4	40	2.9	60	4.3
TRP	1.4	0.1	2.4	48	1.2	43	1.0	58	1.4
ILE	3.8	0.3	6.7	48	3.2	43	2.9	60	4.0
ARG	4.1	0.5	7.3	48	3.5	43	3.1	58	4.2
PHE	4.3	0.6	7.7	48	3.7	44	3.4	59	4.5
HIS	1.9	0.3	3.4	48	1.6	43	1.4	59	2.0
LEU	6.9	0.5	12.2	48	5.8	44	5.4	59	7.2
TYR	2.7	0.3	4.7	48	2.3	42	2.0	59	2.8
VAL	5.2	0.6	9.2	48	4.4	43	3.9	60	5.5
ALA	6.4	0.8	11.3	48	5.4	44	5.0	62	7.0
ASP	9.1	1.1	16.1	48	7.7	43	7.0	59	9.5
GLU	10.0	1.0	17.6	47	8.4	41	7.3	60	10.6
GLY	4.6	0.5	8.1	48	3.9	37	3.0	61	4.9
PRO	4.6	0.6	8.1	48	3.9	35	2.9	60	4.9
SER	4.0	0.4	7.0	48	3.3	39	2.7	59	4.1
Sum AA	79.4		140	-	67	-	59	-	84

Fatty acids	% FA	g/kg
CFAT(h)		37.8
<=C10	-	0.0
C12:0	0.2	0.0
C14:0	2.0	0.4
C16:0	16.0	3.0
C16:1	2.0	0.4
C18:0	2.0	0.4
C18:1	3.0	0.6
C:18:2	13.0	2.5
C18:3	60.0	11.3
>=C20	-	0.0
Sum FA	98.2	18.6
% FA in CFAT-fraction		50

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Grass meal-CP 160 - 200 g/kg:

1. This product may be contaminated with sand / soil; this is the case when the ASH content is higher than approximately 75 g/kg DM.
2. The content of sugar may vary considerably, depending on conditions for growth and harvesting.
3. In calculating the feeding value for ruminants the cutting date is assumed to be first of July (day 91).

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Grass meal-CP > 200 g/kg 5010.610/4/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	917	126	208	40	40	201	342	342
sdc	17	16	8	-	-	20	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	13	-	88	393	233	-	445	52
sdc	-	-	-	34	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	5.3	3.9	0.2	2.5	31.5	2.5	7.2	3.4	1.2
sdc	1.0	0.5	-	0.4	4.8	0.9	4.5	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	789	87	35	9	2.0	0.0	0.7
sdc	363	26	7	1	-	0.0	0.3

IP/P	5	SUGe/SUG	45	EB (meq/kg)	713
		CF_DI	0.96	CAD (meq/kg)	425

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	71	DCCP	57	DCCP	59	DCCP	82
DCCFAT	-	DCCFATh	39	DCCFAT	43	DCCFAT	51
DCCF	-	DCCF	59	DCNFE	30	DCCF	20
DCNFE	-	DCNFE	74	DCPpo	75	DCNFE	76
DCOM	76	DCOM	64				
		DCNSPh	62	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	69	DCCP	71
%RUP	40 49	StaDCP	30	DCCFATh	28	DCOM	63
%DRUP	80 80	AppDCP	25	DC(S+S)	100		
%RUSTA	- -			DCNFEh	28		
%DASH	35 35			DCPpo	75		
DASHmax	52 52						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	795 /kg	NE2015	5.77 MJ/kg	MEpo	5.30 MJ/kg	MErab	9.10 MJ/kg
VEVI	814 /kg	NE2015	1379 kcal/kg	MEpo	1266 kcal/kg	MErab	2174 kcal/kg
FOM-91	479 g/kg	EW2015	0.66 /kg	MEla	5.40 MJ/kg		
FOMr-07	439 g/kg	StaDP	1.2 g/kg	MEla	1291 kcal/kg		
FOMr2-07	181 g/kg	AppDP	1.0 g/kg	DPpo	2.9 g/kg		
FOMr2/FOMr	0.41 /kg						
DVE-91	99 g/kg			**Broilers**		**Horses**	
DVE-07	104 g/kg			MEbr	4.72 MJ/kg	NEm	5.82 MJ/kg
OEB-91	45 g/kg			MEbr	1128 kcal/kg	NEm	1392 kcal/kg
OEB-07	39 g/kg			DPpo	2.9 g/kg	EWpa	0.652 /kg
OEB2-07	33 g/kg					DCPho	142 g/kg
DVMET-91	2.0 g/kg						
DVLYS-91	5.2 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	5.3 g/kg						
SW	0.38 /kg						
VW	0.32 /kg						

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Grass meal-CP > 200 g/kg 5010.610/4/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			208	48	-	43	90	-	-
LYS	3.9	0.6	8.1	48	3.9	43	3.5	71	5.7
MET	1.5	0.2	3.0	63	1.9	60	1.8	72	2.2
CYS	1.0	0.2	2.1	33	0.7	24	0.5	66	1.4
THR	4.1	0.4	8.5	48	4.0	41	3.5	69	5.8
TRP	1.4	0.1	2.9	48	1.4	43	1.2	67	1.9
ILE	3.8	0.3	7.9	48	3.8	44	3.4	70	5.5
ARG	4.1	0.5	8.6	48	4.1	44	3.7	67	5.7
PHE	4.3	0.6	9.0	48	4.3	45	4.0	68	6.1
HIS	1.9	0.3	4.0	48	1.9	44	1.7	68	2.7
LEU	6.9	0.5	14.4	48	6.9	45	6.4	68	9.8
TYR	2.7	0.3	5.6	48	2.7	43	2.4	69	3.8
VAL	5.2	0.6	10.8	48	5.2	43	4.7	69	7.5
ALA	6.4	0.8	13.3	48	6.4	45	5.9	71	9.4
ASP	9.1	1.1	18.9	48	9.1	44	8.3	68	12.9
GLU	10.0	1.0	20.8	48	9.9	42	8.8	69	14.3
GLY	4.6	0.5	9.5	48	4.6	39	3.7	70	6.7
PRO	4.6	0.6	9.6	48	4.6	37	3.6	69	6.6
SER	4.0	0.4	8.3	48	3.9	40	3.4	68	5.6
Sum AA	79.4		165	-	79	-	71	-	114

Fatty acids	% FA	g/kg
CFAT(h)		40.3
<=C10	-	0.0
C12:0	0.2	0.0
C14:0	2.0	0.4
C16:0	16.0	3.2
C16:1	2.0	0.4
C18:0	2.0	0.4
C18:1	3.0	0.6
C:18:2	13.0	2.6
C18:3	60.0	12.1
>=C20	-	0.0
Sum FA	98.2	19.8
% FA in CFAT-fraction		50

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Grass meal-CP > 200 g/kg:

1. This product may be contaminated with sand / soil; this is the case when the ASH content is higher than approximately 75 g/kg DM.
2. The content of sugar may vary considerably, depending on conditions for growth and harvesting.
3. In calculating the feeding value for ruminants the cutting date is assumed to be first of July (day 91).

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grass seed 7009.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	863	47	107	11	-	104	594	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	445	427	-	13	-	-	-	258	258
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	63		DCCP	-	DCCP	-	DCCP	-
DCCFAT	71		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	16		DCCF	-	DCNFE	-	DCCF	-
DCNFE	68		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	61		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	40	42	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	75	75	AppDCP	-	DC(S+S)	-		
%RUSTA	13	12			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	30	30						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	617 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	600 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	387 g/kg	EW2015	-	MEla	-		
FOMr-07	538 g/kg	StaDP	-	MEla	-		
FOMr2-07	301 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.56 /kg						
DVE-91	47 g/kg			**Broilers**		**Horses**	
DVE-07	72 g/kg			MEbr	-	NEm	-
OEB-91	2 g/kg			MEbr	-	NEm	-
OEB-07	-39 g/kg			DPpo	-	EWpa	-
OEB2-07	-34 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.07 /kg						
VW	0.27 /kg						

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grass seed 7009.000/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			107	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		11.2
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Greaves meal 8007.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	964	48	817	127	138	-	-29	-40
sdc	9	8	20	12	23	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	-40	-40
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	6.3	6.8	-	0.6	7.0	6.7	6.1	-	4.0
sdc	3.2	1.6	-	0.2	0.5	0.6	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	7	-	-	-
sdc	-	-	-	1	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	301
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	88	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	87	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	88	DCPpo	-	DCNFE	-
DCOM	-		DCOM	88				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	80	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	77	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	12.34 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	2950 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.40 /kg	MEla	-		
FOMr-07	-	StaDP	5.4 g/kg	MEla	-		
FOMr2-07	-	AppDP	5.2 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Greaves meal 8007.000/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			817	-	-	-	-	-	-
LYS	5.0	0.4	40.9	-	-	-	-	-	-
MET	1.4	0.2	11.7	-	-	-	-	-	-
CYS	0.7	0.1	5.6	-	-	-	-	-	-
THR	3.0	-	24.5	-	-	-	-	-	-
TRP	0.7	-	5.7	-	-	-	-	-	-
ILE	2.7	-	22.1	-	-	-	-	-	-
ARG	6.9	-	56.4	-	-	-	-	-	-
PHE	3.3	-	27.0	-	-	-	-	-	-
HIS	1.7	-	13.9	-	-	-	-	-	-
LEU	5.7	-	46.6	-	-	-	-	-	-
TYR	2.1	-	17.2	-	-	-	-	-	-
VAL	4.4	-	36.0	-	-	-	-	-	-
ALA	7.9	-	64.5	-	-	-	-	-	-
ASP	7.3	-	59.6	-	-	-	-	-	-
GLU	11.3	-	92.3	-	-	-	-	-	-
GLY	14.2	-	116.0	-	-	-	-	-	-
PRO	8.9	-	72.7	-	-	-	-	-	-
SER	3.8	-	31.0	-	-	-	-	-	-
Sum AA	91.0		744	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		138.1
<=C10	0.1	-
C12:0	0.2	-
C14:0	2.5	-
C16:0	25.0	-
C16:1	3.0	-
C18:0	17.0	-
C18:1	40.5	-
C:18:2	6.5	-
C18:3	1.0	-
>=C20	0.5	-
Sum FA	96.3	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Greaves meal:

1. Processing this product in feeds for livestock animals is prohibited in the EU.

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Groundnut expeller-dehulled, CF < 75 g/kg 2013.401/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	932	64	476	81	94	61	250	237
sdc	19	12	-	9	-	10	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	62	-	93	130	-	-	160	30
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.3	4.8	3.1	3.1	9.9	0.2	0.4	0.4	3.0
sdc	0.9	1.1	-	0.4	2.9	-	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	58	-	-	-	-
sdc	-	-	12	-	-	-	-

IP/P	65	SUGe/SUG	90	EB (meq/kg)	251
		CF_DI	0.96	CAD (meq/kg)	40

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	91		DCCP	86	DCCP	85	DCCP	82
DCCFAT	97		DCCFATh	85	DCCFAT	87	DCCFAT	79
DCCF	53		DCCF	56	DCNFE	46	DCCF	20
DCNFE	84		DCNFE	92	DCPpo	38	DCNFE	83
DCOM	87		DCOM	85				
			DCNSPh	70	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	82	DCCP	92
%RUP	27	28	StaDCP	25	DCCFATh	92	DCOM	87
%DRUP	97	97	AppDCP	21	DC(S+S)	45		
%RUSTA	10	9			DCNFEh	29		
%DASH	35	35			DCPpo	38		
DASHmax	28	28						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1176 /kg	NE2015	10.67 MJ/kg	MEpo	12.10 MJ/kg	MErab	13.60 MJ/kg
VEVI	1267 /kg	NE2015	2550 kcal/kg	MEpo	2892 kcal/kg	MErab	3249 kcal/kg
FOM-91	539 g/kg	EW2015	1.21 /kg	MEla	12.51 MJ/kg		
FOMr-07	570 g/kg	StaDP	1.2 g/kg	MEla	2991 kcal/kg		
FOMr2-07	301 g/kg	AppDP	1.0 g/kg	DPpo	1.8 g/kg		
FOMr2/FOMr	0.53 /kg						
DVE-91	178 g/kg			**Broilers**		**Horses**	
DVE-07	171 g/kg			MEbr	11.55 MJ/kg	NEm	9.46 MJ/kg
OEB-91	253 g/kg			MEbr	2760 kcal/kg	NEm	2261 kcal/kg
OEB-07	260 g/kg			DPpo	1.8 g/kg	EWpa	1.059 /kg
OEB2-07	108 g/kg					DCPho	438 g/kg
DVMET-91	2.8 g/kg						
DVLYS-91	7.9 g/kg						
DVMET-07	2.8 g/kg						
DVLYS-07	7.7 g/kg						
SW	0.21 /kg						
VW	0.27 /kg						

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Groundnut expeller-dehulled, CF < 75 g/kg 2013.401/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			476	85	-	83	394	-	-
LYS	3.3	0.3	15.7	81	12.7	78	12.3	82	12.9
MET	1.2	0.2	5.7	85	4.9	83	4.8	90	5.1
CYS	1.4	0.2	6.7	78	5.2	75	5.0	76	5.1
THR	2.6	0.1	12.4	83	10.3	79	9.7	81	10.0
TRP	1.0	0.1	4.8	86	4.1	83	4.0	88	4.2
ILE	3.3	0.2	15.7	88	13.8	86	13.5	89	14.0
ARG	10.9	0.6	51.9	94	48.7	93	48.3	90	46.7
PHE	4.9	0.2	23.3	92	21.4	91	21.1	92	21.5
HIS	2.3	0.1	11.0	83	9.1	81	8.9	84	9.2
LEU	6.3	0.2	30.0	87	26.2	86	25.7	88	26.4
TYR	3.7	0.3	17.6	91	16.0	89	15.8	91	16.0
VAL	4.0	0.2	19.1	87	16.6	85	16.2	89	17.0
ALA	3.9	0.1	18.6	84	15.6	81	15.1	87	16.2
ASP	11.3	0.3	53.8	87	46.8	86	46.1	88	47.4
GLU	18.5	0.7	88.1	89	78.3	88	77.2	90	79.3
GLY	5.5	0.3	26.2	76	19.9	73	19.1	77	20.2
PRO	4.3	0.3	20.5	92	18.8	87	17.8	86	17.6
SER	4.7	0.2	22.4	86	19.2	83	18.6	85	19.0
Sum AA	93.1		444	-	388	-	379	-	388

Fatty acids	% FA	g/kg
CFAT(h)		81.4
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	10.0	6.1
C16:1	1.0	0.6
C18:0	3.0	1.8
C18:1	47.5	29.0
C:18:2	30.0	18.3
C18:3	1.0	0.6
>=C20	7.0	4.3
Sum FA	99.5	60.8
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Groundnut expeller-partly dehulled, CF 75 - 145 g/kg 2013.401/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	920	51	423	87	99	95	264	252
sdc	16	9	-	-	-	14	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	61	-	92	151	-	-	210	59
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.2	4.7	3.1	3.0	9.8	0.2	0.4	0.4	2.7
sdc	0.9	1.1	-	0.4	2.9	-	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	57	-	-	-	-
sdc	-	-	12	-	-	-	-

IP/P	65	SUGe/SUG	90	EB (meq/kg)	248
		CF_DI	0.96	CAD (meq/kg)	58

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	90		DCCP	85	DCCP	84	DCCP	82
DCCFAT	97		DCCFATh	83	DCCFAT	87	DCCFAT	79
DCCF	39		DCCF	53	DCNFE	30	DCCF	20
DCNFE	84		DCNFE	77	DCPpo	38	DCNFE	83
DCOM	84		DCOM	79				
			DCNSPh	47	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	92
%RUP	27	28	StaDCP	25	DCCFATh	-	DCOM	84
%DRUP	97	97	AppDCP	21	DC(S+S)	-		
%RUSTA	10	9			DCNFEh	-		
%DASH	35	35			DCPpo	38		
DASHmax	23	23						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1139 /kg	NE2015	10.06 MJ/kg	MEpo	11.24 MJ/kg	MErab	13.26 MJ/kg
VEVI	1220 /kg	NE2015	2405 kcal/kg	MEpo	2687 kcal/kg	MErab	3169 kcal/kg
FOM-91	519 g/kg	EW2015	1.14 /kg	MEla	11.69 MJ/kg		
FOMr-07	535 g/kg	StaDP	1.2 g/kg	MEla	2793 kcal/kg		
FOMr2-07	284 g/kg	AppDP	1.0 g/kg	DPpo	1.8 g/kg		
FOMr2/FOMr	0.53 /kg						
DVE-91	159 g/kg			**Broilers**		**Horses**	
DVE-07	152 g/kg			MEbr	-	NEm	9.17 MJ/kg
OEB-91	219 g/kg			MEbr	-	NEm	2191 kcal/kg
OEB-07	226 g/kg			DPpo	1.8 g/kg	EWpa	1.027 /kg
OEB2-07	93 g/kg					DCPho	389 g/kg
DVMET-91	2.6 g/kg						
DVLYS-91	7.1 g/kg						
DVMET-07	2.5 g/kg						
DVLYS-07	6.9 g/kg						
SW	0.24 /kg						
VW	0.28 /kg						

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Groundnut expeller-partly dehulled, CF 75 - 145 g/kg 2013.401/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			423	85	-	83	349	-	-
LYS	3.3	0.3	14.0	81	11.3	78	10.9	82	11.5
MET	1.2	0.2	5.1	85	4.3	83	4.2	90	4.6
CYS	1.4	0.2	5.9	78	4.6	75	4.4	76	4.5
THR	2.6	0.1	11.0	83	9.1	78	8.6	81	8.9
TRP	1.0	0.1	4.2	86	3.6	83	3.5	88	3.7
ILE	3.3	0.2	14.0	88	12.3	85	11.9	89	12.4
ARG	10.9	0.6	46.1	94	43.3	93	42.9	90	41.5
PHE	4.9	0.2	20.7	92	19.0	90	18.7	92	19.1
HIS	2.3	0.1	9.7	83	8.1	81	7.9	84	8.2
LEU	6.3	0.2	26.7	87	23.2	86	22.8	88	23.5
TYR	3.7	0.3	15.7	91	14.2	89	14.0	91	14.2
VAL	4.0	0.2	16.9	87	14.8	84	14.3	89	15.1
ALA	3.9	0.1	16.5	84	13.9	81	13.4	87	14.4
ASP	11.3	0.3	47.8	87	41.6	85	40.8	88	42.1
GLU	18.5	0.7	78.3	89	69.6	88	68.5	90	70.5
GLY	5.5	0.3	23.3	76	17.7	72	16.8	77	17.9
PRO	4.3	0.3	18.2	92	16.7	86	15.7	86	15.6
SER	4.7	0.2	19.9	86	17.1	83	16.5	85	16.9
Sum AA	93.1		394	-	344	-	336	-	345

Fatty acids	% FA	g/kg
CFAT(h)		87.4
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	10.0	6.6
C16:1	1.0	0.7
C18:0	3.0	2.0
C18:1	47.5	31.1
C:18:2	30.0	19.7
C18:3	1.0	0.7
>=C20	7.0	4.6
Sum FA	99.5	65.2
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Groundnut expeller-non-dehulled, CF > 145 g/kg 2013.401/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	933	41	346	97	109	157	292	280
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	62	-	93	268	-	-	298	30
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.3	4.8	3.1	3.1	9.9	0.2	0.4	0.4	2.2
sdc	0.9	1.1	-	0.4	2.9	-	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	58	-	-	-	-
sdc	-	-	12	-	-	-	-

IP/P	65	SUGe/SUG	-	EB (meq/kg)	251
		CF_DI	0.96	CAD (meq/kg)	91

Digestibility coëfficients (%)

Ruminants			**Pigs**			**Roosters/Laying hens**			**Rabbits**	
DCCP	89		DCCP	-		DCCP	83		DCCP	-
DCCFAT	98		DCCFATh	-		DCCFAT	91		DCCFAT	-
DCCF	29		DCCF	-		DCNFE	28		DCCF	-
DCNFE	84		DCNFE	-		DCPpo	38		DCNFE	-
DCOM	78		DCOM	-						
			DCNSPh	-		**Broilers**			**Horses**	
DVE	**1991**	**2007**	DCiSTA	-		DCCP	-		DCCP	91
%RUP	27	28	StaDCP	-		DCCFATh	-		DCOM	76
%DRUP	97	97	AppDCP	-		DC(S+S)	-			
%RUSTA	10	9				DCNFEh	-			
%DASH	35	35				DCPpo	38			
DASHmax	19	19								

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1096 /kg	NE2015	-	MEpo	10.07 MJ/kg	MErab	-
VEVI	1159 /kg	NE2015	-	MEpo	2407 kcal/kg	MErab	-
FOM-91	497 g/kg	EW2015	-	MEla	10.58 MJ/kg		
FOMr-07	482 g/kg	StaDP	-	MEla	2530 kcal/kg		
FOMr2-07	260 g/kg	AppDP	-	DPpo	1.8 g/kg		
FOMr2/FOMr	0.54 /kg						
DVE-91	131 g/kg			**Broilers**		**Horses**	
DVE-07	124 g/kg			MEbr	-	NEm	8.56 MJ/kg
OEB-91	168 g/kg			MEbr	-	NEm	2045 kcal/kg
OEB-07	176 g/kg			DPpo	1.8 g/kg	EWpa	0.958 /kg
OEB2-07	71 g/kg					DCPho	315 g/kg
DVMET-91	2.2 g/kg						
DVLYS-91	6.0 g/kg						
DVMET-07	2.1 g/kg						
DVLYS-07	5.7 g/kg						
SW	0.30 /kg						
VW	0.31 /kg						

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Groundnut expeller-non-dehulled, CF > 145 g/kg 2013.401/3/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			346	-	-	-	-	-	-
LYS	3.3	0.3	11.4	-	-	-	-	-	-
MET	1.2	0.2	4.2	-	-	-	-	-	-
CYS	1.4	0.2	4.8	-	-	-	-	-	-
THR	2.6	0.1	9.0	-	-	-	-	-	-
TRP	1.0	0.1	3.5	-	-	-	-	-	-
ILE	3.3	0.2	11.4	-	-	-	-	-	-
ARG	10.9	0.6	37.7	-	-	-	-	-	-
PHE	4.9	0.2	17.0	-	-	-	-	-	-
HIS	2.3	0.1	8.0	-	-	-	-	-	-
LEU	6.3	0.2	21.8	-	-	-	-	-	-
TYR	3.7	0.3	12.8	-	-	-	-	-	-
VAL	4.0	0.2	13.8	-	-	-	-	-	-
ALA	3.9	0.1	13.5	-	-	-	-	-	-
ASP	11.3	0.3	39.1	-	-	-	-	-	-
GLU	18.5	0.7	64.0	-	-	-	-	-	-
GLY	5.5	0.3	19.0	-	-	-	-	-	-
PRO	4.3	0.3	14.9	-	-	-	-	-	-
SER	4.7	0.2	16.3	-	-	-	-	-	-
Sum AA	93.1		322	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		97.0
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	10.0	7.3
C16:1	1.0	0.7
C18:0	3.0	2.2
C18:1	47.5	34.6
C:18:2	30.0	21.8
C18:3	1.0	0.7
>=C20	7.0	5.1
Sum FA	99.5	72.4
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Groundnut meal-dehulled, CF < 75 g/kg 2013.407/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	913	60	456	12	24	64	321	309
sdc	4	5	9	4	-	4	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	80	60	-	75	139	-	-	253	114
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.8	6.4	4.2	3.5	12.5	0.2	0.2	0.4	2.9
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	52	51	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	65	SUGe/SUG	90	EB (meq/kg)	324	
		CF_DI	0.96	CAD (meq/kg)	121	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	91	DCCP	86	DCCP	85	DCCP	82
DCCFAT	80	DCCFATh	71	DCCFAT	60	DCCFAT	69
DCCF	53	DCCF	56	DCNFE	45	DCCF	20
DCNFE	84	DCNFE	84	DCPpo	38	DCNFE	83
DCOM	85	DCOM	83				
		DCNSPh	68	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	82	DCCP	91
%RUP	27	28	StaDCP	25	DCCFATh	92	DCOM	83
%DRUP	97	97	AppDCP	22	DC(S+S)	45		
%RUSTA	10	9			DCNFEh	19		
%DASH	35	35			DCPpo	38		
DASHmax	26	26						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	981 /kg	NE2015	8.57 MJ/kg	MEpo	10.00 MJ/kg	MErab	12.18 MJ/kg
VEVI	1034 /kg	NE2015	2047 kcal/kg	MEpo	2390 kcal/kg	MErab	2910 kcal/kg
FOM-91	588 g/kg	EW2015	0.97 /kg	MEla	10.04 MJ/kg		
FOMr-07	588 g/kg	StaDP	1.6 g/kg	MEla	2400 kcal/kg		
FOMr2-07	288 g/kg	AppDP	1.4 g/kg	DPpo	2.4 g/kg		
FOMr2/FOMr	0.49 /kg						
DVE-91	176 g/kg			**Broilers**		**Horses**	
DVE-07	167 g/kg			MEbr	8.59 MJ/kg	NEm	7.99 MJ/kg
OEB-91	232 g/kg			MEbr	2054 kcal/kg	NEm	1910 kcal/kg
OEB-07	241 g/kg			DPpo	2.4 g/kg	EWpa	0.895 /kg
OEB2-07	104 g/kg					DCPho	415 g/kg
DVMET-91	2.9 g/kg						
DVLYS-91	8.0 g/kg						
DVMET-07	2.8 g/kg						
DVLYS-07	7.7 g/kg						
SW	0.23 /kg						
VW	0.26 /kg						

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Groundnut meal-dehulled, CF < 75 g/kg 2013.407/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			456	85	-	83	377	-	-
LYS	3.3	0.3	15.1	81	12.1	78	11.8	82	12.3
MET	1.2	0.2	5.5	85	4.7	83	4.6	90	4.9
CYS	1.4	0.2	6.4	78	5.0	75	4.8	76	4.9
THR	2.6	0.1	11.9	83	9.9	79	9.3	81	9.6
TRP	1.0	0.1	4.6	86	3.9	83	3.8	88	4.0
ILE	3.3	0.2	15.1	88	13.2	86	12.9	89	13.4
ARG	10.9	0.6	49.7	94	46.6	93	46.3	90	44.8
PHE	4.9	0.2	22.4	92	20.5	91	20.2	92	20.6
HIS	2.3	0.1	10.5	83	8.7	81	8.5	84	8.8
LEU	6.3	0.2	28.7	87	25.0	86	24.6	88	25.3
TYR	3.7	0.3	16.9	91	15.4	89	15.1	91	15.4
VAL	4.0	0.2	18.2	87	15.9	85	15.5	89	16.2
ALA	3.9	0.1	17.8	84	14.9	81	14.5	87	15.5
ASP	11.3	0.3	51.6	87	44.8	86	44.1	88	45.4
GLU	18.5	0.7	84.4	89	75.0	88	74.0	90	76.0
GLY	5.5	0.3	25.1	76	19.1	73	18.2	77	19.3
PRO	4.3	0.3	19.6	92	18.0	87	17.0	86	16.9
SER	4.7	0.2	21.4	86	18.4	83	17.8	85	18.2
Sum AA	93.1		425	-	371	-	363	-	371

Fatty acids

	% FA	g/kg
CFAT(h)		11.6
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	10.0	0.8
C16:1	1.0	0.1
C18:0	3.0	0.2
C18:1	47.5	3.6
C:18:2	30.0	2.3
C18:3	1.0	0.1
>=C20	7.0	0.5
Sum FA	99.5	7.5
% FA in CFAT-fraction		65

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Groundnut meal-partly dehulled, CF 75 - 145 g/kg 2013.407/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	926	56	529	9	21	116	216	203
sdc	48	9	21	3	-	17	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	81	61	-	76	190	-	-	198	8
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.8	6.5	4.2	3.5	12.7	0.2	0.2	0.4	3.3
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	52	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	65	SUGe/SUG	90	EB (meq/kg)	328
		CF_DI	0.96	CAD (meq/kg)	97

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	92	DCCP	85	DCCP	85	DCCP	82
DCCFAT	75	DCCFATh	58	DCCFAT	-	DCCFAT	69
DCCF	36	DCCF	50	DCNFE	31	DCCF	20
DCNFE	84	DCNFE	73	DCPpo	38	DCNFE	83
DCOM	82	DCOM	77				
		DCNSPh	39	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	91
%RUP	27 28	StaDCP	25	DCCFATh	-	DCOM	79
%DRUP	97 97	AppDCP	22	DC(S+S)	-		
%RUSTA	10 9			DCNFEh	-		
%DASH	35 35			DCPpo	38		
DASHmax	25 25						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	950 /kg	NE2015	8.21 MJ/kg	MEpo	8.78 MJ/kg	MErab	11.91 MJ/kg
VEVI	980 /kg	NE2015	1963 kcal/kg	MEpo	2098 kcal/kg	MErab	2847 kcal/kg
FOM-91	557 g/kg	EW2015	0.93 /kg	MEla	8.78 MJ/kg		
FOMr-07	582 g/kg	StaDP	1.6 g/kg	MEla	2098 kcal/kg		
FOMr2-07	299 g/kg	AppDP	1.4 g/kg	DPpo	2.5 g/kg		
FOMr2/FOMr	0.51 /kg						
DVE-91	192 g/kg			**Broilers**		**Horses**	
DVE-07	183 g/kg			MEbr	-	NEm	7.69 MJ/kg
OEB-91	287 g/kg			MEbr	-	NEm	1837 kcal/kg
OEB-07	297 g/kg			DPpo	2.5 g/kg	EWpa	0.861 /kg
OEB2-07	126 g/kg					DCPho	481 g/kg
DVMET-91	3.0 g/kg						
DVLYS-91	8.3 g/kg						
DVMET-07	2.9 g/kg						
DVLYS-07	8.0 g/kg						
SW	0.28 /kg						
VW	0.29 /kg						

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Groundnut meal-partly dehulled, CF 75 - 145 g/kg 2013.407/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			529	85	-	83	439	-	-
LYS	3.3	0.3	17.4	81	14.1	79	13.7	82	14.3
MET	1.2	0.2	6.3	85	5.4	83	5.3	90	5.7
CYS	1.4	0.2	7.4	78	5.8	75	5.6	76	5.6
THR	2.6	0.1	13.7	83	11.4	79	10.9	81	11.1
TRP	1.0	0.1	5.3	86	4.5	83	4.4	88	4.7
ILE	3.3	0.2	17.4	88	15.3	86	15.0	89	15.5
ARG	10.9	0.6	57.6	94	54.0	93	53.7	90	51.9
PHE	4.9	0.2	25.9	92	23.8	91	23.5	92	23.8
HIS	2.3	0.1	12.2	83	10.1	81	9.9	84	10.2
LEU	6.3	0.2	33.3	87	29.0	86	28.6	88	29.3
TYR	3.7	0.3	19.6	91	17.8	90	17.5	91	17.8
VAL	4.0	0.2	21.1	87	18.5	85	18.0	89	18.8
ALA	3.9	0.1	20.6	84	17.3	82	16.9	87	17.9
ASP	11.3	0.3	59.7	87	51.9	86	51.2	88	52.6
GLU	18.5	0.7	97.8	89	86.9	88	85.8	90	88.0
GLY	5.5	0.3	29.1	76	22.1	73	21.2	77	22.4
PRO	4.3	0.3	22.7	92	20.9	87	19.9	86	19.5
SER	4.7	0.2	24.8	86	21.3	83	20.7	85	21.1
Sum AA	93.1		492	-	430	-	422	-	430

Fatty acids	% FA	g/kg
CFAT(h)		9.1
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	10.0	0.6
C16:1	1.0	0.1
C18:0	3.0	0.2
C18:1	47.5	2.8
C:18:2	30.0	1.8
C18:3	1.0	0.1
>=C20	7.0	0.4
Sum FA	99.5	5.9
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Groundnut meal-non-dehulled, CF > 145 g/kg 2013.407/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	911	55	471	10	-	155	220	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	60	-	75	265	-	-	304	39
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.8	6.4	-	3.5	12.5	0.2	0.2	-	3.0
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	51	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	323
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	-	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	-	DCCF	-
DCNFE	-	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	-	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	- -	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	- -	AppDCP	-	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	- -			DCPpo	-		
DASHmax	- -						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	-	MEpo	-	MErab	-
VEVI	-	NE2015	-	MEpo	-	MErab	-
FOM-91	-	EW2015	-	MEla	-		
FOMr-07	-	StaDP	-	MEla	-		
FOMr2-07	-	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Groundnut meal-non-dehulled, CF > 145 g/kg 2013.407/3/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			471	-	-	-	-	-	-
LYS	3.3	0.3	15.5	-	-	-	-	-	-
MET	1.2	0.2	5.7	-	-	-	-	-	-
CYS	1.4	0.2	6.6	-	-	-	-	-	-
THR	2.6	0.1	12.2	-	-	-	-	-	-
TRP	1.0	0.1	4.7	-	-	-	-	-	-
ILE	3.3	0.2	15.5	-	-	-	-	-	-
ARG	10.9	0.6	51.3	-	-	-	-	-	-
PHE	4.9	0.2	23.1	-	-	-	-	-	-
HIS	2.3	0.1	10.8	-	-	-	-	-	-
LEU	6.3	0.2	29.7	-	-	-	-	-	-
TYR	3.7	0.3	17.4	-	-	-	-	-	-
VAL	4.0	0.2	18.8	-	-	-	-	-	-
ALA	3.9	0.1	18.4	-	-	-	-	-	-
ASP	11.3	0.3	53.2	-	-	-	-	-	-
GLU	18.5	0.7	87.1	-	-	-	-	-	-
GLY	5.5	0.3	25.9	-	-	-	-	-	-
PRO	4.3	0.3	20.3	-	-	-	-	-	-
SER	4.7	0.2	22.1	-	-	-	-	-	-
Sum AA	93.1		438	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		10.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Groundnuts (peanuts)-dehulled, CF < 85 g/kg 2013.000/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	932	22	287	490	-	23	109	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	62	-	30	31	-	-	42	11
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.0	4.4	2.8	1.7	5.4	-	0.2	-	1.8
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	65	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	87	DCCP	-	DCCP	82	DCCP	-
DCCFAT	100	DCCFATh	-	DCCFAT	94	DCCFAT	-
DCCF	68	DCCF	-	DCNFE	82	DCCF	-
DCNFE	84	DCNFE	-	DCPpo	38	DCNFE	-
DCOM	93	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	27 28	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	80 80	AppDCP	-	DC(S+S)	-		
%RUSTA	10 9			DCNFEh	-		
%DASH	65 65			DCPpo	38		
DASHmax	22 22						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	2279 /kg	NE2015	-	MEpo	23.48 MJ/kg	MErab	-
VEVI	2649 /kg	NE2015	-	MEpo	5612 kcal/kg	MErab	-
FOM-91	272 g/kg	EW2015	-	MEla	26.17 MJ/kg		
FOMr-07	313 g/kg	StaDP	-	MEla	6254 kcal/kg		
FOMr2-07	169 g/kg	AppDP	-	DPpo	1.7 g/kg		
FOMr2/FOMr	0.54 /kg						
DVE-91	89 g/kg			**Broilers**		**Horses**	
DVE-07	88 g/kg			MEbr	-	NEm	-
OEB-91	160 g/kg			MEbr	-	NEm	-
OEB-07	162 g/kg			DPpo	1.7 g/kg	EWpa	-
OEB2-07	67 g/kg					DCPho	-
DVMET-91	1.4 g/kg						
DVLYS-91	4.0 g/kg						
DVMET-07	1.4 g/kg						
DVLYS-07	4.0 g/kg						
SW	0.24 /kg						
VW	0.27 /kg						

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Groundnuts (peanuts)-dehulled, CF < 85 g/kg 2013.000/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			287	-	-	-	-	-	-
LYS	3.3	0.3	9.5	-	-	-	-	83	7.9
MET	1.2	0.2	3.4	-	-	-	-	84	2.9
CYS	1.4	0.2	4.0	-	-	-	-	73	2.9
THR	2.6	0.1	7.5	-	-	-	-	79	5.9
TRP	1.0	0.1	2.9	-	-	-	-	87	2.5
ILE	3.3	0.2	9.5	-	-	-	-	87	8.2
ARG	10.9	0.6	31.3	-	-	-	-	92	28.8
PHE	4.9	0.2	14.1	-	-	-	-	93	13.1
HIS	2.3	0.1	6.6	-	-	-	-	83	5.5
LEU	6.3	0.2	18.1	-	-	-	-	87	15.7
TYR	3.7	0.3	10.6	-	-	-	-	91	9.7
VAL	4.0	0.2	11.5	-	-	-	-	84	9.6
ALA	3.9	0.1	11.2	-	-	-	-	85	9.5
ASP	11.3	0.3	32.4	-	-	-	-	88	28.5
GLU	18.5	0.7	53.1	-	-	-	-	89	47.3
GLY	5.5	0.3	15.8	-	-	-	-	80	12.6
PRO	4.3	0.3	12.3	-	-	-	-	83	10.2
SER	4.7	0.2	13.5	-	-	-	-	84	11.3
Sum AA	93.1		267	-	-	-	-	-	232

Fatty acids

	% FA	g/kg
CFAT(h)		490.2
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	10.0	46.6
C16:1	1.0	4.7
C18:0	3.0	14.0
C18:1	47.5	221.2
C:18:2	30.0	139.7
C18:3	1.0	4.7
>=C20	7.0	32.6
Sum FA	99.5	463.4
% FA in CFAT-fraction		95

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Groundnuts (peanuts)-non-dehulled, CF > 85 g/kg 2013.000/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	942	28	245	353	-	174	141	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	62	-	30	264	-	-	224	-39
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.5	4.2	2.8	2.8	13.0	2.2	0.5	0.4	1.5
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	65	SUGe/SUG	-	EB (meq/kg)	414	
		CF_DI	0.96	CAD (meq/kg)	294	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	85	DCCP	-	DCCP	-	DCCP	-
DCCFAT	99	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	23	DCCF	-	DCNFE	-	DCCF	-
DCNFE	84	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	79	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	27 28	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	80 80	AppDCP	-	DC(S+S)	-		
%RUSTA	- 9			DCNFEh	-		
%DASH	65 65			DCPpo	-		
DASHmax	26 26						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1718 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1920 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	301 g/kg	EW2015	-	MEla	-		
FOMr-07	324 g/kg	StaDP	-	MEla	-		
FOMr2-07	163 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.50 /kg						
DVE-91	72 g/kg			**Broilers**		**Horses**	
DVE-07	71 g/kg			MEbr	-	NEm	-
OEB-91	127 g/kg			MEbr	-	NEm	-
OEB-07	127 g/kg			DPpo	-	EWpa	-
OEB2-07	54 g/kg					DCPho	-
DVMET-91	1.2 g/kg						
DVLYS-91	3.3 g/kg						
DVMET-07	1.2 g/kg						
DVLYS-07	3.3 g/kg						
SW	0.39 /kg						
VW	0.32 /kg						

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Groundnuts (peanuts)-non-dehulled, CF > 85 g/kg 2013.000/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			245	-	-	-	-	-	-
LYS	3.3	0.3	8.1	-	-	-	-	-	-
MET	1.2	0.2	2.9	-	-	-	-	-	-
CYS	1.4	0.2	3.4	-	-	-	-	-	-
THR	2.6	0.1	6.4	-	-	-	-	-	-
TRP	1.0	0.1	2.4	-	-	-	-	-	-
ILE	3.3	0.2	8.1	-	-	-	-	-	-
ARG	10.9	0.6	26.7	-	-	-	-	-	-
PHE	4.9	0.2	12.0	-	-	-	-	-	-
HIS	2.3	0.1	5.6	-	-	-	-	-	-
LEU	6.3	0.2	15.4	-	-	-	-	-	-
TYR	3.7	0.3	9.1	-	-	-	-	-	-
VAL	4.0	0.2	9.8	-	-	-	-	-	-
ALA	3.9	0.1	9.6	-	-	-	-	-	-
ASP	11.3	0.3	27.7	-	-	-	-	-	-
GLU	18.5	0.7	45.3	-	-	-	-	-	-
GLY	5.5	0.3	13.5	-	-	-	-	-	-
PRO	4.3	0.3	10.5	-	-	-	-	-	-
SER	4.7	0.2	11.5	-	-	-	-	-	-
Sum AA	93.1		228	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		353.3
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	10.0	33.6
C16:1	1.0	3.4
C18:0	3.0	10.1
C18:1	47.5	159.4
C:18:2	30.0	100.7
C18:3	1.0	3.4
>=C20	7.0	23.5
Sum FA	99.5	333.9
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Hemp seed 3014.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	913	48	195	316	-	169	184	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	353	353
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.5	8.1	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	13	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	75		DCCP	-	DCCP	-	DCCP	-
DCCFAT	91		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	13		DCCF	-	DCNFE	-	DCCF	-
DCNFE	45		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	62		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	34	37	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	80	80	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	31	31						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1283 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1365 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	157 g/kg	EW2015	-	MEla	-		
FOMr-07	168 g/kg	StaDP	-	MEla	-		
FOMr2-07	57 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.34 /kg						
DVE-91	49 g/kg			**Broilers**		**Horses**	
DVE-07	44 g/kg			MEbr	-	NEm	-
OEB-91	97 g/kg			MEbr	-	NEm	-
OEB-07	103 g/kg			DPpo	-	EWpa	-
OEB2-07	47 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.46 /kg						
VW	0.31 /kg						

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Hemp seed 3014.000/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			195	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		315.9
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Horse beans 2002.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	869	33	254	12	18	77	492	486
sdc	16	3	13	2	2	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	377	328	-	29	149	101	7	213	65
sdc	20	-	-	6	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.1	5.1	2.8	1.2	12.1	0.1	1.0	0.3	1.3
sdc	0.2	0.8	-	0.2	1.4	0.0	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	68	12	42	13	1.2	0.1	-
sdc	17	2	13	3	-	-	-

IP/P	55	SUGe/SUG	65	EB (meq/kg)	285	
		CF_DI	0.96	CAD (meq/kg)	187	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	84		DCCP	76	DCCP	83	DCCP	80
DCCFAT	71		DCCFATh	66	DCCFAT	50	DCCFAT	60
DCCF	85		DCCF	33	DCNFE	75	DCCF	30
DCNFE	95		DCNFE	91	DCPpo	44	DCNFE	90
DCOM	90		DCOM	81				
			DCNSPh	55	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	83	DCCP	82
%RUP	21	23	StaDCP	40	DCCFATh	100	DCOM	86
%DRUP	91	91	AppDCP	37	DC(S+S)	88		
%RUSTA	20	21			DCNFEh	65		
%DASH	65	65			DCPpo	44		
DASHmax	29	29						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1019 /kg	NE2015	8.76 MJ/kg	MEpo	10.43 MJ/kg	MErab	12.08 MJ/kg
VEVI	1109 /kg	NE2015	2094 kcal/kg	MEpo	2492 kcal/kg	MErab	2888 kcal/kg
FOM-91	623 g/kg	EW2015	1.00 /kg	MEla	10.46 MJ/kg		
FOMr-07	627 g/kg	StaDP	2.0 g/kg	MEla	2500 kcal/kg		
FOMr2-07	359 g/kg	AppDP	1.9 g/kg	DPpo	2.2 g/kg		
FOMr2/FOMr	0.57 /kg						
DVE-91	108 g/kg			**Broilers**		**Horses**	
DVE-07	114 g/kg			MEbr	9.93 MJ/kg	NEm	8.86 MJ/kg
OEB-91	100 g/kg			MEbr	2374 kcal/kg	NEm	2117 kcal/kg
OEB-07	90 g/kg			DPpo	2.2 g/kg	EWpa	0.992 /kg
OEB2-07	77 g/kg					DCPho	208 g/kg
DVMET-91	1.8 g/kg						
DVLYS-91	7.7 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	8.2 g/kg						
SW	0.16 /kg						
VW	0.26 /kg						

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Horse beans 2002.000/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			254	77	-	73	185	-	-
LYS	6.3	0.2	16.0	82	13.1	80	12.8	86	13.8
MET	0.8	0.1	2.0	66	1.3	61	1.2	87	1.8
CYS	1.3	0.1	3.3	59	1.9	53	1.8	72	2.4
THR	3.5	0.2	8.9	77	6.9	71	6.3	78	6.9
TRP	0.9	0.1	2.3	68	1.6	63	1.4	66	1.5
ILE	4.1	0.2	10.4	80	8.3	77	8.0	80	8.3
ARG	9.1	0.7	23.1	89	20.5	87	20.1	87	20.1
PHE	4.1	0.2	10.4	75	7.8	72	7.5	81	8.4
HIS	2.6	0.2	6.6	80	5.3	77	5.1	79	5.2
LEU	7.3	0.2	18.6	78	14.5	76	14.1	80	14.8
TYR	3.3	0.2	8.4	77	6.5	74	6.2	82	6.9
VAL	4.5	0.5	11.4	76	8.7	72	8.3	79	9.0
ALA	4.1	0.2	10.4	75	7.8	71	7.4	88	9.2
ASP	10.9	0.5	27.7	81	22.5	79	21.8	87	24.1
GLU	16.4	0.7	41.7	83	34.7	81	33.7	90	37.5
GLY	4.2	0.2	10.7	74	7.9	66	7.1	82	8.8
PRO	4.3	0.3	10.9	80	8.7	71	7.8	76	8.3
SER	4.8	0.2	12.2	79	9.7	75	9.1	85	10.4
Sum AA	92.5		235	-	188	-	180	-	197

Fatty acids	% FA	g/kg
CFAT(h)		11.6
<=C10	-	0.0
C12:0	0.5	0.0
C14:0	0.5	0.0
C16:0	14.0	1.2
C16:1	-	0.0
C18:0	3.0	0.3
C18:1	26.0	2.3
C:18:2	50.0	4.4
C18:3	4.0	0.3
>=C20	1.0	0.1
Sum FA	99.0	8.6
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Horsebeans, white 2017.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	867	33	264	10	16	82	478	472
sdc	9	2	9	2	2	4	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	376	336	-	39	141	-	-	187	45
sdc	11	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.5	5.1	2.8	1.6	13.2	0.1	0.7	0.3	1.4
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	54	9	47	15	0.3	-	-
sdc	-	-	-	-	-	-	-

IP/P	55	SUGe/SUG	65	EB (meq/kg)	322
		CF_DI	0.96	CAD (meq/kg)	220

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	85		DCCP	79	DCCP	89	DCCP	-
DCCFAT	68		DCCFATh	63	DCCFAT	51	DCCFAT	-
DCCF	85		DCCF	59	DCNFE	79	DCCF	-
DCNFE	95		DCNFE	94	DCPpo	44	DCNFE	-
DCOM	90		DCOM	85				
			DCNSPh	64	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	83	DCCP	-
%RUP	21	23	StaDCP	40	DCCFATh	100	DCOM	-
%DRUP	91	91	AppDCP	37	DC(S+S)	88		
%RUSTA	20	21			DCNFEh	70		
%DASH	65	65			DCPpo	44		
DASHmax	29	29						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1012 /kg	NE2015	9.13 MJ/kg	MEpo	10.97 MJ/kg	MErab	-
VEVI	1100 /kg	NE2015	2182 kcal/kg	MEpo	2621 kcal/kg	MErab	-
FOM-91	619 g/kg	EW2015	1.04 /kg	MEla	11.00 MJ/kg		
FOMr-07	631 g/kg	StaDP	2.0 g/kg	MEla	2628 kcal/kg		
FOMr2-07	369 g/kg	AppDP	1.9 g/kg	DPpo	2.3 g/kg		
FOMr2/FOMr	0.59 /kg						
DVE-91	109 g/kg			**Broilers**		**Horses**	
DVE-07	115 g/kg			MEbr	10.27 MJ/kg	NEm	-
OEB-91	108 g/kg			MEbr	2455 kcal/kg	NEm	-
OEB-07	98 g/kg			DPpo	2.3 g/kg	EWpa	-
OEB2-07	81 g/kg					DCPho	-
DVMET-91	1.9 g/kg						
DVLYS-91	7.8 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	8.2 g/kg						
SW	0.15 /kg						
VW	0.26 /kg						

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Horsebeans, white 2017.000/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			264	86	-	82	216	-	-
LYS	6.3	0.2	16.6	89	14.8	87	14.4	86	14.3
MET	0.8	0.1	2.1	86	1.8	81	1.7	87	1.8
CYS	1.3	0.1	3.4	72	2.5	67	2.3	72	2.5
THR	3.5	0.2	9.2	83	7.6	77	7.1	78	7.2
TRP	0.9	0.1	2.4	76	1.8	71	1.7	66	1.6
ILE	4.1	0.2	10.8	86	9.3	83	9.0	80	8.6
ARG	9.1	0.7	24.0	94	22.5	93	22.2	87	20.9
PHE	4.1	0.2	10.8	79	8.5	76	8.2	81	8.8
HIS	2.6	0.2	6.9	88	6.0	86	5.9	79	5.4
LEU	7.3	0.2	19.2	87	16.7	85	16.3	80	15.4
TYR	3.3	0.2	8.7	78	6.8	75	6.5	82	7.1
VAL	4.5	0.5	11.9	85	10.1	81	9.6	79	9.4
ALA	4.1	0.2	10.8	82	8.9	78	8.4	88	9.5
ASP	10.9	0.5	28.7	87	25.0	85	24.3	87	25.0
GLU	16.4	0.7	43.2	92	39.7	89	38.7	90	38.9
GLY	4.2	0.2	11.1	84	9.3	77	8.5	82	9.1
PRO	4.3	0.3	11.3	88	9.9	79	9.0	76	8.6
SER	4.8	0.2	12.6	89	11.2	84	10.7	85	10.8
Sum AA	92.5		244	-	212	-	204	-	205

Fatty acids	% FA	g/kg
CFAT(h)		9.8
<=C10	-	0.0
C12:0	0.5	0.0
C14:0	0.5	0.0
C16:0	14.0	1.0
C16:1	-	0.0
C18:0	3.0	0.2
C18:1	26.0	1.9
C:18:2	50.0	3.7
C18:3	4.0	0.3
>=C20	1.0	0.1
Sum FA	99.0	7.3
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Lentils 2008.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	873	30	230	13	-	45	555	-
sdc	6	2	5	3	-	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	425	413	-	48	-	-	-	141	141
sdc	15	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.8	3.8	2.1	1.1	9.4	0.1	1.4	0.2	1.0
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	107	16	33	10	-	-	0.2
sdc	-	-	-	-	-	-	-

IP/P	55	SUGe/SUG	65	EB (meq/kg)	206	
		CF_DI	0.96	CAD (meq/kg)	131	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	84	DCCP	83	DCCP	-	DCCP	-
DCCFAT	73	DCCFATh	56	DCCFAT	-	DCCFAT	-
DCCF	66	DCCF	49	DCNFE	-	DCCF	-
DCNFE	92	DCNFE	93	DCPpo	-	DCNFE	-
DCOM	88	DCOM	87				
		DCNSPh	57	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	21	23	StaDCP	40	DCCFATh	-	DCOM	-
%DRUP	85	85	AppDCP	35	DC(S+S)	-		
%RUSTA	20	21			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	27	27						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1009 /kg	NE2015	9.66 MJ/kg	MEpo	-	MErab	-
VEVI	1098 /kg	NE2015	2309 kcal/kg	MEpo	-	MErab	-
FOM-91	600 g/kg	EW2015	1.10 /kg	MEla	-		
FOMr-07	607 g/kg	StaDP	1.5 g/kg	MEla	-		
FOMr2-07	374 g/kg	AppDP	1.3 g/kg	DPpo	-		
FOMr2/FOMr	0.62 /kg						
DVE-91	96 g/kg			**Broilers**		**Horses**	
DVE-07	101 g/kg			MEbr	-	NEm	-
OEB-91	85 g/kg			MEbr	-	NEm	-
OEB-07	77 g/kg			DPpo	-	EWpa	-
OEB2-07	63 g/kg					DCPho	-
DVMET-91	1.7 g/kg						
DVLYS-91	7.5 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	7.9 g/kg						
SW	0.07 /kg						
VW	0.25 /kg						

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Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			230	77	-	73	167	-	-
LYS	7.6	-	17.5	79	13.8	77	13.5	-	-
MET	0.9	-	2.1	71	1.5	66	1.4	-	-
CYS	0.9	-	2.1	66	1.4	57	1.2	-	-
THR	3.3	-	7.6	73	5.5	66	5.0	-	-
TRP	0.9	-	2.1	68	1.4	62	1.3	-	-
ILE	3.7	-	8.5	77	6.6	73	6.2	-	-
ARG	8.4	-	19.3	86	16.6	84	16.3	-	-
PHE	4.6	-	10.6	75	7.9	72	7.6	-	-
HIS	2.7	-	6.2	79	4.9	76	4.7	-	-
LEU	6.8	-	15.7	76	11.9	73	11.5	-	-
TYR	2.8	-	6.4	77	5.0	73	4.7	-	-
VAL	4.1	-	9.4	75	7.1	70	6.6	-	-
ALA	4.7	-	10.8	73	7.9	69	7.5	-	-
ASP	10.7	-	24.6	79	19.4	76	18.7	-	-
GLU	15.3	-	35.2	82	28.8	79	27.8	-	-
GLY	4.2	-	9.7	75	7.2	67	6.4	-	-
PRO	4.0	-	9.2	84	7.7	73	6.7	-	-
SER	4.3	-	9.9	78	7.7	72	7.1	-	-
Sum AA	89.9		207	-	162	-	154	-	-

Fatty acids	% FA	g/kg
CFAT(h)		12.8
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	18.0	1.7
C16:1	-	0.0
C18:0	-	0.0
C18:1	17.0	1.6
C:18:2	54.0	5.2
C18:3	10.0	1.0
>=C20	-	0.0
Sum FA	99.0	9.5
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Linseed 3006.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	922	39	212	401	410	95	174	165
sdc	9	9	15	14	-	18	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	51	14	-	22	221	130	42	234	14
sdc	13	-	-	7	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.4	5.3	3.7	3.5	7.4	0.3	0.6	0.2	1.9
sdc	0.7	0.5	-	0.2	0.7	0.1	0.4	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	277	28	50	13	0.6	0.2	0.2
sdc	305	12	10	3	-	-	-

IP/P	70	SUGe/SUG	85	EB (meq/kg)	184	
		CF_DI	0.97	CAD (meq/kg)	54	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	80	DCCP	76	DCCP	-	DCCP	82
DCCFAT	94	DCCFATh	82	DCCFAT	-	DCCFAT	85
DCCF	25	DCCF	32	DCNFE	-	DCCF	30
DCNFE	82	DCNFE	86	DCPpo	-	DCNFE	70
DCOM	81	DCOM	76				
		DCNSPh	61	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	-	DCCP	80
%RUP	28	StaDCP	10	DCCFATh	-	DCOM	70
%DRUP	85	AppDCP	7	DC(S+S)	-		
%RUSTA	-			DCNFEh	-		
%DASH	50			DCPpo	-		
DASHmax	26						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1779 /kg	NE2015	15.73 MJ/kg	MEpo	-	MErab	18.73 MJ/kg
VEVI	2005 /kg	NE2015	3759 kcal/kg	MEpo	-	MErab	4477 kcal/kg
FOM-91	253 g/kg	EW2015	1.79 /kg	MEla	-		
FOMr-07	316 g/kg	StaDP	0.5 g/kg	MEla	-		
FOMr2-07	153 g/kg	AppDP	0.3 g/kg	DPpo	-		
FOMr2/FOMr	0.48 /kg						
DVE-91	67 g/kg			**Broilers**		**Horses**	
DVE-07	67 g/kg			MEbr	-	NEm	11.40 MJ/kg
OEB-91	107 g/kg			MEbr	-	NEm	2725 kcal/kg
OEB-07	105 g/kg			DPpo	-	EWpa	1.277 /kg
OEB2-07	78 g/kg					DCPho	170 g/kg
DVMET-91	1.5 g/kg						
DVLYS-91	3.2 g/kg						
DVMET-07	1.5 g/kg						
DVLYS-07	3.4 g/kg						
SW	0.35 /kg						
VW	0.28 /kg						

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Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			212	77	-	72	152	-	-
LYS	3.7	0.3	7.8	83	6.5	79	6.2	69	5.4
MET	1.9	0.1	4.0	85	3.4	83	3.3	68	2.7
CYS	1.8	0.2	3.8	87	3.3	82	3.1	64	2.4
THR	3.6	0.2	7.6	82	6.2	75	5.7	66	5.0
TRP	1.6	0.1	3.4	86	2.9	82	2.8	63	2.1
ILE	4.0	0.3	8.5	77	6.5	73	6.2	60	5.1
ARG	8.9	0.7	18.9	77	14.5	75	14.1	66	12.5
PHE	4.6	0.2	9.8	77	7.5	74	7.2	61	5.9
HIS	2.2	0.2	4.7	77	3.6	73	3.4	59	2.8
LEU	5.9	0.3	12.5	77	9.6	73	9.2	63	7.9
TYR	2.5	0.4	5.3	77	4.1	72	3.8	63	3.3
VAL	4.9	0.4	10.4	77	8.0	72	7.5	58	6.0
ALA	4.5	0.3	9.5	77	7.3	72	6.9	60	5.7
ASP	9.1	0.7	19.3	77	14.8	73	14.1	58	11.2
GLU	18.8	1.5	39.9	77	30.6	74	29.5	70	27.9
GLY	5.7	0.3	12.1	77	9.3	70	8.4	61	7.4
PRO	3.9	0.3	8.3	76	6.3	64	5.3	69	5.7
SER	4.5	0.4	9.5	77	7.3	70	6.7	58	5.5
Sum AA	92.1		195	-	152	-	143	-	125

Fatty acids	% FA	g/kg
CFAT(h)		400.8
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.1	0.4
C16:0	7.0	26.7
C16:1	0.1	0.4
C18:0	4.0	15.2
C18:1	18.0	68.5
C:18:2	16.0	60.9
C18:3	54.0	205.6
>=C20	0.1	0.4
Sum FA	99.3	378.1
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	922	58	340	80	89	90	355	346
sdc	11	3	14	5	-	6	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	87	23	-	38	204	121	39	384	180
sdc	5	-	-	4	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	3.5	8.2	5.8	5.4	12.1	0.9	1.3	0.8	3.0
sdc	0.3	0.4	-	0.5	1.0	0.3	0.4	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	215	47	67	19	1.6	0.1	0.3
sdc	92	4	7	2	-	-	-

IP/P	70	SUGe/SUG	85	EB (meq/kg)	314	
		CF_DI	0.96	CAD (meq/kg)	74	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	85		DCCP	79	DCCP	56	DCCP	82
DCCFAT	92		DCCFATh	76	DCCFAT	81	DCCFAT	83
DCCF	25		DCCF	32	DCNFE	22	DCCF	30
DCNFE	82		DCNFE	75	DCPpo	25	DCNFE	70
DCOM	78		DCOM	72				
			DCNSPh	61	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	83
%RUP	42	42	StaDCP	10	DCCFATh	-	DCOM	70
%DRUP	88	88	AppDCP	8	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	25		
DASHmax	47	47						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1036 /kg	NE2015	8.56 MJ/kg	MEpo	7.30 MJ/kg	MErab	12.49 MJ/kg
VEVI	1095 /kg	NE2015	2046 kcal/kg	MEpo	1745 kcal/kg	MErab	2986 kcal/kg
FOM-91	454 g/kg	EW2015	0.97 /kg	MEla	7.68 MJ/kg		
FOMr-07	469 g/kg	StaDP	0.8 g/kg	MEla	1835 kcal/kg		
FOMr2-07	158 g/kg	AppDP	0.6 g/kg	DPpo	2.1 g/kg		
FOMr2/FOMr	0.34 /kg						
DVE-91	167 g/kg			**Broilers**		**Horses**	
DVE-07	157 g/kg			MEbr	-	NEm	7.54 MJ/kg
OEB-91	113 g/kg			MEbr	-	NEm	1802 kcal/kg
OEB-07	124 g/kg			DPpo	2.1 g/kg	EWpa	0.844 /kg
OEB2-07	42 g/kg					DCPho	282 g/kg
DVMET-91	3.6 g/kg						
DVLYS-91	7.6 g/kg						
DVMET-07	3.4 g/kg						
DVLYS-07	7.4 g/kg						
SW	0.32 /kg						
VW	0.28 /kg						

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Linseed expeller 3006.401/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			340	75	-	72	245	-	-
LYS	3.7	0.3	12.6	82	10.3	79	9.9	83	10.4
MET	1.9	0.1	6.5	85	5.5	83	5.4	88	5.7
CYS	1.8	0.2	6.1	85	5.2	82	5.0	67	4.1
THR	3.6	0.2	12.2	80	9.8	75	9.2	79	9.7
TRP	1.6	0.1	5.4	85	4.6	82	4.5	80	4.3
ILE	4.0	0.3	13.6	75	10.2	73	9.9	77	10.5
ARG	8.9	0.7	30.2	75	22.8	74	22.4	74	22.4
PHE	4.6	0.2	15.6	75	11.8	73	11.5	78	12.2
HIS	2.2	0.2	7.5	75	5.6	73	5.5	74	5.5
LEU	5.9	0.3	20.0	75	15.1	73	14.7	77	15.4
TYR	2.5	0.4	8.5	75	6.4	72	6.1	77	6.5
VAL	4.9	0.4	16.6	75	12.5	72	12.1	78	13.0
ALA	4.5	0.3	15.3	75	11.5	72	11.1	77	11.8
ASP	9.1	0.7	30.9	75	23.3	73	22.5	74	22.9
GLU	18.8	1.5	63.9	75	48.1	74	47.0	74	47.3
GLY	5.7	0.3	19.4	75	14.6	71	13.7	76	14.7
PRO	3.9	0.3	13.2	75	9.9	67	8.9	77	10.2
SER	4.5	0.4	15.3	75	11.5	71	10.9	74	11.3
Sum AA	92.1		313	-	239	-	230	-	238

Fatty acids	% FA	g/kg
CFAT(h)		80.1
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.1	0.1
C16:0	7.0	4.2
C16:1	0.1	0.1
C18:0	4.0	2.4
C18:1	18.0	10.8
C:18:2	16.0	9.6
C18:3	54.0	32.4
>=C20	0.1	0.1
Sum FA	99.3	59.7
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	872	55	320	30	39	96	371	363
sdc	9	2	16	6	-	8	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	35	-	43	219	130	42	392	172
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	3.1	8.4	5.9	4.5	10.9	0.8	1.1	0.8	2.8
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	195	42	63	17	1.4	0.1	0.2
sdc	-	-	-	-	-	-	-

IP/P	70	SUGe/SUG	85	EB (meq/kg)	281	
		CF_DI	0.96	CAD (meq/kg)	55	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	85	DCCP	78	DCCP	56	DCCP	82
DCCFAT	87	DCCFATh	69	DCCFAT	76	DCCFAT	73
DCCF	25	DCCF	32	DCNFE	23	DCCF	30
DCNFE	82	DCNFE	77	DCPpo	25	DCNFE	70
DCOM	77	DCOM	72				
		DCNSPh	61	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	83
%RUP	42 42	StaDCP	10	DCCFATh	-	DCOM	70
%DRUP	88 88	AppDCP	8	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	65 65			DCPpo	25		
DASHmax	45 45						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	864 /kg	NE2015	7.18 MJ/kg	MEpo	5.59 MJ/kg	MErab	10.73 MJ/kg
VEVI	895 /kg	NE2015	1717 kcal/kg	MEpo	1337 kcal/kg	MErab	2564 kcal/kg
FOM-91	463 g/kg	EW2015	0.82 /kg	MEla	5.73 MJ/kg		
FOMr-07	476 g/kg	StaDP	0.8 g/kg	MEla	1369 kcal/kg		
FOMr2-07	167 g/kg	AppDP	0.7 g/kg	DPpo	2.1 g/kg		
FOMr2/FOMr	0.35 /kg						
DVE-91	160 g/kg			**Broilers**		**Horses**	
DVE-07	151 g/kg			MEbr	-	NEm	6.60 MJ/kg
OEB-91	101 g/kg			MEbr	-	NEm	1579 kcal/kg
OEB-07	110 g/kg			DPpo	2.1 g/kg	EWpa	0.740 /kg
OEB2-07	36 g/kg					DCPho	266 g/kg
DVMET-91	3.5 g/kg						
DVLYS-91	7.4 g/kg						
DVMET-07	3.3 g/kg						
DVLYS-07	7.2 g/kg						
SW	0.29 /kg						
VW	0.27 /kg						

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Linseed meal 3006.407/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			320	75	-	72	230	-	-
LYS	3.7	0.3	11.8	82	9.7	79	9.3	83	9.8
MET	1.9	0.1	6.1	85	5.1	83	5.0	88	5.3
CYS	1.8	0.2	5.8	85	4.9	82	4.7	67	3.9
THR	3.6	0.2	11.5	79	9.1	75	8.6	78	9.0
TRP	1.6	0.1	5.1	84	4.3	82	4.2	80	4.1
ILE	4.0	0.3	12.8	75	9.6	73	9.3	77	9.9
ARG	8.9	0.7	28.5	75	21.4	74	21.0	74	21.1
PHE	4.6	0.2	14.7	75	11.0	73	10.8	77	11.3
HIS	2.2	0.2	7.0	75	5.3	73	5.1	74	5.2
LEU	5.9	0.3	18.9	75	14.2	73	13.7	77	14.5
TYR	2.5	0.4	8.0	75	6.0	72	5.7	77	6.2
VAL	4.9	0.4	15.7	75	11.8	72	11.3	77	12.1
ALA	4.5	0.3	14.4	75	10.8	72	10.4	77	11.1
ASP	9.1	0.7	29.1	75	21.8	73	21.2	74	21.5
GLU	18.8	1.5	60.2	75	45.1	73	44.1	74	44.5
GLY	5.7	0.3	18.2	75	13.7	71	12.9	75	13.7
PRO	3.9	0.3	12.5	75	9.3	67	8.4	77	9.6
SER	4.5	0.4	14.4	75	10.8	71	10.2	73	10.5
Sum AA	92.1		295	-	224	-	216	-	223

Fatty acids	% FA	g/kg
CFAT(h)		29.9
<=C10	0.0	0.0
C12:0	0.0	0.0
C14:0	0.1	0.0
C16:0	7.0	1.4
C16:1	0.1	0.0
C18:0	4.0	0.8
C18:1	18.0	3.5
C:18:2	16.0	3.1
C18:3	54.0	10.5
>=C20	0.1	0.0
Sum FA	99.3	19.3
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Lucerne (alfalfa) meal-CP < 140 g/kg 5004.610/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	918	90	100	18	-	301	410	-
sdc	11	11	27	7	-	26	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	32	11	-	28	450	333	-	672	222
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	9.1	2.4	0.1	1.5	18.0	0.9	5.3	2.1	0.6
sdc	2.7	0.4	-	0.3	5.6	0.5	1.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	678	37	25	9	-	-	2.2
sdc	319	11	5	2	-	-	-

IP/P	5	SUGe/SUG	-	EB (meq/kg)	350	
		CF_DI	0.97	CAD (meq/kg)	181	

Digestibility coëfficients (%)

Ruminants			**Pigs**			**Roosters/Laying hens**			**Rabbits**	
DCCP	56		DCCP	-		DCCP	-		DCCP	56
DCCFAT	-		DCCFATh	-		DCCFAT	-		DCCFAT	51
DCCF	-		DCCF	-		DCNFE	-		DCCF	10
DCNFE	-		DCNFE	-		DCPpo	-		DCNFE	55
DCOM	62		DCOM	-						
			DCNSPh	-		**Broilers**			**Horses**	
DVE	**1991**	**2007**	DCiSTA	-		DCCP	-		DCCP	60
%RUP	57	57	StaDCP	-		DCCFATh	-		DCOM	54
%DRUP	55	55	AppDCP	-		DC(S+S)	-			
%RUSTA	-	-				DCNFEh	-			
%DASH	35	35				DCPpo	-			
DASHmax	38	38								

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	617 /kg	NE2015	-	MEpo	-	MErab	5.55 MJ/kg
VEVI	588 /kg	NE2015	-	MEpo	-	MErab	1326 kcal/kg
FOM-91	443 g/kg	EW2015	-	MEla	-		
FOMr-07	413 g/kg	StaDP	-	MEla	-		
FOMr2-07	104 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.25 /kg						
DVE-91	49 g/kg			**Broilers**		**Horses**	
DVE-07	46 g/kg			MEbr	-	NEm	4.40 MJ/kg
OEB-91	-30 g/kg			MEbr	-	NEm	1052 kcal/kg
OEB-07	-24 g/kg			DPpo	-	EWpa	0.493 /kg
OEB2-07	0 g/kg					DCPho	60 g/kg
DVMET-91	1.2 g/kg						
DVLYS-91	3.2 g/kg						
DVMET-07	1.1 g/kg						
DVLYS-07	3.1 g/kg						
SW	0.55 /kg						
VW	0.36 /kg						

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Lucerne (alfalfa) meal-CP < 140 g/kg 5004.610/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			100	-	-	-	-	-	-
LYS	4.3	0.4	4.3	-	-	-	-	-	-
MET	1.5	0.1	1.5	-	-	-	-	-	-
CYS	1.0	0.1	1.0	-	-	-	-	-	-
THR	4.0	0.3	4.0	-	-	-	-	-	-
TRP	1.4	0.2	1.4	-	-	-	-	-	-
ILE	4.0	0.4	4.0	-	-	-	-	-	-
ARG	4.1	0.3	4.1	-	-	-	-	-	-
PHE	4.6	0.4	4.6	-	-	-	-	-	-
HIS	2.0	0.2	2.0	-	-	-	-	-	-
LEU	6.9	0.4	6.9	-	-	-	-	-	-
TYR	3.1	0.3	3.1	-	-	-	-	-	-
VAL	5.1	0.4	5.1	-	-	-	-	-	-
ALA	5.1	0.3	5.1	-	-	-	-	-	-
ASP	11.1	0.7	11.1	-	-	-	-	-	-
GLU	9.6	0.8	9.6	-	-	-	-	-	-
GLY	4.7	0.3	4.7	-	-	-	-	-	-
PRO	4.8	0.6	4.8	-	-	-	-	-	-
SER	4.2	0.2	4.2	-	-	-	-	-	-
Sum AA	81.5		82	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		17.7
<=C10	-	0.0
C12:0	-	0.0
C14:0	1.0	0.1
C16:0	27.0	2.4
C16:1	1.0	0.1
C18:0	3.0	0.3
C18:1	10.0	0.9
C:18:2	25.0	2.2
C18:3	30.0	2.7
>=C20	1.0	0.1
Sum FA	98.0	8.7
% FA in CFAT-fraction		50

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Lucerne (alfalfa) meal-CP < 140 g/kg:

1. This product may be contaminated with sand / soil; this is the case when the ASH content is higher than approximately 85 g/kg DM.
2. This product is usually naturally dried (sun-cured).
3. The feeding value for ruminants is calculated without an adjustment for cutting date.

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Lucerne (alfalfa) meal-CP 140 - 160 g/kg 5004.610/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	913	103	152	22	30	286	349	342
sdc	12	7	5	4	-	21	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	42	11	-	38	434	315	78	587	153
sdc	14	-	-	9	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	15.8	2.5	0.1	1.8	26.0	0.8	5.3	2.1	0.9
sdc	3.5	0.4	-	0.2	3.8	0.4	1.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	674	37	24	9	1.5	0.5	1.7
sdc	317	11	5	2	-	-	-

IP/P	5	SUGe/SUG	65	EB (meq/kg)	553
		CF_DI	0.97	CAD (meq/kg)	366

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	67	DCCP	54	DCCP	52	DCCP	62
DCCFAT	-	DCCFATh	35	DCCFAT	38	DCCFAT	51
DCCF	-	DCCF	34	DCNFE	20	DCCF	15
DCNFE	-	DCNFE	65	DCPpo	75	DCNFE	65
DCOM	64	DCOM	51				
		DCNSPh	47	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	67	DCCP	68
%RUP	50 50	StaDCP	30	DCCFATh	28	DCOM	55
%DRUP	67 67	AppDCP	23	DC(S+S)	100		
%RUSTA	- -			DCNFEh	14		
%DASH	50 50			DCPpo	75		
DASHmax	61 61						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	622 /kg	NE2015	4.57 MJ/kg	MEpo	2.97 MJ/kg	MErab	6.76 MJ/kg
VEVI	592 /kg	NE2015	1091 kcal/kg	MEpo	709 kcal/kg	MErab	1615 kcal/kg
FOM-91	416 g/kg	EW2015	0.52 /kg	MEla	3.02 MJ/kg		
FOMr-07	421 g/kg	StaDP	0.8 g/kg	MEla	721 kcal/kg		
FOMr2-07	130 g/kg	AppDP	0.6 g/kg	DPpo	1.9 g/kg		
FOMr2/FOMr	0.31 /kg						
DVE-91	70 g/kg			**Broilers**		**Horses**	
DVE-07	67 g/kg			MEbr	3.02 MJ/kg	NEm	4.62 MJ/kg
OEB-91	6 g/kg			MEbr	721 kcal/kg	NEm	1104 kcal/kg
OEB-07	10 g/kg			DPpo	1.9 g/kg	EWpa	0.517 /kg
OEB2-07	21 g/kg					DCPho	104 g/kg
DVMET-91	1.5 g/kg						
DVLYS-91	4.0 g/kg						
DVMET-07	1.5 g/kg						
DVLYS-07	4.0 g/kg						
SW	0.52 /kg						
VW	0.36 /kg						

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Lucerne (alfalfa) meal-CP 140 - 160 g/kg 5004.610/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			152	45	-	38	58	-	-
LYS	4.3	0.4	6.5	46	3.0	40	2.6	54	3.5
MET	1.5	0.1	2.3	72	1.6	67	1.5	55	1.3
CYS	1.0	0.1	1.5	9	0.1	-	-0.1	50	0.8
THR	4.0	0.3	6.1	55	3.3	46	2.8	53	3.2
TRP	1.4	0.2	2.1	54	1.2	48	1.0	51	1.1
ILE	4.0	0.4	6.1	62	3.8	56	3.4	53	3.2
ARG	4.1	0.3	6.2	73	4.5	67	4.2	51	3.2
PHE	4.6	0.4	7.0	65	4.5	60	4.2	52	3.6
HIS	2.0	0.2	3.0	54	1.6	48	1.5	52	1.6
LEU	6.9	0.4	10.5	62	6.5	58	6.0	52	5.5
TYR	3.1	0.3	4.7	58	2.7	52	2.5	52	2.5
VAL	5.1	0.4	7.8	58	4.5	52	4.1	53	4.1
ALA	5.1	0.3	7.8	59	4.6	53	4.1	55	4.3
ASP	11.1	0.7	16.9	68	11.5	64	10.8	52	8.8
GLU	9.6	0.8	14.6	57	8.4	50	7.3	53	7.7
GLY	4.7	0.3	7.2	51	3.7	40	2.8	54	3.9
PRO	4.8	0.6	7.3	73	5.3	59	4.3	53	3.9
SER	4.2	0.2	6.4	58	3.7	49	3.1	52	3.3
Sum AA	81.5		124	-	75	-	66	-	65

Fatty acids	% FA	g/kg
CFAT(h)		22.3
<=C10	-	0.0
C12:0	-	0.0
C14:0	1.0	0.1
C16:0	27.0	3.0
C16:1	1.0	0.1
C18:0	3.0	0.3
C18:1	10.0	1.1
C:18:2	25.0	2.8
C18:3	30.0	3.4
>=C20	1.0	0.1
Sum FA	98.0	10.9
% FA in CFAT-fraction		50

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Lucerne (alfalfa) meal-CP 140 - 160 g/kg:

1. This product may be contaminated with sand / soil; this is the case when the ASH content is higher than approximately 85 g/kg DM.
2. The feeding value for ruminants is calculated without an adjustment for cutting date.

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Lucerne (alfalfa) meal-CP 160 - 180 g/kg 5004.610/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	914	110	168	25	32	276	335	328
sdc	12	8	6	4	-	26	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	32	11	-	40	428	308	-	562	134
sdc	26	-	-	15	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	16.1	2.7	0.1	1.9	27.3	0.9	5.3	2.1	1.0
sdc	4.6	0.4	-	0.2	4.0	0.5	1.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	675	37	24	9	1.5	0.5	1.7
sdc	317	11	5	2	-	-	-

IP/P	5	SUGe/SUG	65	EB (meq/kg)	589
		CF_DI	0.97	CAD (meq/kg)	396

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	70	DCCP	56	DCCP	60	DCCP	66
DCCFAT	-	DCCFATh	36	DCCFAT	40	DCCFAT	51
DCCF	-	DCCF	34	DCNFE	28	DCCF	20
DCNFE	-	DCNFE	67	DCPpo	75	DCNFE	65
DCOM	64	DCOM	52				
		DCNSPh	48	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	68	DCCP	70
%RUP	48	StaDCP	30	DCCFATh	28	DCOM	56
%DRUP	70	AppDCP	23	DC(S+S)	100		
%RUSTA	-			DCNFEh	15		
%DASH	50			DCPpo	75		
DASHmax	65						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	633 /kg	NE2015	4.71 MJ/kg	MEpo	3.83 MJ/kg	MErab	7.22 MJ/kg
VEVI	607 /kg	NE2015	1125 kcal/kg	MEpo	916 kcal/kg	MErab	1727 kcal/kg
FOM-91	414 g/kg	EW2015	0.53 /kg	MEla	3.89 MJ/kg		
FOMr-07	425 g/kg	StaDP	0.8 g/kg	MEla	929 kcal/kg		
FOMr2-07	139 g/kg	AppDP	0.6 g/kg	DPpo	2.0 g/kg		
FOMr2/FOMr	0.33 /kg						
DVE-91	76 g/kg			**Broilers**		**Horses**	
DVE-07	73 g/kg			MEbr	3.27 MJ/kg	NEm	4.75 MJ/kg
OEB-91	17 g/kg			MEbr	783 kcal/kg	NEm	1135 kcal/kg
OEB-07	22 g/kg			DPpo	2.0 g/kg	EWpa	0.532 /kg
OEB2-07	29 g/kg					DCPho	118 g/kg
DVMET-91	1.6 g/kg						
DVLYS-91	4.3 g/kg						
DVMET-07	1.6 g/kg						
DVLYS-07	4.2 g/kg						
SW	0.51 /kg						
VW	0.36 /kg						

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Lucerne (alfalfa) meal-CP 160 - 180 g/kg 5004.610/3/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			168	45	-	39	66	-	-
LYS	4.3	0.4	7.2	46	3.3	41	3.0	63	4.6
MET	1.5	0.1	2.5	72	1.8	68	1.7	63	1.6
CYS	1.0	0.1	1.7	9	0.1	-	0.0	58	1.0
THR	4.0	0.3	6.7	55	3.7	47	3.1	61	4.1
TRP	1.4	0.2	2.4	54	1.3	49	1.1	59	1.4
ILE	4.0	0.4	6.7	62	4.2	57	3.8	61	4.1
ARG	4.1	0.3	6.9	73	5.0	67	4.7	59	4.1
PHE	4.6	0.4	7.7	65	5.0	61	4.7	60	4.6
HIS	2.0	0.2	3.4	54	1.8	49	1.6	60	2.0
LEU	6.9	0.4	11.6	62	7.2	58	6.7	60	7.0
TYR	3.1	0.3	5.2	58	3.0	53	2.7	60	3.1
VAL	5.1	0.4	8.6	58	5.0	53	4.5	61	5.2
ALA	5.1	0.3	8.6	59	5.0	53	4.6	63	5.4
ASP	11.1	0.7	18.7	68	12.7	64	12.0	60	11.2
GLU	9.6	0.8	16.2	57	9.3	51	8.2	61	9.9
GLY	4.7	0.3	7.9	51	4.1	41	3.2	62	4.9
PRO	4.8	0.6	8.1	73	5.9	61	4.9	61	4.9
SER	4.2	0.2	7.1	58	4.1	50	3.5	60	4.2
Sum AA	81.5		137	-	83	-	74	-	83

Fatty acids	% FA	g/kg
CFAT(h)		24.7
<=C10	-	0.0
C12:0	-	0.0
C14:0	1.0	0.1
C16:0	27.0	3.3
C16:1	1.0	0.1
C18:0	3.0	0.4
C18:1	10.0	1.2
C:18:2	25.0	3.1
C18:3	30.0	3.7
>=C20	1.0	0.1
Sum FA	98.0	12.1
% FA in CFAT-fraction		50

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Lucerne (alfalfa) meal-CP 160 - 180 g/kg:

1. This product may be contaminated with sand / soil; this is the case when the ASH content is higher than approximately 85 g/kg DM.
2. The feeding value for ruminants is calculated without an adjustment for cutting date.

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Lucerne (alfalfa) meal-CP > 180 g/kg 5004.610/4/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	906	115	191	29	37	233	338	330
sdc	13	8	7	5	-	29	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	51	11	-	26	382	258	-	535	152
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	15.5	2.8	0.1	2.2	29.4	0.9	5.3	2.1	1.1
sdc	5.2	0.6	-	-	3.0	0.5	1.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	669	37	24	9	1.5	0.5	1.7
sdc	314	11	5	2	-	-	-

IP/P	5	SUGe/SUG	65	EB (meq/kg)	642
		CF_DI	0.97	CAD (meq/kg)	442

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	72	DCCP	60	DCCP	67	DCCP	70
DCCFAT	-	DCCFATh	38	DCCFAT	42	DCCFAT	51
DCCF	-	DCCF	37	DCNFE	33	DCCF	25
DCNFE	-	DCNFE	67	DCPpo	75	DCNFE	70
DCOM	69	DCOM	55				
		DCNSPh	52	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	69	DCCP	72
%RUP	44	StaDCP	30	DCCFATh	28	DCOM	60
%DRUP	75	AppDCP	23	DC(S+S)	100		
%RUSTA	-			DCNFEh	11		
%DASH	50			DCPpo	75		
DASHmax	68						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	697 /kg	NE2015	4.94 MJ/kg	MEpo	4.72 MJ/kg	MErab	8.21 MJ/kg
VEVI	689 /kg	NE2015	1181 kcal/kg	MEpo	1127 kcal/kg	MErab	1961 kcal/kg
FOM-91	436 g/kg	EW2015	0.56 /kg	MEla	4.79 MJ/kg		
FOMr-07	438 g/kg	StaDP	0.8 g/kg	MEla	1144 kcal/kg		
FOMr2-07	144 g/kg	AppDP	0.6 g/kg	DPpo	2.1 g/kg		
FOMr2/FOMr	0.33 /kg						
DVE-91	90 g/kg			**Broilers**		**Horses**	
DVE-07	84 g/kg			MEbr	3.40 MJ/kg	NEm	5.13 MJ/kg
OEB-91	32 g/kg			MEbr	813 kcal/kg	NEm	1225 kcal/kg
OEB-07	39 g/kg			DPpo	2.1 g/kg	EWpa	0.574 /kg
OEB2-07	44 g/kg					DCPho	137 g/kg
DVMET-91	1.8 g/kg						
DVLYS-91	5.0 g/kg						
DVMET-07	1.7 g/kg						
DVLYS-07	4.8 g/kg						
SW	0.48 /kg						
VW	0.34 /kg						

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Lucerne (alfalfa) meal-CP > 180 g/kg 5004.610/4/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			191	45	-	40	76	-	-
LYS	4.3	0.4	8.2	46	3.8	41	3.4	70	5.7
MET	1.5	0.1	2.9	72	2.1	68	2.0	71	2.0
CYS	1.0	0.1	1.9	9	0.2	-	0.0	65	1.2
THR	4.0	0.3	7.6	55	4.2	48	3.6	68	5.2
TRP	1.4	0.2	2.7	54	1.4	49	1.3	66	1.8
ILE	4.0	0.4	7.6	62	4.7	57	4.4	69	5.3
ARG	4.1	0.3	7.8	73	5.7	68	5.3	66	5.2
PHE	4.6	0.4	8.8	65	5.7	61	5.4	67	5.9
HIS	2.0	0.2	3.8	54	2.1	50	1.9	67	2.6
LEU	6.9	0.4	13.2	62	8.1	58	7.7	67	8.8
TYR	3.1	0.3	5.9	58	3.4	53	3.2	68	4.0
VAL	5.1	0.4	9.7	58	5.7	53	5.2	68	6.6
ALA	5.1	0.3	9.7	59	5.7	54	5.3	70	6.8
ASP	11.1	0.7	21.2	68	14.4	65	13.7	67	14.2
GLU	9.6	0.8	18.3	57	10.5	52	9.5	68	12.5
GLY	4.7	0.3	9.0	51	4.6	42	3.8	69	6.2
PRO	4.8	0.6	9.2	73	6.7	62	5.7	68	6.2
SER	4.2	0.2	8.0	58	4.7	51	4.1	67	5.4
Sum AA	81.5		155	-	93	-	85	-	106

Fatty acids	% FA	g/kg
CFAT(h)		29.4
<=C10	-	0.0
C12:0	-	0.0
C14:0	1.0	0.1
C16:0	27.0	4.0
C16:1	1.0	0.1
C18:0	3.0	0.4
C18:1	10.0	1.5
C:18:2	25.0	3.7
C18:3	30.0	4.4
>=C20	1.0	0.1
Sum FA	98.0	14.4
% FA in CFAT-fraction		50

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Lucerne (alfalfa) meal-CP > 180 g/kg:

1. This product may be contaminated with sand / soil; this is the case when the ASH content is higher than approximately 75 g/kg DM.
2. The feeding value for ruminants is calculated without an adjustment for cutting date.

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Lupins-CP < 335 g/kg 2004.000/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	895	28	303	52	62	153	360	349
sdc	12	2	9	3	2	11	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	82	12	-	50	287	180	4	453	166
sdc	14	-	-	5	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.3	3.4	1.7	1.6	8.0	0.3	0.5	0.6	1.7
sdc	0.3	0.7	-	0.1	0.6	0.2	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	49	41	31	4	3.2	0.1	0.2
sdc	5	12	4	1	-	-	-

IP/P	50	SUGe/SUG	65	EB (meq/kg)	205
		CF_DI	0.95	CAD (meq/kg)	62

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	89		DCCP	83	DCCP	90	DCCP	84
DCCFAT	88		DCCFATh	69	DCCFAT	64	DCCFAT	75
DCCF	92		DCCF	81	DCNFE	18	DCCF	30
DCNFE	92		DCNFE	90	DCPpo	49	DCNFE	80
DCOM	91		DCOM	85				
			DCNSPh	86	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	91	DCCP	84
%RUP	22	27	StaDCP	60	DCCFATh	81	DCOM	87
%DRUP	94	94	AppDCP	55	DC(S+S)	100		
%RUSTA	10	-			DCNFEh	17		
%DASH	65	65			DCPpo	49		
DASHmax	26	26						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1135 /kg	NE2015	8.93 MJ/kg	MEpo	7.33 MJ/kg	MErab	11.98 MJ/kg
VEVI	1235 /kg	NE2015	2133 kcal/kg	MEpo	1751 kcal/kg	MErab	2862 kcal/kg
FOM-91	666 g/kg	EW2015	1.01 /kg	MEla	7.52 MJ/kg		
FOMr-07	561 g/kg	StaDP	2.1 g/kg	MEla	1797 kcal/kg		
FOMr2-07	219 g/kg	AppDP	1.9 g/kg	DPpo	1.7 g/kg		
FOMr2/FOMr	0.39 /kg						
DVE-91	127 g/kg			**Broilers**		**Horses**	
DVE-07	124 g/kg			MEbr	8.00 MJ/kg	NEm	9.38 MJ/kg
OEB-91	129 g/kg			MEbr	1912 kcal/kg	NEm	2242 kcal/kg
OEB-07	137 g/kg			DPpo	1.7 g/kg	EWpa	1.050 /kg
OEB2-07	78 g/kg					DCPho	255 g/kg
DVMET-91	2.0 g/kg						
DVLYS-91	7.9 g/kg						
DVMET-07	1.8 g/kg						
DVLYS-07	7.4 g/kg						
SW	0.37 /kg						
VW	0.30 /kg						

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Lupins-CP < 335 g/kg 2004.000/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			303	87	-	84	253	-	-
LYS	4.8	0.2	14.6	88	12.9	86	12.5	87	12.7
MET	0.7	0.1	2.1	82	1.7	78	1.6	82	1.7
CYS	1.5	0.2	4.6	87	4.0	83	3.8	81	3.7
THR	3.5	0.2	10.6	86	9.1	81	8.6	81	8.6
TRP	0.8	0.1	2.4	87	2.1	81	2.0	82	2.0
ILE	4.1	0.3	12.4	86	10.8	84	10.4	84	10.5
ARG	10.8	0.7	32.8	95	31.1	94	30.7	90	29.5
PHE	3.9	0.2	11.8	87	10.3	85	10.1	85	10.1
HIS	2.5	0.3	7.6	89	6.7	86	6.6	81	6.1
LEU	7.0	0.3	21.2	86	18.3	84	17.9	85	18.1
TYR	4.0	0.5	12.1	89	10.8	87	10.5	83	10.1
VAL	3.9	0.3	11.8	86	10.1	82	9.6	82	9.7
ALA	3.4	0.1	10.3	81	8.3	76	7.9	83	8.6
ASP	10.1	0.4	30.6	87	26.7	85	26.0	82	25.1
GLU	20.9	1.4	63.4	92	58.4	90	57.3	89	56.4
GLY	4.1	0.2	12.4	88	11.0	82	10.2	81	10.1
PRO	4.1	0.2	12.4	94	11.7	86	10.7	79	9.8
SER	4.9	0.3	14.9	89	13.3	85	12.7	82	12.2
Sum AA	95.0		288	-	257	-	249	-	245

Fatty acids

	% FA	g/kg
CFAT(h)		51.6
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.2
C16:0	5.0	2.2
C16:1	0.4	0.2
C18:0	1.0	0.4
C18:1	31.0	13.6
C:18:2	47.0	20.6
C18:3	4.0	1.8
>=C20	15.0	6.6
Sum FA	103.8	45.5
% FA in CFAT-fraction		85

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Lupins-CP > 335 g/kg 2004.000/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	878	38	360	46	55	137	296	287
sdc	18	3	26	3	4	10	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	73	21	-	48	257	162	-	366	109
sdc	19	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.3	3.5	1.8	1.7	8.1	0.4	0.5	0.6	2.0
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	49	40	35	5	3.2	0.1	-
sdc	-	-	-	-	-	-	-

IP/P	50	SUGe/SUG	65	EB (meq/kg)	207
		CF_DI	0.95	CAD (meq/kg)	45

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	91		DCCP	84	DCCP	90	DCCP	84
DCCFAT	87		DCCFATh	68	DCCFAT	63	DCCFAT	75
DCCF	92		DCCF	81	DCNFE	22	DCCF	30
DCNFE	92		DCNFE	91	DCPpo	49	DCNFE	80
DCOM	91		DCOM	85				
			DCNSPh	86	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	92	DCCP	86
%RUP	22	27	StaDCP	60	DCCFATh	81	DCOM	87
%DRUP	94	94	AppDCP	55	DC(S+S)	100		
%RUSTA	10	-			DCNFEh	23		
%DASH	65	65			DCPpo	49		
DASHmax	33	33						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1101 /kg	NE2015	8.72 MJ/kg	MEpo	8.11 MJ/kg	MErab	11.79 MJ/kg
VEVI	1192 /kg	NE2015	2084 kcal/kg	MEpo	1938 kcal/kg	MErab	2817 kcal/kg
FOM-91	637 g/kg	EW2015	0.99 /kg	MEla	8.28 MJ/kg		
FOMr-07	549 g/kg	StaDP	2.1 g/kg	MEla	1979 kcal/kg		
FOMr2-07	230 g/kg	AppDP	1.9 g/kg	DPpo	1.7 g/kg		
FOMr2/FOMr	0.42 /kg						
DVE-91	137 g/kg			**Broilers**		**Horses**	
DVE-07	136 g/kg			MEbr	8.87 MJ/kg	NEm	9.05 MJ/kg
OEB-91	177 g/kg			MEbr	2121 kcal/kg	NEm	2162 kcal/kg
OEB-07	183 g/kg			DPpo	1.7 g/kg	EWpa	1.013 /kg
OEB2-07	98 g/kg					DCPho	310 g/kg
DVMET-91	2.0 g/kg						
DVLYS-91	8.3 g/kg						
DVMET-07	1.8 g/kg						
DVLYS-07	7.9 g/kg						
SW	0.34 /kg						
VW	0.28 /kg						

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Lupins-CP > 335 g/kg 2004.000/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			360	87	-	84	303	-	-
LYS	4.8	0.2	17.3	88	15.3	86	14.9	87	15.0
MET	0.7	0.1	2.5	82	2.1	78	2.0	82	2.1
CYS	1.5	0.2	5.4	87	4.7	84	4.5	81	4.4
THR	3.5	0.2	12.6	86	10.8	82	10.3	81	10.2
TRP	0.8	0.1	2.9	87	2.5	82	2.4	82	2.4
ILE	4.1	0.3	14.8	86	12.8	84	12.4	84	12.4
ARG	10.8	0.7	38.9	95	36.9	94	36.5	90	35.0
PHE	3.9	0.2	14.0	87	12.3	85	12.0	85	11.9
HIS	2.5	0.3	9.0	89	8.0	87	7.8	81	7.3
LEU	7.0	0.3	25.2	86	21.8	85	21.4	85	21.4
TYR	4.0	0.5	14.4	89	12.8	87	12.5	83	12.0
VAL	3.9	0.3	14.0	86	12.0	82	11.6	82	11.5
ALA	3.4	0.1	12.2	81	9.9	77	9.4	83	10.2
ASP	10.1	0.4	36.4	87	31.7	85	31.0	82	29.8
GLU	20.9	1.4	75.3	92	69.3	91	68.3	89	67.0
GLY	4.1	0.2	14.8	88	13.0	83	12.2	81	12.0
PRO	4.1	0.2	14.8	94	13.9	87	12.9	79	11.7
SER	4.9	0.3	17.6	89	15.8	86	15.2	82	14.5
Sum AA	95.0		342	-	305	-	297	-	291

Fatty acids

	% FA	g/kg
CFAT(h)		46.5
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.2
C16:0	5.0	2.0
C16:1	0.4	0.2
C18:0	1.0	0.4
C18:1	31.0	12.2
C:18:2	47.0	18.6
C18:3	4.0	1.6
>=C20	15.0	5.9
Sum FA	103.8	41.0
% FA in CFAT-fraction		85

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Lupins-CP > 335 g/kg:

1. Depending on variety the content of manganese (Mn) may be higher than 1000 mg/kg.

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Maize 1002.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	863	12	75	37	38	24	715	714
sdc	6	1	4	4	2	4	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	640	617	-	13	111	31	3	111	0
sdc	9	-	-	3	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.0	2.5	2.1	0.9	3.3	0.0	0.5	0.1	0.8
sdc	0.0	0.2	-	0.2	0.3	0.0	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	21	6	21	1	0.2	0.1	0.1
sdc	5	2	3	1	-	-	-

IP/P	85	SUGe/SUG	90	EB (meq/kg)	70
		CF_DI	0.96	CAD (meq/kg)	16

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	59	DCCP	76	DCCP	83	DCCP	62
DCCFAT	90	DCCFATh	83	DCCFAT	84	DCCFAT	87
DCCF	51	DCCF	51	DCNFE	91	DCCF	40
DCNFE	94	DCNFE	95	DCPpo	30	DCNFE	89
DCOM	89	DCOM	92				
		DCNSPh	57	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	85	DCCP	73
%RUP	59	StaDCP	27	DCCFATh	88	DCOM	86
%DRUP	94	AppDCP	20	DC(S+S)	99		
%RUSTA	37			DCNFEh	87		
%DASH	65			DCPpo	30		
DASHmax	14						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1085 /kg	NE2015	11.28 MJ/kg	MEpo	13.60 MJ/kg	MErab	13.14 MJ/kg
VEVI	1211 /kg	NE2015	2695 kcal/kg	MEpo	3250 kcal/kg	MErab	3140 kcal/kg
FOM-91	451 g/kg	EW2015	1.28 /kg	MEla	13.78 MJ/kg		
FOMr-07	482 g/kg	StaDP	0.7 g/kg	MEla	3294 kcal/kg		
FOMr2-07	208 g/kg	AppDP	0.5 g/kg	DPpo	0.7 g/kg		
FOMr2/FOMr	0.43 /kg						
DVE-91	82 g/kg			**Broilers**		**Horses**	
DVE-07	98 g/kg			MEbr	13.27 MJ/kg	NEm	9.57 MJ/kg
OEB-91	-42 g/kg			MEbr	3171 kcal/kg	NEm	2288 kcal/kg
OEB-07	-67 g/kg			DPpo	0.7 g/kg	EWpa	1.072 /kg
OEB2-07	-29 g/kg					DCPho	55 g/kg
DVMET-91	2.0 g/kg						
DVLYS-91	4.3 g/kg						
DVMET-07	2.4 g/kg						
DVLYS-07	5.5 g/kg						
SW	0.15 /kg						
VW	0.25 /kg						

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Maize 1002.000/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			75	82	-	69	52	-	-
LYS	2.9	0.3	2.2	75	1.6	60	1.3	90	2.0
MET	2.1	0.2	1.6	87	1.4	81	1.3	94	1.5
CYS	2.2	0.2	1.6	81	1.3	70	1.2	86	1.4
THR	3.6	0.2	2.7	79	2.1	60	1.6	83	2.2
TRP	0.7	0.1	0.5	76	0.4	52	0.3	85	0.4
ILE	3.4	0.2	2.5	86	2.2	73	1.9	93	2.4
ARG	4.7	0.4	3.5	88	3.1	78	2.7	93	3.3
PHE	4.8	0.3	3.6	87	3.1	80	2.9	93	3.3
HIS	3.0	0.2	2.2	86	1.9	79	1.8	90	2.0
LEU	12.1	0.7	9.1	89	8.0	84	7.6	94	8.5
TYR	3.7	0.4	2.8	86	2.4	77	2.1	88	2.4
VAL	4.8	0.3	3.6	86	3.1	73	2.6	90	3.2
ALA	7.5	0.4	5.6	87	4.9	79	4.5	93	5.2
ASP	6.7	0.4	5.0	82	4.1	68	3.4	89	4.5
GLU	18.1	1.0	13.6	89	12.1	82	11.1	95	12.9
GLY	3.9	0.3	2.9	79	2.3	52	1.5	86	2.5
PRO	8.9	0.7	6.7	85	5.6	70	4.7	91	6.1
SER	4.8	0.2	3.6	88	3.2	73	2.6	91	3.3
Sum AA	97.9		73	-	63	-	55	-	67

Fatty acids	% FA	g/kg
CFAT(h)		36.9
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	4.0
C16:1	0.2	0.1
C18:0	2.0	0.7
C18:1	28.0	9.3
C:18:2	55.0	18.3
C18:3	1.0	0.3
>=C20	1.0	0.3
Sum FA	99.6	33.0
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Maize bran 1002.108/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	894	23	93	41	48	91	645	638
sdc	6	2	4	-	-	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	325	302	-	18	408	105	8	418	10
sdc	46	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.3	4.7	3.6	-	-	-	-	-	1.0
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	90	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	65		DCCP	57	DCCP	74	DCCP	60
DCCFAT	90		DCCFATh	73	DCCFAT	58	DCCFAT	87
DCCF	51		DCCF	57	DCNFE	50	DCCF	40
DCNFE	84		DCNFE	72	DCPpo	36	DCNFE	70
DCOM	79		DCOM	69				
			DCNSPh	47	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	69	DCCP	59
%RUP	42	57	StaDCP	25	DCCFATh	22	DCOM	73
%DRUP	88	88	AppDCP	21	DC(S+S)	97		
%RUSTA	22	22			DCNFEh	49		
%DASH	50	50			DCPpo	36		
DASHmax	17	17						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	964 /kg	NE2015	8.25 MJ/kg	MEpo	8.40 MJ/kg	MErab	10.73 MJ/kg
VEVI	1035 /kg	NE2015	1971 kcal/kg	MEpo	2007 kcal/kg	MErab	2565 kcal/kg
FOM-91	542 g/kg	EW2015	0.94 /kg	MEla	8.54 MJ/kg		
FOMr-07	533 g/kg	StaDP	1.2 g/kg	MEla	2040 kcal/kg		
FOMr2-07	201 g/kg	AppDP	1.0 g/kg	DPpo	1.7 g/kg		
FOMr2/FOMr	0.38 /kg						
DVE-91	75 g/kg			**Broilers**		**Horses**	
DVE-07	93 g/kg			MEbr	6.96 MJ/kg	NEm	7.93 MJ/kg
OEB-91	-31 g/kg			MEbr	1663 kcal/kg	NEm	1895 kcal/kg
OEB-07	-55 g/kg			DPpo	1.7 g/kg	EWpa	0.888 /kg
OEB2-07	-20 g/kg					DCPho	55 g/kg
DVMET-91	1.9 g/kg						
DVLYS-91	4.4 g/kg						
DVMET-07	2.3 g/kg						
DVLYS-07	5.3 g/kg						
SW	0.21 /kg						
VW	0.27 /kg						

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Maize bran 1002.108/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			93	74	-	63	59	-	-
LYS	3.2	0.6	3.0	70	2.1	58	1.7	71	2.1
MET	2.1	0.3	2.0	86	1.7	81	1.6	88	1.7
CYS	2.2	0.2	2.0	73	1.5	63	1.3	76	1.6
THR	3.7	0.3	3.4	70	2.4	55	1.9	69	2.4
TRP	0.7	0.2	0.7	73	0.5	53	0.3	79	0.5
ILE	3.5	0.3	3.3	80	2.6	70	2.3	83	2.7
ARG	5.0	0.9	4.6	89	4.1	81	3.8	83	3.9
PHE	4.7	0.6	4.4	80	3.5	74	3.2	83	3.6
HIS	2.9	0.2	2.7	80	2.2	74	2.0	78	2.1
LEU	11.1	2.0	10.3	84	8.6	79	8.2	85	8.8
TYR	3.6	0.4	3.3	83	2.8	75	2.5	79	2.6
VAL	5.1	0.4	4.7	79	3.7	69	3.2	80	3.8
ALA	7.3	0.8	6.8	80	5.4	73	5.0	86	5.8
ASP	7.0	0.6	6.5	72	4.7	62	4.0	75	4.9
GLU	17.6	2.5	16.4	79	13.0	73	12.0	82	13.4
GLY	4.2	0.6	3.9	70	2.7	49	1.9	72	2.8
PRO	8.4	1.2	7.8	77	6.0	64	5.0	79	6.2
SER	4.8	0.4	4.5	81	3.6	67	3.0	78	3.5
Sum AA	97.1		90	-	71	-	63	-	72

Fatty acids	% FA	g/kg
CFAT(h)		41.1
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	3.9
C16:1	0.2	0.1
C18:0	2.0	0.7
C18:1	28.0	9.2
C:18:2	55.0	18.1
C18:3	1.0	0.3
>=C20	1.0	0.3
Sum FA	99.6	32.8
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Maize feed flour 1002.103/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	875	6	76	12	17	8	774	770
sdc	18	2	6	-	-	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	737	685	-	10	37	11	1	87	51
sdc	25	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.2	0.7	0.5	-	1.2	0.1	1.0	0.3	0.8
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	39	7	4	2	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	90	EB (meq/kg)	8
		CF_DI	0.96	CAD (meq/kg)	-57

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	59		DCCP	76	DCCP	80	DCCP	-
DCCFAT	78		DCCFATh	68	DCCFAT	70	DCCFAT	-
DCCF	51		DCCF	51	DCNFE	96	DCCF	-
DCNFE	95		DCNFE	98	DCPpo	36	DCNFE	-
DCOM	92		DCOM	95				
			DCNSPh	73	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	85	DCCP	56
%RUP	42	57	StaDCP	50	DCCFATh	88	DCOM	92
%DRUP	88	88	AppDCP	25	DC(S+S)	97		
%RUSTA	22	22			DCNFEh	88		
%DASH	65	65			DCPpo	36		
DASHmax	10	10						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1092 /kg	NE2015	11.48 MJ/kg	MEpo	14.28 MJ/kg	MErab	-
VEVI	1224 /kg	NE2015	2743 kcal/kg	MEpo	3412 kcal/kg	MErab	-
FOM-91	603 g/kg	EW2015	1.30 /kg	MEla	14.33 MJ/kg		
FOMr-07	617 g/kg	StaDP	0.4 g/kg	MEla	3424 kcal/kg		
FOMr2-07	333 g/kg	AppDP	0.2 g/kg	DPpo	0.3 g/kg		
FOMr2/FOMr	0.54 /kg						
DVE-91	83 g/kg			**Broilers**		**Horses**	
DVE-07	107 g/kg			MEbr	13.45 MJ/kg	NEm	10.15 MJ/kg
OEB-91	-50 g/kg			MEbr	3213 kcal/kg	NEm	2427 kcal/kg
OEB-07	-85 g/kg			DPpo	0.3 g/kg	EWpa	1.137 /kg
OEB2-07	-47 g/kg					DCPho	42 g/kg
DVMET-91	2.0 g/kg						
DVLYS-91	5.1 g/kg						
DVMET-07	2.6 g/kg						
DVLYS-07	6.7 g/kg						
SW	-0.05 /kg						
VW	0.25 /kg						

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Maize feed flour 1002.103/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			76	83	-	70	53	-	-
LYS	3.2	0.6	2.4	80	1.9	65	1.6	93	2.2
MET	2.1	0.3	1.6	93	1.5	87	1.4	95	1.5
CYS	2.2	0.2	1.7	83	1.4	72	1.2	89	1.5
THR	3.7	0.3	2.8	81	2.3	62	1.7	85	2.4
TRP	0.7	0.2	0.5	80	0.4	57	0.3	93	0.5
ILE	3.5	0.3	2.6	89	2.3	77	2.0	95	2.5
ARG	5.0	0.9	3.8	85	3.2	76	2.9	91	3.4
PHE	4.7	0.6	3.6	86	3.0	78	2.8	92	3.3
HIS	2.9	0.2	2.2	87	1.9	80	1.8	92	2.0
LEU	11.1	2.0	8.4	93	7.8	88	7.4	99	8.3
TYR	3.6	0.4	2.7	91	2.5	82	2.2	93	2.5
VAL	5.1	0.4	3.9	87	3.4	75	2.9	92	3.5
ALA	7.3	0.8	5.5	91	5.0	83	4.6	98	5.4
ASP	7.0	0.6	5.3	83	4.4	70	3.7	90	4.8
GLU	17.6	2.5	13.3	92	12.2	84	11.2	98	13.0
GLY	4.2	0.6	3.2	81	2.6	56	1.8	88	2.8
PRO	8.4	1.2	6.3	75	4.7	59	3.8	84	5.3
SER	4.8	0.4	3.6	90	3.2	74	2.7	91	3.3
Sum AA	97.1		73	-	64	-	56	-	68

Fatty acids	% FA	g/kg
CFAT(h)		12.3
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Maize feed meal 1002.105/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	879	22	89	63	74	41	663	652
sdc	8	2	6	12	9	11	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	498	463	-	23	231	64	6	219	-12
sdc	32	-	-	5	60	20	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.6	4.0	3.0	1.9	5.2	0.2	0.5	0.2	0.9
sdc	0.6	0.7	-	0.8	0.6	0.1	0.1	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	62	6	15	1	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	90	EB (meq/kg)	125
		CF_DI	0.96	CAD (meq/kg)	57

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	64		DCCP	65	DCCP	78	DCCP	65
DCCFAT	92		DCCFATh	89	DCCFAT	80	DCCFAT	87
DCCF	51		DCCF	24	DCNFE	76	DCCF	40
DCNFE	91		DCNFE	86	DCPpo	36	DCNFE	77
DCOM	86		DCOM	81				
			DCNSPh	40	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	87	DCCP	62
%RUP	42	57	StaDCP	25	DCCFATh	88	DCOM	85
%DRUP	88	88	AppDCP	21	DC(S+S)	97		
%RUSTA	22	22			DCNFEh	72		
%DASH	65	65			DCPpo	36		
DASHmax	22	22						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1108 /kg	NE2015	10.67 MJ/kg	MEpo	12.34 MJ/kg	MErab	12.18 MJ/kg
VEVI	1229 /kg	NE2015	2549 kcal/kg	MEpo	2949 kcal/kg	MErab	2911 kcal/kg
FOM-91	538 g/kg	EW2015	1.21 /kg	MEla	12.64 MJ/kg		
FOMr-07	511 g/kg	StaDP	1.0 g/kg	MEla	3020 kcal/kg		
FOMr2-07	247 g/kg	AppDP	0.8 g/kg	DPpo	1.5 g/kg		
FOMr2/FOMr	0.48 /kg						
DVE-91	78 g/kg			**Broilers**		**Horses**	
DVE-07	95 g/kg			MEbr	12.10 MJ/kg	NEm	9.60 MJ/kg
OEB-91	-33 g/kg			MEbr	2891 kcal/kg	NEm	2294 kcal/kg
OEB-07	-55 g/kg			DPpo	1.5 g/kg	EWpa	1.075 /kg
OEB2-07	-29 g/kg					DCPho	55 g/kg
DVMET-91	1.9 g/kg						
DVLYS-91	4.6 g/kg						
DVMET-07	2.3 g/kg						
DVLYS-07	5.5 g/kg						
SW	0.08 /kg						
VW	0.25 /kg						

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Maize feed meal 1002.105/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			89	76	-	65	58	-	-
LYS	3.2	0.6	2.9	77	2.2	65	1.9	63	1.8
MET	2.1	0.3	1.9	92	1.7	87	1.6	81	1.5
CYS	2.2	0.2	2.0	81	1.6	71	1.4	69	1.4
THR	3.7	0.3	3.3	76	2.5	60	2.0	68	2.2
TRP	0.7	0.2	0.6	74	0.5	55	0.3	78	0.5
ILE	3.5	0.3	3.1	76	2.4	66	2.1	79	2.5
ARG	5.0	0.9	4.5	77	3.4	69	3.1	86	3.8
PHE	4.7	0.6	4.2	76	3.2	70	2.9	80	3.4
HIS	2.9	0.2	2.6	76	2.0	70	1.8	79	2.0
LEU	11.1	2.0	9.9	77	7.6	72	7.2	87	8.6
TYR	3.6	0.4	3.2	76	2.5	69	2.2	79	2.5
VAL	5.1	0.4	4.5	77	3.5	66	3.0	79	3.6
ALA	7.3	0.8	6.5	77	5.0	70	4.6	82	5.3
ASP	7.0	0.6	6.2	76	4.8	65	4.1	75	4.7
GLU	17.6	2.5	15.7	76	12.0	70	10.9	86	13.5
GLY	4.2	0.6	3.7	76	2.9	55	2.1	69	2.6
PRO	8.4	1.2	7.5	76	5.7	63	4.7	82	6.1
SER	4.8	0.4	4.3	76	3.3	63	2.7	77	3.3
Sum AA	97.1		87	-	66	-	58	-	69

Fatty acids	% FA	g/kg
CFAT(h)		63.3
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	6.1
C16:1	0.2	0.1
C18:0	2.0	1.0
C18:1	28.0	14.2
C:18:2	55.0	27.9
C18:3	1.0	0.5
>=C20	1.0	0.5
Sum FA	99.6	50.5
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Maize feed meal, solvent extracted 1002.416/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	867	13	86	33	-	26	709	-
sdc	10	3	6	6	-	11	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	526	489	-	26	160	44	4	220	60
sdc	131	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.5	3.9	2.9	2.4	6.2	0.2	1.0	0.3	0.9
sdc	0.4	1.7	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	18	46	3	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	90	EB (meq/kg)	140
		CF_DI	0.96	CAD (meq/kg)	68

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	63	DCCP	64	DCCP	-	DCCP	-
DCCFAT	89	DCCFATh	82	DCCFAT	-	DCCFAT	-
DCCF	51	DCCF	24	DCNFE	-	DCCF	-
DCNFE	93	DCNFE	89	DCPpo	-	DCNFE	-
DCOM	89	DCOM	84				
		DCNSPh	56	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	42 57	StaDCP	25	DCCFATh	-	DCOM	-
%DRUP	88 88	AppDCP	20	DC(S+S)	-		
%RUSTA	22 22			DCNFEh	-		
%DASH	65 65			DCPpo	-		
DASHmax	15 15						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1076 /kg	NE2015	10.06 MJ/kg	MEpo	-	MErab	-
VEVI	1198 /kg	NE2015	2404 kcal/kg	MEpo	-	MErab	-
FOM-91	582 g/kg	EW2015	1.14 /kg	MEla	-		
FOMr-07	568 g/kg	StaDP	1.0 g/kg	MEla	-		
FOMr2-07	276 g/kg	AppDP	0.8 g/kg	DPpo	-		
FOMr2/FOMr	0.49 /kg						
DVE-91	83 g/kg			**Broilers**		**Horses**	
DVE-07	103 g/kg			MEbr	-	NEm	-
OEB-91	-41 g/kg			MEbr	-	NEm	-
OEB-07	-68 g/kg			DPpo	-	EWpa	-
OEB2-07	-35 g/kg					DCPho	-
DVMET-91	2.0 g/kg						
DVLYS-91	5.0 g/kg						
DVMET-07	2.5 g/kg						
DVLYS-07	6.1 g/kg						
SW	0.04 /kg						
VW	0.25 /kg						

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Maize feed meal, solvent extracted 1002.416/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			86	76	-	64	55	-	-
LYS	3.2	0.6	2.8	77	2.1	64	1.8	-	-
MET	2.1	0.3	1.8	91	1.6	86	1.6	-	-
CYS	2.2	0.2	1.9	80	1.5	70	1.3	-	-
THR	3.7	0.3	3.2	75	2.4	59	1.9	-	-
TRP	0.7	0.2	0.6	74	0.4	54	0.3	-	-
ILE	3.5	0.3	3.0	76	2.3	65	2.0	-	-
ARG	5.0	0.9	4.3	76	3.3	68	2.9	-	-
PHE	4.7	0.6	4.1	76	3.1	69	2.8	-	-
HIS	2.9	0.2	2.5	76	1.9	69	1.7	-	-
LEU	11.1	2.0	9.6	76	7.3	72	6.9	-	-
TYR	3.6	0.4	3.1	76	2.4	68	2.1	-	-
VAL	5.1	0.4	4.4	76	3.3	65	2.9	-	-
ALA	7.3	0.8	6.3	76	4.8	69	4.4	-	-
ASP	7.0	0.6	6.0	75	4.6	64	3.9	-	-
GLU	17.6	2.5	15.2	75	11.5	69	10.4	-	-
GLY	4.2	0.6	3.6	76	2.7	54	2.0	-	-
PRO	8.4	1.2	7.3	76	5.5	62	4.5	-	-
SER	4.8	0.4	4.1	75	3.1	62	2.6	-	-
Sum AA	97.1		84	-	64	-	56	-	-

Fatty acids	% FA	g/kg
CFAT(h)		33.4
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	3.0
C16:1	0.2	0.1
C18:0	2.0	0.5
C18:1	28.0	7.0
C:18:2	55.0	13.8
C18:3	1.0	0.3
>=C20	1.0	0.3
Sum FA	99.6	24.9
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Maize germ meal feed expeller 1002.419/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	896	44	134	56	56	59	603	604
sdc	13	5	11	5	-	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	359	334	-	51	273	76	6	280	6
sdc	22	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.0	8.3	5.8	3.4	9.0	0.2	0.6	0.2	1.4
sdc	0.8	1.9	-	1.0	2.6	0.4	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	422	14	62	6	-	-	-
sdc	-	4	10	3	-	-	-

IP/P	70	SUGe/SUG	90	EB (meq/kg)	224
		CF_DI	0.96	CAD (meq/kg)	126

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	69	DCCP	75	DCCP	54	DCCP	-
DCCFAT	92	DCCFATh	74	DCCFAT	62	DCCFAT	-
DCCF	68	DCCF	51	DCNFE	67	DCCF	-
DCNFE	90	DCNFE	86	DCPpo	40	DCNFE	-
DCOM	85	DCOM	81				
		DCNSPh	59	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	72	DCCP	72
%RUP	42	StaDCP	20	DCCFATh	70	DCOM	81
%DRUP	88	AppDCP	18	DC(S+S)	97		
%RUSTA	22			DCNFEh	61		
%DASH	50			DCPpo	40		
DASHmax	29						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1065 /kg	NE2015	9.62 MJ/kg	MEpo	10.43 MJ/kg	MErab	-
VEVI	1168 /kg	NE2015	2298 kcal/kg	MEpo	2493 kcal/kg	MErab	-
FOM-91	541 g/kg	EW2015	1.09 /kg	MEla	10.63 MJ/kg		
FOMr-07	515 g/kg	StaDP	1.7 g/kg	MEla	2542 kcal/kg		
FOMr2-07	242 g/kg	AppDP	1.5 g/kg	DPpo	3.3 g/kg		
FOMr2/FOMr	0.47 /kg						
DVE-91	95 g/kg			**Broilers**		**Horses**	
DVE-07	115 g/kg			MEbr	9.67 MJ/kg	NEm	8.63 MJ/kg
OEB-91	-9 g/kg			MEbr	2311 kcal/kg	NEm	2063 kcal/kg
OEB-07	-35 g/kg			DPpo	3.3 g/kg	EWpa	0.967 /kg
OEB2-07	-21 g/kg					DCPho	96 g/kg
DVMET-91	2.3 g/kg						
DVLYS-91	5.1 g/kg						
DVMET-07	2.8 g/kg						
DVLYS-07	6.1 g/kg						
SW	0.13 /kg						
VW	0.26 /kg						

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Maize germ meal feed expeller 1002.419/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible
				AA pigs				AA poultry
				standardized		apparent		
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			134	68	-	60	80	-	-
LYS	3.2	0.6	4.3	62	2.6	54	2.3	61	2.6
MET	2.1	0.3	2.8	82	2.3	78	2.2	71	2.0
CYS	2.2	0.2	2.9	64	1.9	58	1.7	53	1.6
THR	3.7	0.3	5.0	64	3.2	53	2.6	59	2.9
TRP	0.7	0.2	0.9	58	0.5	45	0.4	66	0.6
ILE	3.5	0.3	4.7	73	3.4	66	3.1	65	3.0
ARG	5.0	0.9	6.7	82	5.5	77	5.1	65	4.4
PHE	4.7	0.6	6.3	80	5.0	75	4.7	68	4.3
HIS	2.9	0.2	3.9	69	2.7	65	2.5	59	2.3
LEU	11.1	2.0	14.9	77	11.4	74	11.0	66	9.8
TYR	3.6	0.4	4.8	85	4.1	79	3.8	67	3.2
VAL	5.1	0.4	6.8	71	4.8	64	4.4	63	4.3
ALA	7.3	0.8	9.8	68	6.6	63	6.2	64	6.3
ASP	7.0	0.6	9.4	68	6.3	60	5.6	61	5.7
GLU	17.6	2.5	23.6	68	15.9	63	14.9	60	14.1
GLY	4.2	0.6	5.6	68	3.8	53	3.0	61	3.4
PRO	8.4	1.2	11.2	68	7.6	59	6.6	63	7.1
SER	4.8	0.4	6.4	68	4.3	59	3.8	59	3.8
Sum AA	97.1		130	-	92	-	84	-	81

Fatty acids	% FA	g/kg
CFAT(h)		55.8
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	5.0
C16:1	0.2	0.1
C18:0	2.0	0.8
C18:1	28.0	11.7
C:18:2	55.0	23.0
C18:3	1.0	0.4
>=C20	1.0	0.4
Sum FA	99.6	41.7
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Maize germ meal feed, solvent extracted 1002.420/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	875	39	138	24	24	63	612	612
sdc	11	8	10	9	-	6	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	349	325	-	10	291	81	8	341	50
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.9	5.7	4.0	2.2	7.2	0.3	1.1	0.2	1.4
sdc	0.5	1.1	-	0.4	2.0	0.2	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	244	18	62	5	-	-	-
sdc	141	5	11	1	-	-	-

IP/P	70	SUGe/SUG	90	EB (meq/kg)	165
		CF_DI	0.96	CAD (meq/kg)	65

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	70		DCCP	75	DCCP	58	DCCP	-
DCCFAT	80		DCCFATh	63	DCCFAT	60	DCCFAT	-
DCCF	68		DCCF	51	DCNFE	68	DCCF	-
DCNFE	90		DCNFE	82	DCPpo	40	DCNFE	-
DCOM	84		DCOM	78				
			DCNSPh	58	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	73	DCCP	-
%RUP	42	57	StaDCP	20	DCCFATh	70	DCOM	-
%DRUP	88	88	AppDCP	17	DC(S+S)	97		
%RUSTA	22	22			DCNFEh	53		
%DASH	50	50			DCPpo	40		
DASHmax	26	26						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	963 /kg	NE2015	8.40 MJ/kg	MEpo	9.27 MJ/kg	MErab	-
VEVI	1044 /kg	NE2015	2007 kcal/kg	MEpo	2215 kcal/kg	MErab	-
FOM-91	554 g/kg	EW2015	0.95 /kg	MEla	9.35 MJ/kg		
FOMr-07	525 g/kg	StaDP	1.1 g/kg	MEla	2234 kcal/kg		
FOMr2-07	228 g/kg	AppDP	1.0 g/kg	DPpo	2.3 g/kg		
FOMr2/FOMr	0.44 /kg						
DVE-91	98 g/kg			**Broilers**		**Horses**	
DVE-07	121 g/kg			MEbr	8.04 MJ/kg	NEm	-
OEB-91	-9 g/kg			MEbr	1922 kcal/kg	NEm	-
OEB-07	-39 g/kg			DPpo	2.3 g/kg	EWpa	-
OEB2-07	-18 g/kg					DCPho	-
DVMET-91	2.4 g/kg						
DVLYS-91	5.2 g/kg						
DVMET-07	2.9 g/kg						
DVLYS-07	6.4 g/kg						
SW	0.18 /kg						
VW	0.25 /kg						

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Maize germ meal feed, solvent extracted 1002.420/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			138	68	-	60	83	-	-
LYS	3.2	0.6	4.4	62	2.7	54	2.4	62	2.7
MET	2.1	0.3	2.9	82	2.4	79	2.3	85	2.5
CYS	2.2	0.2	3.0	64	1.9	58	1.8	64	1.9
THR	3.7	0.3	5.1	64	3.2	54	2.7	67	3.4
TRP	0.7	0.2	1.0	58	0.6	45	0.4	78	0.8
ILE	3.5	0.3	4.8	73	3.5	66	3.2	78	3.8
ARG	5.0	0.9	6.9	82	5.6	77	5.3	85	5.9
PHE	4.7	0.6	6.5	80	5.2	75	4.9	83	5.4
HIS	2.9	0.2	4.0	69	2.7	65	2.6	78	3.1
LEU	11.1	2.0	15.3	77	11.8	74	11.4	86	13.2
TYR	3.6	0.4	5.0	85	4.2	80	4.0	81	4.0
VAL	5.1	0.4	7.0	71	5.0	64	4.5	78	5.5
ALA	7.3	0.8	10.1	68	6.8	64	6.4	82	8.2
ASP	7.0	0.6	9.6	68	6.5	61	5.8	75	7.2
GLU	17.6	2.5	24.3	68	16.4	63	15.4	84	20.4
GLY	4.2	0.6	5.8	68	3.9	54	3.1	67	3.9
PRO	8.4	1.2	11.6	68	7.8	59	6.9	80	9.3
SER	4.8	0.4	6.6	68	4.5	59	3.9	77	5.1
Sum AA	97.1		134	-	95	-	87	-	106

Fatty acids	% FA	g/kg
CFAT(h)		23.5
<=C10	-	0.0
C12:0	0.2	0.0
C14:0	0.2	0.0
C16:0	12.0	1.8
C16:1	0.2	0.0
C18:0	2.0	0.3
C18:1	28.0	4.3
C:18:2	55.0	8.4
C18:3	1.0	0.2
>=C20	1.0	0.2
Sum FA	99.6	15.2
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Maize germ meal, solvent extracted 1002.418/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	876	25	226	26	33	89	510	503
sdc	9	2	8	3	3	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	229	213	-	3	361	90	8	384	23
sdc	6	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.5	5.2	3.6	2.2	4.5	0.4	0.5	0.2	2.3
sdc	-	0.3	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	9	62	7	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	70	SUGe/SUG	90	EB (meq/kg)	119	
		CF_DI	0.96	CAD (meq/kg)	-39	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	78		DCCP	77	DCCP	58	DCCP	-
DCCFAT	78		DCCFATh	81	DCCFAT	60	DCCFAT	-
DCCF	68		DCCF	52	DCNFE	55	DCCF	-
DCNFE	85		DCNFE	83	DCPpo	40	DCNFE	-
DCOM	81		DCOM	78				
			DCNSPh	66	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	75	DCCP	78
%RUP	42	57	StaDCP	20	DCCFATh	70	DCOM	77
%DRUP	88	88	AppDCP	17	DC(S+S)	97		
%RUSTA	22	22			DCNFEh	41		
%DASH	50	50			DCPpo	40		
DASHmax	18	18						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	932 /kg	NE2015	8.48 MJ/kg	MEpo	6.93 MJ/kg	MErab	-
VEVI	987 /kg	NE2015	2026 kcal/kg	MEpo	1657 kcal/kg	MErab	-
FOM-91	522 g/kg	EW2015	0.96 /kg	MEla	7.02 MJ/kg		
FOMr-07	492 g/kg	StaDP	1.0 g/kg	MEla	1678 kcal/kg		
FOMr2-07	189 g/kg	AppDP	0.9 g/kg	DPpo	2.1 g/kg		
FOMr2/FOMr	0.38 /kg						
DVE-91	129 g/kg			**Broilers**		**Horses**	
DVE-07	158 g/kg			MEbr	7.57 MJ/kg	NEm	7.62 MJ/kg
OEB-91	44 g/kg			MEbr	1810 kcal/kg	NEm	1820 kcal/kg
OEB-07	8 g/kg			DPpo	2.1 g/kg	EWpa	0.853 /kg
OEB2-07	4 g/kg					DCPho	177 g/kg
DVMET-91	3.1 g/kg						
DVLYS-91	6.0 g/kg						
DVMET-07	3.7 g/kg						
DVLYS-07	7.3 g/kg						
SW	0.27 /kg						
VW	0.26 /kg						

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Maize germ meal, solvent extracted 1002.418/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			226	65	-	60	137	-	-
LYS	3.2	0.6	7.2	59	4.3	54	3.9	62	4.5
MET	2.1	0.3	4.8	79	3.8	77	3.7	71	3.4
CYS	2.2	0.2	5.0	63	3.1	59	3.0	54	2.7
THR	3.7	0.3	8.4	66	5.5	60	5.0	62	5.2
TRP	0.7	0.2	1.6	62	1.0	54	0.9	67	1.1
ILE	3.5	0.3	7.9	71	5.6	67	5.3	66	5.2
ARG	5.0	0.9	11.3	80	9.0	77	8.7	66	7.5
PHE	4.7	0.6	10.6	78	8.3	75	8.0	69	7.3
HIS	2.9	0.2	6.6	74	4.8	71	4.7	63	4.1
LEU	11.1	2.0	25.1	74	18.6	72	18.2	66	16.6
TYR	3.6	0.4	8.2	79	6.4	76	6.2	66	5.4
VAL	5.1	0.4	11.5	69	8.0	65	7.5	64	7.4
ALA	7.3	0.8	16.5	65	10.7	62	10.3	65	10.7
ASP	7.0	0.6	15.8	65	10.3	60	9.6	62	9.8
GLU	17.6	2.5	39.8	65	25.8	62	24.8	61	24.3
GLY	4.2	0.6	9.5	65	6.2	56	5.4	62	5.9
PRO	8.4	1.2	19.0	65	12.3	60	11.4	64	12.2
SER	4.8	0.4	10.9	65	7.0	59	6.5	59	6.4
Sum AA	97.1		220	-	151	-	143	-	140

Fatty acids	% FA	g/kg
CFAT(h)		25.8
<=C10	-	0.0
C12:0	0.2	0.0
C14:0	0.2	0.0
C16:0	12.0	2.0
C16:1	0.2	0.0
C18:0	2.0	0.3
C18:1	28.0	4.7
C:18:2	55.0	9.2
C18:3	1.0	0.2
>=C20	1.0	0.2
Sum FA	99.6	16.7
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Maize germs-STAew < 200 g/kg 1002.102/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	970	15	137	450	458	73	295	287
sdc	7	2	11	20	-	8	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	131	122	-	-	-	-	-	246	246
sdc	11	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.1	4.0	-	1.0	4.1	0.0	0.4	-	1.3
sdc	-	-	-	-	-	-	0.1	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	46	7	26	1	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	90	EB (meq/kg)	95
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	75	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	89	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	65	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	81	DCPpo	-	DCNFE	-
DCOM	-		DCOM	83				
			DCNSPh	66	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	84	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	88	DCOM	-
%DRUP	-	-	AppDCP	-	DC(S+S)	97		
%RUSTA	-	-			DCNFEh	41		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	19.03 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	4547 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	2.16 /kg	MEla	-		
FOMr-07	-	StaDP	-	MEla	-		
FOMr2-07	-	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	19.79 MJ/kg	NEm	-
OEB-91	-			MEbr	4729 kcal/kg	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Maize germs-STAew < 200 g/kg 1002.102/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			137	-	-	-	-	-	-
LYS	4.9	0.3	6.7	-	-	-	-	-	-
MET	1.9	0.1	2.6	-	-	-	-	-	-
CYS	2.0	0.1	2.7	-	-	-	-	-	-
THR	3.8	0.1	5.2	-	-	-	-	-	-
TRP	1.0	0.0	1.4	-	-	-	-	-	-
ILE	3.2	0.1	4.3	-	-	-	-	-	-
ARG	7.0	0.6	9.6	-	-	-	-	-	-
PHE	4.2	0.1	5.7	-	-	-	-	-	-
HIS	3.0	0.2	4.1	-	-	-	-	-	-
LEU	8.0	0.6	10.9	-	-	-	-	-	-
TYR	3.3	0.5	4.5	-	-	-	-	-	-
VAL	5.1	0.3	6.9	-	-	-	-	-	-
ALA	6.5	0.4	9.0	-	-	-	-	-	-
ASP	7.6	0.2	10.4	-	-	-	-	-	-
GLU	13.8	1.0	18.9	-	-	-	-	-	-
GLY	5.2	0.2	7.1	-	-	-	-	-	-
PRO	6.3	0.6	8.6	-	-	-	-	-	-
SER	4.6	0.3	6.3	-	-	-	-	-	-
Sum AA	90.9		125	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		449.9
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	12.0	48.6
C16:1	-	0.0
C18:0	2.0	8.1
C18:1	28.0	113.4
C:18:2	55.0	222.7
C18:3	1.0	4.0
>=C20	1.0	4.0
Sum FA	99.0	400.8
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Maize germs-STAew < 200 g/kg:

1. The DCCFATh for pigs only applies for the situation when the fat has been made very well accessible to lipases by means of thorough grinding and pelleting.

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Maize germs-STAew > 200 g/kg 1002.102/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	885	54	134	193	199	49	456	450
sdc	11	6	7	18	18	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	320	297	-	50	-	-	-	159	159
sdc	19	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.5	11.2	-	3.6	15.0	0.1	-	-	1.2
sdc	-	1.6	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	26	-	5	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	90	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	76	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	88	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	65	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	92	DCPpo	-	DCNFE	-
DCOM	-		DCOM	87				
			DCNSPh	66	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	84	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	88	DCOM	-
%DRUP	-	-	AppDCP	-	DC(S+S)	97		
%RUSTA	-	-			DCNFEh	74		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	13.23 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	3162 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.50 /kg	MEla	-		
FOMr-07	-	StaDP	-	MEla	-		
FOMr2-07	-	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	14.61 MJ/kg	NEm	-
OEB-91	-			MEbr	3492 kcal/kg	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Maize germs-STAew > 200 g/kg 1002.102/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized DC	Ileal digestible AA pigs standardized g/kg	Ileal digestible AA pigs apparent DC	Ileal digestible AA pigs apparent g/kg	Standardized ileal digestible AA poultry DC	Standardized ileal digestible AA poultry g/kg
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			134	-	-	-	-	-	-
LYS	4.9	0.3	6.6	-	-	-	-	-	-
MET	1.9	0.1	2.5	-	-	-	-	-	-
CYS	2.0	0.1	2.7	-	-	-	-	-	-
THR	3.8	0.1	5.0	-	-	-	-	-	-
TRP	1.0	0.0	1.4	-	-	-	-	-	-
ILE	3.2	0.1	4.2	-	-	-	-	-	-
ARG	7.0	0.6	9.3	-	-	-	-	-	-
PHE	4.2	0.1	5.6	-	-	-	-	-	-
HIS	3.0	0.2	4.0	-	-	-	-	-	-
LEU	8.0	0.6	10.6	-	-	-	-	-	-
TYR	3.3	0.5	4.4	-	-	-	-	-	-
VAL	5.1	0.3	6.8	-	-	-	-	-	-
ALA	6.5	0.4	8.7	-	-	-	-	-	-
ASP	7.6	0.2	10.1	-	-	-	-	-	-
GLU	13.8	1.0	18.4	-	-	-	-	-	-
GLY	5.2	0.2	6.9	-	-	-	-	-	-
PRO	6.3	0.6	8.4	-	-	-	-	-	-
SER	4.6	0.3	6.1	-	-	-	-	-	-
Sum AA	90.9		122	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		193.0
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	12.0	20.8
C16:1	-	0.0
C18:0	2.0	3.5
C18:1	28.0	48.6
C:18:2	55.0	95.5
C18:3	1.0	1.7
>=C20	1.0	1.7
Sum FA	99.0	172.0
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Maize germs-STAew > 200 g/kg:

1. The DCCFAT for pigs only applies for the situation when the fat has been made very well accessible to lipases by means of thorough grinding and pelleting.

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Maize gluten feed-CP < 200 g/kg 1002.205/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	882	54	185	20	35	72	550	535
sdc	7	5	5	4	6	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	192	161	-	16	305	87	6	380	75
sdc	28	-	-	7	32	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.7	9.5	6.6	3.6	12.4	3.2	2.1	1.0	1.7
sdc	0.4	0.8	-	0.4	1.5	1.5	0.6	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	162	20	62	5	0.9	0.2	-
sdc	61	3	9	1	-	-	-

IP/P	70	SUGe/SUG	60	EB (meq/kg)	397	
		CF_DI	0.97	CAD (meq/kg)	230	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	75	DCCP	64	DCCP	85	DCCP	75
DCCFAT	86	DCCFATh	67	DCCFAT	72	DCCFAT	87
DCCF	68	DCCF	39	DCNFE	47	DCCF	42
DCNFE	87	DCNFE	61	DCPpo	40	DCNFE	68
DCOM	83	DCOM	60				
		DCNSPh	34	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	67	DCCP	69
%RUP	30	35	StaDCP	25	DCCFATh	64	DCOM	71
%DRUP	88	88	AppDCP	23	DC(S+S)	98		
%RUSTA	21	21			DCNFEh	32		
%DASH	50	50			DCPpo	40		
DASHmax	34	34						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	956 /kg	NE2015	6.59 MJ/kg	MEpo	8.28 MJ/kg	MErab	10.51 MJ/kg
VEVI	1028 /kg	NE2015	1576 kcal/kg	MEpo	1979 kcal/kg	MErab	2511 kcal/kg
FOM-91	534 g/kg	EW2015	0.75 /kg	MEla	8.43 MJ/kg		
FOMr-07	532 g/kg	StaDP	2.4 g/kg	MEla	2014 kcal/kg		
FOMr2-07	286 g/kg	AppDP	2.2 g/kg	DPpo	3.8 g/kg		
FOMr2/FOMr	0.54 /kg						
DVE-91	93 g/kg			**Broilers**		**Horses**	
DVE-07	94 g/kg			MEbr	6.90 MJ/kg	NEm	7.32 MJ/kg
OEB-91	43 g/kg			MEbr	1650 kcal/kg	NEm	1749 kcal/kg
OEB-07	43 g/kg			DPpo	3.8 g/kg	EWpa	0.820 /kg
OEB2-07	50 g/kg					DCPho	128 g/kg
DVMET-91	2.1 g/kg						
DVLYS-91	4.9 g/kg						
DVMET-07	2.1 g/kg						
DVLYS-07	4.8 g/kg						
SW	0.25 /kg						
VW	0.26 /kg						

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Maize gluten feed-CP < 200 g/kg 1002.205/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			185	70	-	64	119	-	-
LYS	3.0	0.4	5.6	65	3.6	59	3.3	73	4.1
MET	1.7	0.1	3.2	81	2.6	78	2.5	82	2.6
CYS	2.1	0.2	3.9	59	2.3	54	2.1	70	2.7
THR	3.6	0.2	6.7	72	4.8	64	4.3	76	5.1
TRP	0.6	0.1	1.1	66	0.7	55	0.6	82	0.9
ILE	3.1	0.2	5.7	80	4.6	74	4.3	83	4.8
ARG	4.4	0.8	8.2	85	6.9	81	6.6	88	7.2
PHE	3.8	0.3	7.0	84	5.9	80	5.6	86	6.1
HIS	3.0	0.3	5.6	76	4.2	73	4.1	83	4.6
LEU	9.0	0.6	16.7	85	14.2	82	13.8	90	15.0
TYR	3.0	0.3	5.6	84	4.7	79	4.4	83	4.6
VAL	4.7	0.3	8.7	77	6.7	72	6.2	85	7.4
ALA	6.7	0.5	12.4	84	10.4	80	10.0	86	10.7
ASP	6.1	0.5	11.3	72	8.1	66	7.4	76	8.6
GLU	15.4	0.8	28.6	82	23.3	78	22.3	87	24.8
GLY	4.5	0.3	8.3	62	5.2	52	4.4	71	5.9
PRO	8.3	0.6	15.4	78	12.0	71	11.0	84	12.9
SER	4.3	0.3	8.0	76	6.0	68	5.5	80	6.4
Sum AA	87.3		162	-	126	-	118	-	134

Fatty acids	% FA	g/kg
CFAT(h)		35.0
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	3.4
C16:1	0.2	0.1
C18:0	2.0	0.6
C18:1	28.0	7.8
C:18:2	55.0	15.4
C18:3	1.0	0.3
>=C20	1.0	0.3
Sum FA	99.6	27.9
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	55	-
LA	55	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Maize gluten feed-CP < 200 g/kg:

1. For the calculation of NE2015 and EW2015 the nutrient content of LA should be included.

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Maize gluten feed-CP 200 - 230 g/kg 1002.205/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	893	56	205	30	40	76	524	515
sdc	13	6	7	7	6	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	152	121	-	17	339	89	6	402	64
sdc	20	-	-	6	37	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.1	9.6	6.7	3.7	12.1	3.2	2.1	1.0	1.9
sdc	4.6	0.8	-	0.4	1.4	1.5	0.6	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	164	20	62	5	0.9	0.2	-
sdc	62	3	9	1	-	-	-

IP/P	70	SUGe/SUG	60	EB (meq/kg)	390	
		CF_DI	0.97	CAD (meq/kg)	210	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	76		DCCP	64	DCCP	85	DCCP	75
DCCFAT	87		DCCFATh	68	DCCFAT	72	DCCFAT	87
DCCF	68		DCCF	39	DCNFE	42	DCCF	42
DCNFE	87		DCNFE	57	DCPpo	40	DCNFE	68
DCOM	82		DCOM	58				
			DCNSPh	34	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	67	DCCP	71
%RUP	26	31	StaDCP	25	DCCFATh	64	DCOM	71
%DRUP	88	88	AppDCP	23	DC(S+S)	98		
%RUSTA	21	21			DCNFEh	26		
%DASH	50	50			DCPpo	40		
DASHmax	35	35						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	968 /kg	NE2015	6.42 MJ/kg	MEpo	8.06 MJ/kg	MErab	10.74 MJ/kg
VEVI	1038 /kg	NE2015	1533 kcal/kg	MEpo	1927 kcal/kg	MErab	2567 kcal/kg
FOM-91	543 g/kg	EW2015	0.73 /kg	MEla	8.23 MJ/kg		
FOMr-07	529 g/kg	StaDP	2.4 g/kg	MEla	1967 kcal/kg		
FOMr2-07	287 g/kg	AppDP	2.2 g/kg	DPpo	3.8 g/kg		
FOMr2/FOMr	0.54 /kg						
DVE-91	91 g/kg			**Broilers**		**Horses**	
DVE-07	91 g/kg			MEbr	6.63 MJ/kg	NEm	7.41 MJ/kg
OEB-91	65 g/kg			MEbr	1584 kcal/kg	NEm	1772 kcal/kg
OEB-07	66 g/kg			DPpo	3.8 g/kg	EWpa	0.830 /kg
OEB2-07	73 g/kg					DCPho	146 g/kg
DVMET-91	2.0 g/kg						
DVLYS-91	4.8 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	4.6 g/kg						
SW	0.28 /kg						
VW	0.26 /kg						

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Maize gluten feed-CP 200 - 230 g/kg 1002.205/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			205	70	-	65	133	-	-
LYS	3.0	0.4	6.2	65	4.0	59	3.6	73	4.5
MET	1.7	0.1	3.5	81	2.8	78	2.7	82	2.9
CYS	2.1	0.2	4.3	59	2.5	55	2.4	70	3.0
THR	3.6	0.2	7.4	72	5.3	65	4.8	76	5.6
TRP	0.6	0.1	1.2	66	0.8	56	0.7	82	1.0
ILE	3.1	0.2	6.4	80	5.1	75	4.8	83	5.3
ARG	4.4	0.8	9.0	85	7.7	81	7.3	88	8.0
PHE	3.8	0.3	7.8	84	6.5	80	6.3	86	6.7
HIS	3.0	0.3	6.2	76	4.7	73	4.5	83	5.1
LEU	9.0	0.6	18.5	85	15.7	83	15.3	90	16.6
TYR	3.0	0.3	6.2	84	5.2	80	4.9	83	5.1
VAL	4.7	0.3	9.7	77	7.4	72	7.0	85	8.2
ALA	6.7	0.5	13.8	84	11.6	81	11.1	86	11.8
ASP	6.1	0.5	12.5	72	9.0	66	8.3	76	9.5
GLU	15.4	0.8	31.6	82	25.9	78	24.8	87	27.5
GLY	4.5	0.3	9.2	62	5.7	53	4.9	71	6.6
PRO	8.3	0.6	17.0	78	13.3	72	12.3	84	14.3
SER	4.3	0.3	8.8	76	6.7	69	6.1	80	7.1
Sum AA	87.3		179	-	140	-	132	-	149

Fatty acids	% FA	g/kg
CFAT(h)		39.6
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	3.8
C16:1	0.2	0.1
C18:0	2.0	0.6
C18:1	28.0	8.9
C:18:2	55.0	17.4
C18:3	1.0	0.3
>=C20	1.0	0.3
Sum FA	99.6	31.6
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	55	-
LA	55	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Maize gluten feed-CP 200 - 230 g/kg:

1. For the calculation of NE2015 and EW2015 the nutrient content of LA should be included.

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Maize gluten feed-CP > 230 g/kg 1002.205/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	889	62	240	30	41	74	483	472
sdc	8	4	7	3	3	4	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	128	97	-	26	334	89	7	373	39
sdc	15	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.9	9.5	6.7	3.6	11.2	3.2	2.1	1.0	2.2
sdc	1.0	0.8	-	0.4	0.8	1.5	0.6	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	163	20	62	6	0.9	0.2	-
sdc	62	3	9	1	-	-	-

IP/P	70	SUGe/SUG	60	EB (meq/kg)	365	
		CF_DI	0.97	CAD (meq/kg)	166	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	78		DCCP	65	DCCP	85	DCCP	75
DCCFAT	88		DCCFATh	69	DCCFAT	72	DCCFAT	87
DCCF	68		DCCF	39	DCNFE	42	DCCF	42
DCNFE	86		DCNFE	57	DCPpo	40	DCNFE	68
DCOM	82		DCOM	58				
			DCNSPh	34	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	68	DCCP	71
%RUP	21	27	StaDCP	25	DCCFATh	64	DCOM	71
%DRUP	88	88	AppDCP	23	DC(S+S)	98		
%RUSTA	21	21			DCNFEh	25		
%DASH	50	50			DCPpo	40		
DASHmax	39	39						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	961 /kg	NE2015	6.41 MJ/kg	MEpo	7.82 MJ/kg	MErab	10.78 MJ/kg
VEVI	1027 /kg	NE2015	1531 kcal/kg	MEpo	1868 kcal/kg	MErab	2575 kcal/kg
FOM-91	540 g/kg	EW2015	0.73 /kg	MEla	7.99 MJ/kg		
FOMr-07	529 g/kg	StaDP	2.4 g/kg	MEla	1909 kcal/kg		
FOMr2-07	304 g/kg	AppDP	2.2 g/kg	DPpo	3.8 g/kg		
FOMr2/FOMr	0.58 /kg						
DVE-91	87 g/kg			**Broilers**		**Horses**	
DVE-07	90 g/kg			MEbr	6.84 MJ/kg	NEm	7.39 MJ/kg
OEB-91	103 g/kg			MEbr	1636 kcal/kg	NEm	1766 kcal/kg
OEB-07	103 g/kg			DPpo	3.8 g/kg	EWpa	0.828 /kg
OEB2-07	108 g/kg					DCPho	170 g/kg
DVMET-91	2.0 g/kg						
DVLYS-91	4.7 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	4.5 g/kg						
SW	0.28 /kg						
VW	0.26 /kg						

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Maize gluten feed-CP > 230 g/kg 1002.205/3/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			240	70	-	66	157	-	-
LYS	3.0	0.5	7.2	65	4.7	60	4.3	73	5.3
MET	1.7	0.2	4.1	81	3.3	79	3.2	82	3.3
CYS	2.1	0.1	5.0	59	3.0	55	2.8	70	3.5
THR	3.6	0.2	8.6	72	6.2	66	5.7	76	6.6
TRP	0.6	0.1	1.4	66	1.0	57	0.8	82	1.2
ILE	3.1	0.3	7.4	80	5.9	75	5.6	83	6.2
ARG	4.4	0.4	10.6	85	9.0	82	8.6	88	9.3
PHE	3.8	0.3	9.1	84	7.6	81	7.4	86	7.8
HIS	3.0	0.5	7.2	76	5.5	74	5.3	83	6.0
LEU	9.0	0.4	21.6	85	18.3	83	17.9	90	19.4
TYR	3.0	0.3	7.2	84	6.0	80	5.8	83	6.0
VAL	4.7	0.4	11.3	77	8.7	73	8.2	85	9.6
ALA	6.7	0.3	16.1	84	13.5	81	13.1	86	13.8
ASP	6.1	0.5	14.6	72	10.5	67	9.8	76	11.1
GLU	15.4	0.7	37.0	82	30.2	79	29.2	87	32.1
GLY	4.5	0.7	10.8	62	6.7	54	5.9	71	7.7
PRO	8.3	0.5	19.9	78	15.5	73	14.5	84	16.7
SER	4.3	0.3	10.3	76	7.8	70	7.2	80	8.3
Sum AA	87.3		209	-	163	-	155	-	174

Fatty acids	% FA	g/kg
CFAT(h)		41.4
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	4.0
C16:1	0.2	0.1
C18:0	2.0	0.7
C18:1	28.0	9.3
C:18:2	55.0	18.2
C18:3	1.0	0.3
>=C20	1.0	0.3
Sum FA	99.6	33.0
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	55	-
LA	55	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Maize gluten feed-CP > 230 g/kg:

1. For the calculation of NE2015 and EW2015 the nutrient content of LA should be included.

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Maize gluten meal 1002.204/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	899	17	604	-	60	10	-	208
sdc	13	6	18	-	15	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	176	-	2	47	13	1	40	-6
sdc	-	-	-	1	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.3	4.6	3.2	0.5	1.4	0.4	0.5	0.4	6.0
sdc	0.4	1.0	-	0.2	0.5	0.2	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	88	6	21	11	0.6	-	2.0
sdc	5	5	7	5	-	-	-

IP/P	70	SUGe/SUG	60	EB (meq/kg)	36	
		CF_DI	0.97	CAD (meq/kg)	-362	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	95	DCCP	94	DCCP	95	DCCP	-
DCCFAT	67	DCCFATh	80	DCCFAT	84	DCCFAT	-
DCCF	95	DCCF	62	DCNFE	80	DCCF	-
DCNFE	99	DCNFE	95	DCPpo	40	DCNFE	-
DCOM	94	DCOM	93				
		DCNSPh	65	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	90	DCCP	89
%RUP	72	StaDCP	20	DCCFATh	71	DCOM	93
%DRUP	93	AppDCP	16	DC(S+S)	95		
%RUSTA	12			DCNFEh	81		
%DASH	50			DCPpo	40		
DASHmax	14						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1213 /kg	NE2015	11.09 MJ/kg	MEpo	15.18 MJ/kg	MErab	-
VEVI	1309 /kg	NE2015	2650 kcal/kg	MEpo	3628 kcal/kg	MErab	-
FOM-91	310 g/kg	EW2015	1.26 /kg	MEla	15.47 MJ/kg		
FOMr-07	324 g/kg	StaDP	0.9 g/kg	MEla	3697 kcal/kg		
FOMr2-07	143 g/kg	AppDP	0.7 g/kg	DPpo	1.9 g/kg		
FOMr2/FOMr	0.44 /kg						
DVE-91	475 g/kg			**Broilers**		**Horses**	
DVE-07	449 g/kg			MEbr	14.37 MJ/kg	NEm	10.59 MJ/kg
OEB-91	73 g/kg			MEbr	3435 kcal/kg	NEm	2531 kcal/kg
OEB-07	99 g/kg			DPpo	1.9 g/kg	EWpa	1.186 /kg
OEB2-07	9 g/kg					DCPho	538 g/kg
DVMET-91	11.9 g/kg						
DVLYS-91	9.7 g/kg						
DVMET-07	11.3 g/kg						
DVLYS-07	9.6 g/kg						
SW	0.17 /kg						
VW	0.26 /kg						

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Maize gluten meal 1002.204/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			604	90	-	88	534	-	-
LYS	1.7	0.2	10.3	87	9.0	84	8.6	79	8.1
MET	2.4	0.2	14.5	97	14.1	96	14.0	89	12.9
CYS	1.8	0.1	10.9	88	9.6	86	9.4	74	8.1
THR	3.4	0.1	20.5	90	18.6	88	18.0	79	16.2
TRP	0.5	0.1	3.0	86	2.6	82	2.5	74	2.2
ILE	4.1	0.2	24.8	89	22.1	88	21.8	85	21.1
ARG	3.2	0.2	19.3	93	18.0	91	17.6	86	16.6
PHE	6.3	0.2	38.1	91	34.6	90	34.3	88	33.5
HIS	2.1	0.2	12.7	86	10.9	85	10.7	82	10.4
LEU	16.6	0.7	100.3	91	91.7	91	91.3	89	89.3
TYR	5.2	0.4	31.4	93	29.2	92	29.0	89	28.0
VAL	4.7	0.3	28.4	88	24.9	86	24.4	84	23.9
ALA	8.9	0.4	53.8	89	47.9	88	47.4	89	47.9
ASP	6.3	0.2	38.1	94	35.8	92	35.1	81	30.8
GLU	21.6	1.1	130.5	88	114.8	87	113.7	88	114.9
GLY	2.7	0.2	16.3	75	12.2	70	11.4	74	12.1
PRO	9.4	0.5	56.8	89	50.5	87	49.5	88	50.0
SER	5.3	0.2	32.0	98	31.4	96	30.8	86	27.5
Sum AA	106.2		642	-	578	-	570	-	553

Fatty acids	% FA	g/kg
CFAT(h)		59.5
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	5.7
C16:1	0.2	0.1
C18:0	2.0	1.0
C18:1	28.0	13.3
C:18:2	55.0	26.2
C18:3	1.0	0.5
>=C20	1.0	0.5
Sum FA	99.6	47.4
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Maize starch 1002.201/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	892	1	6	5	-	2	878	-
sdc	26	1	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	851	-	-	9	3	-	29	20
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	0.4	0.0	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	5	SUGe/SUG	100	EB (meq/kg)	-
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	-	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	97	DCCF	-	DCNFE	100	DCCF	-
DCNFE	97	DCNFE	97	DCPpo	40	DCNFE	-
DCOM	96	DCOM	95				
		DCNSPh	0	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	42	57	StaDCP	65	DCCFATh	-	DCOM	90
%DRUP	88	88	AppDCP	25	DC(S+S)	99		
%RUSTA	22	22			DCNFEh	-		
%DASH	65	65			DCPpo	40		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1164 /kg	NE2015	12.03 MJ/kg	MEpo	15.21 MJ/kg	MErab	-
VEVI	1327 /kg	NE2015	2876 kcal/kg	MEpo	3635 kcal/kg	MErab	-
FOM-91	658 g/kg	EW2015	1.37 /kg	MEla	15.21 MJ/kg		
FOMr-07	678 g/kg	StaDP	0.3 g/kg	MEla	3635 kcal/kg		
FOMr2-07	381 g/kg	AppDP	0.1 g/kg	DPpo	0.2 g/kg		
FOMr2/FOMr	0.56 /kg						
DVE-91	63 g/kg			**Broilers**		**Horses**	
DVE-07	85 g/kg			MEbr	14.65 MJ/kg	NEm	10.20 MJ/kg
OEB-91	-95 g/kg			MEbr	3502 kcal/kg	NEm	2437 kcal/kg
OEB-07	-131 g/kg			DPpo	0.2 g/kg	EWpa	1.142 /kg
OEB2-07	-68 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-0.11 /kg						
VW	0.26 /kg						

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Maize starch 1002.201/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			6	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		5.4
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Maize, chemical/heat treated 1002.629/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	876	13	78	33	40	18	735	727
sdc	5	2	4	2	-	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	631	610	-	15	84	23	2	122	37
sdc	11	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.3	2.9	2.5	1.0	3.5	0.1	0.6	0.1	0.8
sdc	0.5	0.3	-	-	0.3	-	0.1	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	60	6	18	2	0.2	0.1	0.1
sdc	28	1	4	1	-	-	-

IP/P	85	SUGe/SUG	90	EB (meq/kg)	78
		CF_DI	0.96	CAD (meq/kg)	22

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	60		DCCP	76	DCCP	83	DCCP	62
DCCFAT	90		DCCFATh	84	DCCFAT	83	DCCFAT	87
DCCF	51		DCCF	51	DCNFE	91	DCCF	40
DCNFE	94		DCNFE	95	DCPpo	30	DCNFE	89
DCOM	90		DCOM	92				
			DCNSPh	63	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	85	DCCP	73
%RUP	59	64	StaDCP	27	DCCFATh	88	DCOM	86
%DRUP	94	94	AppDCP	21	DC(S+S)	99		
%RUSTA	5	5			DCNFEh	85		
%DASH	65	65			DCPpo	30		
DASHmax	15	15						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1120 /kg	NE2015	11.44 MJ/kg	MEpo	13.91 MJ/kg	MErab	13.42 MJ/kg
VEVI	1254 /kg	NE2015	2734 kcal/kg	MEpo	3325 kcal/kg	MErab	3206 kcal/kg
FOM-91	661 g/kg	EW2015	1.30 /kg	MEla	14.11 MJ/kg		
FOMr-07	671 g/kg	StaDP	0.8 g/kg	MEla	3371 kcal/kg		
FOMr2-07	552 g/kg	AppDP	0.6 g/kg	DPpo	0.9 g/kg		
FOMr2/FOMr	0.82 /kg						
DVE-91	105 g/kg			**Broilers**		**Horses**	
DVE-07	133 g/kg			MEbr	13.30 MJ/kg	NEm	9.71 MJ/kg
OEB-91	-73 g/kg			MEbr	3179 kcal/kg	NEm	2321 kcal/kg
OEB-07	-119 g/kg			DPpo	0.9 g/kg	EWpa	1.087 /kg
OEB2-07	-116 g/kg					DCPho	57 g/kg
DVMET-91	2.5 g/kg						
DVLYS-91	5.9 g/kg						
DVMET-07	3.3 g/kg						
DVLYS-07	8.2 g/kg						
SW	-0.25 /kg						
VW	0.25 /kg						

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Maize, chemical/heat treated 1002.629/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			78	82	-	70	54	-	-
LYS	2.9	0.3	2.3	75	1.7	60	1.4	90	2.0
MET	2.1	0.2	1.6	87	1.4	81	1.3	94	1.5
CYS	2.2	0.2	1.7	81	1.4	70	1.2	86	1.5
THR	3.6	0.2	2.8	79	2.2	61	1.7	83	2.3
TRP	0.7	0.1	0.5	76	0.4	53	0.3	85	0.5
ILE	3.4	0.2	2.6	86	2.3	74	1.9	93	2.5
ARG	4.7	0.4	3.6	88	3.2	78	2.9	93	3.4
PHE	4.8	0.3	3.7	87	3.3	80	3.0	93	3.5
HIS	3.0	0.2	2.3	86	2.0	79	1.8	90	2.1
LEU	12.1	0.7	9.4	89	8.3	84	7.9	94	8.8
TYR	3.7	0.4	2.9	86	2.5	77	2.2	88	2.5
VAL	4.8	0.3	3.7	86	3.2	73	2.7	90	3.4
ALA	7.5	0.4	5.8	87	5.0	79	4.6	93	5.4
ASP	6.7	0.4	5.2	82	4.2	68	3.6	89	4.6
GLU	18.1	1.0	14.0	89	12.5	82	11.5	95	13.3
GLY	3.9	0.3	3.0	79	2.4	53	1.6	86	2.6
PRO	8.9	0.7	6.9	85	5.8	71	4.9	91	6.3
SER	4.8	0.2	3.7	88	3.3	73	2.7	91	3.4
Sum AA	97.9		76	-	65	-	57	-	70

Fatty acids	% FA	g/kg
CFAT(h)		39.9
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	4.3
C16:1	0.2	0.1
C18:0	2.0	0.7
C18:1	28.0	10.1
C:18:2	55.0	19.8
C18:3	1.0	0.4
>=C20	1.0	0.4
Sum FA	99.6	35.8
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Maize, distillers solubles, dried 1002.308/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	894	50	260	-	98	71	-	416
sdc	17	8	10	-	30	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	53	54	-	18	241	-	-	415	175
sdc	26	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.1	8.0	2.4	3.3	11.0	5.2	2.1	-	2.2
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	61	5	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	30	SUGe/SUG	60	EB (meq/kg)	447
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	76		DCCP	65	DCCP	-	DCCP	-
DCCFAT	87		DCCFATh	80	DCCFAT	-	DCCFAT	-
DCCF	81		DCCF	34	DCNFE	-	DCCF	-
DCNFE	85		DCNFE	62	DCPpo	-	DCNFE	-
DCOM	82		DCOM	63				
			DCNSPh	51	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	42	57	StaDCP	58	DCCFATh	-	DCOM	-
%DRUP	88	88	AppDCP	56	DC(S+S)	-		
%RUSTA	15	15			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	32	32						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1085 /kg	NE2015	7.82 MJ/kg	MEpo	-	MErab	-
VEVI	1170 /kg	NE2015	1868 kcal/kg	MEpo	-	MErab	-
FOM-91	479 g/kg	EW2015	0.89 /kg	MEla	-		
FOMr-07	471 g/kg	StaDP	4.6 g/kg	MEla	-		
FOMr2-07	206 g/kg	AppDP	4.4 g/kg	DPpo	-		
FOMr2/FOMr	0.44 /kg						
DVE-91	138 g/kg			**Broilers**		**Horses**	
DVE-07	170 g/kg			MEbr	-	NEm	-
OEB-91	68 g/kg			MEbr	-	NEm	-
OEB-07	29 g/kg			DPpo	-	EWpa	-
OEB2-07	7 g/kg					DCPho	-
DVMET-91	2.9 g/kg						
DVLYS-91	5.3 g/kg						
DVMET-07	3.6 g/kg						
DVLYS-07	6.4 g/kg						
SW	0.30 /kg						
VW	0.26 /kg						

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Maize, distillers solubles, dried 1002.308/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			260	74	-	70	182	-	-
LYS	2.4	0.3	6.2	64	4.0	58	3.6	-	-
MET	1.8	0.1	4.7	86	4.0	84	3.9	-	-
CYS	1.7	0.4	4.4	75	3.3	71	3.1	-	-
THR	3.7	0.5	9.6	75	7.2	69	6.7	-	-
TRP	0.9	0.2	2.3	70	1.6	65	1.5	-	-
ILE	3.6	0.3	9.3	84	7.8	80	7.5	-	-
ARG	3.9	0.8	10.1	91	9.2	87	8.9	-	-
PHE	4.5	0.6	11.7	86	10.0	83	9.7	-	-
HIS	2.6	0.3	6.8	88	5.9	85	5.8	-	-
LEU	9.6	2.5	24.9	87	21.7	85	21.3	-	-
TYR	3.3	0.7	8.6	85	7.3	82	7.0	-	-
VAL	4.9	0.4	12.7	83	10.6	79	10.1	-	-
ALA	6.2	1.8	16.1	78	12.6	75	12.1	-	-
ASP	6.4	0.6	16.6	74	12.3	70	11.6	-	-
GLU	17.4	3.0	45.2	81	36.5	78	35.5	-	-
GLY	3.9	0.3	10.1	71	7.2	63	6.4	-	-
PRO	8.9	0.3	23.1	77	17.8	73	16.8	-	-
SER	4.6	0.3	11.9	80	9.5	75	8.9	-	-
Sum AA	90.3		235	-	188	-	180	-	-

Fatty acids	% FA	g/kg
CFAT(h)		98.1
<=C10	-	0.0
C12:0	0.2	0.2
C14:0	0.2	0.2
C16:0	12.0	9.4
C16:1	0.2	0.2
C18:0	2.0	1.6
C18:1	28.0	22.0
C:18:2	55.0	43.2
C18:3	1.0	0.8
>=C20	1.0	0.8
Sum FA	99.6	78.2
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Maize, distillers solubles, dried:

1. Because STAam is missing feeding values are calculated based on STAew.

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Malt culms-CP < 200 g/kg 1005.310/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	918	46	186	18	27	128	539	530
sdc	23	5	10	3	-	13	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	167	121	-	106	425	-	-	444	19
sdc	30	-	-	14	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.8	5.0	1.2	1.6	12.6	0.4	3.4	-	1.2
sdc	-	0.2	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	113	60	36	12	1.8	0.1	0.1
sdc	-	-	-	-	-	-	-

IP/P	25	SUGe/SUG	75	EB (meq/kg)	242	
		CF_DI	0.96	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	75	DCCP	66	DCCP	-	DCCP	76
DCCFAT	64	DCCFATh	78	DCCFAT	-	DCCFAT	80
DCCF	63	DCCF	22	DCNFE	-	DCCF	15
DCNFE	63	DCNFE	62	DCPpo	-	DCNFE	63
DCOM	66	DCOM	57				
		DCNSPh	30	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	22	StaDCP	35	DCCFATh	-	DCOM	-
%DRUP	80	AppDCP	31	DC(S+S)	-		
%RUSTA	10			DCNFEh	-		
%DASH	50			DCPpo	-		
DASHmax	30						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	720 /kg	NE2015	6.47 MJ/kg	MEpo	-	MErab	9.36 MJ/kg
VEVI	710 /kg	NE2015	1546 kcal/kg	MEpo	-	MErab	2238 kcal/kg
FOM-91	500 g/kg	EW2015	0.73 /kg	MEla	-		
FOMr-07	520 g/kg	StaDP	1.7 g/kg	MEla	-		
FOMr2-07	283 g/kg	AppDP	1.6 g/kg	DPpo	-		
FOMr2/FOMr	0.54 /kg						
DVE-91	60 g/kg			**Broilers**		**Horses**	
DVE-07	64 g/kg			MEbr	-	NEm	-
OEB-91	66 g/kg			MEbr	-	NEm	-
OEB-07	60 g/kg			DPpo	-	EWpa	-
OEB2-07	38 g/kg					DCPho	-
DVMET-91	1.4 g/kg						
DVLYS-91	3.8 g/kg						
DVMET-07	1.5 g/kg						
DVLYS-07	4.1 g/kg						
SW	0.32 /kg						
VW	0.29 /kg						

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Malt culms-CP < 200 g/kg 1005.310/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			186	77	-	71	132	-	-
LYS	4.2	0.2	7.8	73	5.7	68	5.3	-	-
MET	1.5	0.2	2.8	79	2.2	75	2.1	-	-
CYS	1.2	0.2	2.2	77	1.7	68	1.5	-	-
THR	3.2	0.2	6.0	77	4.6	68	4.0	-	-
TRP	1.0	-	1.9	74	1.4	67	1.2	-	-
ILE	3.0	0.2	5.6	79	4.4	73	4.1	-	-
ARG	4.4	0.2	8.2	81	6.6	77	6.3	-	-
PHE	3.3	0.5	6.1	81	5.0	76	4.7	-	-
HIS	1.7	0.1	3.2	80	2.5	74	2.4	-	-
LEU	5.6	0.4	10.4	79	8.2	75	7.8	-	-
TYR	2.2	0.2	4.1	80	3.3	73	3.0	-	-
VAL	4.4	0.4	8.2	78	6.4	72	5.9	-	-
ALA	4.7	0.3	8.7	70	6.1	65	5.7	-	-
ASP	9.9	0.9	18.4	73	13.4	69	12.7	-	-
GLU	11.3	0.8	21.0	86	18.0	80	16.9	-	-
GLY	4.0	0.2	7.4	75	5.6	64	4.7	-	-
PRO	5.7	1.1	10.6	89	9.4	79	8.4	-	-
SER	3.3	0.3	6.1	82	5.0	72	4.4	-	-
Sum AA	74.6		139	-	109	-	101	-	-

Fatty acids	% FA	g/kg
CFAT(h)		18.4
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Malt culms-CP > 200 g/kg 1005.310/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	914	54	218	18	27	123	500	492
sdc	20	5	11	3	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	134	101	-	98	407	-	-	429	22
sdc	28	-	-	15	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.8	5.6	1.4	1.6	12.5	0.4	3.4	-	1.4
sdc	-	0.4	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	113	60	36	12	1.8	0.1	0.1
sdc	-	-	-	-	-	-	-

IP/P	25	SUGe/SUG	75	EB (meq/kg)	241	
		CF_DI	0.96	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	77	DCCP	67	DCCP	-	DCCP	76
DCCFAT	65	DCCFATh	78	DCCFAT	-	DCCFAT	85
DCCF	74	DCCF	22	DCNFE	-	DCCF	18
DCNFE	78	DCNFE	60	DCPpo	-	DCNFE	66
DCOM	77	DCOM	57				
		DCNSPh	31	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	22	25	StaDCP	35	DCCFATh	-	DCOM	-
%DRUP	80	80	AppDCP	32	DC(S+S)	-		
%RUSTA	10	9			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	35	35						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	858 /kg	NE2015	6.31 MJ/kg	MEpo	-	MErab	9.74 MJ/kg
VEVI	890 /kg	NE2015	1508 kcal/kg	MEpo	-	MErab	2329 kcal/kg
FOM-91	585 g/kg	EW2015	0.72 /kg	MEla	-		
FOMr-07	512 g/kg	StaDP	2.0 g/kg	MEla	-		
FOMr2-07	274 g/kg	AppDP	1.8 g/kg	DPpo	-		
FOMr2/FOMr	0.54 /kg						
DVE-91	82 g/kg			**Broilers**		**Horses**	
DVE-07	75 g/kg			MEbr	-	NEm	-
OEB-91	77 g/kg			MEbr	-	NEm	-
OEB-07	87 g/kg			DPpo	-	EWpa	-
OEB2-07	55 g/kg					DCPho	-
DVMET-91	1.8 g/kg						
DVLYS-91	5.1 g/kg						
DVMET-07	1.6 g/kg						
DVLYS-07	4.6 g/kg						
SW	0.33 /kg						
VW	0.29 /kg						

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Malt culms-CP > 200 g/kg 1005.310/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			218	77	-	72	157	-	-
LYS	4.2	0.2	9.1	73	6.7	69	6.3	-	-
MET	1.5	0.2	3.3	79	2.6	76	2.5	-	-
CYS	1.2	0.2	2.6	77	2.0	70	1.8	-	-
THR	3.2	0.2	7.0	77	5.3	69	4.8	-	-
TRP	1.0	-	2.2	74	1.6	68	1.5	-	-
ILE	3.0	0.2	6.5	79	5.1	74	4.8	-	-
ARG	4.4	0.2	9.6	81	7.7	77	7.4	-	-
PHE	3.3	0.5	7.2	81	5.8	77	5.5	-	-
HIS	1.7	0.1	3.7	80	3.0	75	2.8	-	-
LEU	5.6	0.4	12.2	79	9.6	75	9.2	-	-
TYR	2.2	0.2	4.8	80	3.8	74	3.6	-	-
VAL	4.4	0.4	9.6	78	7.5	73	7.0	-	-
ALA	4.7	0.3	10.2	70	7.1	66	6.7	-	-
ASP	9.9	0.9	21.5	73	15.7	70	15.0	-	-
GLU	11.3	0.8	24.6	86	21.1	81	20.0	-	-
GLY	4.0	0.2	8.7	75	6.5	65	5.7	-	-
PRO	5.7	1.1	12.4	89	11.0	81	10.0	-	-
SER	3.3	0.3	7.2	82	5.9	73	5.3	-	-
Sum AA	74.6		162	-	128	-	120	-	-

Fatty acids	% FA	g/kg
CFAT(h)		18.4
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Meat meal-CFATh < 100 g/kg 8001.001/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	940	234	575	-	85	23	-	22
sdc	16	22	28	-	14	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	45	45
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	69.8	34.9	-	1.8	7.0	7.7	6.3	1.4	3.1
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1310	53	154	50	0.6	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	336	
		CF_DI	0.96	CAD (meq/kg)	52	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	83	DCCP	80	DCCP	75
DCCFAT	-		DCCFATh	84	DCCFAT	85	DCCFAT	85
DCCF	-		DCCF	14	DCNFE	20	DCCF	-
DCNFE	-		DCNFE	102	DCPpo	62	DCNFE	75
DCOM	-		DCOM	82				
			DCNSPh	57	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	77	DCCP	-
%RUP	-	-	StaDCP	76	DCCFATh	90	DCOM	-
%DRUP	-	-	AppDCP	75	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	62		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	8.41 MJ/kg	MEpo	11.00 MJ/kg	MErab	11.22 MJ/kg
VEVI	-	NE2015	2011 kcal/kg	MEpo	2630 kcal/kg	MErab	2682 kcal/kg
FOM-91	-	EW2015	0.96 /kg	MEla	11.43 MJ/kg		
FOMr-07	-	StaDP	26.5 g/kg	MEla	2731 kcal/kg		
FOMr2-07	-	AppDP	26.3 g/kg	DPpo	21.6 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	10.96 MJ/kg	NEm	-
OEB-91	-			MEbr	2620 kcal/kg	NEm	-
OEB-07	-			DPpo	21.6 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Meat meal-CFATh < 100 g/kg 8001.001/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			575	74	-	72	413	-	-
LYS	5.1	0.6	29.3	77	22.7	76	22.4	75	22.0
MET	1.3	0.2	7.5	77	5.7	75	5.6	77	5.8
CYS	1.0	0.2	5.8	51	2.9	48	2.7	38	2.2
THR	3.3	0.4	19.0	74	14.1	71	13.5	68	12.9
TRP	0.7	0.1	4.0	73	2.9	70	2.8	69	2.8
ILE	2.8	0.4	16.1	78	12.5	75	12.2	74	11.9
ARG	6.9	0.6	39.7	85	33.9	84	33.5	77	30.6
PHE	3.5	0.4	20.1	78	15.7	77	15.4	76	15.3
HIS	1.9	0.3	10.9	76	8.3	74	8.1	73	8.0
LEU	6.2	0.8	35.7	78	27.7	77	27.3	75	26.8
TYR	2.3	0.3	13.2	78	10.4	76	10.1	73	9.7
VAL	4.5	0.6	25.9	76	19.6	74	19.1	74	19.2
ALA	7.7	0.6	44.3	77	34.3	76	33.9	75	33.2
ASP	7.8	0.6	44.9	57	25.6	55	24.9	58	26.0
GLU	12.3	1.0	70.8	75	53.3	74	52.2	72	51.0
GLY	12.9	1.9	74.2	75	55.4	73	54.5	72	53.4
PRO	8.8	1.2	50.6	82	41.5	80	40.5	69	34.9
SER	4.1	0.5	23.6	72	17.1	70	16.5	66	15.6
Sum AA	93.1		536	-	404	-	395	-	381

Fatty acids	% FA	g/kg
CFAT(h)		85.1
<=C10	-	0.0
C12:0	1.0	0.7
C14:0	3.0	2.0
C16:0	26.0	17.7
C16:1	3.0	2.0
C18:0	16.0	10.9
C18:1	36.0	24.5
C:18:2	7.0	4.8
C18:3	1.0	0.7
>=C20	3.0	2.0
Sum FA	96.0	65.3
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Meat meal-CFATh < 100 g/kg:

1. Processing this product in feeds for livestock animals is prohibited in the EU.
2. The content of linoleic acid may vary from 3 to 12%.

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Meat meal-CFATh > 100 g/kg 8001.001/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	944	217	561	-	136	20	-	9
sdc	13	25	33	-	15	8	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	29	29
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	57.4	31.8	-	1.9	5.1	7.0	6.9	1.3	3.1
sdc	9.8	2.8	-	-	0.7	1.3	2.0	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1166	37	121	15	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	243	
		CF_DI	0.96	CAD (meq/kg)	-31	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	83	DCCP	80	DCCP	75
DCCFAT	-		DCCFATh	87	DCCFAT	86	DCCFAT	85
DCCF	-		DCCF	14	DCNFE	20	DCCF	-
DCNFE	-		DCNFE	60	DCPpo	62	DCNFE	75
DCOM	-		DCOM	81				
			DCNSPh	29	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	75	DCCP	-
%RUP	-	-	StaDCP	76	DCCFATh	90	DCOM	-
%DRUP	-	-	AppDCP	75	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	62		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	9.74 MJ/kg	MEpo	12.66 MJ/kg	MErab	12.49 MJ/kg
VEVI	-	NE2015	2328 kcal/kg	MEpo	3026 kcal/kg	MErab	2986 kcal/kg
FOM-91	-	EW2015	1.11 /kg	MEla	13.34 MJ/kg		
FOMr-07	-	StaDP	24.2 g/kg	MEla	3189 kcal/kg		
FOMr2-07	-	AppDP	24.0 g/kg	DPpo	19.7 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	12.37 MJ/kg	NEm	-
OEB-91	-			MEbr	2955 kcal/kg	NEm	-
OEB-07	-			DPpo	19.7 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Meat meal-CFATh > 100 g/kg 8001.001/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			561	74	-	72	403	-	-
LYS	5.1	0.6	28.6	77	22.2	76	21.8	75	21.5
MET	1.3	0.2	7.3	77	5.6	75	5.5	77	5.6
CYS	1.0	0.2	5.6	51	2.9	48	2.7	38	2.1
THR	3.3	0.4	18.5	74	13.7	71	13.2	68	12.6
TRP	0.7	0.1	3.9	73	2.9	70	2.7	69	2.7
ILE	2.8	0.4	15.7	78	12.2	75	11.9	74	11.6
ARG	6.9	0.6	38.7	85	33.0	84	32.7	77	29.8
PHE	3.5	0.4	19.6	78	15.3	76	15.0	76	14.9
HIS	1.9	0.3	10.7	76	8.1	74	7.9	73	7.8
LEU	6.2	0.8	34.8	78	27.1	76	26.6	75	26.1
TYR	2.3	0.3	12.9	78	10.1	76	9.8	73	9.4
VAL	4.5	0.6	25.3	76	19.1	74	18.6	74	18.7
ALA	7.7	0.6	43.2	77	33.5	76	33.0	75	32.4
ASP	7.8	0.6	43.8	57	25.0	55	24.3	58	25.4
GLU	12.3	1.0	69.1	75	52.0	74	50.9	72	49.7
GLY	12.9	1.9	72.4	75	54.0	73	53.2	72	52.1
PRO	8.8	1.2	49.4	82	40.5	80	39.5	69	34.1
SER	4.1	0.5	23.0	72	16.7	70	16.1	66	15.2
Sum AA	93.1		523	-	394	-	385	-	372

Fatty acids	% FA	g/kg
CFAT(h)		136.1
<=C10	-	0.0
C12:0	1.0	1.1
C14:0	3.0	3.3
C16:0	26.0	28.3
C16:1	3.0	3.3
C18:0	16.0	17.4
C18:1	36.0	39.2
C:18:2	7.0	7.6
C18:3	1.0	1.1
>=C20	3.0	3.3
Sum FA	96.0	104.5
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Meat meal-CFATh > 100 g/kg:

1. Processing this product in feeds for livestock animals is prohibited in the EU.
2. The content of linoleic acid may vary from 3 to 12%.

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Meat meal, Dutch origin 8001.003/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	946	167	581	-	138	28	-	31
sdc	9	17	15	-	18	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	59	59
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	46.2	22.8	-	1.6	6.2	8.4	8.5	1.3	3.6
sdc	8.0	3.7	-	0.1	0.8	1.7	1.9	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1115	34	114	30	-	-	-
sdc	364	7	13	12	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	284
		CF_DI	0.96	CAD (meq/kg)	-20

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	83	DCCP	80	DCCP	75
DCCFAT	-		DCCFATh	87	DCCFAT	89	DCCFAT	85
DCCF	-		DCCF	14	DCNFE	20	DCCF	-
DCNFE	-		DCNFE	55	DCPpo	62	DCNFE	75
DCOM	-		DCOM	80				
			DCNSPh	36	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	78	DCCP	-
%RUP	-	-	StaDCP	76	DCCFATh	90	DCOM	-
%DRUP	-	-	AppDCP	75	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	62		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	10.13 MJ/kg	MEpo	13.69 MJ/kg	MErab	13.12 MJ/kg
VEVI	-	NE2015	2420 kcal/kg	MEpo	3272 kcal/kg	MErab	3135 kcal/kg
FOM-91	-	EW2015	1.15 /kg	MEla	14.41 MJ/kg		
FOMr-07	-	StaDP	17.4 g/kg	MEla	3443 kcal/kg		
FOMr2-07	-	AppDP	17.2 g/kg	DPpo	14.2 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	13.00 MJ/kg	NEm	-
OEB-91	-			MEbr	3107 kcal/kg	NEm	-
OEB-07	-			DPpo	14.2 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Meat meal, Dutch origin 8001.003/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			581	74	-	72	417	-	-
LYS	5.9	0.3	34.3	77	26.5	76	26.2	75	25.7
MET	1.5	0.1	8.7	77	6.7	75	6.6	77	6.7
CYS	1.1	0.1	6.4	51	3.3	48	3.1	38	2.4
THR	3.8	0.1	22.1	74	16.4	72	15.8	68	15.0
TRP	0.8	0.1	4.6	73	3.4	70	3.3	69	3.2
ILE	3.2	0.2	18.6	78	14.4	76	14.1	74	13.8
ARG	6.3	0.2	36.6	85	31.2	84	30.8	77	28.2
PHE	3.9	0.2	22.7	78	17.7	77	17.4	76	17.2
HIS	2.5	0.2	14.5	76	11.0	75	10.9	73	10.6
LEU	7.1	0.3	41.2	78	32.1	77	31.6	75	30.9
TYR	2.6	0.2	15.1	78	11.8	77	11.6	73	11.0
VAL	5.0	0.2	29.0	76	22.0	74	21.5	74	21.5
ALA	6.8	0.3	39.5	77	30.6	76	30.1	75	29.6
ASP	8.1	0.3	47.0	57	26.9	56	26.1	58	27.3
GLU	12.2	0.4	70.9	75	53.4	74	52.3	72	51.0
GLY	9.9	0.4	57.5	75	42.9	73	42.0	72	41.4
PRO	7.6	0.6	44.1	82	36.2	80	35.2	69	30.5
SER	4.4	0.3	25.6	72	18.5	70	17.9	66	16.9
Sum AA	92.7		538	-	405	-	396	-	383

Fatty acids	% FA	g/kg
CFAT(h)		138.1
<=C10	-	0.0
C12:0	1.0	1.1
C14:0	3.0	3.3
C16:0	26.0	28.7
C16:1	3.0	3.3
C18:0	16.0	17.7
C18:1	36.0	39.8
C:18:2	7.0	7.7
C18:3	1.0	1.1
>=C20	3.0	3.3
Sum FA	96.0	106.1
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Meat meal, Dutch origin:

1. Blending this product in feeds for livestock animals is prohibited in the EU.
2. The content of linoleic acid may vary from 3 to 12%.
3. The ASH content differs per supplier, the concentration of mineral vary accordingly.

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Meat-and-bone meal-CFATh < 100 g/kg 8004.000/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	943	392	455	-	87	15	-	-6
sdc	21	21	14	-	11	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	9	9
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	130.1	62.5	-	2.6	3.1	6.3	4.0	-	2.2
sdc	10.3	5.7	-	0.2	0.8	1.1	1.5	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	458	12	98	8	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	243	
		CF_DI	0.96	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	78	DCCP	73	DCCP	-
DCCFAT	-		DCCFATh	85	DCCFAT	62	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	73	DCCF	-
DCNFE	-		DCNFE	78	DCPpo	61	DCNFE	-
DCOM	-		DCOM	78				
			DCNSPh	0	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	77	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	77	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	61		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	6.78 MJ/kg	MEpo	8.06 MJ/kg	MErab	-
VEVI	-	NE2015	1619 kcal/kg	MEpo	1926 kcal/kg	MErab	-
FOM-91	-	EW2015	0.77 /kg	MEla	8.37 MJ/kg		
FOMr-07	-	StaDP	48.1 g/kg	MEla	2001 kcal/kg		
FOMr2-07	-	AppDP	47.9 g/kg	DPpo	38.1 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	38.1 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Meat-and-bone meal-CFATh < 100 g/kg 8004.000/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			455	59	-	57	260	-	-
LYS	4.8	0.4	21.9	65	14.2	63	13.8	75	16.4
MET	1.3	0.1	5.9	53	3.1	51	3.0	77	4.6
CYS	0.8	0.2	3.6	44	1.6	38	1.4	38	1.4
THR	3.0	0.3	13.7	65	8.9	61	8.3	68	9.3
TRP	0.5	0.1	2.3	38	0.9	32	0.7	69	1.6
ILE	2.6	0.3	11.8	59	7.0	56	6.7	74	8.8
ARG	7.5	0.6	34.2	59	20.3	58	19.9	77	26.3
PHE	3.2	0.3	14.6	59	8.7	57	8.3	76	11.1
HIS	1.8	0.3	8.2	59	4.9	57	4.7	73	6.0
LEU	5.5	0.5	25.0	59	14.9	58	14.4	75	18.8
TYR	2.0	0.3	9.1	59	5.4	56	5.1	73	6.6
VAL	4.0	0.4	18.2	59	10.8	57	10.3	74	13.5
ALA	8.1	0.6	36.9	59	21.9	58	21.5	75	27.7
ASP	7.5	0.4	34.2	59	20.3	57	19.5	58	19.8
GLU	12.0	1.1	54.6	59	32.4	57	31.3	72	39.3
GLY	15.7	1.9	71.5	59	42.5	58	41.7	72	51.5
PRO	9.4	1.1	42.8	59	25.4	57	24.4	69	29.5
SER	3.8	0.4	17.3	59	10.3	56	9.7	66	11.4
Sum AA	93.5		426	-	253	-	245	-	303

Fatty acids	% FA	g/kg
CFAT(h)		86.8
<=C10	-	0.0
C12:0	1.0	0.7
C14:0	3.0	2.1
C16:0	26.0	18.1
C16:1	3.0	2.1
C18:0	16.0	11.1
C18:1	36.0	25.0
C:18:2	7.0	4.9
C18:3	1.0	0.7
>=C20	3.0	2.1
Sum FA	96.0	66.7
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Meat-and-bone meal-CFATh < 100 g/kg:

1. Processing this product in feeds for livestock animals is prohibited in the EU.

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Meat-and-bone meal-CFATh > 100 g/kg 8004.000/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	938	355	450	-	134	14	-	-15
sdc	9	15	10	-	8	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	-1	-1
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	129.3	62.2	-	2.6	3.1	6.3	4.0	-	2.2
sdc	10.2	5.7	-	0.2	0.8	1.1	1.5	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	104	9	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	241
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	78	DCCP	73	DCCP	-
DCCFAT	-		DCCFATh	87	DCCFAT	80	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	73	DCCF	-
DCNFE	-		DCNFE	78	DCPpo	61	DCNFE	-
DCOM	-		DCOM	80				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	77	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	77	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	61		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	8.24 MJ/kg	MEpo	9.89 MJ/kg	MErab	-
VEVI	-	NE2015	1969 kcal/kg	MEpo	2363 kcal/kg	MErab	-
FOM-91	-	EW2015	0.94 /kg	MEla	10.51 MJ/kg		
FOMr-07	-	StaDP	47.9 g/kg	MEla	2512 kcal/kg		
FOMr2-07	-	AppDP	47.7 g/kg	DPpo	37.9 g/kg		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	37.9 g/kg	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Meat-and-bone meal-CFATh > 100 g/kg 8004.000/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			450	59	-	57	256	-	-
LYS	4.8	0.4	21.6	65	14.0	63	13.6	75	16.2
MET	1.3	0.1	5.8	53	3.1	51	3.0	77	4.5
CYS	0.8	0.2	3.6	44	1.6	38	1.4	38	1.4
THR	3.0	0.3	13.5	65	8.8	61	8.2	68	9.2
TRP	0.5	0.1	2.2	38	0.9	32	0.7	69	1.6
ILE	2.6	0.3	11.7	59	6.9	56	6.6	74	8.7
ARG	7.5	0.6	33.7	59	20.1	58	19.7	77	26.0
PHE	3.2	0.3	14.4	59	8.5	57	8.2	76	10.9
HIS	1.8	0.3	8.1	59	4.8	57	4.6	73	5.9
LEU	5.5	0.5	24.7	59	14.7	58	14.3	75	18.5
TYR	2.0	0.3	9.0	59	5.3	56	5.1	73	6.6
VAL	4.0	0.4	18.0	59	10.7	57	10.2	74	13.3
ALA	8.1	0.6	36.4	59	21.7	58	21.2	75	27.3
ASP	7.5	0.4	33.7	59	20.0	57	19.3	58	19.6
GLU	12.0	1.1	54.0	59	32.0	57	30.9	72	38.9
GLY	15.7	1.9	70.6	59	42.0	58	41.1	72	50.8
PRO	9.4	1.1	42.3	59	25.1	57	24.1	69	29.2
SER	3.8	0.4	17.1	59	10.1	56	9.5	66	11.3
Sum AA	93.5		420	-	250	-	242	-	300

Fatty acids	% FA	g/kg
CFAT(h)		134.1
<=C10	-	0.0
C12:0	1.0	1.1
C14:0	3.0	3.2
C16:0	26.0	27.9
C16:1	3.0	3.2
C18:0	16.0	17.2
C18:1	36.0	38.6
C:18:2	7.0	7.5
C18:3	1.0	1.1
>=C20	3.0	3.2
Sum FA	96.0	103.0
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Meat-and-bone meal-CFATh > 100 g/kg:

1. Processing this product in feeds for livestock animals is prohibited in the EU.

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Milk powder, whole 8012.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	949	59	267	-	243	-	-	380
sdc	3	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	367	-	-	-	31	31
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	9.4	7.6	-	3.5	12.4	3.4	7.4	0.2	2.1
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1	1	36	0	-	0.9	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	258	
		CF_DI	0.95	CAD (meq/kg)	114	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	89		DCCP	93	DCCP	-	DCCP	-
DCCFAT	99		DCCFATh	98	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	97		DCNFE	100	DCPpo	-	DCNFE	-
DCOM	95		DCOM	97				
			DCNSPh	100	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	21	22	StaDCP	90	DCCFATh	-	DCOM	-
%DRUP	90	90	AppDCP	88	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	48	48						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1690 /kg	NE2015	16.38 MJ/kg	MEpo	-	MErab	-
VEVI	1940 /kg	NE2015	3916 kcal/kg	MEpo	-	MErab	-
FOM-91	549 g/kg	EW2015	1.86 /kg	MEla	-		
FOMr-07	580 g/kg	StaDP	6.8 g/kg	MEla	-		
FOMr2-07	456 g/kg	AppDP	6.6 g/kg	DPpo	-		
FOMr2/FOMr	0.79 /kg						
DVE-91	104 g/kg			**Broilers**		**Horses**	
DVE-07	107 g/kg			MEbr	-	NEm	-
OEB-91	123 g/kg			MEbr	-	NEm	-
OEB-07	117 g/kg			DPpo	-	EWpa	-
OEB2-07	29 g/kg					DCPho	-
DVMET-91	2.8 g/kg						
DVLYS-91	8.1 g/kg						
DVMET-07	2.9 g/kg						
DVLYS-07	8.4 g/kg						
SW	-0.11 /kg						
VW	0.27 /kg						

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Milk powder, whole 8012.000/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			267	91	-	87	232	-	-
LYS	7.8	0.4	20.9	96	20.0	94	19.6	-	-
MET	2.7	0.2	7.2	96	6.9	95	6.8	-	-
CYS	0.8	0.1	2.1	91	1.9	82	1.7	-	-
THR	4.4	0.1	11.8	92	10.8	87	10.2	-	-
TRP	1.3	0.1	3.5	91	3.2	87	3.0	-	-
ILE	5.2	0.3	13.9	88	12.2	85	11.9	-	-
ARG	3.5	0.2	9.4	97	9.1	93	8.7	-	-
PHE	4.8	0.2	12.8	97	12.4	94	12.1	-	-
HIS	2.8	0.1	7.5	96	7.2	94	7.0	-	-
LEU	9.7	0.3	25.9	96	24.9	94	24.4	-	-
TYR	4.5	0.6	12.0	97	11.7	95	11.4	-	-
VAL	6.3	0.2	16.8	89	15.0	86	14.5	-	-
ALA	3.3	0.1	8.8	89	7.8	84	7.4	-	-
ASP	8.0	0.3	21.4	93	19.9	89	19.1	-	-
GLU	20.8	0.7	55.6	88	48.9	86	47.7	-	-
GLY	2.0	0.1	5.3	95	5.1	79	4.2	-	-
PRO	9.8	0.6	26.2	99	25.9	95	24.9	-	-
SER	5.6	0.2	15.0	81	12.1	77	11.5	-	-
Sum AA	103.3		276	-	255	-	246	-	-

Fatty acids	% FA	g/kg
CFAT(h)		242.9
<=C10	9.5	21.5
C12:0	4.0	9.0
C14:0	10.0	22.6
C16:0	27.0	61.0
C16:1	3.0	6.8
C18:0	10.0	22.6
C18:1	25.0	56.5
C:18:2	2.0	4.5
C18:3	1.0	2.3
>=C20	1.0	2.3
Sum FA	92.5	209.0
% FA in CFAT-fraction		93

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Milk powder, whole:

1. SUG is represented as glucose units. Lactose = 0.95 * SUG.
2. SUGe/SUG for pigs only applies when lactose containing diets are fed on a regular basis; otherwise SUGe/SUG = 0.
3. For the digestibility of the NFE fraction in poultry complete fermentation of lactose (present in limited amounts in the diet) is assumed.

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Milkpowder, skimmed 8008.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	951	79	356	8	10	-	508	506
sdc	11	2	13	6	8	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	489	-	-	-	41	41
sdc	-	-	-	11	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	12.6	10.2	-	4.7	16.5	4.6	9.9	0.3	2.8
sdc	0.6	0.2	-	4.9	0.3	0.6	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	2	1	48	0	-	1.1	-
sdc	-	-	3	1	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	343	
		CF_DI	0.95	CAD (meq/kg)	149	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	92		DCCP	94	DCCP	95	DCCP	-
DCCFAT	77		DCCFATh	55	DCCFAT	84	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	70	DCCF	-
DCNFE	97		DCNFE	100	DCPpo	80	DCNFE	-
DCOM	95		DCOM	97				
			DCNSPh	100	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	91
%RUP	21	22	StaDCP	90	DCCFATh	-	DCOM	95
%DRUP	90	90	AppDCP	88	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	80		
DASHmax	62	62						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1113 /kg	NE2015	10.73 MJ/kg	MEpo	12.57 MJ/kg	MErab	-
VEVI	1224 /kg	NE2015	2566 kcal/kg	MEpo	3005 kcal/kg	MErab	-
FOM-91	741 g/kg	EW2015	1.22 /kg	MEla	12.63 MJ/kg		
FOMr-07	773 g/kg	StaDP	9.2 g/kg	MEla	3018 kcal/kg		
FOMr2-07	607 g/kg	AppDP	9.0 g/kg	DPpo	8.1 g/kg		
FOMr2/FOMr	0.79 /kg						
DVE-91	140 g/kg			**Broilers**		**Horses**	
DVE-07	143 g/kg			MEbr	-	NEm	9.95 MJ/kg
OEB-91	162 g/kg			MEbr	-	NEm	2378 kcal/kg
OEB-07	156 g/kg			DPpo	8.1 g/kg	EWpa	1.114 /kg
OEB2-07	38 g/kg					DCPho	324 g/kg
DVMET-91	3.8 g/kg						
DVLYS-91	11.0 g/kg						
DVMET-07	3.9 g/kg						
DVLYS-07	11.2 g/kg						
SW	-0.24 /kg						
VW	0.27 /kg						

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Milkpowder, skimmed 8008.000/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			356	91	-	88	314	-	-
LYS	7.8	0.4	27.8	97	26.9	95	26.5	99	27.5
MET	2.7	0.2	9.6	97	9.3	96	9.2	100	9.6
CYS	0.8	0.1	2.8	91	2.6	84	2.4	88	2.5
THR	4.4	0.1	15.7	93	14.5	89	13.9	92	14.4
TRP	1.3	0.1	4.6	91	4.2	88	4.1	94	4.4
ILE	5.2	0.3	18.5	89	16.4	87	16.1	92	17.0
ARG	3.5	0.2	12.5	97	12.1	94	11.7	95	11.8
PHE	4.8	0.2	17.1	97	16.6	96	16.3	97	16.6
HIS	2.8	0.1	10.0	96	9.6	94	9.4	95	9.5
LEU	9.7	0.3	34.5	96	33.2	95	32.8	96	33.2
TYR	4.5	0.6	16.0	97	15.5	95	15.3	96	15.4
VAL	6.3	0.2	22.4	90	20.1	87	19.6	92	20.6
ALA	3.3	0.1	11.8	89	10.5	85	10.0	95	11.2
ASP	8.0	0.3	28.5	93	26.6	91	25.9	93	26.5
GLU	20.8	0.7	74.1	88	65.3	87	64.2	90	66.7
GLY	2.0	0.1	7.1	95	6.8	83	5.9	96	6.8
PRO	9.8	0.6	34.9	99	34.6	96	33.6	93	32.5
SER	5.6	0.2	19.9	81	16.2	78	15.6	86	17.2
Sum AA	103.3		368	-	341	-	333	-	343

Fatty acids	% FA	g/kg
CFAT(h)		10.5
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Milkpowder, skimmed:

1. SUG is represented as glucose units. Lactose = 0.95 * SUG.
2. SUGe/SUG for pigs only applies when lactose containing diets are fed on a regular basis; otherwise SUGe/SUG = 0.
3. For the digestibility of the NFE fraction in poultry complete fermentation of lactose (present in limited amounts in the diet) is assumed.

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Millet 1006.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	881	32	111	40	-	99	600	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	518	497	-	8	145	93	-	194	48
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.1	2.8	1.8	1.3	3.0	-	1.2	-	1.2
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	104	11	25	6	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	65	SUGe/SUG	70	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	70	DCCP	85	DCCP	84	DCCP	-
DCCFAT	84	DCCFATh	84	DCCFAT	75	DCCFAT	-
DCCF	12	DCCF	8	DCNFE	90	DCCF	-
DCNFE	88	DCNFE	94	DCPpo	38	DCNFE	-
DCOM	77	DCOM	83				
		DCNSPh	35	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	56 60	StaDCP	27	DCCFATh	-	DCOM	-
%DRUP	80 80	AppDCP	21	DC(S+S)	-		
%RUSTA	25 25			DCNFEh	-		
%DASH	50 50			DCPpo	38		
DASHmax	22 22						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	904 /kg	NE2015	10.08 MJ/kg	MEpo	12.19 MJ/kg	MErab	-
VEVI	958 /kg	NE2015	2410 kcal/kg	MEpo	2913 kcal/kg	MErab	-
FOM-91	425 g/kg	EW2015	1.15 /kg	MEla	12.36 MJ/kg		
FOMr-07	496 g/kg	StaDP	0.8 g/kg	MEla	2954 kcal/kg		
FOMr2-07	218 g/kg	AppDP	0.6 g/kg	DPpo	1.1 g/kg		
FOMr2/FOMr	0.44 /kg						
DVE-91	80 g/kg			**Broilers**		**Horses**	
DVE-07	99 g/kg			MEbr	-	NEm	-
OEB-91	-22 g/kg			MEbr	-	NEm	-
OEB-07	-52 g/kg			DPpo	1.1 g/kg	EWpa	-
OEB2-07	-27 g/kg					DCPho	-
DVMET-91	2.3 g/kg						
DVLYS-91	3.2 g/kg						
DVMET-07	2.8 g/kg						
DVLYS-07	4.8 g/kg						
SW	0.16 /kg						
VW	0.27 /kg						

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Millet 1006.000/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			111	85	-	76	84	-	-
LYS	1.8	-	2.0	82	1.6	65	1.3	87	1.7
MET	2.7	-	3.0	75	2.2	71	2.1	83	2.5
CYS	1.8	-	2.0	88	1.8	79	1.6	75	1.5
THR	3.0	-	3.3	85	2.8	69	2.3	79	2.6
TRP	1.2	-	1.3	98	1.3	88	1.2	86	1.1
ILE	3.7	-	4.1	89	3.7	81	3.3	83	3.4
ARG	3.7	-	4.1	87	3.6	79	3.2	89	3.7
PHE	5.3	-	5.9	91	5.3	86	5.1	79	4.6
HIS	2.1	-	2.3	90	2.1	83	1.9	80	1.9
LEU	11.5	-	12.8	90	11.5	87	11.1	82	10.5
TYR	3.7	-	4.1	85	3.5	79	3.2	86	3.5
VAL	5.0	-	5.6	87	4.8	78	4.4	81	4.5
ALA	10.1	-	11.2	90	10.0	86	9.6	81	9.1
ASP	6.4	-	7.1	85	6.1	76	5.4	82	5.8
GLU	21.1	-	23.4	93	21.7	88	20.7	82	19.2
GLY	2.5	-	2.8	83	2.3	55	1.5	80	2.2
PRO	6.6	-	7.3	95	6.9	81	6.0	76	5.6
SER	5.9	-	6.5	90	5.9	81	5.3	81	5.3
Sum AA	98.1		109	-	97	-	89	-	89

Fatty acids	% FA	g/kg
CFAT(h)		39.6
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	12.0	4.3
C16:1	0.4	0.1
C18:0	5.0	1.8
C18:1	18.0	6.4
C:18:2	58.0	20.7
C18:3	3.0	1.1
>=C20	1.0	0.4
Sum FA	97.4	34.8
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Millet, (pearl millet) 1013.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	912	25	122	45	-	20	700	-
sdc	16	5	15	4	-	4	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	632	606	-	14	-	-	-	100	100
sdc	19	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.2	3.3	2.1	1.4	3.5	-	1.2	0.1	1.3
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	65	SUGe/SUG	70	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	72		DCCP	86	DCCP	84	DCCP	-
DCCFAT	85		DCCFATh	85	DCCFAT	75	DCCFAT	-
DCCF	20		DCCF	8	DCNFE	91	DCCF	-
DCNFE	88		DCNFE	95	DCPpo	38	DCNFE	-
DCOM	84		DCOM	91				
			DCNSPh	47	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	56	60	StaDCP	27	DCCFATh	-	DCOM	-
%DRUP	80	80	AppDCP	21	DC(S+S)	-		
%RUSTA	25	25			DCNFEh	-		
%DASH	50	50			DCPpo	38		
DASHmax	18	18						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1065 /kg	NE2015	11.79 MJ/kg	MEpo	14.20 MJ/kg	MErab	-
VEVI	1165 /kg	NE2015	2818 kcal/kg	MEpo	3395 kcal/kg	MErab	-
FOM-91	480 g/kg	EW2015	1.34 /kg	MEla	14.40 MJ/kg		
FOMr-07	554 g/kg	StaDP	0.9 g/kg	MEla	3442 kcal/kg		
FOMr2-07	265 g/kg	AppDP	0.7 g/kg	DPpo	1.2 g/kg		
FOMr2/FOMr	0.48 /kg						
DVE-91	95 g/kg			**Broilers**		**Horses**	
DVE-07	118 g/kg			MEbr	-	NEm	-
OEB-91	-26 g/kg			MEbr	-	NEm	-
OEB-07	-62 g/kg			DPpo	1.2 g/kg	EWpa	-
OEB2-07	-34 g/kg					DCPho	-
DVMET-91	2.7 g/kg						
DVLYS-91	4.0 g/kg						
DVMET-07	3.2 g/kg						
DVLYS-07	5.8 g/kg						
SW	0.04 /kg						
VW	0.26 /kg						

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Millet, (pearl millet) 1013.000/0/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			122	85	-	76	93	-	-
LYS	1.8	-	2.2	82	1.8	65	1.4	87	1.9
MET	2.7	-	3.3	74	2.4	71	2.3	83	2.7
CYS	1.8	-	2.2	87	1.9	78	1.7	75	1.6
THR	3.0	-	3.7	85	3.1	70	2.6	79	2.9
TRP	1.2	-	1.5	97	1.4	88	1.3	86	1.3
ILE	3.7	-	4.5	89	4.0	81	3.7	83	3.8
ARG	3.7	-	4.5	87	3.9	79	3.6	89	4.0
PHE	5.3	-	6.5	91	5.9	86	5.6	79	5.1
HIS	2.1	-	2.6	90	2.3	83	2.1	80	2.1
LEU	11.5	-	14.1	90	12.6	87	12.2	82	11.5
TYR	3.7	-	4.5	85	3.8	79	3.6	86	3.9
VAL	5.0	-	6.1	87	5.3	79	4.8	81	4.9
ALA	10.1	-	12.3	89	11.0	85	10.5	81	10.0
ASP	6.4	-	7.8	85	6.6	75	5.9	82	6.4
GLU	21.1	-	25.8	93	23.9	89	22.8	82	21.1
GLY	2.5	-	3.1	83	2.5	57	1.7	80	2.4
PRO	6.6	-	8.1	95	7.6	82	6.6	76	6.1
SER	5.9	-	7.2	90	6.5	81	5.9	81	5.8
Sum AA	98.1		120	-	107	-	98	-	98

Fatty acids

	% FA	g/kg
CFAT(h)		45.3
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	12.0	4.9
C16:1	0.4	0.2
C18:0	5.0	2.0
C18:1	18.0	7.3
C:18:2	58.0	23.6
C18:3	3.0	1.2
>=C20	1.0	0.4
Sum FA	97.4	39.7
% FA in CFAT-fraction		90

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Molasses, sugarbeet 4004.210/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	787	90	98	2	-	-	597	-
sdc	31	16	8	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	512	-	-	-	100	100
sdc	-	-	-	21	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.7	0.5	0.1	0.1	41.0	7.2	4.3	-	0.1
sdc	0.6	0.6	-	-	5.8	1.5	1.7	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	22	19	13	7	0.2	0.3	0.6
sdc	12	-	7	5	-	-	-

IP/P	10	SUGe/SUG	90	EB (meq/kg)	1242	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	73	DCCP	38	DCCP	21	DCCP	79
DCCFAT	-	DCCFATh	0	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	90	DCCF	-
DCNFE	93	DCNFE	92	DCPpo	50	DCNFE	95
DCOM	90	DCOM	84				
		DCNSPh	53	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	39
%RUP	5 5	StaDCP	60	DCCFATh	-	DCOM	76
%DRUP	- 0	AppDCP	31	DC(S+S)	100		
%RUSTA	- -			DCNFEh	-		
%DASH	65 65			DCPpo	50		
DASHmax	70 70						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	805 /kg	NE2015	7.31 MJ/kg	MEpo	8.43 MJ/kg	MErab	11.16 MJ/kg
VEVI	890 /kg	NE2015	1746 kcal/kg	MEpo	2014 kcal/kg	MErab	2668 kcal/kg
FOM-91	619 g/kg	EW2015	0.83 /kg	MEla	8.43 MJ/kg		
FOMr-07	667 g/kg	StaDP	0.3 g/kg	MEla	2014 kcal/kg		
FOMr2-07	637 g/kg	AppDP	0.2 g/kg	DPpo	0.3 g/kg		
FOMr2/FOMr	0.95 /kg						
DVE-91	51 g/kg			**Broilers**		**Horses**	
DVE-07	60 g/kg			MEbr	9.31 MJ/kg	NEm	6.44 MJ/kg
OEB-91	0 g/kg			MEbr	2225 kcal/kg	NEm	1539 kcal/kg
OEB-07	-14 g/kg			DPpo	0.3 g/kg	EWpa	0.721 /kg
OEB2-07	-11 g/kg					DCPho	38 g/kg
DVMET-91	1.4 g/kg						
DVLYS-91	4.1 g/kg						
DVMET-07	1.6 g/kg						
DVLYS-07	4.8 g/kg						
SW	-0.32 /kg						
VW	0.23 /kg						

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Molasses, sugarbeet 4004.210/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			98	95	-	86	84	-	-
LYS	0.5	0.2	0.5	94	0.5	31	0.2	96	0.5
MET	0.3	0.1	0.3	95	0.3	66	0.2	98	0.3
CYS	0.3	0.1	0.3	95	0.3	39	0.1	92	0.3
THR	0.7	0.1	0.7	93	0.6	25	0.2	92	0.6
TRP	0.2	-	0.2	95	0.2	39	0.1	95	0.2
ILE	1.7	0.4	1.7	95	1.6	77	1.3	96	1.6
ARG	0.3	0.1	0.3	93	0.3	-	0.0	89	0.3
PHE	0.5	-	0.5	92	0.5	41	0.2	94	0.5
HIS	0.2	-	0.2	91	0.2	19	0.0	88	0.2
LEU	1.7	0.4	1.7	94	1.6	72	1.2	95	1.6
TYR	1.6	-	1.6	95	1.5	80	1.3	93	1.5
VAL	1.1	0.2	1.1	94	1.0	56	0.6	95	1.0
ALA	2.2	0.4	2.2	95	2.0	77	1.7	98	2.1
ASP	5.6	1.2	5.5	94	5.2	83	4.6	95	5.2
GLU	36.0	5.9	35.2	95	33.4	92	32.5	94	33.1
GLY	1.8	0.4	1.8	94	1.7	54	1.0	94	1.7
PRO	0.9	-	0.9	92	0.8	-	-0.1	84	0.7
SER	1.7	0.3	1.7	94	1.6	63	1.0	91	1.5
Sum AA	57.3		56	-	53	-	46	-	53

Fatty acids	% FA	g/kg
CFAT(h)		2.4
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Molasses, sugarbeet:

1. SUG is represented as glucose units. Sacharose = 0.95 * SUG.

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Molasses, sugarcane-SUG < 475 g/kg 7002.210/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	724	112	51	1	4	6	554	552
sdc	12	14	10	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	454	-	-	-	120	120
sdc	-	-	-	13	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	7.9	0.7	0.1	2.7	41.0	1.5	18.5	8.3	0.1
sdc	1.3	-	-	-	6.7	0.7	3.9	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	176	24	9	6	0.5	0.9	-
sdc	34	13	-	2	-	-	-

IP/P	10	SUGe/SUG	90	EB (meq/kg)	593
		CF_DI	0.97	CAD (meq/kg)	70

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	21	DCCP	32	DCCP	34	DCCP	68
DCCFAT	-	DCCFATh	0	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	71	DCCF	-
DCNFE	86	DCNFE	91	DCPpo	50	DCNFE	90
DCOM	80	DCOM	85				
		DCNSPh	53	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	40	DCCP	-
%RUP	5 5	StaDCP	60	DCCFATh	-	DCOM	80
%DRUP	- 0	AppDCP	38	DC(S+S)	100		
%RUSTA	- -			DCNFEh	80		
%DASH	65 65			DCPpo	50		
DASHmax	85 85						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	601 /kg	NE2015	6.43 MJ/kg	MEpo	7.46 MJ/kg	MErab	9.19 MJ/kg
VEVI	643 /kg	NE2015	1536 kcal/kg	MEpo	1784 kcal/kg	MErab	2197 kcal/kg
FOM-91	484 g/kg	EW2015	0.73 /kg	MEla	7.46 MJ/kg		
FOMr-07	585 g/kg	StaDP	0.4 g/kg	MEla	1784 kcal/kg		
FOMr2-07	552 g/kg	AppDP	0.2 g/kg	DPpo	0.3 g/kg		
FOMr2/FOMr	0.94 /kg						
DVE-91	34 g/kg			**Broilers**		**Horses**	
DVE-07	48 g/kg			MEbr	7.99 MJ/kg	NEm	5.89 MJ/kg
OEB-91	-24 g/kg			MEbr	1910 kcal/kg	NEm	1407 kcal/kg
OEB-07	-47 g/kg			DPpo	0.3 g/kg	EWpa	0.659 /kg
OEB2-07	-43 g/kg					DCPho	-
DVMET-91	1.0 g/kg						
DVLYS-91	2.9 g/kg						
DVMET-07	1.3 g/kg						
DVLYS-07	4.0 g/kg						
SW	-0.27 /kg						
VW	0.21 /kg						

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Molasses, sugarcane-SUG < 475 g/kg 7002.210/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			51	94	-	78	40	-	-
LYS	0.4	-	0.2	91	0.2	-	-0.1	93	0.2
MET	0.4	-	0.2	95	0.2	56	0.1	98	0.2
CYS	0.6	-	0.3	95	0.3	45	0.1	92	0.3
THR	1.0	-	0.5	92	0.5	8	0.0	91	0.5
TRP	0.2	-	0.1	95	0.1	-	0.0	95	0.1
ILE	0.9	-	0.5	93	0.4	35	0.2	94	0.4
ARG	0.2	-	0.1	87	0.1	-	-0.2	83	0.1
PHE	0.5	-	0.3	88	0.2	-	0.0	90	0.2
HIS	0.2	-	0.1	87	0.1	-	0.0	84	0.1
LEU	1.1	-	0.6	92	0.5	31	0.2	93	0.5
TYR	0.4	-	0.2	91	0.2	-	0.0	90	0.2
VAL	1.9	-	1.0	94	0.9	55	0.5	95	0.9
ALA	3.4	-	1.7	95	1.6	74	1.3	98	1.7
ASP	17.8	-	9.1	95	8.6	88	8.0	95	8.6
GLU	7.6	-	3.9	93	3.6	71	2.8	92	3.6
GLY	1.4	-	0.7	93	0.7	1	0.0	92	0.7
PRO	1.0	-	0.5	88	0.5	-	-0.3	81	0.4
SER	1.2	-	0.6	91	0.6	14	0.1	88	0.5
Sum AA	40.2		21	-	19	-	13	-	19

Fatty acids	% FA	g/kg
CFAT(h)		0.7
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Molasses, sugarcane-SUG < 475 g/kg:

1. This class of molasses may be mixed with vinasse.
2. SUG is represented as glucose units. Sacharose = 0.95 * SUG.
3. The S-i content of this product is variable; for a correct calculation of the CAD value of a batch the S-i content should be analyzed.

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Molasses, sugarcane-SUG > 475 g/kg 7002.210/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	721	91	41	1	4	6	582	579
sdc	9	11	9	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	488	-	-	-	115	115
sdc	-	-	-	13	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	6.8	0.6	0.1	2.7	28.8	1.0	21.7	8.2	0.1
sdc	-	-	-	-	6.5	0.5	1.7	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	165	19	9	5	0.5	0.9	-
sdc	-	-	-	-	-	-	-

IP/P	10	SUGe/SUG	90	EB (meq/kg)	171
		CF_DI	0.97	CAD (meq/kg)	-348

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	11		DCCP	28	DCCP	34	DCCP	68
DCCFAT	-		DCCFATh	0	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	75	DCCF	-
DCNFE	86		DCNFE	92	DCPpo	50	DCNFE	90
DCOM	80		DCOM	86				
			DCNSPh	53	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	40	DCCP	-
%RUP	5	5	StaDCP	60	DCCFATh	-	DCOM	81
%DRUP	-	0	AppDCP	38	DC(S+S)	100		
%RUSTA	-	-			DCNFEh	82		
%DASH	65	65			DCPpo	50		
DASHmax	70	70						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	623 /kg	NE2015	6.76 MJ/kg	MEpo	8.02 MJ/kg	MErab	9.49 MJ/kg
VEVI	669 /kg	NE2015	1616 kcal/kg	MEpo	1917 kcal/kg	MErab	2269 kcal/kg
FOM-91	502 g/kg	EW2015	0.77 /kg	MEla	8.02 MJ/kg		
FOMr-07	603 g/kg	StaDP	0.4 g/kg	MEla	1917 kcal/kg		
FOMr2-07	571 g/kg	AppDP	0.2 g/kg	DPpo	0.3 g/kg		
FOMr2/FOMr	0.95 /kg						
DVE-91	36 g/kg			**Broilers**		**Horses**	
DVE-07	52 g/kg			MEbr	8.49 MJ/kg	NEm	6.15 MJ/kg
OEB-91	-37 g/kg			MEbr	2029 kcal/kg	NEm	1470 kcal/kg
OEB-07	-60 g/kg			DPpo	0.3 g/kg	EWpa	0.689 /kg
OEB2-07	-56 g/kg					DCPho	-
DVMET-91	1.0 g/kg						
DVLYS-91	3.0 g/kg						
DVMET-07	1.4 g/kg						
DVLYS-07	4.2 g/kg						
SW	-0.31 /kg						
VW	0.21 /kg						

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Molasses, sugarcane-SUG > 475 g/kg 7002.210/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			41	94	-	74	30	-	-
LYS	0.4	-	0.2	91	0.1	-	-0.1	93	0.2
MET	0.4	-	0.2	95	0.2	47	0.1	98	0.2
CYS	0.6	-	0.2	95	0.2	33	0.1	92	0.2
THR	1.0	-	0.4	92	0.4	-	0.0	91	0.4
TRP	0.2	-	0.1	95	0.1	-	0.0	95	0.1
ILE	0.9	-	0.4	93	0.3	21	0.1	94	0.3
ARG	0.2	-	0.1	86	0.1	-	-0.2	83	0.1
PHE	0.5	-	0.2	88	0.2	-	-0.1	90	0.2
HIS	0.2	-	0.1	86	0.1	-	-0.1	84	0.1
LEU	1.1	-	0.5	92	0.4	17	0.1	93	0.4
TYR	0.4	-	0.2	91	0.1	-	-0.1	90	0.1
VAL	1.9	-	0.8	94	0.7	45	0.4	95	0.7
ALA	3.4	-	1.4	94	1.3	69	1.0	98	1.4
ASP	17.8	-	7.3	95	6.9	87	6.3	95	6.9
GLU	7.6	-	3.1	93	2.9	66	2.0	92	2.9
GLY	1.4	-	0.6	93	0.5	-	-0.1	92	0.5
PRO	1.0	-	0.4	88	0.4	-	-0.4	81	0.3
SER	1.2	-	0.5	91	0.4	-	0.0	88	0.4
Sum AA	40.2		16	-	15	-	-	-	15

Fatty acids	% FA	g/kg
CFAT(h)		0.7
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Molasses, sugarcane-SUG > 475 g/kg:

1. SUG is represented as glucose units. Sacharose = 0.95 * SUG.
2. The S-i content of this product is variable; for a correct calculation of the CAD value of a batch the S-i content should be analyzed.

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Niger seed 3002.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	916	47	203	409	-	145	112	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	8	-	35	-	-	-	215	215
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	4.0	6.9	5.2	3.3	8.2	-	-	-	2.1
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	501	33	42	13	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	50	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	79		DCCP	78	DCCP	-	DCCP	-
DCCFAT	93		DCCFATh	69	DCCFAT	-	DCCFAT	-
DCCF	30		DCCF	24	DCNFE	-	DCCF	-
DCNFE	66		DCNFE	75	DCPpo	-	DCNFE	-
DCOM	76		DCOM	64				
			DCNSPh	35	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	37	39	StaDCP	10	DCCFATh	-	DCOM	-
%DRUP	80	80	AppDCP	7	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	30	30						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1697 /kg	NE2015	13.15 MJ/kg	MEpo	-	MErab	-
VEVI	1893 /kg	NE2015	3143 kcal/kg	MEpo	-	MErab	-
FOM-91	177 g/kg	EW2015	1.49 /kg	MEla	-		
FOMr-07	185 g/kg	StaDP	0.7 g/kg	MEla	-		
FOMr2-07	89 g/kg	AppDP	0.5 g/kg	DPpo	-		
FOMr2/FOMr	0.48 /kg						
DVE-91	66 g/kg			**Broilers**		**Horses**	
DVE-07	61 g/kg			MEbr	-	NEm	-
OEB-91	94 g/kg			MEbr	-	NEm	-
OEB-07	100 g/kg			DPpo	-	EWpa	-
OEB2-07	36 g/kg					DCPho	-
DVMET-91	1.6 g/kg						
DVLYS-91	2.8 g/kg						
DVMET-07	1.5 g/kg						
DVLYS-07	2.6 g/kg						
SW	0.39 /kg						
VW	0.30 /kg						

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Niger seed 3002.000/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			203	63	-	58	117	-	-
LYS	3.7	-	7.5	70	5.3	65	4.9	-	-
MET	2.1	-	4.3	78	3.3	76	3.2	-	-
CYS	2.2	-	4.5	74	3.3	70	3.1	-	-
THR	3.3	-	6.7	64	4.3	56	3.7	-	-
TRP	1.5	-	3.1	63	1.9	59	1.8	-	-
ILE	4.0	-	8.1	60	4.9	56	4.5	-	-
ARG	8.5	-	17.3	76	13.1	74	12.8	-	-
PHE	4.3	-	8.7	65	5.7	61	5.4	-	-
HIS	2.2	-	4.5	74	3.3	70	3.1	-	-
LEU	6.2	-	12.6	62	7.8	58	7.4	-	-
TYR	2.5	-	5.1	69	3.5	64	3.2	-	-
VAL	5.0	-	10.2	62	6.3	57	5.8	-	-
ALA	3.7	-	7.5	63	4.7	57	4.3	-	-
ASP	8.9	-	18.1	63	11.4	59	10.7	-	-
GLU	19.7	-	40.1	63	25.1	60	24.1	-	-
GLY	4.9	-	10.0	63	6.3	55	5.4	-	-
PRO	3.6	-	7.3	62	4.6	49	3.6	-	-
SER	4.7	-	9.6	63	6.0	56	5.4	-	-
Sum AA	91.0		185	-	121	-	112	-	-

Fatty acids

	% FA	g/kg
CFAT(h)		409.5
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	10.0	38.9
C16:1	-	0.0
C18:0	7.0	27.2
C18:1	5.0	19.4
C:18:2	78.0	303.4
C18:3	-	0.0
>=C20	-	0.0
Sum FA	100.0	389.0
% FA in CFAT-fraction		95

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Oats 1004.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	879	24	100	43	49	106	606	600
sdc	8	3	9	4	4	12	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	395	374	-	9	241	121	-	329	89
sdc	26	-	-	3	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.7	3.0	2.0	1.1	3.9	0.1	0.6	0.1	1.2
sdc	0.1	0.3	-	-	0.6	0.0	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	91	44	25	3	0.7	0.2	0.3
sdc	20	8	4	1	-	-	-

IP/P	65	SUGe/SUG	95	EB (meq/kg)	84	
		CF_DI	0.99	CAD (meq/kg)	6	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	74		DCCP	75	DCCP	75	DCCP	73
DCCFAT	92		DCCFATh	72	DCCFAT	86	DCCFAT	80
DCCF	50		DCCF	9	DCNFE	74	DCCF	10
DCNFE	80		DCNFE	78	DCPpo	50	DCNFE	75
DCOM	76		DCOM	69				
			DCNSPh	29	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	87	DCCP	80
%RUP	22	23	StaDCP	30	DCCFATh	88	DCOM	71
%DRUP	90	90	AppDCP	24	DC(S+S)	100		
%RUSTA	10	9			DCNFEh	64		
%DASH	50	50			DCPpo	50		
DASHmax	18	18						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	916 /kg	NE2015	8.44 MJ/kg	MEpo	10.46 MJ/kg	MErab	10.62 MJ/kg
VEVI	972 /kg	NE2015	2018 kcal/kg	MEpo	2501 kcal/kg	MErab	2537 kcal/kg
FOM-91	550 g/kg	EW2015	0.96 /kg	MEla	10.68 MJ/kg		
FOMr-07	576 g/kg	StaDP	0.9 g/kg	MEla	2552 kcal/kg		
FOMr2-07	339 g/kg	AppDP	0.7 g/kg	DPpo	1.5 g/kg		
FOMr2/FOMr	0.59 /kg						
DVE-91	58 g/kg			**Broilers**		**Horses**	
DVE-07	71 g/kg			MEbr	9.87 MJ/kg	NEm	7.80 MJ/kg
OEB-91	-7 g/kg			MEbr	2358 kcal/kg	NEm	1865 kcal/kg
OEB-07	-28 g/kg			DPpo	1.5 g/kg	EWpa	0.874 /kg
OEB2-07	-23 g/kg					DCPho	80 g/kg
DVMET-91	1.5 g/kg						
DVLYS-91	4.0 g/kg						
DVMET-07	1.8 g/kg						
DVLYS-07	5.1 g/kg						
SW	0.09 /kg						
VW	0.27 /kg						

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Oats 1004.000/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			100	76	-	66	66	-	-
LYS	4.1	0.3	4.1	80	3.3	72	2.9	84	3.4
MET	1.7	0.1	1.7	84	1.4	79	1.3	86	1.5
CYS	3.0	0.3	3.0	75	2.2	69	2.1	67	2.0
THR	3.5	0.2	3.5	75	2.6	60	2.1	74	2.6
TRP	1.2	0.1	1.2	77	0.9	67	0.8	73	0.9
ILE	3.7	0.2	3.7	82	3.0	73	2.7	84	3.1
ARG	6.5	0.5	6.5	90	5.8	85	5.5	84	5.4
PHE	4.8	0.4	4.8	86	4.1	80	3.8	87	4.2
HIS	2.2	0.2	2.2	88	1.9	80	1.8	83	1.8
LEU	7.3	0.3	7.3	84	6.1	78	5.7	84	6.1
TYR	3.3	0.3	3.3	85	2.8	77	2.5	80	2.6
VAL	5.2	0.3	5.2	82	4.2	73	3.8	82	4.3
ALA	4.8	0.3	4.8	76	3.6	67	3.2	79	3.8
ASP	8.2	0.5	8.2	76	6.2	67	5.5	76	6.2
GLU	19.2	1.5	19.1	84	16.0	78	15.0	82	15.7
GLY	4.9	0.4	4.9	77	3.7	60	3.0	76	3.7
PRO	5.3	0.5	5.3	85	4.5	67	3.5	73	3.9
SER	4.8	0.3	4.8	80	3.8	68	3.3	76	3.6
Sum AA	93.7		93	-	76	-	68	-	75

Fatty acids	% FA	g/kg
CFAT(h)		42.6
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.3	0.1
C16:0	19.0	7.3
C16:1	0.4	0.2
C18:0	1.0	0.4
C18:1	35.0	13.4
C:18:2	39.0	15.0
C18:3	2.0	0.8
>=C20	0.4	0.2
Sum FA	97.1	37.3
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Oats husk meal 1004.111/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	910	42	48	18	-	268	534	-
sdc	15	9	8	4	-	19	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	182	-	11	581	294	-	609	29
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.3	1.4	0.6	0.9	4.5	0.6	0.9	0.1	0.6
sdc	-	0.3	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	133	50	22	3	-	-	-
sdc	48	8	5	1	-	-	-

IP/P	45	SUGe/SUG	95	EB (meq/kg)	119
		CF_DI	0.98	CAD (meq/kg)	77

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	43	DCCP	62	DCCP	-	DCCP	40
DCCFAT	85	DCCFATh	56	DCCFAT	-	DCCFAT	80
DCCF	50	DCCF	9	DCNFE	-	DCCF	12
DCNFE	54	DCNFE	37	DCPpo	-	DCNFE	40
DCOM	53	DCOM	30				
		DCNSPh	5	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	-	DCCP	40
%RUP	28	StaDCP	30	DCCFATh	-	DCOM	45
%DRUP	75	AppDCP	17	DC(S+S)	-		
%RUSTA	10			DCNFEh	-		
%DASH	50			DCPpo	-		
DASHmax	28						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	555 /kg	NE2015	3.71 MJ/kg	MEpo	-	MErab	5.08 MJ/kg
VEVI	509 /kg	NE2015	886 kcal/kg	MEpo	-	MErab	1215 kcal/kg
FOM-91	407 g/kg	EW2015	0.42 /kg	MEla	-		
FOMr-07	414 g/kg	StaDP	0.4 g/kg	MEla	-		
FOMr2-07	177 g/kg	AppDP	0.2 g/kg	DPpo	-		
FOMr2/FOMr	0.43 /kg						
DVE-91	18 g/kg			**Broilers**		**Horses**	
DVE-07	24 g/kg			MEbr	-	NEm	4.64 MJ/kg
OEB-91	-28 g/kg			MEbr	-	NEm	1108 kcal/kg
OEB-07	-37 g/kg			DPpo	-	EWpa	0.519 /kg
OEB2-07	-18 g/kg					DCPho	19 g/kg
DVMET-91	0.7 g/kg						
DVLYS-91	1.6 g/kg						
DVMET-07	0.8 g/kg						
DVLYS-07	2.1 g/kg						
SW	0.40 /kg						
VW	0.35 /kg						

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Oats husk meal 1004.111/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			48	39	-	18	9	-	-
LYS	4.1	0.3	2.0	40	0.8	22	0.4	-	-
MET	1.7	0.1	0.8	40	0.3	28	0.2	-	-
CYS	3.0	0.3	1.4	40	0.6	27	0.4	-	-
THR	3.5	0.2	1.7	39	0.7	7	0.1	-	-
TRP	1.2	0.1	0.6	40	0.2	18	0.1	-	-
ILE	3.7	0.2	1.8	40	0.7	21	0.4	-	-
ARG	6.5	0.5	3.1	40	1.2	28	0.9	-	-
PHE	4.8	0.4	2.3	39	0.9	27	0.6	-	-
HIS	2.2	0.2	1.1	39	0.4	24	0.3	-	-
LEU	7.3	0.3	3.5	40	1.4	27	1.0	-	-
TYR	3.3	0.3	1.6	39	0.6	23	0.4	-	-
VAL	5.2	0.3	2.5	40	1.0	20	0.5	-	-
ALA	4.8	0.3	2.3	40	0.9	20	0.5	-	-
ASP	8.2	0.5	4.0	39	1.5	21	0.8	-	-
GLU	19.2	1.5	9.3	39	3.6	28	2.6	-	-
GLY	4.9	0.4	2.4	39	0.9	5	0.1	-	-
PRO	5.3	0.5	2.6	39	1.0	-	0.0	-	-
SER	4.8	0.3	2.3	39	0.9	13	0.3	-	-
Sum AA	93.7		45	-	18	-	10	-	-

Fatty acids	% FA	g/kg
CFAT(h)		17.9
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.1
C16:0	19.0	2.7
C16:1	0.4	0.1
C18:0	1.0	0.1
C18:1	35.0	5.0
C:18:2	39.0	5.6
C18:3	2.0	0.3
>=C20	0.4	0.1
Sum FA	97.2	13.9
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Oats mill feed, high grade 1004.105/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	886	24	91	44	-	118	609	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	269	-	10	263	133	-	448	184
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.7	3.6	1.6	-	-	-	-	-	1.1
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	45	SUGe/SUG	95	EB (meq/kg)	-
		CF_DI	0.98	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	71		DCCP	74	DCCP	-	DCCP	-
DCCFAT	93		DCCFATh	72	DCCFAT	-	DCCFAT	-
DCCF	50		DCCF	10	DCNFE	-	DCCF	-
DCNFE	79		DCNFE	76	DCPpo	-	DCNFE	-
DCOM	75		DCOM	66				
			DCNSPh	43	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	68
%RUP	22	23	StaDCP	30	DCCFATh	-	DCOM	65
%DRUP	90	90	AppDCP	25	DC(S+S)	-		
%RUSTA	10	9			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	18	18						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	903 /kg	NE2015	7.73 MJ/kg	MEpo	-	MErab	-
VEVI	954 /kg	NE2015	1847 kcal/kg	MEpo	-	MErab	-
FOM-91	553 g/kg	EW2015	0.88 /kg	MEla	-		
FOMr-07	540 g/kg	StaDP	1.1 g/kg	MEla	-		
FOMr2-07	280 g/kg	AppDP	0.9 g/kg	DPpo	-		
FOMr2/FOMr	0.52 /kg						
DVE-91	56 g/kg			**Broilers**		**Horses**	
DVE-07	63 g/kg			MEbr	-	NEm	7.00 MJ/kg
OEB-91	-14 g/kg			MEbr	-	NEm	1672 kcal/kg
OEB-07	-26 g/kg			DPpo	-	EWpa	0.783 /kg
OEB2-07	-14 g/kg					DCPho	62 g/kg
DVMET-91	1.4 g/kg						
DVLYS-91	3.9 g/kg						
DVMET-07	1.6 g/kg						
DVLYS-07	4.5 g/kg						
SW	0.18 /kg						
VW	0.28 /kg						

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Oats mill feed, high grade 1004.105/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			91	60	-	49	44	-	-
LYS	4.1	0.3	3.7	60	2.2	51	1.9	-	-
MET	1.7	0.1	1.6	60	0.9	54	0.8	-	-
CYS	3.0	0.3	2.7	60	1.6	53	1.5	-	-
THR	3.5	0.2	3.2	59	1.9	43	1.4	-	-
TRP	1.2	0.1	1.1	60	0.7	49	0.5	-	-
ILE	3.7	0.2	3.4	60	2.0	50	1.7	-	-
ARG	6.5	0.5	5.9	60	3.6	54	3.2	-	-
PHE	4.8	0.4	4.4	60	2.6	53	2.3	-	-
HIS	2.2	0.2	2.0	60	1.2	52	1.0	-	-
LEU	7.3	0.3	6.7	60	4.0	53	3.6	-	-
TYR	3.3	0.3	3.0	60	1.8	51	1.5	-	-
VAL	5.2	0.3	4.7	60	2.8	50	2.4	-	-
ALA	4.8	0.3	4.4	60	2.6	50	2.2	-	-
ASP	8.2	0.5	7.5	60	4.5	50	3.8	-	-
GLU	19.2	1.5	17.5	59	10.4	54	9.4	-	-
GLY	4.9	0.4	4.5	60	2.7	42	1.9	-	-
PRO	5.3	0.5	4.8	59	2.9	39	1.9	-	-
SER	4.8	0.3	4.4	59	2.6	46	2.0	-	-
Sum AA	93.7		86	-	51	-	43	-	-

Fatty acids	% FA	g/kg
CFAT(h)		44.3
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.1
C16:0	19.0	6.7
C16:1	0.4	0.1
C18:0	1.0	0.4
C18:1	35.0	12.4
C:18:2	39.0	13.8
C18:3	2.0	0.7
>=C20	0.4	0.1
Sum FA	97.2	34.4
% FA in CFAT-fraction		80

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Oats, peeled 1004.116/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	888	20	129	63	69	13	663	657
sdc	4	2	12	4	4	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	575	545	-	14	30	15	9	117	87
sdc	8	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.6	4.3	2.8	1.2	4.0	0.1	0.4	0.1	1.5
sdc	-	0.3	-	-	0.2	-	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	48	44	28	3	0.2	-	0.0
sdc	10	12	3	0	-	-	-

IP/P	65	SUGe/SUG	95	EB (meq/kg)	95	
		CF_DI	0.98	CAD (meq/kg)	-5	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	79	DCCP	77	DCCP	83	DCCP	-
DCCFAT	94	DCCFATh	75	DCCFAT	86	DCCFAT	-
DCCF	50	DCCF	35	DCNFE	92	DCCF	-
DCNFE	93	DCNFE	97	DCPpo	50	DCNFE	-
DCOM	90	DCOM	91				
		DCNSPh	74	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	89	DCCP	85
%RUP	22	StaDCP	30	DCCFATh	88	DCOM	90
%DRUP	90	AppDCP	26	DC(S+S)	100		
%RUSTA	10			DCNFEh	85		
%DASH	50			DCPpo	50		
DASHmax	15						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1187 /kg	NE2015	11.72 MJ/kg	MEpo	14.60 MJ/kg	MErab	-
VEVI	1330 /kg	NE2015	2800 kcal/kg	MEpo	3490 kcal/kg	MErab	-
FOM-91	637 g/kg	EW2015	1.33 /kg	MEla	14.92 MJ/kg		
FOMr-07	680 g/kg	StaDP	1.3 g/kg	MEla	3566 kcal/kg		
FOMr2-07	471 g/kg	AppDP	1.1 g/kg	DPpo	2.1 g/kg		
FOMr2/FOMr	0.69 /kg						
DVE-91	82 g/kg			**Broilers**		**Horses**	
DVE-07	101 g/kg			MEbr	14.13 MJ/kg	NEm	10.44 MJ/kg
OEB-91	2 g/kg			MEbr	3378 kcal/kg	NEm	2496 kcal/kg
OEB-07	-29 g/kg			DPpo	2.1 g/kg	EWpa	1.170 /kg
OEB2-07	-36 g/kg					DCPho	109 g/kg
DVMET-91	1.9 g/kg						
DVLYS-91	5.4 g/kg						
DVMET-07	2.4 g/kg						
DVLYS-07	7.0 g/kg						
SW	-0.14 /kg						
VW	0.25 /kg						

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Oats, peeled 1004.116/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			129	81	-	73	94	-	-
LYS	4.1	0.3	5.3	86	4.6	80	4.2	90	4.8
MET	1.7	0.1	2.2	90	2.0	86	1.9	92	2.0
CYS	3.0	0.3	3.9	81	3.1	76	2.9	73	2.8
THR	3.5	0.2	4.5	81	3.6	69	3.1	80	3.6
TRP	1.2	0.1	1.5	83	1.3	75	1.2	79	1.2
ILE	3.7	0.2	4.8	88	4.2	81	3.9	90	4.3
ARG	6.5	0.5	8.4	96	8.0	92	7.7	90	7.5
PHE	4.8	0.4	6.2	92	5.7	87	5.4	93	5.7
HIS	2.2	0.2	2.8	94	2.7	88	2.5	89	2.5
LEU	7.3	0.3	9.4	90	8.5	86	8.0	90	8.5
TYR	3.3	0.3	4.2	91	3.9	85	3.6	86	3.7
VAL	5.2	0.3	6.7	88	5.9	81	5.4	88	5.9
ALA	4.8	0.3	6.2	82	5.1	75	4.6	85	5.3
ASP	8.2	0.5	10.6	82	8.6	75	7.9	82	8.7
GLU	19.2	1.5	24.7	90	22.2	85	21.1	88	21.8
GLY	4.9	0.4	6.3	83	5.2	70	4.4	82	5.2
PRO	5.3	0.5	6.8	91	6.2	77	5.3	79	5.4
SER	4.8	0.3	6.2	86	5.3	77	4.8	82	5.1
Sum AA	93.7		121	-	106	-	98	-	104

Fatty acids	% FA	g/kg
CFAT(h)		63.4
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.2
C16:0	19.0	10.8
C16:1	0.4	0.2
C18:0	1.0	0.6
C18:1	35.0	20.0
C:18:2	39.0	22.2
C18:3	2.0	1.1
>=C20	0.4	0.2
Sum FA	97.2	55.4
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Palm kernel expeller-CF < 180 g/kg 3001.401/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	919	42	159	85	87	167	465	463
sdc	12	2	5	10	-	11	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	9	3	-	15	543	345	83	615	72
sdc	11	-	-	3	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.9	5.9	3.8	2.7	6.6	0.1	1.6	1.1	1.3
sdc	0.4	0.3	-	0.2	0.4	0.1	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	736	276	41	24	0.5	0.1	0.1
sdc	372	34	3	1	-	-	-

IP/P	65	SUGe/SUG	75	EB (meq/kg)	129	
		CF_DI	0.96	CAD (meq/kg)	-20	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	76		DCCP	30	DCCP	-	DCCP	67
DCCFAT	97		DCCFATh	86	DCCFAT	-	DCCFAT	80
DCCF	49		DCCF	32	DCNFE	-	DCCF	20
DCNFE	85		DCNFE	82	DCPpo	-	DCNFE	65
DCOM	77		DCOM	63				
			DCNSPh	68	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	67
%RUP	64	73	StaDCP	40	DCCFATh	-	DCOM	70
%DRUP	83	83	AppDCP	37	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	35	35			DCPpo	-		
DASHmax	20	20						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1044 /kg	NE2015	7.49 MJ/kg	MEpo	-	MErab	10.31 MJ/kg
VEVI	1116 /kg	NE2015	1791 kcal/kg	MEpo	-	MErab	2465 kcal/kg
FOM-91	492 g/kg	EW2015	0.85 /kg	MEla	-		
FOMr-07	378 g/kg	StaDP	2.3 g/kg	MEla	-		
FOMr2-07	109 g/kg	AppDP	2.2 g/kg	DPpo	-		
FOMr2/FOMr	0.29 /kg						
DVE-91	123 g/kg			**Broilers**		**Horses**	
DVE-07	117 g/kg			MEbr	-	NEm	7.44 MJ/kg
OEB-91	-27 g/kg			MEbr	-	NEm	1779 kcal/kg
OEB-07	-17 g/kg			DPpo	-	EWpa	0.833 /kg
OEB2-07	-1 g/kg					DCPho	106 g/kg
DVMET-91	2.8 g/kg						
DVLYS-91	5.5 g/kg						
DVMET-07	2.6 g/kg						
DVLYS-07	4.8 g/kg						
SW	0.44 /kg						
VW	0.31 /kg						

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Palm kernel expeller-CF < 180 g/kg 3001.401/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			159	65	-	59	93	-	-
LYS	3.0	-	4.8	65	3.1	58	2.7	-	-
MET	1.9	-	3.0	74	2.2	70	2.1	-	-
CYS	1.5	-	2.4	67	1.6	59	1.4	-	-
THR	3.1	-	4.9	70	3.4	59	2.9	-	-
TRP	0.8	-	1.3	59	0.7	49	0.6	-	-
ILE	3.3	-	5.2	65	3.4	59	3.1	-	-
ARG	12.0	-	19.0	65	12.4	63	12.1	-	-
PHE	4.1	-	6.5	65	4.2	61	3.9	-	-
HIS	1.7	-	2.7	65	1.8	59	1.6	-	-
LEU	6.3	-	10.0	65	6.5	61	6.1	-	-
TYR	2.6	-	4.1	65	2.7	59	2.4	-	-
VAL	4.8	-	7.6	65	5.0	59	4.5	-	-
ALA	4.0	-	6.3	65	4.1	58	3.7	-	-
ASP	8.3	-	13.2	65	8.6	60	7.9	-	-
GLU	17.9	-	28.4	65	18.5	61	17.4	-	-
GLY	4.6	-	7.3	65	4.8	54	3.9	-	-
PRO	3.4	-	5.4	65	3.5	46	2.5	-	-
SER	4.2	-	6.7	65	4.3	56	3.7	-	-
Sum AA	87.5		139	-	91	-	83	-	-

Fatty acids	% FA	g/kg
CFAT(h)		85.3
<=C10	7.0	4.5
C12:0	47.0	30.1
C14:0	15.0	9.6
C16:0	9.0	5.8
C16:1	-	0.0
C18:0	3.0	1.9
C18:1	16.0	10.2
C:18:2	2.0	1.3
C18:3	0.4	0.3
>=C20	-	0.0
Sum FA	99.4	63.6
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Palm kernel expeller-CF > 180 g/kg 3001.401/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	927	43	152	85	87	198	450	448
sdc	11	5	8	14	-	8	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	6	2	-	15	597	375	98	631	34
sdc	2	-	-	5	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.9	5.7	3.7	2.7	6.7	0.1	1.6	1.1	1.2
sdc	0.4	0.3	-	0.2	0.4	0.1	0.4	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	743	279	42	24	0.5	0.1	0.1
sdc	375	35	3	1	-	-	-

IP/P	65	SUGe/SUG	75	EB (meq/kg)	132	
		CF_DI	0.96	CAD (meq/kg)	-14	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	75	DCCP	29	DCCP	-	DCCP	67
DCCFAT	97	DCCFATh	86	DCCFAT	-	DCCFAT	80
DCCF	45	DCCF	32	DCNFE	-	DCCF	15
DCNFE	81	DCNFE	77	DCPpo	-	DCNFE	62
DCOM	74	DCOM	59				
		DCNSPh	62	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	65
%RUP	64	73	StaDCP	40	DCCFATh	-	DCOM	66
%DRUP	83	83	AppDCP	37	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	35	35			DCPpo	-		
DASHmax	20	20						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	996 /kg	NE2015	7.18 MJ/kg	MEpo	-	MErab	9.76 MJ/kg
VEVI	1049 /kg	NE2015	1715 kcal/kg	MEpo	-	MErab	2332 kcal/kg
FOM-91	470 g/kg	EW2015	0.82 /kg	MEla	-		
FOMr-07	368 g/kg	StaDP	2.3 g/kg	MEla	-		
FOMr2-07	89 g/kg	AppDP	2.1 g/kg	DPpo	-		
FOMr2/FOMr	0.24 /kg						
DVE-91	115 g/kg			**Broilers**		**Horses**	
DVE-07	110 g/kg			MEbr	-	NEm	7.08 MJ/kg
OEB-91	-26 g/kg			MEbr	-	NEm	1691 kcal/kg
OEB-07	-18 g/kg			DPpo	-	EWpa	0.792 /kg
OEB2-07	1 g/kg					DCPho	99 g/kg
DVMET-91	2.6 g/kg						
DVLYS-91	5.0 g/kg						
DVMET-07	2.5 g/kg						
DVLYS-07	4.5 g/kg						
SW	0.47 /kg						
VW	0.32 /kg						

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Palm kernel expeller-CF > 180 g/kg 3001.401/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			152	65	-	58	88	-	-
LYS	3.0	-	4.6	65	3.0	57	2.6	-	-
MET	1.9	-	2.9	73	2.1	69	2.0	-	-
CYS	1.5	-	2.3	66	1.5	57	1.3	-	-
THR	3.1	-	4.7	70	3.3	58	2.7	-	-
TRP	0.8	-	1.2	58	0.7	47	0.6	-	-
ILE	3.3	-	5.0	65	3.3	58	2.9	-	-
ARG	12.0	-	18.2	65	11.8	63	11.5	-	-
PHE	4.1	-	6.2	65	4.0	60	3.7	-	-
HIS	1.7	-	2.6	65	1.7	58	1.5	-	-
LEU	6.3	-	9.6	65	6.2	60	5.8	-	-
TYR	2.6	-	4.0	65	2.6	58	2.3	-	-
VAL	4.8	-	7.3	65	4.7	58	4.2	-	-
ALA	4.0	-	6.1	65	3.9	57	3.5	-	-
ASP	8.3	-	12.6	65	8.2	59	7.4	-	-
GLU	17.9	-	27.2	65	17.6	61	16.5	-	-
GLY	4.6	-	7.0	65	4.5	53	3.7	-	-
PRO	3.4	-	5.2	64	3.3	45	2.3	-	-
SER	4.2	-	6.4	65	4.1	55	3.5	-	-
Sum AA	87.5		133	-	87	-	78	-	-

Fatty acids	% FA	g/kg
CFAT(h)		85.1
<=C10	7.0	4.5
C12:0	47.0	30.0
C14:0	15.0	9.6
C16:0	9.0	5.7
C16:1	-	0.0
C18:0	3.0	1.9
C18:1	16.0	10.2
C:18:2	2.0	1.3
C18:3	0.4	0.3
>=C20	-	0.0
Sum FA	99.4	63.4
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Palm kernel, solvent extracted-CF < 190 g/kg 3001.407/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	893	39	158	24	25	173	498	497
sdc	23	3	13	9	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	2	-	12	546	346	86	658	111
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.8	6.0	3.9	2.8	7.1	0.1	1.7	0.3	1.3
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	770	294	43	24	0.5	0.1	0.1
sdc	-	-	-	-	-	-	-

IP/P	65	SUGe/SUG	75	EB (meq/kg)	137	
		CF_DI	0.96	CAD (meq/kg)	40	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	76		DCCP	30	DCCP	-	DCCP	67
DCCFAT	91		DCCFATh	73	DCCFAT	-	DCCFAT	70
DCCF	49		DCCF	32	DCNFE	-	DCCF	15
DCNFE	85		DCNFE	82	DCPpo	-	DCNFE	65
DCOM	76		DCOM	62				
			DCNSPh	68	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	64	73	StaDCP	40	DCCFATh	-	DCOM	-
%DRUP	83	83	AppDCP	37	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	35	35			DCPpo	-		
DASHmax	18	18						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	871 /kg	NE2015	5.74 MJ/kg	MEpo	-	MErab	8.61 MJ/kg
VEVI	909 /kg	NE2015	1373 kcal/kg	MEpo	-	MErab	2058 kcal/kg
FOM-91	527 g/kg	EW2015	0.65 /kg	MEla	-		
FOMr-07	410 g/kg	StaDP	2.4 g/kg	MEla	-		
FOMr2-07	130 g/kg	AppDP	2.2 g/kg	DPpo	-		
FOMr2/FOMr	0.32 /kg						
DVE-91	127 g/kg			**Broilers**		**Horses**	
DVE-07	120 g/kg			MEbr	-	NEm	-
OEB-91	-33 g/kg			MEbr	-	NEm	-
OEB-07	-21 g/kg			DPpo	-	EWpa	-
OEB2-07	-4 g/kg					DCPho	-
DVMET-91	2.8 g/kg						
DVLYS-91	5.7 g/kg						
DVMET-07	2.7 g/kg						
DVLYS-07	5.1 g/kg						
SW	0.44 /kg						
VW	0.30 /kg						

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Palm kernel, solvent extracted-CF < 190 g/kg 3001.407/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			158	65	-	58	92	-	-
LYS	3.0	0.4	4.8	65	3.1	57	2.7	-	-
MET	1.9	0.1	3.0	73	2.2	70	2.1	-	-
CYS	1.5	0.2	2.4	66	1.6	58	1.4	-	-
THR	3.1	0.1	4.9	70	3.4	59	2.9	-	-
TRP	0.8	0.1	1.3	58	0.7	48	0.6	-	-
ILE	3.3	0.1	5.2	65	3.4	59	3.1	-	-
ARG	12.0	1.1	19.0	65	12.3	63	12.0	-	-
PHE	4.1	0.2	6.5	65	4.2	60	3.9	-	-
HIS	1.7	0.1	2.7	65	1.7	59	1.6	-	-
LEU	6.3	0.2	10.0	65	6.5	61	6.0	-	-
TYR	2.6	0.2	4.1	65	2.7	58	2.4	-	-
VAL	4.8	0.2	7.6	65	4.9	59	4.5	-	-
ALA	4.0	0.1	6.3	65	4.1	58	3.7	-	-
ASP	8.3	0.3	13.1	65	8.5	59	7.8	-	-
GLU	17.9	0.7	28.4	65	18.3	61	17.3	-	-
GLY	4.6	0.2	7.3	65	4.7	54	3.9	-	-
PRO	3.4	0.3	5.4	64	3.5	46	2.5	-	-
SER	4.2	0.2	6.7	65	4.3	56	3.7	-	-
Sum AA	87.5		139	-	90	-	82	-	-

Fatty acids

	% FA	g/kg
CFAT(h)		24.0
<=C10	7.0	1.1
C12:0	47.0	7.3
C14:0	15.0	2.3
C16:0	9.0	1.4
C16:1	-	0.0
C18:0	3.0	0.5
C18:1	16.0	2.5
C:18:2	2.0	0.3
C18:3	0.4	0.1
>=C20	-	0.0
Sum FA	99.4	15.5
% FA in CFAT-fraction		65

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Palm kernel, solvent extracted-CF > 190 g/kg 3001.407/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	876	40	150	16	17	204	466	465
sdc	18	4	11	6	-	12	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	2	-	12	592	370	101	656	65
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.7	5.9	3.8	2.7	6.9	0.1	1.7	0.3	1.2
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	756	288	42	24	0.5	0.1	0.1
sdc	-	-	-	-	-	-	-

IP/P	65	SUGe/SUG	75	EB (meq/kg)	134	
		CF_DI	0.96	CAD (meq/kg)	42	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	75		DCCP	30	DCCP	-	DCCP	67
DCCFAT	86		DCCFATh	66	DCCFAT	-	DCCFAT	70
DCCF	41		DCCF	32	DCNFE	-	DCCF	15
DCNFE	82		DCNFE	76	DCPpo	-	DCNFE	65
DCOM	71		DCOM	57				
			DCNSPh	62	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	64	73	StaDCP	40	DCCFATh	-	DCOM	-
%DRUP	83	83	AppDCP	37	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	35	35			DCPpo	-		
DASHmax	19	19						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	761 /kg	NE2015	5.05 MJ/kg	MEpo	-	MErab	8.00 MJ/kg
VEVI	771 /kg	NE2015	1207 kcal/kg	MEpo	-	MErab	1913 kcal/kg
FOM-91	480 g/kg	EW2015	0.57 /kg	MEla	-		
FOMr-07	389 g/kg	StaDP	2.3 g/kg	MEla	-		
FOMr2-07	104 g/kg	AppDP	2.2 g/kg	DPpo	-		
FOMr2/FOMr	0.27 /kg						
DVE-91	114 g/kg			**Broilers**		**Horses**	
DVE-07	110 g/kg			MEbr	-	NEm	-
OEB-91	-28 g/kg			MEbr	-	NEm	-
OEB-07	-21 g/kg			DPpo	-	EWpa	-
OEB2-07	-2 g/kg					DCPho	-
DVMET-91	2.6 g/kg						
DVLYS-91	5.0 g/kg						
DVMET-07	2.5 g/kg						
DVLYS-07	4.6 g/kg						
SW	0.47 /kg						
VW	0.31 /kg						

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Palm kernel, solvent extracted-CF > 190 g/kg 3001.407/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			150	65	-	58	87	-	-
LYS	3.0	0.4	4.5	65	2.9	57	2.6	-	-
MET	1.9	0.1	2.8	73	2.1	70	2.0	-	-
CYS	1.5	0.2	2.2	66	1.5	58	1.3	-	-
THR	3.1	0.1	4.6	70	3.2	58	2.7	-	-
TRP	0.8	0.1	1.2	58	0.7	48	0.6	-	-
ILE	3.3	0.1	4.9	65	3.2	58	2.9	-	-
ARG	12.0	1.1	17.9	65	11.7	63	11.3	-	-
PHE	4.1	0.2	6.1	65	4.0	60	3.7	-	-
HIS	1.7	0.1	2.5	65	1.6	58	1.5	-	-
LEU	6.3	0.2	9.4	65	6.1	60	5.7	-	-
TYR	2.6	0.2	3.9	65	2.5	58	2.3	-	-
VAL	4.8	0.2	7.2	65	4.7	58	4.2	-	-
ALA	4.0	0.1	6.0	65	3.9	58	3.5	-	-
ASP	8.3	0.3	12.4	65	8.0	59	7.4	-	-
GLU	17.9	0.7	26.8	65	17.3	61	16.3	-	-
GLY	4.6	0.2	6.9	65	4.5	53	3.7	-	-
PRO	3.4	0.3	5.1	64	3.3	45	2.3	-	-
SER	4.2	0.2	6.3	65	4.1	56	3.5	-	-
Sum AA	87.5		131	-	85	-	77	-	-

Fatty acids	% FA	g/kg
CFAT(h)		15.8
<=C10	7.0	0.7
C12:0	47.0	4.8
C14:0	15.0	1.5
C16:0	9.0	0.9
C16:1	-	0.0
C18:0	3.0	0.3
C18:1	16.0	1.6
C:18:2	2.0	0.2
C18:3	0.4	0.0
>=C20	-	0.0
Sum FA	99.4	10.2
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Palm kernels 3001.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	938	20	92	480	-	97	249	-
sdc	33	2	7	14	-	19	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	2	-	15	322	291	48	330	9
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.2	3.1	2.0	2.6	-	-	-	-	0.7
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	129	20	13	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	65	SUGe/SUG	75	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	62		DCCP	53	DCCP	-	DCCP	68
DCCFAT	100		DCCFATh	74	DCCFAT	-	DCCFAT	85
DCCF	46		DCCF	32	DCNFE	-	DCCF	35
DCNFE	83		DCNFE	78	DCPpo	-	DCNFE	65
DCOM	86		DCOM	69				
			DCNSPh	63	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	60
%RUP	52	63	StaDCP	40	DCCFATh	-	DCOM	69
%DRUP	83	83	AppDCP	34	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	15	15						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	2141 /kg	NE2015	15.50 MJ/kg	MEpo	-	MErab	19.94 MJ/kg
VEVI	2479 /kg	NE2015	3704 kcal/kg	MEpo	-	MErab	4764 kcal/kg
FOM-91	260 g/kg	EW2015	1.76 /kg	MEla	-		
FOMr-07	203 g/kg	StaDP	1.2 g/kg	MEla	-		
FOMr2-07	50 g/kg	AppDP	1.1 g/kg	DPpo	-		
FOMr2/FOMr	0.25 /kg						
DVE-91	58 g/kg			**Broilers**		**Horses**	
DVE-07	58 g/kg			MEbr	-	NEm	12.36 MJ/kg
OEB-91	0 g/kg			MEbr	-	NEm	2953 kcal/kg
OEB-07	2 g/kg			DPpo	-	EWpa	1.384 /kg
OEB2-07	5 g/kg					DCPho	55 g/kg
DVMET-91	1.3 g/kg						
DVLYS-91	2.6 g/kg						
DVMET-07	1.3 g/kg						
DVLYS-07	2.4 g/kg						
SW	0.38 /kg						
VW	0.28 /kg						

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Palm kernels 3001.000/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			92	65	-	53	48	-	-
LYS	3.0	0.4	2.7	65	1.8	51	1.4	-	-
MET	1.9	0.1	1.7	73	1.3	67	1.2	-	-
CYS	1.5	0.2	1.4	66	0.9	52	0.7	-	-
THR	3.1	0.1	2.8	69	2.0	50	1.4	-	-
TRP	0.8	0.1	0.7	58	0.4	40	0.3	-	-
ILE	3.3	0.1	3.0	65	2.0	53	1.6	-	-
ARG	12.0	1.1	11.0	65	7.1	62	6.8	-	-
PHE	4.1	0.2	3.8	65	2.4	57	2.1	-	-
HIS	1.7	0.1	1.6	64	1.0	54	0.8	-	-
LEU	6.3	0.2	5.8	65	3.7	57	3.3	-	-
TYR	2.6	0.2	2.4	65	1.5	53	1.3	-	-
VAL	4.8	0.2	4.4	65	2.8	53	2.3	-	-
ALA	4.0	0.1	3.7	65	2.4	52	1.9	-	-
ASP	8.3	0.3	7.6	65	4.9	55	4.2	-	-
GLU	17.9	0.7	16.4	64	10.6	58	9.5	-	-
GLY	4.6	0.2	4.2	65	2.7	45	1.9	-	-
PRO	3.4	0.3	3.1	64	2.0	31	1.0	-	-
SER	4.2	0.2	3.8	64	2.5	48	1.9	-	-
Sum AA	87.5		80	-	52	-	43	-	-

Fatty acids	% FA	g/kg
CFAT(h)		480.1
<=C10	7.0	31.9
C12:0	47.0	214.4
C14:0	15.0	68.4
C16:0	9.0	41.1
C16:1	-	0.0
C18:0	3.0	13.7
C18:1	16.0	73.0
C:18:2	2.0	9.1
C18:3	0.5	2.3
>=C20	-	0.0
Sum FA	99.5	453.8
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Peas 2006.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	866	29	201	10	17	53	573	567
sdc	7	3	10	2	2	4	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	449	416	-	43	124	72	1	169	44
sdc	11	-	-	4	44	15	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.9	3.8	2.1	1.2	10.0	0.1	0.7	0.5	1.2
sdc	0.2	0.4	-	0.1	0.8	0.0	0.4	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	73	12	30	7	3.0	0.1	0.1
sdc	26	2	4	1	-	-	-

IP/P	55	SUGe/SUG	70	EB (meq/kg)	239	
		CF_DI	0.97	CAD (meq/kg)	129	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	82		DCCP	86	DCCP	87	DCCP	85
DCCFAT	69		DCCFATh	56	DCCFAT	50	DCCFAT	60
DCCF	86		DCCF	73	DCNFE	80	DCCF	30
DCNFE	94		DCNFE	97	DCPpo	42	DCNFE	92
DCOM	90		DCOM	92				
			DCNSPh	82	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	86	DCCP	77
%RUP	21	23	StaDCP	48	DCCFATh	87	DCOM	88
%DRUP	96	96	AppDCP	43	DC(S+S)	93		
%RUSTA	21	22			DCNFEh	75		
%DASH	65	65			DCPpo	42		
DASHmax	26	26						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1023 /kg	NE2015	10.03 MJ/kg	MEpo	11.29 MJ/kg	MErab	12.75 MJ/kg
VEVI	1123 /kg	NE2015	2398 kcal/kg	MEpo	2699 kcal/kg	MErab	3048 kcal/kg
FOM-91	617 g/kg	EW2015	1.14 /kg	MEla	11.32 MJ/kg		
FOMr-07	628 g/kg	StaDP	1.8 g/kg	MEla	2706 kcal/kg		
FOMr2-07	366 g/kg	AppDP	1.7 g/kg	DPpo	1.6 g/kg		
FOMr2/FOMr	0.58 /kg						
DVE-91	98 g/kg			**Broilers**		**Horses**	
DVE-07	105 g/kg			MEbr	11.06 MJ/kg	NEm	9.18 MJ/kg
OEB-91	61 g/kg			MEbr	2644 kcal/kg	NEm	2193 kcal/kg
OEB-07	49 g/kg			DPpo	1.6 g/kg	EWpa	1.028 /kg
OEB2-07	48 g/kg					DCPho	155 g/kg
DVMET-91	1.9 g/kg						
DVLYS-91	7.4 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	8.0 g/kg						
SW	0.09 /kg						
VW	0.25 /kg						

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Peas 2006.000/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			201	79	-	74	149	-	-
LYS	7.1	0.3	14.3	81	11.6	79	11.3	88	12.6
MET	1.0	0.1	2.0	74	1.5	69	1.4	85	1.7
CYS	1.5	0.1	3.0	68	2.1	62	1.9	73	2.2
THR	3.7	0.2	7.4	76	5.6	69	5.1	81	6.0
TRP	0.9	0.1	1.8	70	1.3	63	1.1	79	1.4
ILE	4.1	0.2	8.2	79	6.5	76	6.2	82	6.8
ARG	8.8	0.7	17.7	89	15.7	87	15.4	90	15.9
PHE	4.7	0.2	9.5	77	7.3	74	7.0	83	7.8
HIS	2.5	0.1	5.0	81	4.1	78	3.9	85	4.3
LEU	7.1	0.2	14.3	78	11.2	75	10.8	83	11.9
TYR	3.3	0.2	6.6	79	5.2	75	5.0	84	5.6
VAL	4.6	0.3	9.3	77	7.1	72	6.7	82	7.6
ALA	4.4	0.2	8.9	76	6.7	71	6.3	86	7.6
ASP	11.7	0.5	23.5	81	19.2	79	18.5	86	20.2
GLU	16.7	0.7	33.6	84	28.4	81	27.4	91	30.6
GLY	4.4	0.2	8.9	77	6.9	69	6.1	84	7.4
PRO	4.0	0.3	8.0	86	6.9	74	6.0	85	6.8
SER	4.7	0.2	9.5	80	7.5	74	7.0	84	7.9
Sum AA	95.2		191	-	155	-	147	-	164

Fatty acids	% FA	g/kg
CFAT(h)		10.1
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.3	0.0
C16:0	11.4	0.9
C16:1	-	0.0
C18:0	3.0	0.2
C18:1	22.5	1.7
C:18:2	48.9	3.7
C18:3	11.2	0.9
>=C20	2.2	0.2
Sum FA	99.5	7.6
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Peas:

1. The stated digestibility values for poultry apply to summer peas.

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Poppy seed 3007.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	928	69	205	438	-	55	161	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	216	216
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	13.6	7.9	-	3.2	5.8	-	-	-	2.6
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	75		DCCP	-	DCCP	-	DCCP	-
DCCFAT	94		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	25		DCCF	-	DCNFE	-	DCCF	-
DCNFE	50		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	77		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	80	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	-	MEpo	-	MErab	-
VEVI	-	NE2015	-	MEpo	-	MErab	-
FOM-91	-	EW2015	-	MEla	-		
FOMr-07	-	StaDP	-	MEla	-		
FOMr2-07	-	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.00 /kg						
VW	-						

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Poppy seed 3007.000/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized DC	Ileal digestible AA pigs standardized g/kg	Ileal digestible AA pigs apparent DC	Ileal digestible AA pigs apparent g/kg	Standardized ileal digestible AA poultry DC	Standardized ileal digestible AA poultry g/kg
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			205	-	-	-	-	-	-
LYS	7.8	-	16.0	-	-	-	-	-	-
MET	2.2	-	4.5	-	-	-	-	-	-
CYS	2.9	-	5.9	-	-	-	-	-	-
THR	4.4	-	9.0	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	4.0	-	8.2	-	-	-	-	-	-
ARG	10.2	-	20.9	-	-	-	-	-	-
PHE	4.5	-	9.2	-	-	-	-	-	-
HIS	3.1	-	6.4	-	-	-	-	-	-
LEU	7.4	-	15.2	-	-	-	-	-	-
TYR	2.9	-	5.9	-	-	-	-	-	-
VAL	5.5	-	11.3	-	-	-	-	-	-
ALA	5.2	-	10.7	-	-	-	-	-	-
ASP	10.5	-	21.5	-	-	-	-	-	-
GLU	21.1	-	43.3	-	-	-	-	-	-
GLY	5.2	-	10.7	-	-	-	-	-	-
PRO	4.6	-	9.4	-	-	-	-	-	-
SER	5.4	-	11.1	-	-	-	-	-	-
Sum AA	106.9		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		438.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato crisps 4001.664/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	962	35	59	-	300	11	-	557
sdc	19	4	5	-	34	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	464	444	-	28	-	-	-	98	98
sdc	29	-	-	9	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.3	1.4	0.2	0.6	11.2	5.7	7.4	-	0.4
sdc	0.1	0.2	-	0.1	1.9	3.2	4.8	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	15	SUGe/SUG	5	EB (meq/kg)	325
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	20		DCCP	62	DCCP	-	DCCP	-
DCCFAT	84		DCCFATh	88	DCCFAT	-	DCCFAT	-
DCCF	74		DCCF	70	DCNFE	-	DCCF	-
DCNFE	93		DCNFE	98	DCPpo	-	DCNFE	-
DCOM	86		DCOM	92				
			DCNSPh	87	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	41	41	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	90	90	AppDCP	46	DC(S+S)	-		
%RUSTA	10	9			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	31	31						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1608 /kg	NE2015	17.28 MJ/kg	MEpo	-	MErab	-
VEVI	1817 /kg	NE2015	4130 kcal/kg	MEpo	-	MErab	-
FOM-91	426 g/kg	EW2015	1.96 /kg	MEla	-		
FOMr-07	528 g/kg	StaDP	0.8 g/kg	MEla	-		
FOMr2-07	366 g/kg	AppDP	0.6 g/kg	DPpo	-		
FOMr2/FOMr	0.69 /kg						
DVE-91	54 g/kg			**Broilers**		**Horses**	
DVE-07	77 g/kg			MEbr	-	NEm	-
OEB-91	-32 g/kg			MEbr	-	NEm	-
OEB-07	-70 g/kg			DPpo	-	EWpa	-
OEB2-07	-58 g/kg					DCPho	-
DVMET-91	1.2 g/kg						
DVLYS-91	3.8 g/kg						
DVMET-07	1.8 g/kg						
DVLYS-07	5.7 g/kg						
SW	0.29 /kg						
VW	0.53 /kg						

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Potato crisps 4001.664/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			59	49	-	31	18	-	-
LYS	5.4	-	3.2	50	1.6	38	1.2	-	-
MET	1.4	-	0.8	50	0.4	37	0.3	-	-
CYS	1.3	-	0.8	50	0.4	24	0.2	-	-
THR	3.9	-	2.3	49	1.1	24	0.6	-	-
TRP	0.9	-	0.5	50	0.3	25	0.1	-	-
ILE	3.7	-	2.2	50	1.1	33	0.7	-	-
ARG	3.1	-	1.8	49	0.9	29	0.5	-	-
PHE	3.9	-	2.3	49	1.1	36	0.8	-	-
HIS	1.7	-	1.0	49	0.5	32	0.3	-	-
LEU	6.1	-	3.6	49	1.8	37	1.3	-	-
TYR	3.3	-	1.9	50	1.0	35	0.7	-	-
VAL	5.2	-	3.1	50	1.5	33	1.0	-	-
ALA	6.0	-	3.5	50	1.8	36	1.3	-	-
ASP	19.1	-	11.2	50	5.6	43	4.8	-	-
GLU	11.6	-	6.8	49	3.3	32	2.2	-	-
GLY	3.6	-	2.1	49	1.0	8	0.2	-	-
PRO	3.4	-	2.0	48	1.0	-	-0.1	-	-
SER	3.7	-	2.2	49	1.1	20	0.4	-	-
Sum AA	87.3		51	-	25	-	17	-	-

Fatty acids	% FA	g/kg
CFAT(h)		300.1
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato protein-ASH < 10 g/kg 4001.203/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	908	5	797	10	20	6	89	79
sdc	6	2	8	6	5	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	10	1	-	9	17	3	-	76	58
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.4	1.6	0.8	0.3	0.2	0.2	2.2	1.1	7.1
sdc	0.1	0.4	-	0.3	0.2	0.2	1.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	95	4	5	33	-	-	-
sdc	19	1	5	6	-	-	-

IP/P	50	SUGe/SUG	5	EB (meq/kg)	-49	
		CF_DI	0.97	CAD (meq/kg)	-562	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	89		DCCP	94	DCCP	90	DCCP	-
DCCFAT	79		DCCFATh	51	DCCFAT	60	DCCFAT	-
DCCF	-		DCCF	100	DCNFE	68	DCCF	-
DCNFE	93		DCNFE	100	DCPpo	65	DCNFE	-
DCOM	89		DCOM	94				
			DCNSPh	100	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	87	DCCP	-
%RUP	62	62	StaDCP	60	DCCFATh	88	DCOM	-
%DRUP	90	90	AppDCP	48	DC(S+S)	100		
%RUSTA	-	-			DCNFEh	12		
%DASH	50	50			DCPpo	65		
DASHmax	7	7						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1115 /kg	NE2015	10.00 MJ/kg	MEpo	14.34 MJ/kg	MErab	-
VEVI	1164 /kg	NE2015	2390 kcal/kg	MEpo	3427 kcal/kg	MErab	-
FOM-91	288 g/kg	EW2015	1.14 /kg	MEla	14.41 MJ/kg		
FOMr-07	359 g/kg	StaDP	0.9 g/kg	MEla	3444 kcal/kg		
FOMr2-07	76 g/kg	AppDP	0.8 g/kg	DPpo	1.0 g/kg		
FOMr2/FOMr	0.21 /kg						
DVE-91	511 g/kg			**Broilers**		**Horses**	
DVE-07	469 g/kg			MEbr	13.39 MJ/kg	NEm	-
OEB-91	208 g/kg			MEbr	3199 kcal/kg	NEm	-
OEB-07	253 g/kg			DPpo	1.0 g/kg	EWpa	-
OEB2-07	50 g/kg					DCPho	-
DVMET-91	12.3 g/kg						
DVLYS-91	40.0 g/kg						
DVMET-07	11.3 g/kg						
DVLYS-07	36.7 g/kg						
SW	0.29 /kg						
VW	0.26 /kg						

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Potato protein-ASH < 10 g/kg 4001.203/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			797	90	-	89	709	-	-
LYS	7.8	0.2	62.2	89	55.6	89	55.3	89	55.3
MET	2.3	0.1	18.3	91	16.7	90	16.6	91	16.7
CYS	1.5	0.2	12.0	76	9.1	74	8.9	75	9.0
THR	5.7	0.2	45.4	86	39.2	85	38.6	88	40.0
TRP	1.4	0.1	11.2	80	9.0	79	8.8	85	9.5
ILE	5.6	0.2	44.6	89	39.9	89	39.5	90	40.2
ARG	5.2	0.1	41.5	93	38.4	92	38.0	93	38.6
PHE	6.4	0.2	51.0	90	46.1	90	45.8	91	46.4
HIS	2.2	0.1	17.5	87	15.3	86	15.1	90	15.8
LEU	10.2	0.3	81.3	91	74.2	91	73.8	92	74.8
TYR	5.6	0.3	44.6	91	40.6	90	40.4	92	41.1
VAL	6.6	0.2	52.6	88	46.3	87	45.8	90	47.4
ALA	4.9	0.2	39.1	87	34.0	86	33.5	88	34.4
ASP	12.7	0.4	101.3	83	84.3	83	83.6	86	87.1
GLU	10.9	0.4	86.9	88	76.5	87	75.4	90	78.2
GLY	4.9	0.2	39.1	82	31.9	79	31.0	83	32.4
PRO	4.9	0.3	39.1	95	36.9	92	35.9	89	34.8
SER	5.3	0.2	42.3	87	36.6	85	36.0	88	37.2
Sum AA	104.1		830	-	730	-	722	-	739

Fatty acids

	% FA	g/kg
CFAT(h)		20.1
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato protein-ASH > 10 g/kg 4001.203/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	904	20	773	10	20	9	91	82
sdc	4	3	16	6	5	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	10	1	-	5	17	-	3	85	68
sdc	-	-	-	3	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.5	2.0	1.0	0.4	6.9	0.3	0.8	1.1	6.9
sdc	0.3	0.5	-	-	1.6	-	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	124	9	29	24	-	-	-
sdc	55	4	13	9	-	-	-

IP/P	50	SUGe/SUG	5	EB (meq/kg)	167
		CF_DI	0.97	CAD (meq/kg)	-332

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	89	DCCP	94	DCCP	90	DCCP	-
DCCFAT	79	DCCFATh	51	DCCFAT	60	DCCFAT	-
DCCF	-	DCCF	100	DCNFE	68	DCCF	-
DCNFE	93	DCNFE	100	DCPpo	65	DCNFE	-
DCOM	88	DCOM	94				
		DCNSPh	100	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	87	DCCP	-
%RUP	62	62	StaDCP	60	DCCFATh	88	DCOM	-
%DRUP	90	90	AppDCP	51	DC(S+S)	100		
%RUSTA	-	-			DCNFEh	7		
%DASH	50	50			DCPpo	65		
DASHmax	15	15						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1086 /kg	NE2015	9.78 MJ/kg	MEpo	13.98 MJ/kg	MErab	-
VEVI	1134 /kg	NE2015	2338 kcal/kg	MEpo	3340 kcal/kg	MErab	-
FOM-91	283 g/kg	EW2015	1.11 /kg	MEla	14.05 MJ/kg		
FOMr-07	352 g/kg	StaDP	1.2 g/kg	MEla	3357 kcal/kg		
FOMr2-07	71 g/kg	AppDP	1.0 g/kg	DPpo	1.3 g/kg		
FOMr2/FOMr	0.20 /kg						
DVE-91	495 g/kg			**Broilers**		**Horses**	
DVE-07	455 g/kg			MEbr	12.94 MJ/kg	NEm	-
OEB-91	202 g/kg			MEbr	3092 kcal/kg	NEm	-
OEB-07	245 g/kg			DPpo	1.3 g/kg	EWpa	-
OEB2-07	49 g/kg					DCPho	-
DVMET-91	12.0 g/kg						
DVLYS-91	38.7 g/kg						
DVMET-07	11.0 g/kg						
DVLYS-07	35.6 g/kg						
SW	0.29 /kg						
VW	0.26 /kg						

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Potato protein-ASH > 10 g/kg 4001.203/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			773	90	-	89	688	-	-
LYS	7.8	0.2	60.3	89	54.0	89	53.6	89	53.7
MET	2.3	0.1	17.8	91	16.2	90	16.1	91	16.2
CYS	1.5	0.2	11.6	76	8.8	74	8.6	75	8.7
THR	5.7	0.2	44.1	86	38.0	85	37.4	88	38.8
TRP	1.4	0.1	10.8	80	8.7	79	8.6	85	9.2
ILE	5.6	0.2	43.3	89	38.7	89	38.3	90	39.0
ARG	5.2	0.1	40.2	93	37.2	92	36.9	93	37.4
PHE	6.4	0.2	49.5	90	44.7	90	44.4	91	45.0
HIS	2.2	0.1	17.0	87	14.8	86	14.7	90	15.3
LEU	10.2	0.3	78.9	91	72.0	91	71.6	92	72.6
TYR	5.6	0.3	43.3	91	39.4	90	39.1	92	39.8
VAL	6.6	0.2	51.0	88	44.9	87	44.4	90	45.9
ALA	4.9	0.2	37.9	87	33.0	86	32.5	88	33.3
ASP	12.7	0.4	98.2	83	81.8	83	81.1	86	84.5
GLU	10.9	0.4	84.3	88	74.2	87	73.1	90	75.9
GLY	4.9	0.2	37.9	82	30.9	79	30.1	83	31.5
PRO	4.9	0.3	37.9	95	35.8	92	34.8	89	33.7
SER	5.3	0.2	41.0	87	35.5	85	34.9	88	36.1
Sum AA	104.1		805	-	708	-	700	-	717

Fatty acids	% FA	g/kg
CFAT(h)		20.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato pulp, dried-CP < 90 g/kg 4001.202/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	876	47	61	2	-	164	602	-
sdc	12	14	18	1	-	21	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	328	251	-	12	273	-	-	503	230
sdc	74	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.7	1.0	0.2	0.6	12.7	0.9	1.8	0.7	0.5
sdc	-	0.4	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	693	37	35	6	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	15	SUGe/SUG	5	EB (meq/kg)	312
		CF_DI	0.97	CAD (meq/kg)	240

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	16	DCCP	-52	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	-95	DCCFAT	-	DCCFAT	-
DCCF	73	DCCF	88	DCNFE	-	DCCF	-
DCNFE	92	DCNFE	90	DCPpo	-	DCNFE	-
DCOM	82	DCOM	79				
		DCNSPh	84	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	50	DCCP	-	DCCP	31
%RUP	44	49	StaDCP	60	DCCFATh	-	DCOM	82
%DRUP	75	75	AppDCP	43	DC(S+S)	-		
%RUSTA	20	19			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	40	40						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	863 /kg	NE2015	6.79 MJ/kg	MEpo	-	MErab	-
VEVI	922 /kg	NE2015	1624 kcal/kg	MEpo	-	MErab	-
FOM-91	602 g/kg	EW2015	0.77 /kg	MEla	-		
FOMr-07	571 g/kg	StaDP	0.6 g/kg	MEla	-		
FOMr2-07	287 g/kg	AppDP	0.4 g/kg	DPpo	-		
FOMr2/FOMr	0.50 /kg						
DVE-91	67 g/kg			**Broilers**		**Horses**	
DVE-07	80 g/kg			MEbr	-	NEm	8.17 MJ/kg
OEB-91	-59 g/kg			MEbr	-	NEm	1952 kcal/kg
OEB-07	-79 g/kg			DPpo	-	EWpa	0.915 /kg
OEB2-07	-36 g/kg					DCPho	19 g/kg
DVMET-91	1.6 g/kg						
DVLYS-91	5.1 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	6.1 g/kg						
SW	0.29 /kg						
VW	0.30 /kg						

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Potato pulp, dried-CP < 90 g/kg 4001.202/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			61	39	-	23	14	-	-
LYS	6.2	-	3.8	40	1.5	31	1.2	-	-
MET	1.3	-	0.8	40	0.3	28	0.2	-	-
CYS	1.8	-	1.1	40	0.4	23	0.3	-	-
THR	3.7	-	2.2	39	0.9	16	0.4	-	-
TRP	1.5	-	0.9	40	0.4	26	0.2	-	-
ILE	3.5	-	2.1	40	0.8	24	0.5	-	-
ARG	4.2	-	2.5	40	1.0	26	0.7	-	-
PHE	3.7	-	2.2	39	0.9	27	0.6	-	-
HIS	2.1	-	1.3	39	0.5	27	0.3	-	-
LEU	6.1	-	3.7	40	1.5	28	1.0	-	-
TYR	3.8	-	2.3	40	0.9	29	0.7	-	-
VAL	5.3	-	3.2	40	1.3	25	0.8	-	-
ALA	3.2	-	1.9	40	0.8	17	0.3	-	-
ASP	9.6	-	5.8	39	2.3	28	1.6	-	-
GLU	8.7	-	5.3	38	2.0	19	1.0	-	-
GLY	3.7	-	2.2	39	0.9	4	0.1	-	-
PRO	4.0	-	2.4	39	0.9	-	0.0	-	-
SER	3.8	-	2.3	39	0.9	14	0.3	-	-
Sum AA	76.2		46	-	18	-	10	-	-

Fatty acids	% FA	g/kg
CFAT(h)		2.4
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Potato pulp, dried-CP < 90 g/kg:

1. Often of non-Dutch origin.

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Potato pulp, dried-CP 90 - 130 g/kg 4001.202/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	880	69	96	4	-	151	561	-
sdc	12	6	6	2	-	17	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	319	244	-	12	230	-	-	456	227
sdc	42	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.6	1.3	0.2	0.8	25.1	0.8	1.8	1.3	0.7
sdc	-	-	-	-	3.2	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	696	37	35	6	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	15	SUGe/SUG	5	EB (meq/kg)	627
		CF_DI	0.97	CAD (meq/kg)	500

Digestibility coëfficients (%)

Ruminants			**Pigs**			**Roosters/Laying hens**			**Rabbits**	
DCCP	42		DCCP	-3		DCCP	-		DCCP	-
DCCFAT	30		DCCFATh	-30		DCCFAT	-		DCCFAT	-
DCCF	73		DCCF	88		DCNFE	-		DCCF	-
DCNFE	92		DCNFE	91		DCPpo	-		DCNFE	-
DCOM	82		DCOM	79						
			DCNSPh	85		**Broilers**			**Horses**	
DVE	**1991**	**2007**	DCiSTA	50		DCCP	-		DCCP	55
%RUP	44	49	StaDCP	60		DCCFATh	-		DCOM	83
%DRUP	75	75	AppDCP	46		DC(S+S)	-			
%RUSTA	20	19				DCNFEh	-			
%DASH	65	65				DCPpo	-			
DASHmax	55	55								

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	848 /kg	NE2015	6.72 MJ/kg	MEpo	-	MErab	-
VEVI	903 /kg	NE2015	1606 kcal/kg	MEpo	-	MErab	-
FOM-91	572 g/kg	EW2015	0.76 /kg	MEla	-		
FOMr-07	561 g/kg	StaDP	0.8 g/kg	MEla	-		
FOMr2-07	290 g/kg	AppDP	0.6 g/kg	DPpo	-		
FOMr2/FOMr	0.52 /kg						
DVE-91	77 g/kg			**Broilers**		**Horses**	
DVE-07	91 g/kg			MEbr	-	NEm	8.12 MJ/kg
OEB-91	-36 g/kg			MEbr	-	NEm	1942 kcal/kg
OEB-07	-58 g/kg			DPpo	-	EWpa	0.910 /kg
OEB2-07	-25 g/kg					DCPho	53 g/kg
DVMET-91	1.6 g/kg						
DVLYS-91	5.6 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	6.7 g/kg						
SW	0.29 /kg						
VW	0.29 /kg						

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Potato pulp, dried-CP 90 - 130 g/kg 4001.202/2/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			96	50	-	39	38	-	-
LYS	6.2	-	6.0	50	3.0	44	2.6	-	-
MET	1.3	-	1.2	50	0.6	42	0.5	-	-
CYS	1.8	-	1.7	50	0.9	39	0.7	-	-
THR	3.7	-	3.6	49	1.8	35	1.2	-	-
TRP	1.5	-	1.4	50	0.7	41	0.6	-	-
ILE	3.5	-	3.4	50	1.7	40	1.3	-	-
ARG	4.2	-	4.0	50	2.0	41	1.7	-	-
PHE	3.7	-	3.6	49	1.8	42	1.5	-	-
HIS	2.1	-	2.0	50	1.0	42	0.8	-	-
LEU	6.1	-	5.9	50	2.9	43	2.5	-	-
TYR	3.8	-	3.7	50	1.8	43	1.6	-	-
VAL	5.3	-	5.1	50	2.5	41	2.1	-	-
ALA	3.2	-	3.1	50	1.5	36	1.1	-	-
ASP	9.6	-	9.2	50	4.6	42	3.9	-	-
GLU	8.7	-	8.4	49	4.1	37	3.1	-	-
GLY	3.7	-	3.6	49	1.8	27	1.0	-	-
PRO	4.0	-	3.8	49	1.9	24	0.9	-	-
SER	3.8	-	3.7	49	1.8	34	1.2	-	-
Sum AA	76.2		73	-	36	-	28	-	-

Fatty acids		
	% FA	g/kg
CFAT(h)		3.7
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products		
	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Potato pulp, dried-CP 90 - 130 g/kg:

1. Often of non-Dutch origin.

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Potato pulp, dried-CP > 130 g/kg 4001.202/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	1000	1000
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	-	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	-		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	-	MEpo	-	MErab	-
VEVI	-	NE2015	-	MEpo	-	MErab	-
FOM-91	-	EW2015	-	MEla	-		
FOMr-07	-	StaDP	-	MEla	-		
FOMr2-07	-	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Potato pulp, dried-CP > 130 g/kg 4001.202/3/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids		
	% FA	g/kg
CFAT(h)		0.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products		
	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Potato pulp, dried-CP > 130 g/kg:

1. Often of non-Dutch origin.

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Potato starch, dried 4001.201/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	863	5	6	1	-	4	847	-
sdc	47	5	6	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	752	703	-	-	-	-	-	148	148
sdc	68	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.3	0.7	0.1	0.1	0.9	0.2	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	3	1	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	15	SUGe/SUG	5	EB (meq/kg)	-
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**			**Roosters/Laying hens**			**Rabbits**	
DCCP	-		DCCP	-		DCCP	-		DCCP	-
DCCFAT	-		DCCFATh	-		DCCFAT	-		DCCFAT	-
DCCF	-		DCCF	-		DCNFE	-		DCCF	-
DCNFE	95		DCNFE	-		DCPpo	-		DCNFE	-
DCOM	94		DCOM	-						
			DCNSPh	-		**Broilers**			**Horses**	
DVE	**1991**	**2007**	DCiSTA	-		DCCP	-		DCCP	-
%RUP	5	5	StaDCP	60		DCCFATh	-		DCOM	-
%DRUP	-	0	AppDCP	36		DC(S+S)	-			
%RUSTA	25	25				DCNFEh	-			
%DASH	50	50				DCPpo	-			
DASHmax	7	7								

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1092 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1241 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	628 g/kg	EW2015	-	MEla	-		
FOMr-07	628 g/kg	StaDP	0.4 g/kg	MEla	-		
FOMr2-07	303 g/kg	AppDP	0.3 g/kg	DPpo	-		
FOMr2/FOMr	0.48 /kg						
DVE-91	56 g/kg			**Broilers**		**Horses**	
DVE-07	74 g/kg			MEbr	-	NEm	-
OEB-91	-89 g/kg			MEbr	-	NEm	-
OEB-07	-118 g/kg			DPpo	-	EWpa	-
OEB2-07	-50 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-0.01 /kg						
VW	0.25 /kg						

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Potato starch, dried 4001.201/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			6	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		0.9
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato starch, heat treated, dried 4001.232/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	875	45	39	0	-	3	788	788
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	778	728	-	35	-	-	-	29	29
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.2	1.6	0.2	0.1	0.4	17.4	11.6	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	22	-	2	1	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	15	SUGe/SUG	25	EB (meq/kg)	440
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	-	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	94	DCCF	-
DCNFE	-	DCNFE	97	DCPpo	55	DCNFE	-
DCOM	-	DCOM	92				
		DCNSPh	0	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	100	100	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	0	AppDCP	49	DC(S+S)	-		
%RUSTA	5	79			DCNFEh	-		
%DASH	50	50			DCPpo	55		
DASHmax	29	29						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	10.65 MJ/kg	MEpo	12.83 MJ/kg	MErab	-
VEVI	-	NE2015	2546 kcal/kg	MEpo	3066 kcal/kg	MErab	-
FOM-91	712 g/kg	EW2015	1.21 /kg	MEla	12.83 MJ/kg		
FOMr-07	183 g/kg	StaDP	1.0 g/kg	MEla	3066 kcal/kg		
FOMr2-07	122 g/kg	AppDP	0.8 g/kg	DPpo	0.9 g/kg		
FOMr2/FOMr	0.67 /kg						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-31 g/kg			DPpo	0.9 g/kg	EWpa	-
OEB2-07	-21 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Potato starch, heat treated, dried 4001.232/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			39	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		0.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potatoes, dried 4001.611/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	897	42	93	4	-	25	733	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	625	599	-	31	80	-	-	129	49
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.5	2.4	0.4	-	12.1	1.3	-	-	0.7
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	15	SUGe/SUG	5	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	39		DCCP	45	DCCP	-	DCCP	-
DCCFAT	34		DCCFATh	-22	DCCFAT	-	DCCFAT	-
DCCF	73		DCCF	88	DCNFE	-	DCCF	-
DCNFE	92		DCNFE	93	DCPpo	-	DCNFE	-
DCOM	85		DCOM	87				
			DCNSPh	59	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	50	DCCP	-	DCCP	-
%RUP	36	36	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	85	85	AppDCP	53	DC(S+S)	-		
%RUSTA	30	29			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	28	28						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	953 /kg	NE2015	8.65 MJ/kg	MEpo	-	MErab	-
VEVI	1040 /kg	NE2015	2067 kcal/kg	MEpo	-	MErab	-
FOM-91	510 g/kg	EW2015	0.98 /kg	MEla	-		
FOMr-07	592 g/kg	StaDP	1.4 g/kg	MEla	-		
FOMr2-07	277 g/kg	AppDP	1.3 g/kg	DPpo	-		
FOMr2/FOMr	0.47 /kg						
DVE-91	69 g/kg			**Broilers**		**Horses**	
DVE-07	89 g/kg			MEbr	-	NEm	-
OEB-91	-20 g/kg			MEbr	-	NEm	-
OEB-07	-52 g/kg			DPpo	-	EWpa	-
OEB2-07	-23 g/kg					DCPho	-
DVMET-91	1.6 g/kg						
DVLYS-91	4.7 g/kg						
DVMET-07	2.1 g/kg						
DVLYS-07	6.3 g/kg						
SW	0.08 /kg						
VW	0.26 /kg						

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Potatoes, dried 4001.611/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			93	60	-	49	45	-	-
LYS	5.2	-	4.8	65	3.1	58	2.8	-	-
MET	1.7	-	1.6	67	1.1	61	1.0	-	-
CYS	1.5	-	1.4	54	0.8	40	0.6	-	-
THR	4.0	-	3.7	64	2.4	49	1.8	-	-
TRP	1.5	-	1.4	52	0.7	43	0.6	-	-
ILE	4.7	-	4.4	60	2.6	52	2.3	-	-
ARG	5.2	-	4.8	60	2.9	53	2.5	-	-
PHE	4.3	-	4.0	60	2.4	52	2.1	-	-
HIS	1.7	-	1.6	59	0.9	49	0.8	-	-
LEU	6.9	-	6.4	60	3.8	53	3.4	-	-
TYR	3.9	-	3.6	60	2.2	53	1.9	-	-
VAL	5.0	-	4.7	60	2.8	50	2.3	-	-
ALA	3.9	-	3.6	60	2.2	48	1.7	-	-
ASP	19.1	-	17.8	60	10.6	56	9.9	-	-
GLU	13.2	-	12.3	59	7.3	51	6.2	-	-
GLY	3.5	-	3.3	59	1.9	35	1.1	-	-
PRO	4.2	-	3.9	59	2.3	34	1.3	-	-
SER	4.2	-	3.9	59	2.3	44	1.7	-	-
Sum AA	93.7		87	-	52	-	44	-	-

Fatty acids	% FA	g/kg
CFAT(h)		4.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Rape seed 3009.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	925	38	192	422	434	114	159	147
sdc	9	2	12	16	16	24	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	15	-	29	230	176	69	231	1
sdc	-	-	-	5	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	4.3	6.3	4.7	2.5	7.4	0.1	0.2	0.7	2.1
sdc	0.6	0.4	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	96	33	43	6	-	-	-
sdc	-	3	11	2	-	-	-

IP/P	75	SUGe/SUG	75	EB (meq/kg)	188	
		CF_DI	0.96	CAD (meq/kg)	11	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	78	DCCP	71	DCCP	73	DCCP	-
DCCFAT	96	DCCFATh	86	DCCFAT	71	DCCFAT	-
DCCF	41	DCCF	35	DCNFE	39	DCCF	-
DCNFE	83	DCNFE	83	DCPpo	33	DCNFE	-
DCOM	83	DCOM	76				
		DCNSPh	55	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	73	DCCP	-
%RUP	23	25	StaDCP	28	DCCFATh	84	DCOM	-
%DRUP	50	50	AppDCP	25	DC(S+S)	48		
%RUSTA	-	-			DCNFEh	14		
%DASH	50	50			DCPpo	33		
DASHmax	26	26						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1876 /kg	NE2015	16.63 MJ/kg	MEpo	15.22 MJ/kg	MErab	-
VEVI	2131 /kg	NE2015	3976 kcal/kg	MEpo	3638 kcal/kg	MErab	-
FOM-91	268 g/kg	EW2015	1.89 /kg	MEla	16.96 MJ/kg		
FOMr-07	257 g/kg	StaDP	1.8 g/kg	MEla	4055 kcal/kg		
FOMr2-07	132 g/kg	AppDP	1.6 g/kg	DPpo	2.1 g/kg		
FOMr2/FOMr	0.51 /kg						
DVE-91	38 g/kg			**Broilers**		**Horses**	
DVE-07	34 g/kg			MEbr	17.09 MJ/kg	NEm	-
OEB-91	102 g/kg			MEbr	4085 kcal/kg	NEm	-
OEB-07	107 g/kg			DPpo	2.1 g/kg	EWpa	-
OEB2-07	63 g/kg					DCPho	-
DVMET-91	1.0 g/kg						
DVLYS-91	2.6 g/kg						
DVMET-07	0.9 g/kg						
DVLYS-07	2.4 g/kg						
SW	0.36 /kg						
VW	0.29 /kg						

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Rape seed 3009.000/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			192	72	-	66	127	-	-
LYS	5.5	0.3	10.5	73	7.7	69	7.3	78	8.2
MET	2.0	0.1	3.8	81	3.1	78	3.0	88	3.4
CYS	2.5	0.2	4.8	70	3.4	66	3.2	73	3.5
THR	4.4	0.2	8.4	70	5.9	63	5.3	75	6.3
TRP	1.3	0.1	2.5	71	1.8	66	1.6	81	2.0
ILE	3.9	0.1	7.5	74	5.5	69	5.2	82	6.1
ARG	6.1	0.3	11.7	84	9.8	81	9.5	84	9.8
PHE	4.1	0.2	7.9	77	6.0	73	5.7	84	6.6
HIS	2.8	0.2	5.4	80	4.3	77	4.1	83	4.5
LEU	7.0	0.2	13.4	76	10.2	73	9.8	82	11.0
TYR	3.1	0.3	5.9	75	4.5	70	4.2	80	4.8
VAL	5.1	0.2	9.8	71	6.9	66	6.4	81	7.9
ALA	4.5	0.2	8.6	75	6.5	70	6.0	81	7.0
ASP	7.5	0.4	14.4	71	10.2	66	9.5	73	10.5
GLU	16.9	0.9	32.4	84	27.1	80	26.1	84	27.2
GLY	5.2	0.2	10.0	73	7.3	64	6.4	79	7.9
PRO	6.0	0.4	11.5	79	9.1	70	8.0	72	8.3
SER	4.4	0.2	8.4	76	6.4	69	5.8	79	6.7
Sum AA	92.3		177	-	136	-	127	-	142

Fatty acids	% FA	g/kg
CFAT(h)		421.6
<=C10	-	0.0
C12:0	0.2	0.8
C14:0	0.2	0.8
C16:0	5.0	20.0
C16:1	0.4	1.6
C18:0	2.0	8.0
C18:1	56.0	224.3
C:18:2	22.0	88.1
C18:3	9.0	36.0
>=C20	4.0	16.0
Sum FA	98.8	395.7
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Rape seed:

1. The content of S-o does not include the sulphur bound to thioglucosinolates.
2. The nutrient digestibility values mentioned for pigs and poultry apply to the so-called double-zero variety.
3. The DCCFATh for pigs only applies for a product in an unpelleted form.; in pelleted form the DCCFAT may be higher.
4. The DCCFATh of 84% for broilers is applicable only for rapeseed thas is milled very well; if this is not the case a DCCFATh of 78% is advised.

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Rape seed expeller 3009.401/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	902	62	315	101	113	122	303	291
sdc	14	3	12	16	-	8	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	60	7	-	77	246	188	74	343	96
sdc	7	-	-	8	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	6.9	10.2	7.6	3.9	11.3	0.4	0.4	0.8	3.5
sdc	-	0.6	-	-	0.6	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	277	54	56	5	1.1	-	0.2
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	75	EB (meq/kg)	294
		CF_DI	0.96	CAD (meq/kg)	29

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	83		DCCP	74	DCCP	76	DCCP	77
DCCFAT	94		DCCFATh	83	DCCFAT	82	DCCFAT	80
DCCF	41		DCCF	35	DCNFE	32	DCCF	10
DCNFE	83		DCNFE	75	DCPpo	33	DCNFE	70
DCOM	79		DCOM	70				
			DCNSPh	55	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	75	DCCP	-
%RUP	35	36	StaDCP	28	DCCFATh	81	DCOM	-
%DRUP	80	80	AppDCP	26	DC(S+S)	48		
%RUSTA	-	-			DCNFEh	13		
%DASH	50	50			DCPpo	33		
DASHmax	39	39						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1055 /kg	NE2015	8.85 MJ/kg	MEpo	9.21 MJ/kg	MErab	11.48 MJ/kg
VEVI	1122 /kg	NE2015	2115 kcal/kg	MEpo	2201 kcal/kg	MErab	2744 kcal/kg
FOM-91	450 g/kg	EW2015	1.01 /kg	MEla	9.69 MJ/kg		
FOMr-07	448 g/kg	StaDP	2.9 g/kg	MEla	2316 kcal/kg		
FOMr2-07	203 g/kg	AppDP	2.7 g/kg	DPpo	3.4 g/kg		
FOMr2/FOMr	0.45 /kg						
DVE-91	124 g/kg			**Broilers**		**Horses**	
DVE-07	118 g/kg			MEbr	8.46 MJ/kg	NEm	-
OEB-91	126 g/kg			MEbr	2023 kcal/kg	NEm	-
OEB-07	133 g/kg			DPpo	3.4 g/kg	EWpa	-
OEB2-07	45 g/kg					DCPho	-
DVMET-91	2.9 g/kg						
DVLYS-91	7.7 g/kg						
DVMET-07	2.7 g/kg						
DVLYS-07	7.4 g/kg						
SW	0.31 /kg						
VW	0.28 /kg						

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Rape seed expeller 3009.401/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			315	72	-	69	218	-	-
LYS	5.5	0.3	17.3	74	12.8	72	12.4	78	13.5
MET	2.0	0.1	6.3	81	5.1	80	5.0	88	5.5
CYS	2.5	0.2	7.9	70	5.5	68	5.3	73	5.7
THR	4.4	0.2	13.8	71	9.8	67	9.2	75	10.4
TRP	1.3	0.1	4.1	71	2.9	68	2.8	81	3.3
ILE	3.9	0.1	12.3	75	9.2	72	8.8	82	10.1
ARG	6.1	0.3	19.2	84	16.1	82	15.8	84	16.1
PHE	4.1	0.2	12.9	77	9.9	75	9.6	84	10.8
HIS	2.8	0.2	8.8	80	7.1	78	6.9	83	7.3
LEU	7.0	0.2	22.0	77	16.9	75	16.5	82	18.1
TYR	3.1	0.3	9.8	75	7.3	72	7.1	80	7.8
VAL	5.1	0.2	16.1	72	11.5	69	11.1	81	13.0
ALA	4.5	0.2	14.2	76	10.7	73	10.3	81	11.5
ASP	7.5	0.4	23.6	71	16.8	68	16.1	73	17.2
GLU	16.9	0.9	53.2	84	44.6	82	43.6	84	44.7
GLY	5.2	0.2	16.4	74	12.1	69	11.2	79	12.9
PRO	6.0	0.4	18.9	80	15.1	74	14.1	72	13.6
SER	4.4	0.2	13.8	76	10.5	72	9.9	79	10.9
Sum AA	92.3		291	-	224	-	216	-	233

Fatty acids

	% FA	g/kg
CFAT(h)		101.0
<=C10	-	0.0
C12:0	0.2	0.2
C14:0	0.2	0.2
C16:0	5.0	3.8
C16:1	0.4	0.3
C18:0	2.0	1.5
C18:1	56.0	42.4
C:18:2	22.0	16.7
C18:3	9.0	6.8
>=C20	4.0	3.0
Sum FA	98.8	74.9
% FA in CFAT-fraction		75

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Rape seed expeller:

1. The content of S-o does not include the sulphur bound to thioglucosinolates.
2. The nutrient digestibility values mentioned for pigs and poultry apply to the so-called double-zero variety.

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Rape seed meal, rumen bypass, Mervobest 3009.434/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	877	67	333	30	36	132	315	309
sdc	6	3	10	7	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	10	-	93	279	197	84	349	70
sdc	-	-	-	4	29	5	7	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	7.2	10.9	8.2	4.3	13.0	0.3	0.3	0.7	3.6
sdc	0.4	0.6	-	0.3	0.5	0.2	0.1	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	145	49	60	4	0.8	-	0.1
sdc	23	9	2	1	0.2	-	0.1

IP/P	75	SUGe/SUG	-	EB (meq/kg)	337	
		CF_DI	0.95	CAD (meq/kg)	66	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	84		DCCP	-	DCCP	-	DCCP	-
DCCFAT	89		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	38		DCCF	-	DCNFE	-	DCCF	-
DCNFE	80		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	75		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	81	83	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	88	88	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	41	41						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	828 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	847 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	309 g/kg	EW2015	-	MEla	-		
FOMr-07	319 g/kg	StaDP	-	MEla	-		
FOMr2-07	159 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.50 /kg						
DVE-91	275 g/kg			**Broilers**		**Horses**	
DVE-07	259 g/kg			MEbr	-	NEm	-
OEB-91	-12 g/kg			MEbr	-	NEm	-
OEB-07	3 g/kg			DPpo	-	EWpa	-
OEB2-07	-8 g/kg					DCPho	-
DVMET-91	5.9 g/kg						
DVLYS-91	15.7 g/kg						
DVMET-07	5.6 g/kg						
DVLYS-07	15.0 g/kg						
SW	0.30 /kg						
VW	0.28 /kg						

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Rape seed meal, rumen bypass, Mervobest 3009.434/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			333	-	-	-	-	-	-
LYS	5.5	-	18.3	-	-	-	-	-	-
MET	2.0	0.1	6.7	-	-	-	-	-	-
CYS	2.5	0.2	8.3	-	-	-	-	-	-
THR	4.4	0.2	14.6	-	-	-	-	-	-
TRP	1.3	0.1	4.3	-	-	-	-	-	-
ILE	3.9	0.1	13.0	-	-	-	-	-	-
ARG	6.1	0.3	20.3	-	-	-	-	-	-
PHE	4.1	0.2	13.6	-	-	-	-	-	-
HIS	2.8	0.2	9.3	-	-	-	-	-	-
LEU	7.0	0.2	23.3	-	-	-	-	-	-
TYR	3.1	0.3	10.3	-	-	-	-	-	-
VAL	5.1	0.2	17.0	-	-	-	-	-	-
ALA	4.5	0.2	15.0	-	-	-	-	-	-
ASP	7.5	0.4	25.0	-	-	-	-	-	-
GLU	16.9	0.9	56.2	-	-	-	-	-	-
GLY	5.2	0.2	17.3	-	-	-	-	-	-
PRO	6.0	0.4	20.0	-	-	-	-	-	-
SER	4.4	0.2	14.6	-	-	-	-	-	-
Sum AA	92.3		307	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		30.0
<=C10	-	0.0
C12:0	0.2	0.0
C14:0	0.2	0.0
C16:0	5.0	1.0
C16:1	0.4	0.1
C18:0	2.0	0.4
C18:1	56.0	10.9
C:18:2	22.0	4.3
C18:3	9.0	1.8
>=C20	4.0	0.8
Sum FA	98.8	19.3
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Rape seed meal, rumen bypass, Mervobest:

1. Product treated with formaldehyde, produced by Nuscience in utrecht, the Netherlands. the average nutrient values are solely based on analyses carried out on this product.

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Rape seed meal, solvent extracted-CP < 370 g/kg 3009.407/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	882	69	339	28	39	125	321	310
sdc	6	4	13	6	4	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	67	8	-	85	255	193	76	356	101
sdc	4	-	-	7	26	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	7.5	10.5	7.9	4.1	12.2	0.8	0.4	0.7	3.7
sdc	0.8	0.6	-	0.3	0.7	0.6	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	355	70	60	5	0.8	0.1	0.0
sdc	326	10	5	1	-	-	-

IP/P	75	SUGe/SUG	75	EB (meq/kg)	337	
		CF_DI	0.95	CAD (meq/kg)	61	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	84		DCCP	74	DCCP	76	DCCP	77
DCCFAT	89		DCCFATh	59	DCCFAT	65	DCCFAT	70
DCCF	41		DCCF	35	DCNFE	31	DCCF	10
DCNFE	83		DCNFE	75	DCPpo	33	DCNFE	70
DCOM	77		DCOM	68				
			DCNSPh	55	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	74	DCCP	83
%RUP	35	36	StaDCP	28	DCCFATh	65	DCOM	70
%DRUP	80	80	AppDCP	26	DC(S+S)	48		
%RUSTA	-	-			DCNFEh	14		
%DASH	50	50			DCPpo	33		
DASHmax	42	42						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	857 /kg	NE2015	6.72 MJ/kg	MEpo	7.08 MJ/kg	MErab	9.75 MJ/kg
VEVI	885 /kg	NE2015	1605 kcal/kg	MEpo	1692 kcal/kg	MErab	2330 kcal/kg
FOM-91	483 g/kg	EW2015	0.76 /kg	MEla	7.19 MJ/kg		
FOMr-07	479 g/kg	StaDP	2.9 g/kg	MEla	1717 kcal/kg		
FOMr2-07	219 g/kg	AppDP	2.8 g/kg	DPpo	3.5 g/kg		
FOMr2/FOMr	0.46 /kg						
DVE-91	134 g/kg			**Broilers**		**Horses**	
DVE-07	128 g/kg			MEbr	6.24 MJ/kg	NEm	6.60 MJ/kg
OEB-91	136 g/kg			MEbr	1490 kcal/kg	NEm	1577 kcal/kg
OEB-07	144 g/kg			DPpo	3.5 g/kg	EWpa	0.739 /kg
OEB2-07	48 g/kg					DCPho	281 g/kg
DVMET-91	3.1 g/kg						
DVLYS-91	8.4 g/kg						
DVMET-07	2.9 g/kg						
DVLYS-07	8.0 g/kg						
SW	0.30 /kg						
VW	0.28 /kg						

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Rape seed meal, solvent extracted-CP < 370 g/kg 3009.407/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			339	72	-	70	236	-	-
LYS	5.5	0.3	18.6	74	13.8	72	13.4	78	14.5
MET	2.0	0.1	6.8	81	5.5	80	5.4	88	6.0
CYS	2.5	0.2	8.5	70	5.9	68	5.7	75	6.4
THR	4.4	0.2	14.9	71	10.5	67	10.0	73	10.9
TRP	1.3	0.1	4.4	71	3.1	68	3.0	80	3.5
ILE	3.9	0.1	13.2	75	9.9	72	9.5	78	10.3
ARG	6.1	0.3	20.7	84	17.4	82	17.0	85	17.6
PHE	4.1	0.2	13.9	77	10.7	75	10.4	80	11.1
HIS	2.8	0.2	9.5	80	7.6	79	7.5	82	7.8
LEU	7.0	0.2	23.7	77	18.2	75	17.8	80	19.0
TYR	3.1	0.3	10.5	75	7.9	73	7.6	79	8.3
VAL	5.1	0.2	17.3	72	12.4	69	11.9	77	13.3
ALA	4.5	0.2	15.2	76	11.6	73	11.1	80	12.2
ASP	7.5	0.4	25.4	71	18.1	69	17.4	76	19.3
GLU	16.9	0.9	57.3	84	48.1	82	47.0	86	49.2
GLY	5.2	0.2	17.6	74	13.0	69	12.2	78	13.7
PRO	6.0	0.4	20.3	80	16.2	75	15.2	77	15.7
SER	4.4	0.2	14.9	76	11.3	72	10.7	76	11.3
Sum AA	92.3		313	-	241	-	233	-	250

Fatty acids	% FA	g/kg
CFAT(h)		28.3
<=C10	-	0.0
C12:0	0.2	0.0
C14:0	0.2	0.0
C16:0	5.0	0.9
C16:1	0.4	0.1
C18:0	2.0	0.4
C18:1	56.0	10.3
C:18:2	22.0	4.0
C18:3	9.0	1.7
>=C20	4.0	0.7
Sum FA	98.8	18.2
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Rape seed meal, solvent extracted-CP < 370 g/kg:

1. The content of S-o does not include the sulphur bound to thioglucosinolates.
2. The nutrient digestibility values mentioned for pigs and poultry apply to the so-called double-zero variety.

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Rape seed meal, solvent extracted-CP > 370 g/kg 3009.407/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	897	80	383	18	30	115	301	290
sdc	17	9	5	8	-	13	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	11	-	88	233	178	70	322	89
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	7.1	10.6	8.0	4.0	12.5	0.1	0.4	0.7	4.2
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	373	72	76	7	0.8	0.1	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	75	EB (meq/kg)	311
		CF_DI	0.95	CAD (meq/kg)	4

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	85		DCCP	74	DCCP	76	DCCP	77
DCCFAT	84		DCCFATh	55	DCCFAT	60	DCCFAT	70
DCCF	41		DCCF	35	DCNFE	32	DCCF	10
DCNFE	83		DCNFE	77	DCPpo	33	DCNFE	70
DCOM	78		DCOM	69				
			DCNSPh	55	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	74	DCCP	83
%RUP	35	36	StaDCP	28	DCCFATh	65	DCOM	71
%DRUP	80	80	AppDCP	26	DC(S+S)	48		
%RUSTA	-	-			DCNFEh	16		
%DASH	50	50			DCPpo	33		
DASHmax	48	48						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	852 /kg	NE2015	6.77 MJ/kg	MEpo	7.34 MJ/kg	MErab	9.87 MJ/kg
VEVI	877 /kg	NE2015	1618 kcal/kg	MEpo	1754 kcal/kg	MErab	2360 kcal/kg
FOM-91	489 g/kg	EW2015	0.77 /kg	MEla	7.40 MJ/kg		
FOMr-07	495 g/kg	StaDP	3.0 g/kg	MEla	1769 kcal/kg		
FOMr2-07	229 g/kg	AppDP	2.8 g/kg	DPpo	3.5 g/kg		
FOMr2/FOMr	0.46 /kg						
DVE-91	148 g/kg			**Broilers**		**Horses**	
DVE-07	141 g/kg			MEbr	6.66 MJ/kg	NEm	6.65 MJ/kg
OEB-91	162 g/kg			MEbr	1592 kcal/kg	NEm	1588 kcal/kg
OEB-07	171 g/kg			DPpo	3.5 g/kg	EWpa	0.744 /kg
OEB2-07	58 g/kg					DCPho	318 g/kg
DVMET-91	3.4 g/kg						
DVLYS-91	9.2 g/kg						
DVMET-07	3.2 g/kg						
DVLYS-07	8.8 g/kg						
SW	0.29 /kg						
VW	0.28 /kg						

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Rape seed meal, solvent extracted-CP > 370 g/kg 3009.407/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			383	73	-	70	268	-	-
LYS	5.5	0.3	21.1	74	15.6	72	15.2	78	16.4
MET	2.0	0.1	7.7	81	6.2	80	6.1	88	6.7
CYS	2.5	0.2	9.6	70	6.7	68	6.5	75	7.2
THR	4.4	0.2	16.9	71	11.9	67	11.4	73	12.3
TRP	1.3	0.1	5.0	71	3.5	69	3.4	80	4.0
ILE	3.9	0.1	14.9	75	11.2	72	10.8	78	11.7
ARG	6.1	0.3	23.4	84	19.6	83	19.3	85	19.9
PHE	4.1	0.2	15.7	77	12.1	75	11.8	80	12.6
HIS	2.8	0.2	10.7	80	8.6	79	8.5	82	8.8
LEU	7.0	0.2	26.8	77	20.6	75	20.2	80	21.5
TYR	3.1	0.3	11.9	75	8.9	73	8.7	79	9.4
VAL	5.1	0.2	19.5	72	14.0	69	13.6	77	15.0
ALA	4.5	0.2	17.2	76	13.1	73	12.6	80	13.8
ASP	7.5	0.4	28.7	71	20.5	69	19.8	76	21.8
GLU	16.9	0.9	64.7	84	54.4	82	53.3	86	55.7
GLY	5.2	0.2	19.9	74	14.7	70	13.9	78	15.5
PRO	6.0	0.4	23.0	80	18.3	75	17.3	77	17.7
SER	4.4	0.2	16.9	76	12.8	72	12.2	76	12.8
Sum AA	92.3		354	-	273	-	265	-	283

Fatty acids	% FA	g/kg
CFAT(h)		17.9
<=C10	-	0.0
C12:0	0.2	0.0
C14:0	0.2	0.0
C16:0	5.0	0.6
C16:1	0.4	0.0
C18:0	2.0	0.2
C18:1	56.0	6.5
C:18:2	22.0	2.6
C18:3	9.0	1.0
>=C20	4.0	0.5
Sum FA	98.8	11.5
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Rape seed meal, solvent extracted-CP > 370 g/kg:

1. Sometimes mustardseed meal, solvent extracted is traded under this name.
2. The content of S-o does not include the sulphur bound to thioglucosinolates.
3. The nutrient digestibility values mentioned for pigs and poultry apply to the so-called double-zero variety.

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Rice-dehulled 1003.000/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	885	7	78	8	12	7	784	780
sdc	16	2	3	3	-	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	725	715	-	9	35	13	-	68	32
sdc	20	-	-	10	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.1	0.9	0.8	0.2	0.9	-	0.3	-	0.8
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	13	8	16	1	-	-	2.0
sdc	-	-	-	-	-	-	-

IP/P	90	SUGe/SUG	100	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	49		DCCP	67	DCCP	82	DCCP	-
DCCFAT	55		DCCFATh	52	DCCFAT	57	DCCFAT	-
DCCF	12		DCCF	98	DCNFE	99	DCCF	-
DCNFE	96		DCNFE	97	DCPpo	16	DCNFE	-
DCOM	91		DCOM	94				
			DCNSPh	60	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	81	DCCP	-
%RUP	29	31	StaDCP	13	DCCFATh	90	DCOM	-
%DRUP	80	80	AppDCP	-7	DC(S+S)	99		
%RUSTA	10	9			DCNFEh	92		
%DASH	65	65			DCPpo	16		
DASHmax	11	11						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1078 /kg	NE2015	11.43 MJ/kg	MEpo	14.77 MJ/kg	MErab	-
VEVI	1204 /kg	NE2015	2732 kcal/kg	MEpo	3530 kcal/kg	MErab	-
FOM-91	692 g/kg	EW2015	1.30 /kg	MEla	14.80 MJ/kg		
FOMr-07	740 g/kg	StaDP	0.1 g/kg	MEla	3537 kcal/kg		
FOMr2-07	541 g/kg	AppDP	-0.1 g/kg	DPpo	0.1 g/kg		
FOMr2/FOMr	0.73 /kg						
DVE-91	80 g/kg			**Broilers**		**Horses**	
DVE-07	105 g/kg			MEbr	14.00 MJ/kg	NEm	-
OEB-91	-51 g/kg			MEbr	3345 kcal/kg	NEm	-
OEB-07	-90 g/kg			DPpo	0.1 g/kg	EWpa	-
OEB2-07	-80 g/kg					DCPho	-
DVMET-91	2.0 g/kg						
DVLYS-91	5.6 g/kg						
DVMET-07	2.6 g/kg						
DVLYS-07	7.5 g/kg						
SW	-0.27 /kg						
VW	0.25 /kg						

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Rice-dehulled 1003.000/1/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			78	95	-	82	64	-	-
LYS	4.2	0.6	3.3	94	3.1	83	2.7	98	3.2
MET	2.1	0.3	1.6	95	1.6	89	1.5	90	1.5
CYS	2.2	0.2	1.7	90	1.5	79	1.4	84	1.4
THR	3.7	0.3	2.9	93	2.7	75	2.2	93	2.7
TRP	1.1	0.2	0.9	93	0.8	79	0.7	89	0.8
ILE	3.7	0.3	2.9	96	2.8	84	2.4	95	2.8
ARG	7.8	0.6	6.1	96	5.9	90	5.5	93	5.7
PHE	4.7	0.4	3.7	92	3.4	84	3.1	91	3.3
HIS	2.7	0.3	2.1	95	2.0	87	1.8	90	1.9
LEU	7.3	0.5	5.7	96	5.5	88	5.0	93	5.3
TYR	3.4	0.5	2.7	97	2.6	87	2.3	92	2.4
VAL	5.5	0.4	4.3	95	4.1	84	3.6	93	4.0
ALA	5.9	0.4	4.6	95	4.4	85	3.9	94	4.3
ASP	9.0	0.5	7.0	93	6.6	84	5.9	93	6.5
GLU	14.6	1.7	11.4	96	11.0	87	10.0	91	10.4
GLY	5.1	0.5	4.0	95	3.8	75	3.0	93	3.7
PRO	4.5	0.3	3.5	93	3.3	65	2.3	80	2.8
SER	4.7	0.4	3.7	96	3.5	81	3.0	92	3.4
Sum AA	92.2		72	-	68	-	60	-	66

Fatty acids	% FA	g/kg
CFAT(h)		8.4
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.0
C16:0	14.0	1.1
C16:1	0.4	0.0
C18:0	2.0	0.2
C18:1	40.0	3.0
C:18:2	37.0	2.8
C18:3	1.0	0.1
>=C20	2.0	0.2
Sum FA	96.8	7.3
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Rice-with hulls 1003.000/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	886	44	73	19	22	102	649	645
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	480	463	-	13	248	114	-	275	27
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.4	2.6	2.3	1.4	3.4	-	-	-	0.8
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	90	SUGe/SUG	100	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	47		DCCP	66	DCCP	73	DCCP	-
DCCFAT	70		DCCFATh	70	DCCFAT	73	DCCFAT	-
DCCF	12		DCCF	6	DCNFE	87	DCCF	-
DCNFE	88		DCNFE	86	DCPpo	16	DCNFE	-
DCOM	75		DCOM	74				
			DCNSPh	31	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	29	31	StaDCP	13	DCCFATh	-	DCOM	-
%DRUP	80	80	AppDCP	6	DC(S+S)	-		
%RUSTA	10	9			DCNFEh	-		
%DASH	50	50			DCPpo	16		
DASHmax	29	29						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	825 /kg	NE2015	8.65 MJ/kg	MEpo	11.17 MJ/kg	MErab	-
VEVI	865 /kg	NE2015	2066 kcal/kg	MEpo	2670 kcal/kg	MErab	-
FOM-91	542 g/kg	EW2015	0.98 /kg	MEla	11.25 MJ/kg		
FOMr-07	554 g/kg	StaDP	0.3 g/kg	MEla	2689 kcal/kg		
FOMr2-07	369 g/kg	AppDP	0.2 g/kg	DPpo	0.4 g/kg		
FOMr2/FOMr	0.67 /kg						
DVE-91	52 g/kg			**Broilers**		**Horses**	
DVE-07	66 g/kg			MEbr	-	NEm	-
OEB-91	-32 g/kg			MEbr	-	NEm	-
OEB-07	-54 g/kg			DPpo	0.4 g/kg	EWpa	-
OEB2-07	-48 g/kg					DCPho	-
DVMET-91	1.4 g/kg						
DVLYS-91	3.7 g/kg						
DVMET-07	1.8 g/kg						
DVLYS-07	4.8 g/kg						
SW	0.01 /kg						
VW	0.27 /kg						

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Rice-with hulls 1003.000/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			73	76	-	62	45	-	-
LYS	4.2	0.6	3.1	80	2.4	68	2.1	73	2.2
MET	2.1	0.3	1.5	84	1.3	78	1.2	84	1.3
CYS	2.2	0.2	1.6	74	1.2	62	1.0	67	1.1
THR	3.7	0.3	2.7	74	2.0	55	1.5	69	1.9
TRP	1.1	0.2	0.8	77	0.6	61	0.5	75	0.6
ILE	3.7	0.3	2.7	82	2.2	69	1.9	79	2.1
ARG	7.8	0.6	5.7	90	5.1	84	4.7	84	4.8
PHE	4.7	0.4	3.4	85	2.9	77	2.6	84	2.9
HIS	2.7	0.3	2.0	88	1.7	79	1.6	81	1.6
LEU	7.3	0.5	5.3	84	4.4	76	4.0	83	4.4
TYR	3.4	0.5	2.5	84	2.1	73	1.8	79	2.0
VAL	5.5	0.4	4.0	81	3.2	69	2.8	77	3.1
ALA	5.9	0.4	4.3	76	3.2	66	2.8	74	3.2
ASP	9.0	0.5	6.5	75	4.9	65	4.2	76	5.0
GLU	14.6	1.7	10.6	83	8.8	73	7.8	82	8.7
GLY	5.1	0.5	3.7	77	2.8	55	2.0	72	2.7
PRO	4.5	0.3	3.3	85	2.8	55	1.8	70	2.3
SER	4.7	0.4	3.4	79	2.7	62	2.1	75	2.6
Sum AA	92.2		67	-	54	-	46	-	52

Fatty acids	% FA	g/kg
CFAT(h)		18.6
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.1
C16:0	17.0	2.8
C16:1	0.4	0.1
C18:0	2.0	0.3
C18:1	40.0	6.7
C:18:2	37.0	6.2
C18:3	1.0	0.2
>=C20	2.0	0.3
Sum FA	99.8	16.7
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Rice bran meal, solvent extracted 1003.416/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	901	108	143	15	-	113	521	-
sdc	9	34	12	12	-	31	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	293	270	-	26	283	131	-	339	56
sdc	28	-	-	14	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.1	16.5	14.9	8.1	12.3	0.2	0.9	0.2	1.5
sdc	0.6	2.2	-	-	-	-	0.5	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	93	11	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	90	SUGe/SUG	100	EB (meq/kg)	295	
		CF_DI	0.96	CAD (meq/kg)	191	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	64		DCCP	52	DCCP	69	DCCP	-
DCCFAT	67		DCCFATh	59	DCCFAT	55	DCCFAT	-
DCCF	12		DCCF	9	DCNFE	55	DCCF	-
DCNFE	85		DCNFE	78	DCPpo	16	DCNFE	-
DCOM	70		DCOM	63				
			DCNSPh	36	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	65
%RUP	29	31	StaDCP	13	DCCFATh	-	DCOM	67
%DRUP	75	75	AppDCP	12	DC(S+S)	-		
%RUSTA	10	9			DCNFEh	-		
%DASH	35	35			DCPpo	16		
DASHmax	45	45						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	717 /kg	NE2015	6.51 MJ/kg	MEpo	7.71 MJ/kg	MErab	-
VEVI	729 /kg	NE2015	1557 kcal/kg	MEpo	1844 kcal/kg	MErab	-
FOM-91	472 g/kg	EW2015	0.74 /kg	MEla	7.76 MJ/kg		
FOMr-07	462 g/kg	StaDP	2.1 g/kg	MEla	1856 kcal/kg		
FOMr2-07	267 g/kg	AppDP	2.0 g/kg	DPpo	2.6 g/kg		
FOMr2/FOMr	0.58 /kg						
DVE-91	57 g/kg			**Broilers**		**Horses**	
DVE-07	62 g/kg			MEbr	-	NEm	6.66 MJ/kg
OEB-91	25 g/kg			MEbr	-	NEm	1593 kcal/kg
OEB-07	18 g/kg			DPpo	2.6 g/kg	EWpa	0.746 /kg
OEB2-07	-6 g/kg					DCPho	93 g/kg
DVMET-91	1.6 g/kg						
DVLYS-91	3.6 g/kg						
DVMET-07	1.7 g/kg						
DVLYS-07	4.0 g/kg						
SW	0.16 /kg						
VW	0.28 /kg						

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Rice bran meal, solvent extracted 1003.416/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			143	63	-	56	80	-	-
LYS	4.2	0.6	6.0	62	3.7	56	3.4	66	4.0
MET	2.1	0.3	3.0	71	2.1	68	2.0	75	2.2
CYS	2.2	0.2	3.1	53	1.7	47	1.5	55	1.7
THR	3.7	0.3	5.3	61	3.2	51	2.7	62	3.3
TRP	1.1	0.2	1.6	75	1.2	67	1.1	73	1.1
ILE	3.7	0.3	5.3	68	3.6	62	3.3	69	3.6
ARG	7.8	0.6	11.1	77	8.6	74	8.2	77	8.6
PHE	4.7	0.4	6.7	63	4.2	58	3.9	67	4.5
HIS	2.7	0.3	3.9	66	2.5	62	2.4	68	2.6
LEU	7.3	0.5	10.4	66	6.9	62	6.4	68	7.1
TYR	3.4	0.5	4.9	70	3.4	64	3.1	70	3.4
VAL	5.5	0.4	7.9	67	5.2	61	4.8	68	5.3
ALA	5.9	0.4	8.4	66	5.6	61	5.1	70	5.9
ASP	9.0	0.5	12.8	63	8.1	58	7.4	64	8.2
GLU	14.6	1.7	20.8	71	14.7	66	13.7	72	15.0
GLY	5.1	0.5	7.3	58	4.2	47	3.4	61	4.4
PRO	4.5	0.3	6.4	66	4.2	51	3.2	58	3.7
SER	4.7	0.4	6.7	68	4.6	59	4.0	67	4.5
Sum AA	92.2		132	-	88	-	80	-	89

Fatty acids	% FA	g/kg
CFAT(h)		15.2
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.0
C16:0	17.0	1.7
C16:1	0.4	0.0
C18:0	2.0	0.2
C18:1	40.0	4.0
C:18:2	37.0	3.7
C18:3	1.0	0.1
>=C20	2.0	0.2
Sum FA	99.8	9.9
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Rice feed meal-ASH < 90 g/kg 1003.122/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	901	75	139	160	167	56	470	463
sdc	7	11	8	27	-	10	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	288	264	-	48	168	75	-	215	47
sdc	68	-	-	7	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	4.7	15.1	13.6	5.5	9.9	0.1	0.4	0.3	1.4
sdc	4.7	2.6	-	-	-	0.0	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	131	188	56	7	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	90	SUGe/SUG	100	EB (meq/kg)	247
		CF_DI	0.97	CAD (meq/kg)	139

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	64		DCCP	72	DCCP	70	DCCP	60
DCCFAT	80		DCCFATh	86	DCCFAT	88	DCCFAT	68
DCCF	12		DCCF	21	DCNFE	68	DCCF	18
DCNFE	90		DCNFE	84	DCPpo	16	DCNFE	66
DCOM	79		DCOM	78				
			DCNSPh	43	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	62	DCCP	82
%RUP	29	31	StaDCP	13	DCCFATh	85	DCOM	79
%DRUP	80	80	AppDCP	12	DC(S+S)	92		
%RUSTA	10	9			DCNFEh	62		
%DASH	50	50			DCPpo	16		
DASHmax	46	46						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1114 /kg	NE2015	11.51 MJ/kg	MEpo	13.02 MJ/kg	MErab	11.17 MJ/kg
VEVI	1208 /kg	NE2015	2750 kcal/kg	MEpo	3113 kcal/kg	MErab	2669 kcal/kg
FOM-91	420 g/kg	EW2015	1.31 /kg	MEla	13.84 MJ/kg		
FOMr-07	478 g/kg	StaDP	2.0 g/kg	MEla	3309 kcal/kg		
FOMr2-07	283 g/kg	AppDP	1.8 g/kg	DPpo	2.4 g/kg		
FOMr2/FOMr	0.59 /kg						
DVE-91	61 g/kg			**Broilers**		**Horses**	
DVE-07	72 g/kg			MEbr	12.04 MJ/kg	NEm	9.70 MJ/kg
OEB-91	31 g/kg			MEbr	2877 kcal/kg	NEm	2318 kcal/kg
OEB-07	13 g/kg			DPpo	2.4 g/kg	EWpa	1.086 /kg
OEB2-07	-10 g/kg					DCPho	114 g/kg
DVMET-91	1.6 g/kg						
DVLYS-91	3.7 g/kg						
DVMET-07	1.8 g/kg						
DVLYS-07	4.6 g/kg						
SW	0.09 /kg						
VW	0.26 /kg						

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Rice feed meal-ASH < 90 g/kg 1003.122/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			139	63	-	55	77	-	-
LYS	4.2	0.6	5.9	62	3.6	56	3.3	74	4.3
MET	2.1	0.3	2.9	71	2.1	68	2.0	72	2.1
CYS	2.2	0.2	3.1	52	1.6	46	1.4	69	2.1
THR	3.7	0.3	5.2	61	3.1	50	2.6	67	3.5
TRP	1.1	0.2	1.5	75	1.2	67	1.0	70	1.1
ILE	3.7	0.3	5.2	68	3.5	61	3.2	68	3.5
ARG	7.8	0.6	10.9	77	8.4	74	8.0	78	8.5
PHE	4.7	0.4	6.6	62	4.0	57	3.8	67	4.4
HIS	2.7	0.3	3.8	66	2.5	61	2.3	74	2.8
LEU	7.3	0.5	10.2	66	6.7	62	6.3	69	7.0
TYR	3.4	0.5	4.7	69	3.3	63	3.0	65	3.1
VAL	5.5	0.4	7.7	66	5.1	60	4.6	66	5.1
ALA	5.9	0.4	8.2	66	5.4	61	5.0	74	6.1
ASP	9.0	0.5	12.5	63	7.9	57	7.2	71	8.9
GLU	14.6	1.7	20.4	71	14.4	65	13.3	75	15.3
GLY	5.1	0.5	7.1	58	4.1	46	3.3	72	5.1
PRO	4.5	0.3	6.3	65	4.1	50	3.1	71	4.5
SER	4.7	0.4	6.6	68	4.4	59	3.8	72	4.7
Sum AA	92.2		129	-	85	-	77	-	92

Fatty acids

	% FA	g/kg
CFAT(h)		160.0
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.5
C16:0	17.0	21.8
C16:1	0.4	0.5
C18:0	2.0	2.6
C18:1	40.0	51.2
C:18:2	37.0	47.4
C18:3	1.0	1.3
>=C20	2.0	2.6
Sum FA	99.8	127.7
% FA in CFAT-fraction		80

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Rice feed meal-ASH < 90 g/kg:

1. Often limestone is added to this product, the Ca content of this product without added limestone is approximately 1 g/kg.

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Rice feed meal-ASH > 90 g/kg 1003.122/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	912	121	137	176	183	60	417	411
sdc	8	20	6	26	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	240	215	-	31	177	80	-	232	55
sdc	61	-	-	20	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	24.9	17.0	15.3	6.7	10.0	0.1	0.4	0.3	1.4
sdc	9.1	1.5	-	-	-	0.0	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	133	191	73	7	-	-	-
sdc	-	-	26	-	-	-	-

IP/P	90	SUGe/SUG	100	EB (meq/kg)	251	
		CF_DI	0.97	CAD (meq/kg)	145	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	63		DCCP	71	DCCP	70	DCCP	60
DCCFAT	81		DCCFATh	86	DCCFAT	88	DCCFAT	68
DCCF	12		DCCF	21	DCNFE	68	DCCF	18
DCNFE	89		DCNFE	80	DCPpo	16	DCNFE	66
DCOM	77		DCOM	76				
			DCNSPh	43	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	62	DCCP	82
%RUP	29	31	StaDCP	13	DCCFATh	48	DCOM	78
%DRUP	80	80	AppDCP	12	DC(S+S)	92		
%RUSTA	10	9			DCNFEh	55		
%DASH	50	50			DCPpo	16		
DASHmax	71	71						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1084 /kg	NE2015	11.16 MJ/kg	MEpo	12.57 MJ/kg	MErab	10.98 MJ/kg
VEVI	1173 /kg	NE2015	2667 kcal/kg	MEpo	3005 kcal/kg	MErab	2625 kcal/kg
FOM-91	368 g/kg	EW2015	1.27 /kg	MEla	13.48 MJ/kg		
FOMr-07	423 g/kg	StaDP	2.2 g/kg	MEla	3221 kcal/kg		
FOMr2-07	233 g/kg	AppDP	2.0 g/kg	DPpo	2.7 g/kg		
FOMr2/FOMr	0.55 /kg						
DVE-91	53 g/kg			**Broilers**		**Horses**	
DVE-07	62 g/kg			MEbr	8.88 MJ/kg	NEm	9.48 MJ/kg
OEB-91	37 g/kg			MEbr	2123 kcal/kg	NEm	2265 kcal/kg
OEB-07	22 g/kg			DPpo	2.7 g/kg	EWpa	1.061 /kg
OEB2-07	-1 g/kg					DCPho	112 g/kg
DVMET-91	1.4 g/kg						
DVLYS-91	3.2 g/kg						
DVMET-07	1.6 g/kg						
DVLYS-07	3.9 g/kg						
SW	0.15 /kg						
VW	0.26 /kg						

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Rice feed meal-ASH > 90 g/kg 1003.122/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			137	66	-	58	80	-	-
LYS	4.2	0.6	5.8	62	3.6	56	3.2	74	4.3
MET	2.1	0.3	2.9	71	2.0	68	1.9	72	2.1
CYS	2.2	0.2	3.0	52	1.6	46	1.4	69	2.1
THR	3.7	0.3	5.1	61	3.1	50	2.5	67	3.4
TRP	1.1	0.2	1.5	75	1.1	67	1.0	70	1.1
ILE	3.7	0.3	5.1	68	3.4	61	3.1	68	3.5
ARG	7.8	0.6	10.7	77	8.2	74	7.9	78	8.3
PHE	4.7	0.4	6.4	62	4.0	57	3.7	67	4.3
HIS	2.7	0.3	3.7	66	2.4	61	2.3	74	2.7
LEU	7.3	0.5	10.0	66	6.6	62	6.2	69	6.9
TYR	3.4	0.5	4.7	69	3.2	63	2.9	65	3.0
VAL	5.5	0.4	7.5	66	5.0	59	4.5	66	5.0
ALA	5.9	0.4	8.1	66	5.3	60	4.9	74	6.0
ASP	9.0	0.5	12.3	63	7.7	57	7.0	71	8.8
GLU	14.6	1.7	20.0	71	14.1	65	13.1	75	15.0
GLY	5.1	0.5	7.0	58	4.0	46	3.2	72	5.0
PRO	4.5	0.3	6.2	65	4.0	49	3.0	71	4.4
SER	4.7	0.4	6.4	68	4.4	58	3.8	72	4.6
Sum AA	92.2		126	-	84	-	76	-	90

Fatty acids

	% FA	g/kg
CFAT(h)		176.4
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.6
C16:0	17.0	24.0
C16:1	0.4	0.6
C18:0	2.0	2.8
C18:1	40.0	56.5
C:18:2	37.0	52.2
C18:3	1.0	1.4
>=C20	2.0	2.8
Sum FA	99.8	140.8
% FA in CFAT-fraction		80

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Rice feed meal-ASH > 90 g/kg:

1. Often limestone is added to this product, the Ca content of this product without added limestone is approximately 1 g/kg.

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Rice husk 1003.115/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	912	152	68	52	-	265	374	-
sdc	12	39	23	-	-	73	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	127	-	9	447	-	-	503	57
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	3.6	11.0	9.9	1.3	9.4	0.7	-	-	0.7
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	90	SUGe/SUG	100	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	43		DCCP	51	DCCP	-	DCCP	60
DCCFAT	78		DCCFATh	81	DCCFAT	-	DCCFAT	68
DCCF	12		DCCF	6	DCNFE	-	DCCF	18
DCNFE	58		DCNFE	51	DCPpo	-	DCNFE	60
DCOM	42		DCOM	38				
			DCNSPh	14	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	43
%RUP	29	31	StaDCP	13	DCCFATh	-	DCOM	31
%DRUP	80	80	AppDCP	11	DC(S+S)	-		
%RUSTA	10	9			DCNFEh	-		
%DASH	35	35			DCPpo	-		
DASHmax	62	62						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	434 /kg	NE2015	4.53 MJ/kg	MEpo	-	MErab	6.72 MJ/kg
VEVI	372 /kg	NE2015	1083 kcal/kg	MEpo	-	MErab	1607 kcal/kg
FOM-91	232 g/kg	EW2015	0.52 /kg	MEla	-		
FOMr-07	268 g/kg	StaDP	1.4 g/kg	MEla	-		
FOMr2-07	128 g/kg	AppDP	1.3 g/kg	DPpo	-		
FOMr2/FOMr	0.48 /kg						
DVE-91	-1 g/kg			**Broilers**		**Horses**	
DVE-07	5 g/kg			MEbr	-	NEm	3.13 MJ/kg
OEB-91	11 g/kg			MEbr	-	NEm	749 kcal/kg
OEB-07	2 g/kg			DPpo	-	EWpa	0.351 /kg
OEB2-07	-3 g/kg					DCPho	29 g/kg
DVMET-91	0.3 g/kg						
DVLYS-91	0.1 g/kg						
DVMET-07	0.5 g/kg						
DVLYS-07	0.6 g/kg						
SW	0.45 /kg						
VW	0.35 /kg						

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Rice husk 1003.115/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			68	39	-	24	16	-	-
LYS	4.2	0.6	2.9	40	1.1	27	0.8	-	-
MET	2.1	0.3	1.4	40	0.6	33	0.5	-	-
CYS	2.2	0.2	1.5	40	0.6	27	0.4	-	-
THR	3.7	0.3	2.5	39	1.0	18	0.5	-	-
TRP	1.1	0.2	0.7	40	0.3	23	0.2	-	-
ILE	3.7	0.3	2.5	40	1.0	26	0.7	-	-
ARG	7.8	0.6	5.3	40	2.1	33	1.8	-	-
PHE	4.7	0.4	3.2	39	1.3	30	1.0	-	-
HIS	2.7	0.3	1.8	40	0.7	31	0.6	-	-
LEU	7.3	0.5	5.0	40	2.0	31	1.5	-	-
TYR	3.4	0.5	2.3	40	0.9	28	0.7	-	-
VAL	5.5	0.4	3.7	40	1.5	27	1.0	-	-
ALA	5.9	0.4	4.0	40	1.6	29	1.2	-	-
ASP	9.0	0.5	6.1	39	2.4	28	1.7	-	-
GLU	14.6	1.7	10.0	39	3.9	28	2.8	-	-
GLY	5.1	0.5	3.5	39	1.4	16	0.6	-	-
PRO	4.5	0.3	3.1	39	1.2	6	0.2	-	-
SER	4.7	0.4	3.2	39	1.3	21	0.7	-	-
Sum AA	92.2		63	-	25	-	17	-	-

Fatty acids	% FA	g/kg
CFAT(h)		52.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Rye 1007.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	870	16	93	13	17	21	725	721
sdc	13	1	9	2	2	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	540	514	-	55	98	30	10	180	82
sdc	15	-	-	6	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.4	3.1	2.0	1.0	4.6	0.1	0.9	0.1	0.9
sdc	0.1	0.3	-	0.1	0.4	0.0	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	70	33	33	4	0.9	0.0	0.1
sdc	50	-	7	1	-	0.0	-

IP/P	65	SUGe/SUG	50	EB (meq/kg)	95
		CF_DI	0.96	CAD (meq/kg)	31

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	72	DCCP	74	DCCP	60	DCCP	70
DCCFAT	71	DCCFATh	36	DCCFAT	32	DCCFAT	60
DCCF	36	DCCF	16	DCNFE	82	DCCF	30
DCNFE	91	DCNFE	93	DCPpo	38	DCNFE	87
DCOM	87	DCOM	88				
		DCNSPh	60	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	75
%RUP	21 24	StaDCP	30	DCCFATh	-	DCOM	86
%DRUP	85 85	AppDCP	24	DC(S+S)	-		
%RUSTA	10 9			DCNFEh	-		
%DASH	65 65			DCPpo	38		
DASHmax	17 17						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1007 /kg	NE2015	9.93 MJ/kg	MEpo	11.48 MJ/kg	MErab	12.44 MJ/kg
VEVI	1110 /kg	NE2015	2373 kcal/kg	MEpo	2743 kcal/kg	MErab	2973 kcal/kg
FOM-91	658 g/kg	EW2015	1.13 /kg	MEla	11.50 MJ/kg		
FOMr-07	697 g/kg	StaDP	0.9 g/kg	MEla	2749 kcal/kg		
FOMr2-07	497 g/kg	AppDP	0.7 g/kg	DPpo	1.2 g/kg		
FOMr2/FOMr	0.71 /kg						
DVE-91	73 g/kg			**Broilers**		**Horses**	
DVE-07	97 g/kg			MEbr	-	NEm	9.23 MJ/kg
OEB-91	-28 g/kg			MEbr	-	NEm	2207 kcal/kg
OEB-07	-64 g/kg			DPpo	1.2 g/kg	EWpa	1.034 /kg
OEB2-07	-53 g/kg					DCPho	70 g/kg
DVMET-91	1.8 g/kg						
DVLYS-91	5.1 g/kg						
DVMET-07	2.4 g/kg						
DVLYS-07	6.9 g/kg						
SW	-0.16 /kg						
VW	0.25 /kg						

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Rye 1007.000/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			93	77	-	67	62	-	-
LYS	3.8	0.2	3.5	75	2.7	66	2.3	71	2.5
MET	1.7	0.1	1.6	81	1.3	75	1.2	82	1.3
CYS	2.4	0.2	2.2	82	1.8	73	1.6	56	1.3
THR	3.3	0.1	3.1	74	2.3	58	1.8	54	1.7
TRP	1.0	0.1	0.9	76	0.7	63	0.6	51	0.5
ILE	3.4	0.2	3.2	78	2.5	68	2.1	67	2.1
ARG	5.1	0.3	4.8	79	3.7	72	3.4	66	3.1
PHE	4.6	0.3	4.3	82	3.5	76	3.2	73	3.1
HIS	2.4	0.2	2.2	79	1.8	72	1.6	65	1.5
LEU	6.2	0.2	5.8	79	4.5	71	4.1	71	4.1
TYR	2.6	0.2	2.4	76	1.8	66	1.6	65	1.6
VAL	4.7	0.3	4.4	78	3.4	67	2.9	64	2.8
ALA	4.3	0.2	4.0	70	2.8	59	2.4	59	2.4
ASP	7.2	0.5	6.7	78	5.2	68	4.6	45	3.0
GLU	22.7	1.5	21.2	91	19.2	86	18.2	82	17.4
GLY	4.4	0.2	4.1	79	3.2	60	2.4	40	1.6
PRO	9.4	0.8	8.8	97	8.5	87	7.6	69	6.0
SER	4.3	0.2	4.0	84	3.4	70	2.8	54	2.2
Sum AA	93.5		87	-	72	-	65	-	58

Fatty acids	% FA	g/kg
CFAT(h)		13.3
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.0
C16:0	18.0	1.7
C16:1	0.4	0.0
C18:0	1.0	0.1
C18:1	15.0	1.4
C:18:2	55.0	5.1
C18:3	7.0	0.7
>=C20	-	0.0
Sum FA	96.8	9.0
% FA in CFAT-fraction		70

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Rye:

1. The STaDCP of rye including endogenous phytase activity is 52%.

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Rye feed 1007.107/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	872	50	141	32	-	60	589	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	140	129	-	10	278	86	-	511	233
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.8	4.4	3.3	-	6.3	-	-	-	1.4
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	75	SUGe/SUG	50	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	77		DCCP	61	DCCP	-	DCCP	-
DCCFAT	80		DCCFATh	47	DCCFAT	-	DCCFAT	-
DCCF	36		DCCF	29	DCNFE	-	DCCF	-
DCNFE	83		DCNFE	53	DCPpo	-	DCNFE	-
DCOM	78		DCOM	52				
			DCNSPh	37	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	21	24	StaDCP	25	DCCFATh	-	DCOM	-
%DRUP	80	80	AppDCP	21	DC(S+S)	-		
%RUSTA	11	10			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	41	41						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	885 /kg	NE2015	5.33 MJ/kg	MEpo	-	MErab	-
VEVI	941 /kg	NE2015	1273 kcal/kg	MEpo	-	MErab	-
FOM-91	568 g/kg	EW2015	0.61 /kg	MEla	-		
FOMr-07	540 g/kg	StaDP	1.1 g/kg	MEla	-		
FOMr2-07	278 g/kg	AppDP	0.9 g/kg	DPpo	-		
FOMr2/FOMr	0.52 /kg						
DVE-91	67 g/kg			**Broilers**		**Horses**	
DVE-07	77 g/kg			MEbr	-	NEm	-
OEB-91	22 g/kg			MEbr	-	NEm	-
OEB-07	6 g/kg			DPpo	-	EWpa	-
OEB2-07	10 g/kg					DCPho	-
DVMET-91	1.6 g/kg						
DVLYS-91	4.4 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	5.2 g/kg						
SW	0.23 /kg						
VW	0.25 /kg						

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Rye feed 1007.107/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			141	66	-	59	83	-	-
LYS	3.8	-	5.4	70	3.7	64	3.4	-	-
MET	1.7	-	2.4	73	1.8	69	1.7	-	-
CYS	2.4	-	3.4	68	2.3	63	2.1	-	-
THR	3.3	-	4.7	61	2.8	50	2.3	-	-
TRP	1.0	-	1.4	69	1.0	60	0.9	-	-
ILE	3.4	-	4.8	66	3.2	59	2.8	-	-
ARG	5.1	-	7.2	79	5.7	74	5.3	-	-
PHE	4.6	-	6.5	75	4.9	70	4.6	-	-
HIS	2.4	-	3.4	72	2.4	67	2.3	-	-
LEU	6.2	-	8.8	68	5.9	63	5.5	-	-
TYR	2.6	-	3.7	68	2.5	61	2.2	-	-
VAL	4.7	-	6.6	70	4.6	63	4.2	-	-
ALA	4.3	-	6.1	63	3.8	56	3.4	-	-
ASP	7.2	-	10.2	74	7.5	67	6.8	-	-
GLU	22.7	-	32.1	85	27.2	82	26.1	-	-
GLY	4.4	-	6.2	66	4.1	53	3.3	-	-
PRO	9.4	-	13.3	90	11.9	83	11.0	-	-
SER	4.3	-	6.1	75	4.5	65	4.0	-	-
Sum AA	93.5		132	-	100	-	92	-	-

Fatty acids	% FA	g/kg
CFAT(h)		32.3
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.0	0.0
C16:0	18.0	4.1
C16:1	0.0	0.0
C18:0	1.0	0.2
C18:1	15.0	3.4
C:18:2	55.0	12.4
C18:3	7.0	1.6
>=C20	-	0.0
Sum FA	96.0	21.7
% FA in CFAT-fraction		70

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Rye feed:

1. The STaDCP of rye feed including endogenous phytase activity is 30%.

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Safflower seed 3013.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	907	28	122	273	-	340	143	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	9	-	-	17	427	-	-	467	40
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	1.0
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	68		DCCP	-	DCCP	-	DCCP	-
DCCFAT	96		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	35		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	45		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	19	21	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	80	80	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	20	20						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	997 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	996 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	99 g/kg	EW2015	-	MEla	-		
FOMr-07	256 g/kg	StaDP	-	MEla	-		
FOMr2-07	102 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.40 /kg						
DVE-91	-7 g/kg			**Broilers**		**Horses**	
DVE-07	9 g/kg			MEbr	-	NEm	-
OEB-91	82 g/kg			MEbr	-	NEm	-
OEB-07	57 g/kg			DPpo	-	EWpa	-
OEB2-07	42 g/kg					DCPho	-
DVMET-91	0.0 g/kg						
DVLYS-91	-0.7 g/kg						
DVMET-07	0.4 g/kg						
DVLYS-07	0.5 g/kg						
SW	0.61 /kg						
VW	0.36 /kg						

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Safflower seed 3013.000/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			122	-	-	-	-	-	-
LYS	3.4	0.3	4.2	-	-	-	-	-	-
MET	1.6	0.1	2.0	-	-	-	-	-	-
CYS	1.7	0.1	2.1	-	-	-	-	-	-
THR	3.2	0.3	3.9	-	-	-	-	-	-
TRP	2.0	0.2	2.4	-	-	-	-	-	-
ILE	3.8	0.1	4.7	-	-	-	-	-	-
ARG	9.6	0.5	11.8	-	-	-	-	-	-
PHE	4.9	0.3	6.0	-	-	-	-	-	-
HIS	2.8	0.2	3.4	-	-	-	-	-	-
LEU	6.5	0.4	8.0	-	-	-	-	-	-
TYR	3.2	0.3	3.9	-	-	-	-	-	-
VAL	5.4	0.1	6.6	-	-	-	-	-	-
ALA	4.4	0.3	5.4	-	-	-	-	-	-
ASP	9.7	0.5	11.9	-	-	-	-	-	-
GLU	20.2	1.3	24.7	-	-	-	-	-	-
GLY	5.7	0.3	7.0	-	-	-	-	-	-
PRO	4.3	0.3	5.3	-	-	-	-	-	-
SER	4.5	0.4	5.5	-	-	-	-	-	-
Sum AA	96.9		119	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		273.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Sesame seed 3005.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	942	75	220	429	-	43	174	-
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	9	-	-	14	-	-	-	204	204
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	11.0	5.6	3.6	4.1	5.2	-	0.1	-	2.4
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	65	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	83		DCCP	-	DCCP	-	DCCP	-
DCCFAT	96		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	60		DCCF	-	DCNFE	-	DCCF	-
DCNFE	65		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	85		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	23	25	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	80	80	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	46	46						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1906 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	2177 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	254 g/kg	EW2015	-	MEla	-		
FOMr-07	257 g/kg	StaDP	-	MEla	-		
FOMr2-07	120 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.47 /kg						
DVE-91	57 g/kg			**Broilers**		**Horses**	
DVE-07	54 g/kg			MEbr	-	NEm	-
OEB-91	125 g/kg			MEbr	-	NEm	-
OEB-07	130 g/kg			DPpo	-	EWpa	-
OEB2-07	78 g/kg					DCPho	-
DVMET-91	1.7 g/kg						
DVLYS-91	2.3 g/kg						
DVMET-07	1.6 g/kg						
DVLYS-07	2.1 g/kg						
SW	0.33 /kg						
VW	0.27 /kg						

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Sesame seed 3005.000/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			220	-	-	-	-	-	-
LYS	2.5	0.2	5.5	-	-	-	-	-	-
MET	2.7	0.2	6.0	-	-	-	-	-	-
CYS	1.9	0.2	4.2	-	-	-	-	-	-
THR	3.4	0.2	7.5	-	-	-	-	-	-
TRP	1.3	0.1	2.9	-	-	-	-	-	-
ILE	3.6	0.1	7.9	-	-	-	-	-	-
ARG	11.6	0.8	25.6	-	-	-	-	-	-
PHE	4.4	0.2	9.7	-	-	-	-	-	-
HIS	2.4	0.1	5.3	-	-	-	-	-	-
LEU	6.5	0.2	14.3	-	-	-	-	-	-
TYR	3.5	0.3	7.7	-	-	-	-	-	-
VAL	4.6	0.3	10.1	-	-	-	-	-	-
ALA	4.7	0.3	10.4	-	-	-	-	-	-
ASP	8.1	0.6	17.9	-	-	-	-	-	-
GLU	17.9	1.2	39.5	-	-	-	-	-	-
GLY	4.8	0.3	10.6	-	-	-	-	-	-
PRO	3.5	0.2	7.7	-	-	-	-	-	-
SER	4.5	0.3	9.9	-	-	-	-	-	-
Sum AA	91.9		203	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		428.6
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	9.0	36.6
C16:1	0.1	0.4
C18:0	5.0	20.4
C18:1	42.0	171.0
C:18:2	43.0	175.1
C18:3	0.1	0.4
>=C20	0.1	0.4
Sum FA	99.3	404.3
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Sesame seed expeller 3005.401/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	943	132	451	115	116	62	184	182
sdc	9	16	25	16	-	8	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	15	-	-	25	-	-	-	222	222
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	19.1	9.8	6.9	7.1	9.4	0.1	0.1	-	4.9
sdc	2.7	1.1	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	46	97	-	-	-	-
sdc	-	11	23	-	-	-	-

IP/P	70	SUGe/SUG	50	EB (meq/kg)	243
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	90		DCCP	82	DCCP	88	DCCP	-
DCCFAT	94		DCCFATh	88	DCCFAT	70	DCCFAT	-
DCCF	68		DCCF	43	DCNFE	17	DCCF	-
DCNFE	72		DCNFE	79	DCPpo	30	DCNFE	-
DCOM	85		DCOM	79				
			DCNSPh	67	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	91	DCCP	90
%RUP	34	38	StaDCP	10	DCCFATh	81	DCOM	81
%DRUP	90	90	AppDCP	8	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	35	35			DCPpo	30		
DASHmax	54	54						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1148 /kg	NE2015	9.72 MJ/kg	MEpo	10.81 MJ/kg	MErab	-
VEVI	1237 /kg	NE2015	2323 kcal/kg	MEpo	2584 kcal/kg	MErab	-
FOM-91	418 g/kg	EW2015	1.10 /kg	MEla	11.28 MJ/kg		
FOMr-07	420 g/kg	StaDP	1.0 g/kg	MEla	2696 kcal/kg		
FOMr2-07	170 g/kg	AppDP	0.8 g/kg	DPpo	2.9 g/kg		
FOMr2/FOMr	0.41 /kg						
DVE-91	179 g/kg			**Broilers**		**Horses**	
DVE-07	174 g/kg			MEbr	10.99 MJ/kg	NEm	8.67 MJ/kg
OEB-91	217 g/kg			MEbr	2628 kcal/kg	NEm	2073 kcal/kg
OEB-07	224 g/kg			DPpo	2.9 g/kg	EWpa	0.971 /kg
OEB2-07	105 g/kg					DCPho	406 g/kg
DVMET-91	5.1 g/kg						
DVLYS-91	6.0 g/kg						
DVMET-07	5.0 g/kg						
DVLYS-07	5.8 g/kg						
SW	0.34 /kg						
VW	0.27 /kg						

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Sesame seed expeller 3005.401/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			451	84	-	81	367	-	-
LYS	2.5	0.2	11.3	82	9.2	79	8.9	80	9.0
MET	2.7	0.2	12.2	84	10.2	83	10.1	88	10.7
CYS	1.9	0.2	8.6	84	7.2	82	7.0	69	5.9
THR	3.4	0.2	15.3	79	12.1	75	11.5	77	11.8
TRP	1.3	0.1	5.9	84	4.9	82	4.8	85	5.0
ILE	3.6	0.1	16.2	87	14.1	85	13.8	88	14.3
ARG	11.6	0.8	52.3	84	44.0	83	43.6	85	44.5
PHE	4.4	0.2	19.9	90	17.9	89	17.6	91	18.1
HIS	2.4	0.1	10.8	84	9.1	82	8.9	76	8.2
LEU	6.5	0.2	29.3	87	25.6	86	25.1	88	25.8
TYR	3.5	0.3	15.8	84	13.3	82	13.0	88	13.9
VAL	4.6	0.3	20.8	88	18.3	86	17.8	87	18.1
ALA	4.7	0.3	21.2	84	17.8	82	17.3	84	17.8
ASP	8.1	0.6	36.5	84	30.7	82	29.9	80	29.2
GLU	17.9	1.2	80.8	84	67.7	83	66.6	83	67.0
GLY	4.8	0.3	21.7	84	18.2	80	17.3	72	15.6
PRO	3.5	0.2	15.8	84	13.2	77	12.2	82	12.9
SER	4.5	0.3	20.3	84	17.0	81	16.4	79	16.0
Sum AA	91.9		415	-	350	-	342	-	344

Fatty acids	% FA	g/kg
CFAT(h)		114.5
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	9.0	7.7
C16:1	0.1	0.1
C18:0	5.0	4.3
C18:1	42.0	36.1
C:18:2	43.0	36.9
C18:3	0.1	0.1
>=C20	0.1	0.1
Sum FA	99.3	85.3
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Sesame seed expeller:

1. Calcium is largely bound to calcium oxalate.

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Sesame seed meal, solvent extracted 3005.407/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	893	60	430	16	16	117	270	270
sdc	23	-	36	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	17	-	-	63	-	-	-	326	326
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	23.0	12.9	9.0	7.7	10.4	0.2	0.4	-	4.7
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	444	55	88	41	2.8	0.4	0.8
sdc	-	-	-	-	-	-	-

IP/P	70	SUGe/SUG	50	EB (meq/kg)	265
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	90	DCCP	82	DCCP	90	DCCP	-
DCCFAT	76	DCCFATh	65	DCCFAT	30	DCCFAT	-
DCCF	74	DCCF	43	DCNFE	24	DCCF	-
DCNFE	72	DCNFE	83	DCPpo	30	DCNFE	-
DCOM	82	DCOM	77				
		DCNSPh	66	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	74	DCCP	-
%RUP	34	38	StaDCP	10	DCCFATh	65	DCOM	-
%DRUP	90	90	AppDCP	9	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	35	35			DCPpo	30		
DASHmax	26	26						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	910 /kg	NE2015	7.30 MJ/kg	MEpo	8.29 MJ/kg	MErab	-
VEVI	943 /kg	NE2015	1746 kcal/kg	MEpo	1981 kcal/kg	MErab	-
FOM-91	516 g/kg	EW2015	0.83 /kg	MEla	8.32 MJ/kg		
FOMr-07	498 g/kg	StaDP	1.3 g/kg	MEla	1988 kcal/kg		
FOMr2-07	211 g/kg	AppDP	1.1 g/kg	DPpo	3.9 g/kg		
FOMr2/FOMr	0.42 /kg						
DVE-91	182 g/kg			**Broilers**		**Horses**	
DVE-07	177 g/kg			MEbr	6.18 MJ/kg	NEm	-
OEB-91	189 g/kg			MEbr	1478 kcal/kg	NEm	-
OEB-07	196 g/kg			DPpo	3.9 g/kg	EWpa	-
OEB2-07	91 g/kg					DCPho	-
DVMET-91	5.2 g/kg						
DVLYS-91	6.7 g/kg						
DVMET-07	5.0 g/kg						
DVLYS-07	6.4 g/kg						
SW	0.33 /kg						
VW	0.28 /kg						

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Sesame seed meal, solvent extracted 3005.407/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			430	84	-	81	350	-	-
LYS	2.5	0.2	10.8	82	8.8	79	8.5	80	8.6
MET	2.7	0.2	11.6	84	9.8	83	9.7	88	10.2
CYS	1.9	0.2	8.2	84	6.9	82	6.7	69	5.6
THR	3.4	0.2	14.6	79	11.5	75	11.0	77	11.3
TRP	1.3	0.1	5.6	84	4.7	82	4.6	85	4.8
ILE	3.6	0.1	15.5	87	13.4	85	13.1	88	13.6
ARG	11.6	0.8	49.9	84	41.9	83	41.5	85	42.4
PHE	4.4	0.2	18.9	90	17.1	89	16.8	91	17.2
HIS	2.4	0.1	10.3	84	8.7	82	8.5	76	7.8
LEU	6.5	0.2	28.0	87	24.4	86	23.9	88	24.6
TYR	3.5	0.3	15.1	84	12.6	82	12.4	88	13.2
VAL	4.6	0.3	19.8	88	17.4	86	16.9	87	17.2
ALA	4.7	0.3	20.2	84	17.0	82	16.5	84	17.0
ASP	8.1	0.6	34.8	84	29.2	82	28.5	80	27.9
GLU	17.9	1.2	77.0	84	64.6	83	63.5	83	63.9
GLY	4.8	0.3	20.6	84	17.3	80	16.5	72	14.9
PRO	3.5	0.2	15.1	84	12.6	77	11.6	82	12.3
SER	4.5	0.3	19.4	84	16.2	81	15.6	79	15.3
Sum AA	91.9		395	-	334	-	326	-	328

Fatty acids	% FA	g/kg
CFAT(h)		16.1
<=C10	-	0.0
C12:0	-	0.0
C14:0	-	0.0
C16:0	9.0	0.9
C16:1	0.1	0.0
C18:0	5.0	0.5
C18:1	42.0	4.4
C:18:2	43.0	4.5
C18:3	0.1	0.0
>=C20	0.1	0.0
Sum FA	99.3	10.4
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Sesame seed meal, solvent extracted:

1. Calcium is largely bound to calcium oxalate.

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Sorghum 1008.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	872	15	87	28	35	23	720	713
sdc	13	1	7	2	2	4	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	625	606	-	8	74	51	-	129	55
sdc	21	-	-	2	9	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.3	2.7	1.9	1.2	3.5	0.1	0.7	-	0.8
sdc	0.1	0.3	-	0.2	0.2	0.0	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	65	15	19	3	-	-	-
sdc	-	-	2	1	-	-	-

IP/P	70	SUGe/SUG	95	EB (meq/kg)	72
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	49		DCCP	71	DCCP	76	DCCP	55
DCCFAT	87		DCCFATh	75	DCCFAT	80	DCCFAT	80
DCCF	24		DCCF	59	DCNFE	90	DCCF	40
DCNFE	91		DCNFE	98	DCPpo	30	DCNFE	88
DCOM	85		DCOM	93				
			DCNSPh	80	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	71	DCCP	70
%RUP	58	62	StaDCP	25	DCCFATh	84	DCOM	84
%DRUP	80	80	AppDCP	18	DC(S+S)	99		
%RUSTA	40	38			DCNFEh	85		
%DASH	65	65			DCPpo	30		
DASHmax	16	16						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1008 /kg	NE2015	11.27 MJ/kg	MEpo	13.27 MJ/kg	MErab	12.73 MJ/kg
VEVI	1107 /kg	NE2015	2694 kcal/kg	MEpo	3173 kcal/kg	MErab	3042 kcal/kg
FOM-91	407 g/kg	EW2015	1.28 /kg	MEla	13.41 MJ/kg		
FOMr-07	467 g/kg	StaDP	0.7 g/kg	MEla	3204 kcal/kg		
FOMr2-07	193 g/kg	AppDP	0.5 g/kg	DPpo	0.8 g/kg		
FOMr2/FOMr	0.41 /kg						
DVE-91	73 g/kg			**Broilers**		**Horses**	
DVE-07	90 g/kg			MEbr	12.77 MJ/kg	NEm	9.29 MJ/kg
OEB-91	-30 g/kg			MEbr	3052 kcal/kg	NEm	2220 kcal/kg
OEB-07	-56 g/kg			DPpo	0.8 g/kg	EWpa	1.040 /kg
OEB2-07	-25 g/kg					DCPho	61 g/kg
DVMET-91	1.7 g/kg						
DVLYS-91	3.5 g/kg						
DVMET-07	2.1 g/kg						
DVLYS-07	4.8 g/kg						
SW	0.17 /kg						
VW	0.25 /kg						

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Sorghum 1008.000/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			87	84	-	73	63	-	-
LYS	2.4	0.3	2.1	80	1.7	64	1.3	88	1.8
MET	1.8	0.1	1.6	89	1.4	83	1.3	88	1.4
CYS	1.9	0.1	1.6	86	1.4	75	1.2	84	1.4
THR	3.3	0.1	2.9	86	2.5	68	2.0	83	2.4
TRP	1.1	0.1	1.0	86	0.8	74	0.7	82	0.8
ILE	4.0	0.2	3.5	88	3.1	79	2.7	90	3.1
ARG	4.0	0.3	3.5	86	3.0	77	2.7	87	3.0
PHE	5.3	0.3	4.6	89	4.1	83	3.8	89	4.1
HIS	2.4	0.2	2.1	83	1.7	75	1.6	79	1.6
LEU	13.0	0.6	11.3	89	10.0	85	9.6	89	10.0
TYR	3.9	0.3	3.4	90	3.0	82	2.8	84	2.8
VAL	5.0	0.3	4.3	87	3.8	77	3.3	87	3.8
ALA	8.9	0.4	7.7	85	6.5	79	6.1	89	6.9
ASP	7.1	0.3	6.1	84	5.2	73	4.5	88	5.4
GLU	20.0	1.1	17.3	93	16.0	87	15.0	89	15.4
GLY	3.4	0.3	2.9	82	2.4	56	1.6	83	2.4
PRO	8.1	0.5	7.0	93	6.5	79	5.5	92	6.5
SER	4.6	0.2	4.0	91	3.6	77	3.1	88	3.5
Sum AA	100.2		87	-	77	-	69	-	76

Fatty acids	% FA	g/kg
CFAT(h)		27.9
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.4	0.1
C16:0	17.0	4.3
C16:1	1.0	0.3
C18:0	1.0	0.3
C18:1	31.0	7.8
C:18:2	45.0	11.3
C18:3	3.0	0.8
>=C20	1.0	0.3
Sum FA	99.4	25.0
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Sorghum:

1. The digestibility coefficients mentioned for broilers, roosters and laying hens only apply for sorghum containing less than 4 g tannin per kg.

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Sorghum gluten meal 1008.204/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	900	32	430	54	-	36	347	-
sdc	2	5	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	246	246	-	-	85	-	-	138	53
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	3.0	1.8	-	-	-	-	-	3.6
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	60	SUGe/SUG	95	EB (meq/kg)	-
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	89		DCCP	89	DCCP	82	DCCP	-
DCCFAT	87		DCCFATh	87	DCCFAT	80	DCCFAT	-
DCCF	71		DCCF	71	DCNFE	66	DCCF	-
DCNFE	92		DCNFE	99	DCPpo	30	DCNFE	-
DCOM	89		DCOM	92				
			DCNSPh	90	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	56	60	StaDCP	20	DCCFATh	-	DCOM	-
%DRUP	80	80	AppDCP	14	DC(S+S)	-		
%RUSTA	15	15			DCNFEh	-		
%DASH	50	50			DCPpo	30		
DASHmax	22	22						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1138 /kg	NE2015	10.83 MJ/kg	MEpo	12.01 MJ/kg	MErab	-
VEVI	1231 /kg	NE2015	2589 kcal/kg	MEpo	2871 kcal/kg	MErab	-
FOM-91	444 g/kg	EW2015	1.23 /kg	MEla	12.26 MJ/kg		
FOMr-07	444 g/kg	StaDP	0.6 g/kg	MEla	2931 kcal/kg		
FOMr2-07	187 g/kg	AppDP	0.4 g/kg	DPpo	0.9 g/kg		
FOMr2/FOMr	0.42 /kg						
DVE-91	247 g/kg			**Broilers**		**Horses**	
DVE-07	245 g/kg			MEbr	-	NEm	-
OEB-91	98 g/kg			MEbr	-	NEm	-
OEB-07	99 g/kg			DPpo	0.9 g/kg	EWpa	-
OEB2-07	17 g/kg					DCPho	-
DVMET-91	4.7 g/kg						
DVLYS-91	7.7 g/kg						
DVMET-07	4.7 g/kg						
DVLYS-07	8.0 g/kg						
SW	0.17 /kg						
VW	0.26 /kg						

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Sorghum gluten meal 1008.204/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			430	86	-	84	359	-	-
LYS	2.3	-	9.9	82	8.1	78	7.8	82	8.1
MET	1.7	-	7.3	91	6.7	90	6.6	92	6.7
CYS	1.8	-	7.7	88	6.8	86	6.6	80	6.2
THR	3.2	-	13.8	88	12.1	84	11.6	86	11.8
TRP	1.1	-	4.7	88	4.2	85	4.0	85	4.0
ILE	3.9	-	16.8	90	15.1	88	14.8	90	15.1
ARG	4.1	-	17.6	88	15.5	86	15.2	83	14.6
PHE	4.9	-	21.1	91	19.2	90	18.9	90	19.0
HIS	2.1	-	9.0	85	7.7	83	7.5	81	7.3
LEU	13.2	-	56.8	91	51.7	90	51.2	90	51.1
TYR	4.2	-	18.1	92	16.6	91	16.4	88	15.9
VAL	4.9	-	21.1	89	18.8	87	18.3	87	18.3
ALA	8.8	-	37.9	87	32.9	86	32.5	89	33.7
ASP	6.9	-	29.7	87	25.8	85	25.1	85	25.2
GLU	21.1	-	90.8	95	86.2	94	85.1	93	84.4
GLY	3.3	-	14.2	84	11.9	78	11.1	82	11.6
PRO	8.6	-	37.0	95	35.1	92	34.1	88	32.6
SER	4.5	-	19.4	93	18.0	90	17.4	89	17.2
Sum AA	100.6		433	-	392	-	384	-	383

Fatty acids

	% FA	g/kg
CFAT(h)		54.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Soya bean expeller 3012.401/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	916	64	439	81	90	63	269	260
sdc	31	6	14	16	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	58	8	-	84	131	85	5	244	112
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.7	6.3	4.1	2.9	21.6	0.2	0.4	0.5	3.1
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	232	39	47	15	4.1	0.1	-
sdc	-	-	-	-	-	-	-

IP/P	65	SUGe/SUG	70	EB (meq/kg)	551
		CF_DI	0.95	CAD (meq/kg)	330

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	91	DCCP	86	DCCP	85	DCCP	-
DCCFAT	94	DCCFATh	77	DCCFAT	80	DCCFAT	-
DCCF	84	DCCF	72	DCNFE	34	DCCF	-
DCNFE	93	DCNFE	94	DCPpo	41	DCNFE	-
DCOM	91	DCOM	86				
		DCNSPh	86	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	85	DCCP	90
%RUP	41	StaDCP	42	DCCFATh	78	DCOM	86
%DRUP	99	AppDCP	39	DC(S+S)	60		
%RUSTA	-			DCNFEh	20		
%DASH	65			DCPpo	41		
DASHmax	52						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1208 /kg	NE2015	9.95 MJ/kg	MEpo	10.76 MJ/kg	MErab	-
VEVI	1319 /kg	NE2015	2379 kcal/kg	MEpo	2572 kcal/kg	MErab	-
FOM-91	519 g/kg	EW2015	1.13 /kg	MEla	11.14 MJ/kg		
FOMr-07	514 g/kg	StaDP	2.7 g/kg	MEla	2661 kcal/kg		
FOMr2-07	218 g/kg	AppDP	2.5 g/kg	DPpo	2.6 g/kg		
FOMr2/FOMr	0.42 /kg						
DVE-91	239 g/kg			**Broilers**		**Horses**	
DVE-07	225 g/kg			MEbr	10.41 MJ/kg	NEm	9.17 MJ/kg
OEB-91	163 g/kg			MEbr	2487 kcal/kg	NEm	2193 kcal/kg
OEB-07	177 g/kg			DPpo	2.6 g/kg	EWpa	1.027 /kg
OEB2-07	48 g/kg					DCPho	395 g/kg
DVMET-91	4.0 g/kg						
DVLYS-91	15.6 g/kg						
DVMET-07	3.8 g/kg						
DVLYS-07	14.7 g/kg						
SW	0.18 /kg						
VW	0.26 /kg						

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Soya bean expeller 3012.401/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			439	87	-	84	370	-	-
LYS	6.2	0.2	27.2	89	24.2	87	23.8	88	24.0
MET	1.4	0.1	6.2	90	5.5	88	5.4	90	5.5
CYS	1.5	0.1	6.6	83	5.5	80	5.3	75	4.9
THR	3.9	0.1	17.1	85	14.6	82	14.1	83	14.2
TRP	1.3	0.1	5.7	88	5.0	85	4.9	89	5.1
ILE	4.6	0.2	20.2	88	17.8	86	17.4	87	17.6
ARG	7.5	0.3	33.0	93	30.8	92	30.4	90	29.7
PHE	5.2	0.2	22.9	89	20.3	87	20.0	87	19.9
HIS	2.7	0.1	11.9	90	10.6	88	10.5	87	10.3
LEU	7.7	0.2	33.8	87	29.3	85	28.9	87	29.4
TYR	3.7	0.3	16.3	88	14.4	87	14.1	88	14.3
VAL	4.8	0.2	21.1	87	18.3	85	17.8	86	18.1
ALA	4.4	0.2	19.3	86	16.6	83	16.1	86	16.6
ASP	11.6	0.4	51.0	87	44.5	86	43.8	84	42.8
GLU	17.8	0.8	78.2	90	70.5	89	69.5	89	69.6
GLY	4.3	0.2	18.9	86	16.3	82	15.4	84	15.9
PRO	5.1	0.3	22.4	92	20.6	87	19.6	86	19.3
SER	5.1	0.2	22.4	89	19.9	86	19.3	86	19.3
Sum AA	98.8		434	-	385	-	376	-	377

Fatty acids	% FA	g/kg
CFAT(h)		80.8
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.1
C16:0	11.0	6.7
C16:1	0.2	0.1
C18:0	4.0	2.4
C18:1	22.0	13.3
C:18:2	54.0	32.7
C18:3	8.0	4.8
>=C20	0.4	0.2
Sum FA	99.8	60.5
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Soya bean hulls-CF < 320 g/kg 3012.505/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	883	48	129	28	32	306	371	368
sdc	8	4	10	7	7	8	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	64	9	-	17	514	383	11	652	139
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	5.8	1.7	0.8	2.2	12.4	0.1	0.4	0.1	0.9
sdc	-	-	-	0.2	-	0.1	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	560	19	50	8	0.4	0.1	-
sdc	-	-	6	1	-	-	-

IP/P	45	SUGe/SUG	50	EB (meq/kg)	311	
		CF_DI	0.96	CAD (meq/kg)	248	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	68	DCCP	44	DCCP	-	DCCP	54
DCCFAT	82	DCCFATh	43	DCCFAT	-	DCCFAT	72
DCCF	87	DCCF	64	DCNFE	-	DCCF	10
DCNFE	89	DCNFE	72	DCPpo	-	DCNFE	65
DCOM	84	DCOM	64				
		DCNSPh	67	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	75
%RUP	47	50	StaDCP	50	DCCFATh	-	DCOM	74
%DRUP	75	75	AppDCP	39	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	31	31						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	935 /kg	NE2015	5.73 MJ/kg	MEpo	-	MErab	6.72 MJ/kg
VEVI	992 /kg	NE2015	1369 kcal/kg	MEpo	-	MErab	1606 kcal/kg
FOM-91	616 g/kg	EW2015	0.65 /kg	MEla	-		
FOMr-07	445 g/kg	StaDP	0.8 g/kg	MEla	-		
FOMr2-07	94 g/kg	AppDP	0.7 g/kg	DPpo	-		
FOMr2/FOMr	0.21 /kg						
DVE-91	97 g/kg			**Broilers**		**Horses**	
DVE-07	79 g/kg			MEbr	-	NEm	6.83 MJ/kg
OEB-91	-30 g/kg			MEbr	-	NEm	1633 kcal/kg
OEB-07	-2 g/kg			DPpo	-	EWpa	0.765 /kg
OEB2-07	16 g/kg					DCPho	97 g/kg
DVMET-91	1.9 g/kg						
DVLYS-91	7.2 g/kg						
DVMET-07	1.5 g/kg						
DVLYS-07	5.8 g/kg						
SW	0.55 /kg						
VW	0.35 /kg						

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Soya bean hulls-CF < 320 g/kg 3012.505/1/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			129	54	-	46	59	-	-
LYS	6.6	0.3	8.5	56	4.8	52	4.4	-	-
MET	1.2	0.2	1.5	68	1.1	62	1.0	-	-
CYS	1.7	0.1	2.2	62	1.4	54	1.2	-	-
THR	3.6	0.2	4.6	62	2.9	50	2.3	-	-
TRP	1.1	0.1	1.4	60	0.9	51	0.7	-	-
ILE	3.8	0.4	4.9	65	3.2	58	2.9	-	-
ARG	5.3	0.6	6.8	80	5.5	75	5.1	-	-
PHE	4.2	0.4	5.4	69	3.7	63	3.4	-	-
HIS	2.7	0.2	3.5	53	1.8	48	1.7	-	-
LEU	6.3	0.3	8.1	66	5.4	61	4.9	-	-
TYR	4.3	0.3	5.6	62	3.4	57	3.2	-	-
VAL	4.6	0.1	5.9	60	3.6	52	3.1	-	-
ALA	4.2	0.1	5.4	54	2.9	46	2.5	-	-
ASP	9.6	0.6	12.4	54	6.7	48	6.0	-	-
GLU	12.1	1.6	15.6	53	8.4	47	7.3	-	-
GLY	7.5	1.1	9.7	54	5.2	46	4.4	-	-
PRO	4.9	0.2	6.3	53	3.4	38	2.4	-	-
SER	5.6	0.2	7.2	54	3.9	46	3.3	-	-
Sum AA	89.3		115	-	68	-	60	-	-

Fatty acids	% FA	g/kg
CFAT(h)		28.5
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.1
C16:0	11.0	3.0
C16:1	0.2	0.1
C18:0	4.0	1.1
C18:1	22.0	6.0
C:18:2	54.0	14.6
C18:3	8.0	2.2
>=C20	0.4	0.1
Sum FA	99.8	27.0
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Soya bean hulls-CF < 320 g/kg:

1. This class contains to some extent pieces of soya beans that may not have been heat treated.

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Soya bean hulls-CF 320 - 360 g/kg 3012.505/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	886	46	105	21	25	344	370	366
sdc	8	2	7	5	4	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	71	7	-	16	559	414	12	692	133
sdc	13	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	5.3	1.2	0.5	2.2	12.9	0.1	0.4	0.1	0.7
sdc	0.4	0.2	-	0.2	0.8	0.1	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	562	19	50	8	0.4	0.1	-
sdc	-	-	6	1	-	-	-

IP/P	45	SUGe/SUG	50	EB (meq/kg)	325	
		CF_DI	0.96	CAD (meq/kg)	273	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	55		DCCP	26	DCCP	-	DCCP	54
DCCFAT	79		DCCFATh	30	DCCFAT	-	DCCFAT	62
DCCF	87		DCCF	64	DCNFE	-	DCCF	6
DCNFE	89		DCNFE	72	DCPpo	-	DCNFE	65
DCOM	83		DCOM	62				
			DCNSPh	67	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	61
%RUP	49	52	StaDCP	50	DCCFATh	-	DCOM	73
%DRUP	75	75	AppDCP	35	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	30	30						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	905 /kg	NE2015	5.37 MJ/kg	MEpo	-	MErab	6.02 MJ/kg
VEVI	953 /kg	NE2015	1284 kcal/kg	MEpo	-	MErab	1438 kcal/kg
FOM-91	627 g/kg	EW2015	0.61 /kg	MEla	-		
FOMr-07	451 g/kg	StaDP	0.6 g/kg	MEla	-		
FOMr2-07	86 g/kg	AppDP	0.4 g/kg	DPpo	-		
FOMr2/FOMr	0.19 /kg						
DVE-91	91 g/kg			**Broilers**		**Horses**	
DVE-07	72 g/kg			MEbr	-	NEm	6.66 MJ/kg
OEB-91	-46 g/kg			MEbr	-	NEm	1593 kcal/kg
OEB-07	-18 g/kg			DPpo	-	EWpa	0.746 /kg
OEB2-07	9 g/kg					DCPho	64 g/kg
DVMET-91	1.9 g/kg						
DVLYS-91	6.7 g/kg						
DVMET-07	1.4 g/kg						
DVLYS-07	5.4 g/kg						
SW	0.59 /kg						
VW	0.35 /kg						

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Soya bean hulls-CF 320 - 360 g/kg 3012.505/2/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			105	54	-	44	46	-	-
LYS	6.6	0.3	6.9	56	3.9	51	3.5	-	-
MET	1.2	0.2	1.3	68	0.9	60	0.8	-	-
CYS	1.7	0.1	1.8	62	1.1	52	0.9	-	-
THR	3.6	0.2	3.8	62	2.3	48	1.8	-	-
TRP	1.1	0.1	1.2	60	0.7	49	0.6	-	-
ILE	3.8	0.4	4.0	65	2.6	57	2.3	-	-
ARG	5.3	0.6	5.6	80	4.4	74	4.1	-	-
PHE	4.2	0.4	4.4	69	3.0	62	2.7	-	-
HIS	2.7	0.2	2.8	53	1.5	47	1.3	-	-
LEU	6.3	0.3	6.6	66	4.4	59	3.9	-	-
TYR	4.3	0.3	4.5	62	2.8	56	2.5	-	-
VAL	4.6	0.1	4.8	60	2.9	50	2.4	-	-
ALA	4.2	0.1	4.4	54	2.4	44	1.9	-	-
ASP	9.6	0.6	10.1	54	5.4	47	4.7	-	-
GLU	12.1	1.6	12.7	53	6.8	45	5.7	-	-
GLY	7.5	1.1	7.9	54	4.2	44	3.4	-	-
PRO	4.9	0.2	5.1	53	2.7	34	1.8	-	-
SER	5.6	0.2	5.9	54	3.2	44	2.6	-	-
Sum AA	89.3		94	-	55	-	47	-	-

Fatty acids

	% FA	g/kg
CFAT(h)		21.0
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.0
C16:0	11.0	2.2
C16:1	0.2	0.0
C18:0	4.0	0.8
C18:1	22.0	4.4
C:18:2	54.0	10.8
C18:3	8.0	1.6
>=C20	0.4	0.1
Sum FA	99.8	19.9
% FA in CFAT-fraction		95

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Soya bean hulls-CF > 360 g/kg 3012.505/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	887	45	101	16	21	360	364	359
sdc	8	3	5	4	2	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	62	6	-	12	579	446	17	707	128
sdc	12	-	-	3	-	7	2	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	5.2	1.1	0.5	2.2	12.2	0.1	0.4	0.1	0.7
sdc	0.5	0.2	-	0.2	1.1	0.1	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	563	19	50	8	0.4	0.1	-
sdc	-	-	6	1	-	-	-

IP/P	45	SUGe/SUG	50	EB (meq/kg)	307
		CF_DI	0.96	CAD (meq/kg)	256

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	51	DCCP	20	DCCP	-	DCCP	54
DCCFAT	75	DCCFATh	19	DCCFAT	-	DCCFAT	62
DCCF	87	DCCF	64	DCNFE	-	DCCF	6
DCNFE	89	DCNFE	72	DCPpo	-	DCNFE	65
DCOM	83	DCOM	61				
		DCNSPh	67	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	61
%RUP	50	53	StaDCP	50	DCCFATh	-	DCOM	74
%DRUP	75	75	AppDCP	33	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	29	29						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	890 /kg	NE2015	5.21 MJ/kg	MEpo	-	MErab	5.81 MJ/kg
VEVI	934 /kg	NE2015	1245 kcal/kg	MEpo	-	MErab	1389 kcal/kg
FOM-91	632 g/kg	EW2015	0.59 /kg	MEla	-		
FOMr-07	452 g/kg	StaDP	0.5 g/kg	MEla	-		
FOMr2-07	80 g/kg	AppDP	0.4 g/kg	DPpo	-		
FOMr2/FOMr	0.18 /kg						
DVE-91	90 g/kg			**Broilers**		**Horses**	
DVE-07	71 g/kg			MEbr	-	NEm	6.69 MJ/kg
OEB-91	-50 g/kg			MEbr	-	NEm	1598 kcal/kg
OEB-07	-21 g/kg			DPpo	-	EWpa	0.749 /kg
OEB2-07	8 g/kg					DCPho	62 g/kg
DVMET-91	1.9 g/kg						
DVLYS-91	6.7 g/kg						
DVMET-07	1.4 g/kg						
DVLYS-07	5.3 g/kg						
SW	0.61 /kg						
VW	0.35 /kg						

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Soya bean hulls-CF > 360 g/kg 3012.505/3/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			101	54	-	44	44	-	-
LYS	6.6	0.3	6.7	56	3.7	51	3.4	-	-
MET	1.2	0.2	1.2	68	0.8	60	0.7	-	-
CYS	1.7	0.1	1.7	62	1.1	51	0.9	-	-
THR	3.6	0.2	3.6	62	2.2	47	1.7	-	-
TRP	1.1	0.1	1.1	60	0.7	49	0.5	-	-
ILE	3.8	0.4	3.8	65	2.5	56	2.2	-	-
ARG	5.3	0.6	5.4	80	4.3	73	3.9	-	-
PHE	4.2	0.4	4.2	69	2.9	62	2.6	-	-
HIS	2.7	0.2	2.7	53	1.4	47	1.3	-	-
LEU	6.3	0.3	6.4	66	4.2	59	3.8	-	-
TYR	4.3	0.3	4.4	62	2.7	56	2.4	-	-
VAL	4.6	0.1	4.7	60	2.8	50	2.3	-	-
ALA	4.2	0.1	4.2	54	2.3	44	1.9	-	-
ASP	9.6	0.6	9.7	54	5.2	47	4.5	-	-
GLU	12.1	1.6	12.2	53	6.5	45	5.5	-	-
GLY	7.5	1.1	7.6	54	4.1	43	3.3	-	-
PRO	4.9	0.2	5.0	53	2.6	34	1.7	-	-
SER	5.6	0.2	5.7	54	3.0	43	2.5	-	-
Sum AA	89.3		90	-	53	-	45	-	-

Fatty acids	% FA	g/kg
CFAT(h)		16.0
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.0
C16:0	11.0	1.7
C16:1	0.2	0.0
C18:0	4.0	0.6
C18:1	22.0	3.3
C:18:2	54.0	8.2
C18:3	8.0	1.2
>=C20	0.4	0.1
Sum FA	99.8	15.2
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Soya bean meal, rumen bypass, CovaSoy 3012.436/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	872	63	462	16	20	43	288	283
sdc	6	2	9	4	4	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	6	-	100	114	48	8	229	115
sdc	-	-	-	8	34	6	5	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.6	6.4	4.5	2.9	21.7	0.2	0.2	5.2	3.2
sdc	0.5	0.5	-	0.3	1.7	0.2	0.1	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	242	34	47	14	3.5	0.1	0.8
sdc	129	6	8	2	1.4	-	0.7

IP/P	70	SUGe/SUG	-	EB (meq/kg)	560
		CF_DI	0.95	CAD (meq/kg)	32

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	89	DCCP	-	DCCP	-	DCCP	-
DCCFAT	67	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	84	DCCF	-	DCNFE	-	DCCF	-
DCNFE	93	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	90	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	77 81	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	94 94	AppDCP	-	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	65 65			DCPpo	-		
DASHmax	51 51						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	991 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1058 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	358 g/kg	EW2015	-	MEla	-		
FOMr-07	353 g/kg	StaDP	-	MEla	-		
FOMr2-07	171 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.48 /kg						
DVE-91	397 g/kg			**Broilers**		**Horses**	
DVE-07	380 g/kg			MEbr	-	NEm	-
OEB-91	15 g/kg			MEbr	-	NEm	-
OEB-07	31 g/kg			DPpo	-	EWpa	-
OEB2-07	-7 g/kg					DCPho	-
DVMET-91	6.1 g/kg						
DVLYS-91	25.1 g/kg						
DVMET-07	5.9 g/kg						
DVLYS-07	24.1 g/kg						
SW	0.14 /kg						
VW	0.25 /kg						

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Soya bean meal, rumen bypass, CovaSoy 3012.436/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			462	-	-	-	-	-	-
LYS	6.2	0.2	28.7	-	-	-	-	-	-
MET	1.4	0.1	6.5	-	-	-	-	-	-
CYS	1.5	0.1	6.9	-	-	-	-	-	-
THR	3.9	0.1	18.0	-	-	-	-	-	-
TRP	1.3	0.1	6.0	-	-	-	-	-	-
ILE	4.6	0.2	21.3	-	-	-	-	-	-
ARG	7.5	0.3	34.7	-	-	-	-	-	-
PHE	5.2	0.2	24.0	-	-	-	-	-	-
HIS	2.7	0.1	12.5	-	-	-	-	-	-
LEU	7.7	0.2	35.6	-	-	-	-	-	-
TYR	3.7	0.3	17.1	-	-	-	-	-	-
VAL	4.8	0.2	22.2	-	-	-	-	-	-
ALA	4.4	0.2	20.3	-	-	-	-	-	-
ASP	11.6	0.4	53.6	-	-	-	-	-	-
GLU	17.8	0.8	82.3	-	-	-	-	-	-
GLY	4.3	0.2	19.9	-	-	-	-	-	-
PRO	5.1	0.3	23.6	-	-	-	-	-	-
SER	5.1	0.2	23.6	-	-	-	-	-	-
Sum AA	98.8		457	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		15.7
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.0
C16:0	11.0	1.1
C16:1	0.2	0.0
C18:0	4.0	0.4
C18:1	22.0	2.2
C:18:2	54.0	5.5
C18:3	8.0	0.8
>=C20	0.4	0.0
Sum FA	99.8	10.2
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Soya bean meal, rumen bypass, CovaSoy:

1. Product treated with formaldehyde, produced by FeedValid B.V. in Poederoijen, the Netherlands. The average nutrient values are solely based on analyses carried out on this product.
2. The feeding values for protein apply to a product produced in a meal form.

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Soya bean meal, rumen bypass, Mervobest 3012.434/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	873	60	454	17	26	59	283	274
sdc	3	3	7	3	-	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	10	-	96	116	78	6	241	126
sdc	-	-	-	5	25	9	3	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.8	5.7	4.0	2.9	21.2	0.1	0.1	0.3	3.2
sdc	0.3	0.2	-	0.1	0.6	0.1	0.0	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	178	27	52	12	3.7	-	0.1
sdc	46	5	3	2	1.6	-	0.1

IP/P	70	SUGe/SUG	-	EB (meq/kg)	544	
		CF_DI	0.95	CAD (meq/kg)	324	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	89		DCCP	-	DCCP	-	DCCP	-
DCCFAT	69		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	84		DCCF	-	DCNFE	-	DCCF	-
DCNFE	93		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	90		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	76	80	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	94	94	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	49	49						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	995 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1062 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	368 g/kg	EW2015	-	MEla	-		
FOMr-07	362 g/kg	StaDP	-	MEla	-		
FOMr2-07	173 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.48 /kg						
DVE-91	387 g/kg			**Broilers**		**Horses**	
DVE-07	371 g/kg			MEbr	-	NEm	-
OEB-91	16 g/kg			MEbr	-	NEm	-
OEB-07	32 g/kg			DPpo	-	EWpa	-
OEB2-07	-5 g/kg					DCPho	-
DVMET-91	6.0 g/kg						
DVLYS-91	23.1 g/kg						
DVMET-07	5.8 g/kg						
DVLYS-07	22.2 g/kg						
SW	0.14 /kg						
VW	0.25 /kg						

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Soya bean meal, rumen bypass, Mervobest 3012.434/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized DC	Ileal digestible AA pigs standardized g/kg	Ileal digestible AA pigs apparent DC	Ileal digestible AA pigs apparent g/kg	Standardized ileal digestible AA poultry DC	Standardized ileal digestible AA poultry g/kg
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			454	-	-	-	-	-	-
LYS	5.8	0.2	26.3	-	-	-	-	-	-
MET	1.4	0.1	6.3	-	-	-	-	-	-
CYS	1.5	0.1	6.8	-	-	-	-	-	-
THR	3.9	0.1	17.7	-	-	-	-	-	-
TRP	1.3	0.1	5.9	-	-	-	-	-	-
ILE	4.6	0.2	20.9	-	-	-	-	-	-
ARG	7.4	0.3	33.6	-	-	-	-	-	-
PHE	5.1	0.2	23.1	-	-	-	-	-	-
HIS	2.7	0.1	12.2	-	-	-	-	-	-
LEU	7.7	0.2	34.9	-	-	-	-	-	-
TYR	3.7	0.3	16.8	-	-	-	-	-	-
VAL	4.8	0.2	21.8	-	-	-	-	-	-
ALA	4.4	0.2	20.0	-	-	-	-	-	-
ASP	11.6	0.4	52.6	-	-	-	-	-	-
GLU	18.1	0.8	82.1	-	-	-	-	-	-
GLY	4.3	0.2	19.5	-	-	-	-	-	-
PRO	5.1	0.3	23.1	-	-	-	-	-	-
SER	5.2	0.2	23.6	-	-	-	-	-	-
Sum AA	98.6		447	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		17.5
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.0
C16:0	11.0	1.2
C16:1	0.2	0.0
C18:0	4.0	0.5
C18:1	22.0	2.5
C:18:2	54.0	6.1
C18:3	8.0	0.9
>=C20	0.4	0.0
Sum FA	99.8	11.3
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Soya bean meal, rumen bypass, Mervobest:

1. Product treated with formaldehyde, produced by Nuscience in Utrecht, the Netherlands. the average nutrient values are solely based on analyses carried out on this product.
2. The feeding values for protein apply to a product produced in a meal form.

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Soya bean meal, solvent extracted-HiPro CF < 45 g/kg-CP < 485 g/kg 3012.407/1/1

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	882	65	469	13	24	37	297	286
sdc	7	2	10	3	3	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	61	11	-	92	84	50	4	236	152
sdc	7	-	-	9	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.9	6.7	4.7	3.0	22.1	0.1	0.4	0.4	3.3
sdc	0.5	0.4	-	0.4	1.2	0.1	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	130	37	49	15	4.2	0.1	0.3
sdc	32	3	4	1	-	-	-

IP/P	70	SUGe/SUG	70	EB (meq/kg)	558
		CF_DI	0.95	CAD (meq/kg)	331

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	91		DCCP	88	DCCP	87	DCCP	83
DCCFAT	65		DCCFATh	49	DCCFAT	28	DCCFAT	62
DCCF	84		DCCF	72	DCNFE	35	DCCF	25
DCNFE	93		DCNFE	92	DCPpo	42	DCNFE	87
DCOM	91		DCOM	87				
			DCNSPh	86	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	85	DCCP	91
%RUP	41	42	StaDCP	42	DCCFATh	71	DCOM	87
%DRUP	98	98	AppDCP	39	DC(S+S)	60		
%RUSTA	-	-			DCNFEh	21		
%DASH	65	65			DCPpo	42		
DASHmax	52	52						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1016 /kg	NE2015	8.35 MJ/kg	MEpo	9.11 MJ/kg	MErab	12.28 MJ/kg
VEVI	1089 /kg	NE2015	1995 kcal/kg	MEpo	2178 kcal/kg	MErab	2935 kcal/kg
FOM-91	541 g/kg	EW2015	0.95 /kg	MEla	9.13 MJ/kg		
FOMr-07	540 g/kg	StaDP	2.8 g/kg	MEla	2183 kcal/kg		
FOMr2-07	239 g/kg	AppDP	2.6 g/kg	DPpo	2.8 g/kg		
FOMr2/FOMr	0.44 /kg						
DVE-91	253 g/kg			**Broilers**		**Horses**	
DVE-07	238 g/kg			MEbr	8.93 MJ/kg	NEm	8.11 MJ/kg
OEB-91	176 g/kg			MEbr	2133 kcal/kg	NEm	1939 kcal/kg
OEB-07	191 g/kg			DPpo	2.8 g/kg	EWpa	0.909 /kg
OEB2-07	51 g/kg					DCPho	427 g/kg
DVMET-91	4.2 g/kg						
DVLYS-91	16.5 g/kg						
DVMET-07	4.0 g/kg						
DVLYS-07	15.5 g/kg						
SW	0.12 /kg						
VW	0.25 /kg						

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Soya bean meal, solvent extracted-HiPro CF < 45 g/kg-CP < 485 g/kg 3012.407/1/1

Amino acids	g/16g N			Ileal digestible AA pigs standardized		apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			469	88	-	85	401	-	-
LYS	6.2	0.2	29.1	90	26.1	89	25.8	88	25.6
MET	1.4	0.1	6.6	91	6.0	90	5.9	90	5.9
CYS	1.5	0.1	7.0	84	5.9	82	5.8	75	5.3
THR	3.9	0.1	18.3	86	15.8	84	15.3	83	15.2
TRP	1.3	0.1	6.1	89	5.4	86	5.3	89	5.4
ILE	4.6	0.2	21.6	89	19.2	87	18.9	87	18.8
ARG	7.5	0.3	35.2	94	33.2	93	32.9	90	31.7
PHE	5.2	0.2	24.4	90	21.9	88	21.6	87	21.2
HIS	2.7	0.1	12.7	91	11.5	89	11.3	87	11.0
LEU	7.7	0.2	36.1	88	31.7	87	31.3	87	31.4
TYR	3.7	0.3	17.4	89	15.5	88	15.3	88	15.3
VAL	4.8	0.2	22.5	88	19.8	86	19.3	86	19.4
ALA	4.4	0.2	20.6	87	17.9	85	17.5	86	17.8
ASP	11.6	0.4	54.4	88	48.0	87	47.3	84	45.7
GLU	17.8	0.8	83.5	91	76.2	90	75.1	89	74.3
GLY	4.3	0.2	20.2	87	17.6	83	16.8	84	16.9
PRO	5.1	0.3	23.9	93	22.2	89	21.2	86	20.6
SER	5.1	0.2	23.9	90	21.4	87	20.9	86	20.6
Sum AA	98.8		464	-	415	-	407	-	402

Fatty acids	% FA	g/kg
CFAT(h)		13.4
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.0
C16:0	11.0	1.0
C16:1	0.2	0.0
C18:0	4.0	0.3
C18:1	22.0	1.9
C:18:2	54.0	4.7
C18:3	8.0	0.7
>=C20	0.4	0.0
Sum FA	99.8	8.7
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Soya bean meal, solvent extracted-HiPro CF < 45 g/kg-CP > 485 g/kg 3012.407/1/2

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	878	65	489	13	24	36	274	263
sdc	4	3	4	4	2	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	8	-	90	83	49	4	217	134
sdc	-	-	-	9	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.9	6.5	4.6	3.0	22.1	0.1	0.4	1.2	3.4
sdc	0.5	0.5	-	0.4	1.2	0.1	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	129	37	48	15	4.2	0.1	0.3
sdc	32	3	4	1	-	-	-

IP/P	70	SUGe/SUG	70	EB (meq/kg)	556
		CF_DI	0.95	CAD (meq/kg)	265

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	92	DCCP	89	DCCP	87	DCCP	83
DCCFAT	64	DCCFATh	48	DCCFAT	28	DCCFAT	62
DCCF	84	DCCF	72	DCNFE	35	DCCF	25
DCNFE	93	DCNFE	93	DCPpo	42	DCNFE	87
DCOM	91	DCOM	88				
		DCNSPh	86	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	86	DCCP	91
%RUP	41 42	StaDCP	42	DCCFATh	71	DCOM	87
%DRUP	98 98	AppDCP	39	DC(S+S)	60		
%RUSTA	- -			DCNFEh	21		
%DASH	65 65			DCPpo	42		
DASHmax	53 53						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1013 /kg	NE2015	8.41 MJ/kg	MEpo	9.22 MJ/kg	MErab	12.25 MJ/kg
VEVI	1085 /kg	NE2015	2010 kcal/kg	MEpo	2203 kcal/kg	MErab	2927 kcal/kg
FOM-91	530 g/kg	EW2015	0.96 /kg	MEla	9.24 MJ/kg		
FOMr-07	535 g/kg	StaDP	2.7 g/kg	MEla	2208 kcal/kg		
FOMr2-07	235 g/kg	AppDP	2.6 g/kg	DPpo	2.7 g/kg		
FOMr2/FOMr	0.44 /kg						
DVE-91	261 g/kg			**Broilers**		**Horses**	
DVE-07	245 g/kg			MEbr	9.17 MJ/kg	NEm	8.08 MJ/kg
OEB-91	188 g/kg			MEbr	2192 kcal/kg	NEm	1931 kcal/kg
OEB-07	204 g/kg			DPpo	2.7 g/kg	EWpa	0.905 /kg
OEB2-07	55 g/kg					DCPho	445 g/kg
DVMET-91	4.3 g/kg						
DVLYS-91	16.9 g/kg						
DVMET-07	4.1 g/kg						
DVLYS-07	16.0 g/kg						
SW	0.12 /kg						
VW	0.25 /kg						

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Soya bean meal, solvent extracted-HiPro CF < 45 g/kg-CP > 485 g/kg 3012.407/1/2

Amino acids	g/16g N			Ileal digestible AA pigs standardized		apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			489	88	-	85	418	-	-
LYS	6.2	0.2	30.3	90	27.2	89	26.9	88	26.7
MET	1.4	0.1	6.8	91	6.2	90	6.1	90	6.2
CYS	1.5	0.1	7.3	84	6.2	82	6.0	75	5.5
THR	3.9	0.1	19.1	86	16.5	84	16.0	83	15.8
TRP	1.3	0.1	6.4	89	5.6	87	5.5	89	5.7
ILE	4.6	0.2	22.5	89	20.0	87	19.7	87	19.6
ARG	7.5	0.3	36.7	94	34.7	94	34.3	90	33.0
PHE	5.2	0.2	25.4	90	22.8	89	22.5	87	22.1
HIS	2.7	0.1	13.2	91	12.0	90	11.8	87	11.5
LEU	7.7	0.2	37.7	88	33.0	87	32.6	87	32.8
TYR	3.7	0.3	18.1	89	16.2	88	15.9	88	15.9
VAL	4.8	0.2	23.5	88	20.6	86	20.2	86	20.2
ALA	4.4	0.2	21.5	87	18.7	85	18.2	86	18.5
ASP	11.6	0.4	56.7	88	50.1	87	49.4	84	47.7
GLU	17.8	0.8	87.1	91	79.4	90	78.4	89	77.5
GLY	4.3	0.2	21.0	87	18.3	83	17.5	84	17.7
PRO	5.1	0.3	24.9	93	23.2	89	22.2	86	21.5
SER	5.1	0.2	24.9	90	22.4	87	21.8	86	21.5
Sum AA	98.8		483	-	433	-	425	-	419

Fatty acids	% FA	g/kg
CFAT(h)		13.3
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.0
C16:0	11.0	0.9
C16:1	0.2	0.0
C18:0	4.0	0.3
C18:1	22.0	1.9
C:18:2	54.0	4.7
C18:3	8.0	0.7
>=C20	0.4	0.0
Sum FA	99.8	8.6
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Soya bean meal, solvent extracted-CF 45 - 70 g/kg-CP < 450 g/kg 3012.407/2/1

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	880	63	436	15	24	63	302	293
sdc	7	3	12	3	3	6	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	60	9	-	86	131	85	7	275	144
sdc	10	-	-	9	-	-	1	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.9	5.9	4.1	3.0	22.1	0.1	0.4	2.1	3.1
sdc	0.5	0.4	-	0.4	1.2	0.1	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	129	37	48	15	4.2	0.1	0.3
sdc	32	3	4	1	-	-	-

IP/P	70	SUGe/SUG	70	EB (meq/kg)	557	
		CF_DI	0.95	CAD (meq/kg)	234	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	91		DCCP	84	DCCP	85	DCCP	83
DCCFAT	66		DCCFATh	49	DCCFAT	28	DCCFAT	62
DCCF	84		DCCF	72	DCNFE	34	DCCF	25
DCNFE	93		DCNFE	93	DCPpo	42	DCNFE	87
DCOM	91		DCOM	85				
			DCNSPh	86	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	85	DCCP	90
%RUP	41	42	StaDCP	42	DCCFATh	71	DCOM	86
%DRUP	98	98	AppDCP	39	DC(S+S)	60		
%RUSTA	-	-			DCNFEh	19		
%DASH	65	65			DCPpo	42		
DASHmax	51	51						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1008 /kg	NE2015	8.06 MJ/kg	MEpo	8.52 MJ/kg	MErab	11.98 MJ/kg
VEVI	1081 /kg	NE2015	1927 kcal/kg	MEpo	2036 kcal/kg	MErab	2863 kcal/kg
FOM-91	549 g/kg	EW2015	0.92 /kg	MEla	8.55 MJ/kg		
FOMr-07	532 g/kg	StaDP	2.5 g/kg	MEla	2042 kcal/kg		
FOMr2-07	221 g/kg	AppDP	2.3 g/kg	DPpo	2.5 g/kg		
FOMr2/FOMr	0.42 /kg						
DVE-91	238 g/kg			**Broilers**		**Horses**	
DVE-07	223 g/kg			MEbr	8.32 MJ/kg	NEm	8.00 MJ/kg
OEB-91	156 g/kg			MEbr	1989 kcal/kg	NEm	1912 kcal/kg
OEB-07	173 g/kg			DPpo	2.5 g/kg	EWpa	0.896 /kg
OEB2-07	47 g/kg					DCPho	392 g/kg
DVMET-91	4.0 g/kg						
DVLYS-91	15.6 g/kg						
DVMET-07	3.8 g/kg						
DVLYS-07	14.6 g/kg						
SW	0.17 /kg						
VW	0.25 /kg						

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Soya bean meal, solvent extracted-CF 45 - 70 g/kg-CP < 450 g/kg

3012.407/2/1

Amino acids

	g/16g N			Ileal digestible AA pigs				Standardized ileal digestible AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			436	86	-	83	363	-	-
LYS	6.2	0.2	27.0	88	23.7	86	23.4	88	23.8
MET	1.4	0.1	6.1	89	5.4	87	5.3	90	5.5
CYS	1.5	0.1	6.5	82	5.4	80	5.2	75	4.9
THR	3.9	0.1	17.0	84	14.3	81	13.8	83	14.1
TRP	1.3	0.1	5.7	87	4.9	84	4.8	89	5.0
ILE	4.6	0.2	20.0	87	17.4	85	17.1	87	17.4
ARG	7.5	0.3	32.7	92	30.2	91	29.9	90	29.4
PHE	5.2	0.2	22.7	88	19.9	86	19.6	87	19.7
HIS	2.7	0.1	11.8	89	10.4	87	10.3	87	10.2
LEU	7.7	0.2	33.6	86	28.7	84	28.3	87	29.2
TYR	3.7	0.3	16.1	87	14.1	86	13.8	88	14.2
VAL	4.8	0.2	20.9	86	18.0	84	17.5	86	18.0
ALA	4.4	0.2	19.2	85	16.3	83	15.8	86	16.5
ASP	11.6	0.4	50.6	86	43.6	85	42.9	84	42.5
GLU	17.8	0.8	77.6	89	69.2	88	68.2	89	69.0
GLY	4.3	0.2	18.7	85	15.9	81	15.1	84	15.7
PRO	5.1	0.3	22.2	91	20.2	86	19.2	86	19.1
SER	5.1	0.2	22.2	88	19.5	85	18.9	86	19.1
Sum AA	98.8		431	-	377	-	369	-	373

Fatty acids

	% FA	g/kg
CFAT(h)		15.1
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.0
C16:0	11.0	1.1
C16:1	0.2	0.0
C18:0	4.0	0.4
C18:1	22.0	2.2
C:18:2	54.0	5.3
C18:3	8.0	0.8
>=C20	0.4	0.0
Sum FA	99.8	9.8
% FA in CFAT-fraction		65

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Soya bean meal, solvent extracted-CF 45 - 70 g/kg-CP > 450 g/kg 3012.407/2/2

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	877	64	467	15	26	48	283	272
sdc	4	3	10	5	3	4	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	52	5	-	84	104	65	5	246	142
sdc	9	-	-	9	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.9	6.4	4.5	3.0	22.0	0.1	0.4	3.0	3.3
sdc	0.5	0.6	-	0.4	1.2	0.1	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	129	37	48	15	4.2	0.1	0.3
sdc	32	3	4	1	-	-	-

IP/P	70	SUGe/SUG	70	EB (meq/kg)	555
		CF_DI	0.95	CAD (meq/kg)	165

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	91		DCCP	87	DCCP	86	DCCP	83
DCCFAT	67		DCCFATh	51	DCCFAT	28	DCCFAT	62
DCCF	84		DCCF	72	DCNFE	33	DCCF	25
DCNFE	93		DCNFE	93	DCPpo	42	DCNFE	87
DCOM	91		DCOM	87				
			DCNSPh	86	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	85	DCCP	90
%RUP	41	42	StaDCP	42	DCCFATh	71	DCOM	86
%DRUP	98	98	AppDCP	39	DC(S+S)	60		
%RUSTA	-	-			DCNFEh	19		
%DASH	65	65			DCPpo	42		
DASHmax	51	51						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1012 /kg	NE2015	8.26 MJ/kg	MEpo	8.95 MJ/kg	MErab	12.13 MJ/kg
VEVI	1085 /kg	NE2015	1973 kcal/kg	MEpo	2140 kcal/kg	MErab	2899 kcal/kg
FOM-91	536 g/kg	EW2015	0.94 /kg	MEla	8.98 MJ/kg		
FOMr-07	531 g/kg	StaDP	2.7 g/kg	MEla	2146 kcal/kg		
FOMr2-07	224 g/kg	AppDP	2.5 g/kg	DPpo	2.7 g/kg		
FOMr2/FOMr	0.42 /kg						
DVE-91	251 g/kg			**Broilers**		**Horses**	
DVE-07	236 g/kg			MEbr	8.80 MJ/kg	NEm	8.00 MJ/kg
OEB-91	176 g/kg			MEbr	2103 kcal/kg	NEm	1911 kcal/kg
OEB-07	192 g/kg			DPpo	2.7 g/kg	EWpa	0.895 /kg
OEB2-07	53 g/kg					DCPho	420 g/kg
DVMET-91	4.2 g/kg						
DVLYS-91	16.4 g/kg						
DVMET-07	4.0 g/kg						
DVLYS-07	15.4 g/kg						
SW	0.15 /kg						
VW	0.25 /kg						

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Soya bean meal, solvent extracted-CF 45 - 70 g/kg-CP > 450 g/kg

3012.407/2/2

Amino acids	g/16g N			Ileal digestible AA pigs standardized		apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			467	87	-	84	394	-	-
LYS	6.2	0.2	29.0	89	25.7	88	25.4	88	25.5
MET	1.4	0.1	6.5	90	5.9	88	5.8	90	5.9
CYS	1.5	0.1	7.0	83	5.8	81	5.7	75	5.3
THR	3.9	0.1	18.2	85	15.6	83	15.0	83	15.1
TRP	1.3	0.1	6.1	88	5.3	85	5.2	89	5.4
ILE	4.6	0.2	21.5	88	18.9	86	18.6	87	18.7
ARG	7.5	0.3	35.0	93	32.8	92	32.4	90	31.5
PHE	5.2	0.2	24.3	89	21.5	87	21.3	87	21.1
HIS	2.7	0.1	12.6	90	11.3	88	11.2	87	11.0
LEU	7.7	0.2	36.0	87	31.2	86	30.8	87	31.3
TYR	3.7	0.3	17.3	88	15.3	87	15.0	88	15.2
VAL	4.8	0.2	22.4	87	19.5	85	19.0	86	19.3
ALA	4.4	0.2	20.6	86	17.6	84	17.2	86	17.7
ASP	11.6	0.4	54.2	87	47.3	86	46.6	84	45.5
GLU	17.8	0.8	83.2	90	75.0	89	74.0	89	74.0
GLY	4.3	0.2	20.1	86	17.3	82	16.5	84	16.9
PRO	5.1	0.3	23.8	92	21.9	88	20.9	86	20.5
SER	5.1	0.2	23.8	89	21.1	86	20.5	86	20.5
Sum AA	98.8		462	-	409	-	401	-	400

Fatty acids

	% FA	g/kg
CFAT(h)		15.4
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.0
C16:0	11.0	1.1
C16:1	0.2	0.0
C18:0	4.0	0.4
C18:1	22.0	2.2
C:18:2	54.0	5.4
C18:3	8.0	0.8
>=C20	0.4	0.0
Sum FA	99.8	10.0
% FA in CFAT-fraction		65

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Soya bean meal, solvent extracted-CF > 70 g/kg 3012.407/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	878	65	421	15	24	75	301	293
sdc	5	3	10	3	2	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	60	13	-	80	153	102	7	288	135
sdc	9	-	-	8	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.9	5.8	4.1	3.0	22.0	0.1	0.4	3.9	3.0
sdc	0.5	0.2	-	0.4	1.2	0.1	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	129	37	48	15	4.2	0.1	0.3
sdc	32	3	4	1	-	-	-

IP/P	70	SUGe/SUG	70	EB (meq/kg)	555	
		CF_DI	0.95	CAD (meq/kg)	130	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	91		DCCP	83	DCCP	85	DCCP	83
DCCFAT	66		DCCFATh	48	DCCFAT	28	DCCFAT	62
DCCF	84		DCCF	72	DCNFE	28	DCCF	25
DCNFE	93		DCNFE	94	DCPpo	42	DCNFE	87
DCOM	91		DCOM	85				
			DCNSPh	86	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	85	DCCP	89
%RUP	41	42	StaDCP	42	DCCFATh	71	DCOM	85
%DRUP	98	98	AppDCP	39	DC(S+S)	60		
%RUSTA	-	-			DCNFEh	18		
%DASH	65	65			DCPpo	42		
DASHmax	52	52						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	999 /kg	NE2015	7.92 MJ/kg	MEpo	8.20 MJ/kg	MErab	11.78 MJ/kg
VEVI	1071 /kg	NE2015	1892 kcal/kg	MEpo	1960 kcal/kg	MErab	2816 kcal/kg
FOM-91	550 g/kg	EW2015	0.90 /kg	MEla	8.22 MJ/kg		
FOMr-07	526 g/kg	StaDP	2.4 g/kg	MEla	1966 kcal/kg		
FOMr2-07	213 g/kg	AppDP	2.3 g/kg	DPpo	2.4 g/kg		
FOMr2/FOMr	0.40 /kg						
DVE-91	232 g/kg			**Broilers**		**Horses**	
DVE-07	216 g/kg			MEbr	8.05 MJ/kg	NEm	7.85 MJ/kg
OEB-91	148 g/kg			MEbr	1923 kcal/kg	NEm	1877 kcal/kg
OEB-07	166 g/kg			DPpo	2.4 g/kg	EWpa	0.879 /kg
OEB2-07	46 g/kg					DCPho	375 g/kg
DVMET-91	3.9 g/kg						
DVLYS-91	15.2 g/kg						
DVMET-07	3.7 g/kg						
DVLYS-07	14.2 g/kg						
SW	0.19 /kg						
VW	0.26 /kg						

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Soya bean meal, solvent extracted-CF > 70 g/kg 3012.407/3/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			421	86	-	83	350	-	-
LYS	6.2	0.2	26.1	88	22.9	86	22.6	88	23.0
MET	1.4	0.1	5.9	89	5.2	87	5.2	90	5.3
CYS	1.5	0.1	6.3	82	5.2	79	5.0	75	4.7
THR	3.9	0.1	16.4	84	13.9	81	13.3	83	13.6
TRP	1.3	0.1	5.5	87	4.7	84	4.6	89	4.9
ILE	4.6	0.2	19.4	87	16.8	85	16.5	87	16.9
ARG	7.5	0.3	31.6	92	29.2	91	28.9	90	28.4
PHE	5.2	0.2	21.9	88	19.2	86	18.9	87	19.1
HIS	2.7	0.1	11.4	89	10.1	87	9.9	87	9.9
LEU	7.7	0.2	32.4	86	27.8	84	27.4	87	28.2
TYR	3.7	0.3	15.6	87	13.6	86	13.4	88	13.7
VAL	4.8	0.2	20.2	86	17.4	84	16.9	86	17.4
ALA	4.4	0.2	18.5	85	15.7	82	15.3	86	15.9
ASP	11.6	0.4	48.9	86	42.1	85	41.4	84	41.0
GLU	17.8	0.8	75.0	89	66.9	88	65.8	89	66.7
GLY	4.3	0.2	18.1	85	15.4	81	14.6	84	15.2
PRO	5.1	0.3	21.5	91	19.5	86	18.5	86	18.5
SER	5.1	0.2	21.5	88	18.8	85	18.2	86	18.5
Sum AA	98.8		416	-	364	-	356	-	361

Fatty acids

	% FA	g/kg
CFAT(h)		14.9
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.0
C16:0	11.0	1.1
C16:1	0.2	0.0
C18:0	4.0	0.4
C18:1	22.0	2.1
C:18:2	54.0	5.2
C18:3	8.0	0.8
>=C20	0.4	0.0
Sum FA	99.8	9.7
% FA in CFAT-fraction		65

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Soya beans, heat treated 3012.616/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	899	50	362	198	208	49	240	230
sdc	6	2	8	12	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	44	7	-	67	109	52	3	218	109
sdc	6	-	-	9	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.2	5.1	3.5	3.0	17.0	0.1	0.3	0.3	2.5
sdc	0.3	0.3	-	0.4	0.7	0.1	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	171	31	39	12	-	-	0.2
sdc	57	5	3	1	-	-	-

IP/P	70	SUGe/SUG	70	EB (meq/kg)	431	
		CF_DI	0.96	CAD (meq/kg)	256	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	90		DCCP	86	DCCP	85	DCCP	85
DCCFAT	96		DCCFATh	85	DCCFAT	84	DCCFAT	90
DCCF	80		DCCF	74	DCNFE	48	DCCF	40
DCNFE	82		DCNFE	93	DCPpo	41	DCNFE	90
DCOM	88		DCOM	87				
			DCNSPh	86	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	87	DCCP	89
%RUP	37	37	StaDCP	55	DCCFATh	81	DCOM	85
%DRUP	89	89	AppDCP	51	DC(S+S)	79		
%RUSTA	-	-			DCNFEh	24		
%DASH	65	65			DCPpo	41		
DASHmax	41	41						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1425 /kg	NE2015	12.56 MJ/kg	MEpo	14.00 MJ/kg	MErab	16.60 MJ/kg
VEVI	1585 /kg	NE2015	3002 kcal/kg	MEpo	3347 kcal/kg	MErab	3967 kcal/kg
FOM-91	418 g/kg	EW2015	1.43 /kg	MEla	14.97 MJ/kg		
FOMr-07	456 g/kg	StaDP	2.8 g/kg	MEla	3579 kcal/kg		
FOMr2-07	189 g/kg	AppDP	2.6 g/kg	DPpo	2.1 g/kg		
FOMr2/FOMr	0.42 /kg						
DVE-91	163 g/kg			**Broilers**		**Horses**	
DVE-07	156 g/kg			MEbr	13.16 MJ/kg	NEm	10.53 MJ/kg
OEB-91	151 g/kg			MEbr	3145 kcal/kg	NEm	2518 kcal/kg
OEB-07	157 g/kg			DPpo	2.1 g/kg	EWpa	1.180 /kg
OEB2-07	49 g/kg					DCPho	322 g/kg
DVMET-91	2.8 g/kg						
DVLYS-91	10.8 g/kg						
DVMET-07	2.7 g/kg						
DVLYS-07	10.4 g/kg						
SW	0.17 /kg						
VW	0.26 /kg						

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Soya beans, heat treated 3012.616/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			362	82	-	80	288	-	-
LYS	6.2	0.2	22.5	83	18.6	81	18.2	85	19.1
MET	1.4	0.1	5.1	82	4.1	80	4.0	84	4.3
CYS	1.5	0.1	5.4	75	4.1	72	3.9	68	3.7
THR	3.9	0.1	14.1	78	11.1	75	10.6	77	10.9
TRP	1.3	0.1	4.7	82	3.8	79	3.7	75	3.5
ILE	4.6	0.2	16.7	79	13.2	77	12.9	83	13.8
ARG	7.4	0.3	26.8	87	23.3	86	23.0	87	23.3
PHE	5.1	0.2	18.5	81	14.9	79	14.6	84	15.5
HIS	2.7	0.1	9.8	83	8.1	81	8.0	84	8.2
LEU	7.7	0.2	27.9	78	21.7	76	21.3	83	23.1
TYR	3.7	0.3	13.4	80	10.8	78	10.5	81	10.9
VAL	4.8	0.2	17.4	78	13.6	76	13.1	82	14.3
ALA	4.4	0.2	15.9	77	12.2	74	11.8	81	12.9
ASP	11.6	0.4	42.0	82	34.6	81	33.9	81	34.0
GLU	18.1	0.8	65.6	84	55.0	82	53.9	84	55.1
GLY	4.3	0.2	15.6	74	11.5	69	10.7	77	12.0
PRO	5.1	0.3	18.5	87	16.0	81	15.0	83	15.3
SER	5.2	0.2	18.8	77	14.6	74	14.0	81	15.3
Sum AA	99.0		359	-	291	-	283	-	295

Fatty acids	% FA	g/kg
CFAT(h)		198.0
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.4
C16:0	11.0	20.7
C16:1	0.2	0.4
C18:0	4.0	7.5
C18:1	22.0	41.4
C:18:2	54.0	101.6
C18:3	8.0	15.1
>=C20	0.4	0.8
Sum FA	99.8	187.8
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Soya beans, heat treated:

1. this composition does not apply for dehulled, toasted soya beans.
2. The DCCFATh for pigs only applies for a ground product.
3. The nutrient digestibility values mentioned for roosters and laying hens apply for grounded unpelleted feeds.
4. The DCCFATh for broilers is valid for pelleted feeds.

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Soya beans, raw 3012.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	899	50	362	198	208	49	240	230
sdc	6	2	8	12	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	44	7	-	67	109	52	3	217	109
sdc	6	-	-	9	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.2	5.1	3.5	3.0	17.0	0.1	0.3	0.3	2.5
sdc	0.3	0.3	-	0.4	0.7	0.1	0.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	171	31	39	12	-	-	-
sdc	57	5	3	1	-	-	-

IP/P	70	SUGe/SUG	70	EB (meq/kg)	431	
		CF_DI	-	CAD (meq/kg)	256	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	90	DCCP	-	DCCP	-	DCCP	-
DCCFAT	96	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	80	DCCF	-	DCNFE	-	DCCF	-
DCNFE	82	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	88	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	89
%RUP	21	22	StaDCP	-	DCCFATh	-	DCOM	85
%DRUP	89	89	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	41	41						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1425 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1585 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	475 g/kg	EW2015	-	MEla	-		
FOMr-07	506 g/kg	StaDP	-	MEla	-		
FOMr2-07	279 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.55 /kg						
DVE-91	110 g/kg			**Broilers**		**Horses**	
DVE-07	107 g/kg			MEbr	-	NEm	10.53 MJ/kg
OEB-91	205 g/kg			MEbr	-	NEm	2518 kcal/kg
OEB-07	208 g/kg			DPpo	-	EWpa	1.180 /kg
OEB2-07	137 g/kg					DCPho	322 g/kg
DVMET-91	2.1 g/kg						
DVLYS-91	7.6 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	7.4 g/kg						
SW	0.17 /kg						
VW	0.26 /kg						

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Soya beans, raw 3012.000/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			362	-	-	-	-	-	-
LYS	6.2	0.2	22.5	-	-	-	-	-	-
MET	1.4	0.1	5.1	-	-	-	-	-	-
CYS	1.5	0.1	5.4	-	-	-	-	-	-
THR	3.9	0.1	14.1	-	-	-	-	-	-
TRP	1.3	0.1	4.7	-	-	-	-	-	-
ILE	4.6	0.2	16.7	-	-	-	-	-	-
ARG	7.4	0.3	26.8	-	-	-	-	-	-
PHE	5.1	0.2	18.5	-	-	-	-	-	-
HIS	2.7	0.1	9.8	-	-	-	-	-	-
LEU	7.7	0.2	27.9	-	-	-	-	-	-
TYR	3.7	0.3	13.4	-	-	-	-	-	-
VAL	4.8	0.2	17.4	-	-	-	-	-	-
ALA	4.4	0.2	15.9	-	-	-	-	-	-
ASP	11.6	0.4	42.0	-	-	-	-	-	-
GLU	18.1	0.8	65.6	-	-	-	-	-	-
GLY	4.3	0.2	15.6	-	-	-	-	-	-
PRO	5.1	0.3	18.5	-	-	-	-	-	-
SER	5.2	0.2	18.8	-	-	-	-	-	-
Sum AA	99.0		359	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		198.0
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.4
C16:0	11.0	20.7
C16:1	0.2	0.4
C18:0	4.0	7.5
C18:1	22.0	41.4
C:18:2	54.0	101.6
C18:3	8.0	15.1
>=C20	0.4	0.8
Sum FA	99.8	187.8
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Soya beans, raw:

1. this composition does not apply for dehulled, toasted soya beans.

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Sugar 4004.211/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	1000	-	-	-	-	-	1000	1000
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	1053	-	-	-	0	0
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	-	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	-
		CF_DI	0.95	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	-	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	100	DCCF	-
DCNFE	100		DCNFE	100	DCPpo	-	DCNFE	100
DCOM	100		DCOM	100				
			DCNSPh	0	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	5	-	StaDCP	-	DCCFATh	-	DCOM	100
%DRUP	-	-	AppDCP	-	DC(S+S)	100		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1080 /kg	NE2015	13.40 MJ/kg	MEpo	16.41 MJ/kg	MErab	17.10 MJ/kg
VEVI	1250 /kg	NE2015	3203 kcal/kg	MEpo	3922 kcal/kg	MErab	4087 kcal/kg
FOM-91	1000 g/kg	EW2015	1.52 /kg	MEla	16.41 MJ/kg		
FOMr-07	998 g/kg	StaDP	-	MEla	3922 kcal/kg		
FOMr2-07	983 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.99 /kg						
DVE-91	96 g/kg			**Broilers**		**Horses**	
DVE-07	111 g/kg			MEbr	17.32 MJ/kg	NEm	12.51 MJ/kg
OEB-91	-150 g/kg			MEbr	4139 kcal/kg	NEm	2989 kcal/kg
OEB-07	-174 g/kg			DPpo	-	EWpa	1.400 /kg
OEB2-07	-172 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-0.86 /kg						
VW	0.29 /kg						

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Sugar 4004.211/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			-	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		0.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Sugar:

1. The energy value for ruminants has been derived from starch, based on its ATP yielding capacity.
2. SUG is represented as glucose units. The sacharose content is 0.95 * SUG = 1000 g/kg.

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Sugarbeet pulp, dried-SUG < 100 g/kg 4004.209/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	893	61	75	9	14	175	573	568
sdc	5	17	6	2	3	8	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	7	-	68	377	200	11	676	299
sdc	-	-	-	11	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	9.9	0.8	0.2	2.4	4.0	0.5	0.4	1.4	0.5
sdc	1.9	0.1	-	0.6	1.4	0.3	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	475	57	17	5	0.4	0.1	0.3
sdc	182	10	8	1	0.2	0.1	0.2

IP/P	30	SUGe/SUG	95	EB (meq/kg)	115
		CF_DI	0.97	CAD (meq/kg)	-6

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	52		DCCP	10	DCCP	-	DCCP	45
DCCFAT	65		DCCFATh	58	DCCFAT	-	DCCFAT	-
DCCF	84		DCCF	79	DCNFE	-	DCCF	60
DCNFE	91		DCNFE	91	DCPpo	-	DCNFE	90
DCOM	86		DCOM	81				
			DCNSPh	87	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	42
%RUP	55	55	StaDCP	60	DCCFATh	-	DCOM	83
%DRUP	85	85	AppDCP	37	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	35	35			DCPpo	-		
DASHmax	27	27						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	933 /kg	NE2015	9.31 MJ/kg	MEpo	-	MErab	11.18 MJ/kg
VEVI	1009 /kg	NE2015	2225 kcal/kg	MEpo	-	MErab	2671 kcal/kg
FOM-91	665 g/kg	EW2015	1.06 /kg	MEla	-		
FOMr-07	570 g/kg	StaDP	0.5 g/kg	MEla	-		
FOMr2-07	187 g/kg	AppDP	0.3 g/kg	DPpo	-		
FOMr2/FOMr	0.33 /kg						
DVE-91	91 g/kg			**Broilers**		**Horses**	
DVE-07	90 g/kg			MEbr	-	NEm	7.96 MJ/kg
OEB-91	-71 g/kg			MEbr	-	NEm	1902 kcal/kg
OEB-07	-70 g/kg			DPpo	-	EWpa	0.891 /kg
OEB2-07	-21 g/kg					DCPho	32 g/kg
DVMET-91	2.1 g/kg						
DVLYS-91	6.4 g/kg						
DVMET-07	2.1 g/kg						
DVLYS-07	6.4 g/kg						
SW	0.38 /kg						
VW	0.31 /kg						

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Sugarbeet pulp, dried-SUG < 100 g/kg 4004.209/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			75	46	-	32	24	-	-
LYS	5.6	-	4.2	55	2.3	46	2.0	-	-
MET	1.6	-	1.2	59	0.7	51	0.6	-	-
CYS	1.4	-	1.1	46	0.5	28	0.3	-	-
THR	5.0	-	3.8	28	1.1	14	0.5	-	-
TRP	1.0	-	0.8	50	0.4	33	0.3	-	-
ILE	3.7	-	2.8	51	1.4	39	1.1	-	-
ARG	4.6	-	3.5	53	1.8	43	1.5	-	-
PHE	3.9	-	2.9	46	1.3	36	1.1	-	-
HIS	3.2	-	2.4	52	1.3	46	1.1	-	-
LEU	6.2	-	4.7	52	2.4	43	2.0	-	-
TYR	5.1	-	3.8	52	2.0	45	1.7	-	-
VAL	5.8	-	4.4	42	1.8	31	1.3	-	-
ALA	4.8	-	3.6	47	1.7	35	1.2	-	-
ASP	8.9	-	6.7	25	1.7	15	1.0	-	-
GLU	9.6	-	7.2	58	4.2	44	3.2	-	-
GLY	4.3	-	3.2	46	1.5	21	0.7	-	-
PRO	4.6	-	3.5	45	1.6	17	0.6	-	-
SER	5.0	-	3.8	34	1.3	18	0.7	-	-
Sum AA	84.3		63	-	29	-	21	-	-

Fatty acids	% FA	g/kg
CFAT(h)		8.9
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Sugarbeet pulp, dried-SUG < 100 g/kg:

1. Vinasse may be added to this class of sugar beet pulp. In case vinasse is added the K content will be higher than mentioned.
2. The NE2015 and EW2015 have been calculated including an addition for reduced activity.

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Sugarbeet pulp, dried-SUG 100 - 150 g/kg 4004.209/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	901	67	88	8	14	166	571	566
sdc	10	10	7	2	3	12	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	7	-	123	357	189	10	611	254
sdc	-	-	-	18	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	9.0	0.7	0.2	1.7	6.5	0.5	0.4	1.4	0.5
sdc	2.0	0.1	-	0.3	3.3	0.3	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	479	65	26	5	0.4	0.1	0.3
sdc	183	10	8	1	0.2	0.1	0.2

IP/P	30	SUGe/SUG	95	EB (meq/kg)	177
		CF_DI	0.97	CAD (meq/kg)	56

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	60	DCCP	22	DCCP	-	DCCP	45
DCCFAT	63	DCCFATh	57	DCCFAT	-	DCCFAT	-
DCCF	84	DCCF	79	DCNFE	-	DCCF	60
DCNFE	91	DCNFE	92	DCPpo	-	DCNFE	89
DCOM	86	DCOM	82				
		DCNSPh	87	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	-	DCCP	42
%RUP	50	StaDCP	60	DCCFATh	-	DCOM	83
%DRUP	85	AppDCP	34	DC(S+S)	-		
%RUSTA	-			DCNFEh	-		
%DASH	35			DCPpo	-		
DASHmax	29						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	932 /kg	NE2015	9.37 MJ/kg	MEpo	-	MErab	11.07 MJ/kg
VEVI	1009 /kg	NE2015	2239 kcal/kg	MEpo	-	MErab	2646 kcal/kg
FOM-91	667 g/kg	EW2015	1.06 /kg	MEla	-		
FOMr-07	587 g/kg	StaDP	0.4 g/kg	MEla	-		
FOMr2-07	236 g/kg	AppDP	0.2 g/kg	DPpo	-		
FOMr2/FOMr	0.40 /kg						
DVE-91	94 g/kg			**Broilers**		**Horses**	
DVE-07	93 g/kg			MEbr	-	NEm	8.04 MJ/kg
OEB-91	-61 g/kg			MEbr	-	NEm	1922 kcal/kg
OEB-07	-61 g/kg			DPpo	-	EWpa	0.901 /kg
OEB2-07	-20 g/kg					DCPho	37 g/kg
DVMET-91	2.0 g/kg						
DVLYS-91	6.3 g/kg						
DVMET-07	2.1 g/kg						
DVLYS-07	6.3 g/kg						
SW	0.31 /kg						
VW	0.30 /kg						

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Sugarbeet pulp, dried-SUG 100 - 150 g/kg 4004.209/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			88	46	-	34	30	-	-
LYS	4.9	-	4.3	55	2.4	46	2.0	-	-
MET	1.4	-	1.2	59	0.7	51	0.6	-	-
CYS	1.2	-	1.1	46	0.5	28	0.3	-	-
THR	4.4	-	3.9	28	1.1	14	0.6	-	-
TRP	0.9	-	0.8	50	0.4	34	0.3	-	-
ILE	3.4	-	3.0	51	1.5	40	1.2	-	-
ARG	4.0	-	3.5	53	1.9	43	1.5	-	-
PHE	3.4	-	3.0	46	1.4	36	1.1	-	-
HIS	2.8	-	2.5	52	1.3	46	1.1	-	-
LEU	5.5	-	4.9	52	2.5	43	2.1	-	-
TYR	4.5	-	4.0	52	2.1	45	1.8	-	-
VAL	5.3	-	4.7	42	2.0	32	1.5	-	-
ALA	4.6	-	4.1	47	1.9	36	1.5	-	-
ASP	10.1	-	8.9	25	2.3	18	1.6	-	-
GLU	9.8	-	8.7	58	5.0	46	4.0	-	-
GLY	3.9	-	3.4	45	1.6	22	0.8	-	-
PRO	4.0	-	3.5	45	1.6	17	0.6	-	-
SER	4.5	-	4.0	34	1.3	19	0.7	-	-
Sum AA	78.6		69	-	31	-	23	-	-

Fatty acids	% FA	g/kg
CFAT(h)		8.4
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Sugarbeet pulp, dried-SUG 100 - 150 g/kg:

1. This class of sugar beet pulp contains molasses.
2. The NE2015 and EW2015 have been calculated including an addition for reduced activity.
3. The AA pattern is based on the relative proportions of sugar beet pulp (SUG < 100 g/kg) and sugar beet molasses, and the AA pattern of these products.

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Sugarbeet pulp, dried-SUG 150 - 200 g/kg 4004.209/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	906	77	97	7	13	137	588	582
sdc	10	8	8	2	2	8	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	7	-	182	295	156	9	541	246
sdc	-	-	-	13	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	7.9	0.7	0.2	1.7	5.4	0.5	0.4	1.6	0.5
sdc	1.5	0.1	-	0.3	2.8	0.3	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	481	65	26	5	0.4	0.1	0.3
sdc	184	11	8	1	0.2	0.1	0.2

IP/P	30	SUGe/SUG	95	EB (meq/kg)	150
		CF_DI	0.97	CAD (meq/kg)	18

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	66	DCCP	35	DCCP	-	DCCP	45
DCCFAT	58	DCCFATh	54	DCCFAT	-	DCCFAT	-
DCCF	84	DCCF	79	DCNFE	-	DCCF	60
DCNFE	91	DCNFE	93	DCPpo	-	DCNFE	88
DCOM	87	DCOM	83				
		DCNSPh	87	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	-	DCCP	42
%RUP	45	StaDCP	60	DCCFATh	-	DCOM	84
%DRUP	85	AppDCP	34	DC(S+S)	-		
%RUSTA	-			DCNFEh	-		
%DASH	35			DCPpo	-		
DASHmax	33						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	933 /kg	NE2015	9.41 MJ/kg	MEpo	-	MErab	11.02 MJ/kg
VEVI	1013 /kg	NE2015	2249 kcal/kg	MEpo	-	MErab	2633 kcal/kg
FOM-91	670 g/kg	EW2015	1.07 /kg	MEla	-		
FOMr-07	607 g/kg	StaDP	0.4 g/kg	MEla	-		
FOMr2-07	292 g/kg	AppDP	0.2 g/kg	DPpo	-		
FOMr2/FOMr	0.48 /kg						
DVE-91	93 g/kg			**Broilers**		**Horses**	
DVE-07	94 g/kg			MEbr	-	NEm	8.19 MJ/kg
OEB-91	-52 g/kg			MEbr	-	NEm	1959 kcal/kg
OEB-07	-54 g/kg			DPpo	-	EWpa	0.918 /kg
OEB2-07	-19 g/kg					DCPho	41 g/kg
DVMET-91	2.0 g/kg						
DVLYS-91	5.9 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	6.1 g/kg						
SW	0.21 /kg						
VW	0.29 /kg						

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Sugarbeet pulp, dried-SUG 150 - 200 g/kg 4004.209/3/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			97	46	-	35	34	-	-
LYS	4.1	-	4.0	55	2.2	46	1.8	-	-
MET	1.3	-	1.3	59	0.7	51	0.6	-	-
CYS	1.0	-	1.0	46	0.4	26	0.3	-	-
THR	3.8	-	3.7	28	1.0	14	0.5	-	-
TRP	0.7	-	0.7	50	0.3	31	0.2	-	-
ILE	3.0	-	2.9	51	1.5	40	1.2	-	-
ARG	3.4	-	3.3	53	1.7	42	1.4	-	-
PHE	3.0	-	2.9	46	1.3	36	1.0	-	-
HIS	2.4	-	2.3	52	1.2	45	1.1	-	-
LEU	4.8	-	4.7	52	2.4	43	2.0	-	-
TYR	3.8	-	3.7	52	1.9	45	1.7	-	-
VAL	4.7	-	4.6	42	1.9	31	1.4	-	-
ALA	4.4	-	4.3	47	2.0	36	1.6	-	-
ASP	11.3	-	11.0	26	2.8	19	2.1	-	-
GLU	10.0	-	9.7	58	5.7	47	4.6	-	-
GLY	3.5	-	3.4	45	1.5	22	0.7	-	-
PRO	3.4	-	3.3	45	1.5	15	0.5	-	-
SER	3.9	-	3.8	34	1.3	18	0.7	-	-
Sum AA	72.5		70	-	32	-	23	-	-

Fatty acids	% FA	g/kg
CFAT(h)		7.1
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Sugarbeet pulp, dried-SUG 150 - 200 g/kg:

1. This class of sugar beet pulp contains molasses.
2. The NE2015 and EW2015 have been calculated including an addition for reduced activity.
3. The AA pattern is based on the relative proportions of sugar beet pulp (SUG < 100 g/kg) and sugar beet molasses, and the AA pattern of these products.

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Sugarbeet pulp, dried-SUG > 200 g/kg 4004.209/4/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	912	76	102	7	14	130	596	589
sdc	11	8	10	1	3	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	7	-	219	286	152	8	507	222
sdc	-	-	-	12	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	7.8	0.7	0.2	1.4	14.6	2.5	0.4	1.4	0.5
sdc	1.5	0.2	-	0.3	2.1	1.0	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	484	61	25	5	0.4	0.1	0.3
sdc	186	11	8	1	0.2	0.1	0.2

IP/P	30	SUGe/SUG	95	EB (meq/kg)	474	
		CF_DI	0.97	CAD (meq/kg)	357	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	68		DCCP	38	DCCP	-	DCCP	45
DCCFAT	58		DCCFATh	58	DCCFAT	-	DCCFAT	-
DCCF	84		DCCF	79	DCNFE	-	DCCF	60
DCNFE	91		DCNFE	94	DCPpo	-	DCNFE	87
DCOM	87		DCOM	84				
			DCNSPh	87	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	42
%RUP	41	42	StaDCP	60	DCCFATh	-	DCOM	84
%DRUP	85	85	AppDCP	34	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	35	35			DCPpo	-		
DASHmax	33	33						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	942 /kg	NE2015	9.56 MJ/kg	MEpo	-	MErab	11.01 MJ/kg
VEVI	1024 /kg	NE2015	2284 kcal/kg	MEpo	-	MErab	2633 kcal/kg
FOM-91	679 g/kg	EW2015	1.09 /kg	MEla	-		
FOMr-07	623 g/kg	StaDP	0.4 g/kg	MEla	-		
FOMr2-07	326 g/kg	AppDP	0.2 g/kg	DPpo	-		
FOMr2/FOMr	0.52 /kg						
DVE-91	93 g/kg			**Broilers**		**Horses**	
DVE-07	94 g/kg			MEbr	-	NEm	8.30 MJ/kg
OEB-91	-47 g/kg			MEbr	-	NEm	1984 kcal/kg
OEB-07	-50 g/kg			DPpo	-	EWpa	0.929 /kg
OEB2-07	-19 g/kg					DCPho	43 g/kg
DVMET-91	1.9 g/kg						
DVLYS-91	5.8 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	6.0 g/kg						
SW	0.17 /kg						
VW	0.29 /kg						

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Sugarbeet pulp, dried-SUG > 200 g/kg 4004.209/4/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			102	46	-	36	36	-	-
LYS	3.6	-	3.7	55	2.0	45	1.6	-	-
MET	1.1	-	1.1	59	0.7	50	0.6	-	-
CYS	0.9	-	0.9	46	0.4	25	0.2	-	-
THR	3.5	-	3.6	28	1.0	13	0.5	-	-
TRP	0.6	-	0.6	50	0.3	29	0.2	-	-
ILE	2.7	-	2.8	51	1.4	39	1.1	-	-
ARG	2.9	-	3.0	53	1.6	41	1.2	-	-
PHE	2.7	-	2.8	46	1.3	35	1.0	-	-
HIS	2.1	-	2.1	52	1.1	44	1.0	-	-
LEU	4.3	-	4.4	52	2.3	42	1.8	-	-
TYR	3.4	-	3.5	52	1.8	44	1.5	-	-
VAL	4.4	-	4.5	42	1.9	31	1.4	-	-
ALA	4.2	-	4.3	47	2.0	36	1.6	-	-
ASP	12.1	-	12.3	26	3.2	20	2.4	-	-
GLU	10.2	-	10.4	58	6.1	48	5.0	-	-
GLY	3.2	-	3.3	45	1.5	20	0.7	-	-
PRO	3.0	-	3.1	45	1.4	12	0.4	-	-
SER	3.6	-	3.7	33	1.2	17	0.6	-	-
Sum AA	68.5		70	-	31	-	23	-	-

Fatty acids		
	% FA	g/kg
CFAT(h)		7.1
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products		
	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Sugarbeet pulp, dried-SUG > 200 g/kg:

1. This class of sugar beet pulp contains molasses.
2. The NE2015 and EW2015 have been calculated including an addition for reduced activity.
3. The AA pattern is based on the relative proportions of sugar beet pulp (SUG < 100 g/kg) and sugar beet molasses, and the AA pattern of these products.

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Sunflower seed-dehulled, CF < 90 g/kg 3003.000/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	915	37	207	515	524	74	82	74
sdc	7	8	14	-	-	10	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	56	4	-	23	148	-	-	130	-18
sdc	10	-	-	4	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.3	5.0	4.0	2.5	7.1	0.3	0.2	0.2	1.9
sdc	-	0.6	-	-	0.8	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	123	20	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	80	SUGe/SUG	-	EB (meq/kg)	188	
		CF_DI	0.96	CAD (meq/kg)	56	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	82	DCCP	-	DCCP	85	DCCP	-
DCCFAT	94	DCCFATh	-	DCCFAT	96	DCCFAT	-
DCCF	36	DCCF	-	DCNFE	12	DCCF	-
DCNFE	69	DCNFE	-	DCPpo	32	DCNFE	-
DCOM	84	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	81	DCCP	85
%RUP	22	25	StaDCP	-	DCCFATh	92	DCOM	73
%DRUP	80	80	AppDCP	-	DC(S+S)	15		
%RUSTA	-	-			DCNFEh	5		
%DASH	65	65			DCPpo	32		
DASHmax	32	32						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	2077 /kg	NE2015	-	MEpo	22.55 MJ/kg	MErab	-
VEVI	2377 /kg	NE2015	-	MEpo	5390 kcal/kg	MErab	-
FOM-91	179 g/kg	EW2015	-	MEla	25.44 MJ/kg		
FOMr-07	239 g/kg	StaDP	-	MEla	6079 kcal/kg		
FOMr2-07	120 g/kg	AppDP	-	DPpo	1.6 g/kg		
FOMr2/FOMr	0.50 /kg						
DVE-91	46 g/kg			**Broilers**		**Horses**	
DVE-07	50 g/kg			MEbr	21.72 MJ/kg	NEm	13.09 MJ/kg
OEB-91	130 g/kg			MEbr	5191 kcal/kg	NEm	3130 kcal/kg
OEB-07	123 g/kg			DPpo	1.6 g/kg	EWpa	1.466 /kg
OEB2-07	70 g/kg					DCPho	176 g/kg
DVMET-91	1.2 g/kg						
DVLYS-91	2.1 g/kg						
DVMET-07	1.3 g/kg						
DVLYS-07	2.4 g/kg						
SW	0.34 /kg						
VW	0.27 /kg						

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Sunflower seed-dehulled, CF < 90 g/kg 3003.000/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			207	-	-	-	-	-	-
LYS	3.5	0.2	7.2	-	-	-	-	-	-
MET	2.2	0.1	4.6	-	-	-	-	-	-
CYS	1.7	0.1	3.5	-	-	-	-	-	-
THR	3.7	0.2	7.7	-	-	-	-	-	-
TRP	1.2	0.1	2.5	-	-	-	-	-	-
ILE	4.1	0.2	8.5	-	-	-	-	-	-
ARG	8.1	0.5	16.8	-	-	-	-	-	-
PHE	4.6	0.2	9.5	-	-	-	-	-	-
HIS	2.5	0.2	5.2	-	-	-	-	-	-
LEU	6.3	0.2	13.0	-	-	-	-	-	-
TYR	2.5	0.2	5.2	-	-	-	-	-	-
VAL	4.9	0.2	10.1	-	-	-	-	-	-
ALA	4.3	0.2	8.9	-	-	-	-	-	-
ASP	9.2	0.4	19.1	-	-	-	-	-	-
GLU	19.3	0.9	40.0	-	-	-	-	-	-
GLY	5.7	0.3	11.8	-	-	-	-	-	-
PRO	4.3	0.3	8.9	-	-	-	-	-	-
SER	4.3	0.2	8.9	-	-	-	-	-	-
Sum AA	92.4		191	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		515.3
<=C10	0.1	0.5
C12:0	0.2	1.0
C14:0	0.3	1.5
C16:0	7.0	34.3
C16:1	0.3	1.5
C18:0	4.0	19.6
C18:1	22.0	107.7
C:18:2	65.0	318.2
C18:3	0.4	2.0
>=C20	0.3	1.5
Sum FA	99.6	487.6
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Sunflower seed-partly dehulled, CF 90 - 200 g/kg 3003.000/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	938	32	169	441	460	179	118	98
sdc	15	4	-	41	12	14	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	17	4	-	20	269	-	-	274	5
sdc	-	-	-	2	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.3	4.8	3.9	2.6	8.0	0.3	0.2	0.2	1.6
sdc	-	0.8	-	-	-	0.5	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	126	15	43	14	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	80	SUGe/SUG	-	EB (meq/kg)	212	
		CF_DI	0.96	CAD (meq/kg)	102	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	79	DCCP	-	DCCP	85	DCCP	-
DCCFAT	94	DCCFATh	-	DCCFAT	96	DCCFAT	-
DCCF	19	DCCF	-	DCNFE	12	DCCF	-
DCNFE	50	DCNFE	-	DCPpo	32	DCNFE	-
DCOM	71	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	-	DCCP	80	DCCP	85
%RUP	22 25	StaDCP	-	DCCFATh	92	DCOM	61
%DRUP	80 80	AppDCP	-	DC(S+S)	15		
%RUSTA	- -			DCNFEh	3		
%DASH	65 65			DCPpo	32		
DASHmax	29 29						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1726 /kg	NE2015	-	MEpo	19.27 MJ/kg	MErab	-
VEVI	1913 /kg	NE2015	-	MEpo	4605 kcal/kg	MErab	-
FOM-91	164 g/kg	EW2015	-	MEla	21.73 MJ/kg		
FOMr-07	209 g/kg	StaDP	-	MEla	5194 kcal/kg		
FOMr2-07	101 g/kg	AppDP	-	DPpo	1.5 g/kg		
FOMr2/FOMr	0.48 /kg						
DVE-91	28 g/kg			**Broilers**		**Horses**	
DVE-07	31 g/kg			MEbr	18.87 MJ/kg	NEm	10.56 MJ/kg
OEB-91	104 g/kg			MEbr	4510 kcal/kg	NEm	2525 kcal/kg
OEB-07	98 g/kg			DPpo	1.5 g/kg	EWpa	1.183 /kg
OEB2-07	57 g/kg					DCPho	144 g/kg
DVMET-91	0.8 g/kg						
DVLYS-91	1.2 g/kg						
DVMET-07	0.9 g/kg						
DVLYS-07	1.4 g/kg						
SW	0.45 /kg						
VW	0.32 /kg						

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Sunflower seed-partly dehulled, CF 90 - 200 g/kg 3003.000/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			169	-	-	-	-	-	-
LYS	3.5	0.2	5.9	-	-	-	-	-	-
MET	2.2	0.1	3.7	-	-	-	-	-	-
CYS	1.7	0.1	2.9	-	-	-	-	-	-
THR	3.7	0.2	6.2	-	-	-	-	-	-
TRP	1.2	0.1	2.0	-	-	-	-	-	-
ILE	4.1	0.2	6.9	-	-	-	-	-	-
ARG	8.1	0.5	13.7	-	-	-	-	-	-
PHE	4.6	0.2	7.8	-	-	-	-	-	-
HIS	2.5	0.2	4.2	-	-	-	-	-	-
LEU	6.3	0.2	10.6	-	-	-	-	-	-
TYR	2.5	0.2	4.2	-	-	-	-	-	-
VAL	4.9	0.2	8.3	-	-	-	-	-	-
ALA	4.3	0.2	7.3	-	-	-	-	-	-
ASP	9.2	0.4	15.5	-	-	-	-	-	-
GLU	19.3	0.9	32.6	-	-	-	-	-	-
GLY	5.7	0.3	9.6	-	-	-	-	-	-
PRO	4.3	0.3	7.3	-	-	-	-	-	-
SER	4.3	0.2	7.3	-	-	-	-	-	-
Sum AA	92.4		156	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		440.9
<=C10	0.1	0.4
C12:0	0.2	0.8
C14:0	0.3	1.3
C16:0	7.0	29.3
C16:1	0.3	1.3
C18:0	4.0	16.8
C18:1	22.0	92.2
C:18:2	65.0	272.3
C18:3	0.4	1.7
>=C20	0.3	1.3
Sum FA	99.6	417.2
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Sunflower seed-non-dehulled, CF > 200 g/kg 3003.000/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	940	29	141	372	381	277	121	112
sdc	-	3	11	-	-	49	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	17	4	-	19	381	-	-	376	-5
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.4	4.4	3.5	2.6	8.0	0.1	0.2	0.2	1.3
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	126	15	43	14	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	80	SUGe/SUG	-	EB (meq/kg)	202	
		CF_DI	0.96	CAD (meq/kg)	108	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	76	DCCP	-	DCCP	85	DCCP	-
DCCFAT	94	DCCFATh	-	DCCFAT	96	DCCFAT	-
DCCF	14	DCCF	-	DCNFE	12	DCCF	-
DCNFE	27	DCNFE	-	DCPpo	32	DCNFE	-
DCOM	58	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	78	DCCP	-
%RUP	22	25	StaDCP	-	DCCFATh	92	DCOM	-
%DRUP	80	80	AppDCP	-	DC(S+S)	15		
%RUSTA	-	-			DCNFEh	3		
%DASH	65	65			DCPpo	32		
DASHmax	27	27						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1386 /kg	NE2015	-	MEpo	16.29 MJ/kg	MErab	-
VEVI	1474 /kg	NE2015	-	MEpo	3893 kcal/kg	MErab	-
FOM-91	126 g/kg	EW2015	-	MEla	18.37 MJ/kg		
FOMr-07	148 g/kg	StaDP	-	MEla	4390 kcal/kg		
FOMr2-07	82 g/kg	AppDP	-	DPpo	1.4 g/kg		
FOMr2/FOMr	0.55 /kg						
DVE-91	10 g/kg			**Broilers**		**Horses**	
DVE-07	11 g/kg			MEbr	15.61 MJ/kg	NEm	-
OEB-91	88 g/kg			MEbr	3730 kcal/kg	NEm	-
OEB-07	87 g/kg			DPpo	1.4 g/kg	EWpa	-
OEB2-07	48 g/kg					DCPho	-
DVMET-91	0.5 g/kg						
DVLYS-91	0.2 g/kg						
DVMET-07	0.5 g/kg						
DVLYS-07	0.3 g/kg						
SW	0.55 /kg						
VW	0.37 /kg						

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Sunflower seed-non-dehulled, CF > 200 g/kg 3003.000/3/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			141	-	-	-	-	-	-
LYS	3.5	0.2	4.9	-	-	-	-	-	-
MET	2.2	0.1	3.1	-	-	-	-	-	-
CYS	1.7	0.1	2.4	-	-	-	-	-	-
THR	3.7	0.2	5.2	-	-	-	-	-	-
TRP	1.2	0.1	1.7	-	-	-	-	-	-
ILE	4.1	0.2	5.8	-	-	-	-	-	-
ARG	8.1	0.5	11.4	-	-	-	-	-	-
PHE	4.6	0.2	6.5	-	-	-	-	-	-
HIS	2.5	0.2	3.5	-	-	-	-	-	-
LEU	6.3	0.2	8.9	-	-	-	-	-	-
TYR	2.5	0.2	3.5	-	-	-	-	-	-
VAL	4.9	0.2	6.9	-	-	-	-	-	-
ALA	4.3	0.2	6.1	-	-	-	-	-	-
ASP	9.2	0.4	13.0	-	-	-	-	-	-
GLU	19.3	0.9	27.2	-	-	-	-	-	-
GLY	5.7	0.3	8.0	-	-	-	-	-	-
PRO	4.3	0.3	6.1	-	-	-	-	-	-
SER	4.3	0.2	6.1	-	-	-	-	-	-
Sum AA	92.4		130	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		372.2
<=C10	0.1	0.4
C12:0	0.2	0.7
C14:0	0.3	1.1
C16:0	7.0	24.8
C16:1	0.3	1.1
C18:0	4.0	14.1
C18:1	22.0	77.8
C:18:2	65.0	229.9
C18:3	0.4	1.4
>=C20	0.3	1.1
Sum FA	99.6	352.2
% FA in CFAT-fraction		95

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Sunflower seed expeller-dehulled, CF < 200 g/kg 3003.401/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	926	63	335	88	103	180	260	245
sdc	12	5	22	11	10	13	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	43	5	-	56	331	228	52	381	50
sdc	2	-	-	7	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.9	11.3	9.0	3.8	14.3	0.2	1.2	0.2	3.1
sdc	-	0.8	-	-	0.6	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1067	57	72	29	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	86	SUGe/SUG	60	EB (meq/kg)	341	
		CF_DI	0.96	CAD (meq/kg)	136	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	87		DCCP	75	DCCP	85	DCCP	-
DCCFAT	92		DCCFATh	88	DCCFAT	65	DCCFAT	-
DCCF	31		DCCF	19	DCNFE	17	DCCF	-
DCNFE	75		DCNFE	63	DCPpo	27	DCNFE	-
DCOM	72		DCOM	61				
			DCNSPh	35	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	82	DCCP	85
%RUP	32	33	StaDCP	17	DCCFATh	86	DCOM	69
%DRUP	88	88	AppDCP	15	DC(S+S)	15		
%RUSTA	-	-			DCNFEh	4		
%DASH	65	65			DCPpo	27		
DASHmax	51	51						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	968 /kg	NE2015	8.17 MJ/kg	MEpo	8.15 MJ/kg	MErab	-
VEVI	998 /kg	NE2015	1952 kcal/kg	MEpo	1947 kcal/kg	MErab	-
FOM-91	430 g/kg	EW2015	0.93 /kg	MEla	8.48 MJ/kg		
FOMr-07	437 g/kg	StaDP	1.9 g/kg	MEla	2027 kcal/kg		
FOMr2-07	170 g/kg	AppDP	1.7 g/kg	DPpo	3.0 g/kg		
FOMr2/FOMr	0.39 /kg						
DVE-91	126 g/kg			**Broilers**		**Horses**	
DVE-07	119 g/kg			MEbr	8.55 MJ/kg	NEm	7.41 MJ/kg
OEB-91	152 g/kg			MEbr	2043 kcal/kg	NEm	1771 kcal/kg
OEB-07	160 g/kg			DPpo	3.0 g/kg	EWpa	0.830 /kg
OEB2-07	63 g/kg					DCPho	285 g/kg
DVMET-91	3.1 g/kg						
DVLYS-91	5.7 g/kg						
DVMET-07	3.0 g/kg						
DVLYS-07	5.5 g/kg						
SW	0.41 /kg						
VW	0.32 /kg						

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Sunflower seed expeller-dehulled, CF < 200 g/kg 3003.401/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			335	80	-	77	259	-	-
LYS	3.5	0.2	11.7	79	9.3	76	8.9	82	9.6
MET	2.2	0.1	7.4	88	6.5	86	6.4	92	6.8
CYS	1.7	0.1	5.7	77	4.4	74	4.2	69	3.9
THR	3.7	0.2	12.4	80	9.9	75	9.4	76	9.4
TRP	1.2	0.1	4.0	83	3.3	80	3.2	84	3.4
ILE	4.1	0.2	13.8	83	11.4	80	11.0	84	11.6
ARG	8.1	0.5	27.2	92	25.0	91	24.7	90	24.5
PHE	4.6	0.2	15.4	82	12.7	80	12.4	87	13.4
HIS	2.5	0.2	8.4	82	6.9	80	6.7	78	6.5
LEU	6.3	0.2	21.1	81	17.1	79	16.7	84	17.7
TYR	2.5	0.2	8.4	83	7.0	80	6.7	87	7.3
VAL	4.9	0.2	16.4	81	13.3	78	12.8	84	13.8
ALA	4.3	0.2	14.4	78	11.2	75	10.8	85	12.3
ASP	9.2	0.4	30.9	81	24.9	78	24.2	81	25.0
GLU	19.3	0.9	64.7	88	57.1	87	56.0	88	57.0
GLY	5.7	0.3	19.1	73	13.9	68	13.1	73	14.0
PRO	4.3	0.3	14.4	86	12.4	79	11.4	94	13.6
SER	4.3	0.2	14.4	82	11.8	77	11.2	77	11.1
Sum AA	92.4		310	-	258	-	250	-	261

Fatty acids	% FA	g/kg
CFAT(h)		88.5
<=C10	0.1	0.1
C12:0	0.2	0.1
C14:0	0.3	0.2
C16:0	7.0	4.6
C16:1	0.3	0.2
C18:0	4.0	2.7
C18:1	22.0	14.6
C:18:2	65.0	43.1
C18:3	0.4	0.3
>=C20	0.3	0.2
Sum FA	99.6	66.1
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Sunflower seed expeller-partly dehulled, CF 200 - 315 3003.401/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	923	58	298	96	105	227	245	236
sdc	22	7	26	24	-	15	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	30	4	-	47	373	269	73	422	49
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.9	10.0	8.0	3.8	13.0	0.2	1.2	0.2	2.8
sdc	-	1.5	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1063	57	72	28	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	83	SUGe/SUG	60	EB (meq/kg)	308	
		CF_DI	0.96	CAD (meq/kg)	124	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	86		DCCP	75	DCCP	85	DCCP	76
DCCFAT	92		DCCFATh	89	DCCFAT	65	DCCFAT	85
DCCF	25		DCCF	19	DCNFE	17	DCCF	15
DCNFE	68		DCNFE	58	DCPpo	27	DCNFE	65
DCOM	66		DCOM	57				
			DCNSPh	31	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	82	DCCP	85
%RUP	32	33	StaDCP	17	DCCFATh	86	DCOM	59
%DRUP	88	88	AppDCP	15	DC(S+S)	15		
%RUSTA	-	-			DCNFEh	3		
%DASH	65	65			DCPpo	27		
DASHmax	47	47						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	893 /kg	NE2015	7.77 MJ/kg	MEpo	7.96 MJ/kg	MErab	10.67 MJ/kg
VEVI	900 /kg	NE2015	1858 kcal/kg	MEpo	1902 kcal/kg	MErab	2549 kcal/kg
FOM-91	377 g/kg	EW2015	0.88 /kg	MEla	8.32 MJ/kg		
FOMr-07	388 g/kg	StaDP	1.7 g/kg	MEla	1989 kcal/kg		
FOMr2-07	149 g/kg	AppDP	1.5 g/kg	DPpo	2.7 g/kg		
FOMr2/FOMr	0.38 /kg						
DVE-91	105 g/kg			**Broilers**		**Horses**	
DVE-07	99 g/kg			MEbr	8.02 MJ/kg	NEm	6.45 MJ/kg
OEB-91	136 g/kg			MEbr	1916 kcal/kg	NEm	1540 kcal/kg
OEB-07	142 g/kg			DPpo	2.7 g/kg	EWpa	0.722 /kg
OEB2-07	56 g/kg					DCPho	253 g/kg
DVMET-91	2.7 g/kg						
DVLYS-91	4.7 g/kg						
DVMET-07	2.5 g/kg						
DVLYS-07	4.5 g/kg						
SW	0.46 /kg						
VW	0.34 /kg						

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Sunflower seed expeller-partly dehulled, CF 200 - 315 3003.401/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			298	80	-	77	229	-	-
LYS	3.5	0.2	10.4	79	8.3	76	7.9	82	8.5
MET	2.2	0.1	6.6	88	5.7	86	5.6	92	6.0
CYS	1.7	0.1	5.1	77	3.9	73	3.7	69	3.5
THR	3.7	0.2	11.0	80	8.8	75	8.3	76	8.4
TRP	1.2	0.1	3.6	83	3.0	79	2.8	84	3.0
ILE	4.1	0.2	12.2	83	10.1	80	9.7	84	10.3
ARG	8.1	0.5	24.1	92	22.2	91	21.9	90	21.7
PHE	4.6	0.2	13.7	82	11.3	80	11.0	87	11.9
HIS	2.5	0.2	7.4	82	6.1	80	5.9	78	5.8
LEU	6.3	0.2	18.8	81	15.2	79	14.8	84	15.8
TYR	2.5	0.2	7.4	83	6.2	79	5.9	87	6.5
VAL	4.9	0.2	14.6	81	11.8	77	11.3	84	12.3
ALA	4.3	0.2	12.8	78	10.0	74	9.5	85	10.9
ASP	9.2	0.4	27.4	81	22.1	78	21.4	81	22.2
GLU	19.3	0.9	57.5	88	50.7	86	49.6	88	50.6
GLY	5.7	0.3	17.0	73	12.3	68	11.5	73	12.4
PRO	4.3	0.3	12.8	86	11.0	78	10.0	94	12.0
SER	4.3	0.2	12.8	82	10.4	77	9.8	77	9.9
Sum AA	92.4		275	-	229	-	221	-	232

Fatty acids	% FA	g/kg
CFAT(h)		96.3
<=C10	0.1	0.1
C12:0	0.2	0.1
C14:0	0.3	0.2
C16:0	7.0	5.1
C16:1	0.3	0.2
C18:0	4.0	2.9
C18:1	22.0	15.9
C:18:2	65.0	46.9
C18:3	0.4	0.3
>=C20	0.3	0.2
Sum FA	99.6	71.9
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Sunflower seed expeller-non-dehulled, CF > 315 3003.401/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	913	56	183	103	111	372	200	192
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	17	2	-	26	514	416	120	544	30
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.9	5.5	4.4	3.8	12.9	0.2	1.0	0.2	1.7
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1052	56	71	28	-	-	0.1
sdc	-	-	-	-	-	-	-

IP/P	80	SUGe/SUG	-	EB (meq/kg)	310	
		CF_DI	0.96	CAD (meq/kg)	193	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	81	DCCP	-	DCCP	85	DCCP	-
DCCFAT	92	DCCFATh	-	DCCFAT	67	DCCFAT	-
DCCF	15	DCCF	-	DCNFE	11	DCCF	-
DCNFE	40	DCNFE	-	DCPpo	27	DCNFE	-
DCOM	44	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	32 33	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	88 88	AppDCP	-	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	65 65			DCPpo	27		
DASHmax	46 46						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	624 /kg	NE2015	-	MEpo	5.86 MJ/kg	MErab	-
VEVI	563 /kg	NE2015	-	MEpo	1401 kcal/kg	MErab	-
FOM-91	217 g/kg	EW2015	-	MEla	6.27 MJ/kg		
FOMr-07	200 g/kg	StaDP	-	MEla	1498 kcal/kg		
FOMr2-07	82 g/kg	AppDP	-	DPpo	1.5 g/kg		
FOMr2/FOMr	0.41 /kg						
DVE-91	40 g/kg			**Broilers**		**Horses**	
DVE-07	34 g/kg			MEbr	-	NEm	-
OEB-91	85 g/kg			MEbr	-	NEm	-
OEB-07	94 g/kg			DPpo	1.5 g/kg	EWpa	-
OEB2-07	36 g/kg					DCPho	-
DVMET-91	1.3 g/kg						
DVLYS-91	1.5 g/kg						
DVMET-07	1.1 g/kg						
DVLYS-07	1.1 g/kg						
SW	0.63 /kg						
VW	0.36 /kg						

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Sunflower seed expeller-non-dehulled, CF > 315 3003.401/3/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			183	-	-	-	-	-	-
LYS	3.5	0.2	6.4	-	-	-	-	-	-
MET	2.2	0.1	4.0	-	-	-	-	-	-
CYS	1.7	0.1	3.1	-	-	-	-	-	-
THR	3.7	0.2	6.8	-	-	-	-	-	-
TRP	1.2	0.1	2.2	-	-	-	-	-	-
ILE	4.1	0.2	7.5	-	-	-	-	-	-
ARG	8.1	0.5	14.8	-	-	-	-	-	-
PHE	4.6	0.2	8.4	-	-	-	-	-	-
HIS	2.5	0.2	4.6	-	-	-	-	-	-
LEU	6.3	0.2	11.5	-	-	-	-	-	-
TYR	2.5	0.2	4.6	-	-	-	-	-	-
VAL	4.9	0.2	8.9	-	-	-	-	-	-
ALA	4.3	0.2	7.9	-	-	-	-	-	-
ASP	9.2	0.4	16.8	-	-	-	-	-	-
GLU	19.3	0.9	35.2	-	-	-	-	-	-
GLY	5.7	0.3	10.4	-	-	-	-	-	-
PRO	4.3	0.3	7.9	-	-	-	-	-	-
SER	4.3	0.2	7.9	-	-	-	-	-	-
Sum AA	92.4		169	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		103.2
<=C10	0.1	0.1
C12:0	0.2	0.2
C14:0	0.3	0.2
C16:0	7.0	5.4
C16:1	0.3	0.2
C18:0	4.0	3.1
C18:1	22.0	17.0
C:18:2	65.0	50.3
C18:3	0.4	0.3
>=C20	0.3	0.2
Sum FA	99.6	77.1
% FA in CFAT-fraction		75

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Sunflower seed meal, solvent extracted-partly dehulled, CF 150 - 195 g/kg 3003.407/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	901	66	368	9	21	176	282	270
sdc	5	4	8	2	2	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	47	8	-	63	328	221	54	390	62
sdc	3	-	-	11	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	3.6	11.6	9.3	5.7	15.6	0.2	1.1	-	3.4
sdc	0.4	1.2	-	0.7	1.4	0.1	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	236	49	91	35	2.3	0.6	0.3
sdc	99	-	17	-	-	-	-

IP/P	88	SUGe/SUG	60	EB (meq/kg)	375
		CF_DI	0.95	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	88	DCCP	75	DCCP	85	DCCP	76
DCCFAT	70	DCCFATh	60	DCCFAT	51	DCCFAT	75
DCCF	34	DCCF	21	DCNFE	15	DCCF	15
DCNFE	77	DCNFE	64	DCPpo	27	DCNFE	65
DCOM	73	DCOM	60				
		DCNSPh	37	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	83	DCCP	85
%RUP	32 33	StaDCP	17	DCCFATh	64	DCOM	60
%DRUP	88 88	AppDCP	15	DC(S+S)	15		
%RUSTA	- -			DCNFEh	4		
%DASH	65 65			DCPpo	27		
DASHmax	53 53						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	786 /kg	NE2015	5.88 MJ/kg	MEpo	6.33 MJ/kg	MErab	9.13 MJ/kg
VEVI	787 /kg	NE2015	1405 kcal/kg	MEpo	1514 kcal/kg	MErab	2181 kcal/kg
FOM-91	482 g/kg	EW2015	0.67 /kg	MEla	6.36 MJ/kg		
FOMr-07	481 g/kg	StaDP	2.0 g/kg	MEla	1520 kcal/kg		
FOMr2-07	189 g/kg	AppDP	1.8 g/kg	DPpo	3.1 g/kg		
FOMr2/FOMr	0.39 /kg						
DVE-91	142 g/kg			**Broilers**		**Horses**	
DVE-07	133 g/kg			MEbr	6.16 MJ/kg	NEm	5.53 MJ/kg
OEB-91	165 g/kg			MEbr	1473 kcal/kg	NEm	1321 kcal/kg
OEB-07	175 g/kg			DPpo	3.1 g/kg	EWpa	0.619 /kg
OEB2-07	68 g/kg					DCPho	312 g/kg
DVMET-91	3.5 g/kg						
DVLYS-91	6.5 g/kg						
DVMET-07	3.3 g/kg						
DVLYS-07	6.2 g/kg						
SW	0.38 /kg						
VW	0.31 /kg						

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Sunflower seed meal, solvent extracted-partly dehulled, CF 150 - 195 g/kg 3003.407/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			368	80	-	78	285	-	-
LYS	3.5	0.2	12.9	79	10.2	76	9.8	82	10.5
MET	2.2	0.1	8.1	88	7.1	86	7.0	92	7.4
CYS	1.7	0.1	6.2	77	4.8	74	4.6	73	4.6
THR	3.7	0.2	13.6	80	10.9	76	10.3	76	10.3
TRP	1.2	0.1	4.4	83	3.7	80	3.5	84	3.7
ILE	4.1	0.2	15.1	83	12.4	80	12.1	85	12.8
ARG	8.1	0.5	29.8	92	27.4	91	27.1	91	27.1
PHE	4.6	0.2	16.9	82	13.9	81	13.6	87	14.7
HIS	2.5	0.2	9.2	82	7.5	80	7.4	77	7.1
LEU	6.3	0.2	23.2	81	18.8	79	18.3	84	19.4
TYR	2.5	0.2	9.2	83	7.6	80	7.4	86	7.9
VAL	4.9	0.2	18.0	81	14.6	78	14.1	83	14.9
ALA	4.3	0.2	15.8	78	12.3	75	11.9	83	13.1
ASP	9.2	0.4	33.8	81	27.3	79	26.6	80	27.1
GLU	19.3	0.9	70.9	88	62.5	87	61.5	87	61.7
GLY	5.7	0.3	20.9	73	15.2	69	14.4	71	14.9
PRO	4.3	0.3	15.8	86	13.6	80	12.6	94	14.9
SER	4.3	0.2	15.8	82	12.9	78	12.3	78	12.3
Sum AA	92.4		340	-	283	-	275	-	285

Fatty acids	% FA	g/kg
CFAT(h)		9.2
<=C10	0.1	0.0
C12:0	0.2	0.0
C14:0	0.3	0.0
C16:0	7.0	0.4
C16:1	0.3	0.0
C18:0	4.0	0.2
C18:1	22.0	1.3
C:18:2	65.0	3.9
C18:3	0.4	0.0
>=C20	0.3	0.0
Sum FA	99.6	5.9
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Sunflower seed meal, solvent extracted-partly dehulled, CF 195 - 245 g/kg 3003.407/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	891	66	308	16	25	224	277	268
sdc	9	4	14	3	2	12	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	39	3	-	50	363	264	70	450	86
sdc	8	-	-	9	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	3.5	10.6	8.4	5.6	15.2	0.2	1.1	-	2.8
sdc	0.4	1.4	-	0.7	1.2	0.1	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	233	48	90	35	2.2	0.6	0.3
sdc	97	6	17	4	-	-	-

IP/P	86	SUGe/SUG	60	EB (meq/kg)	364
		CF_DI	0.95	CAD (meq/kg)	214

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	87	DCCP	75	DCCP	85	DCCP	76
DCCFAT	81	DCCFATh	64	DCCFAT	51	DCCFAT	75
DCCF	26	DCCF	23	DCNFE	15	DCCF	10
DCNFE	72	DCNFE	56	DCPpo	27	DCNFE	65
DCOM	65	DCOM	54				
		DCNSPh	34	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	82	DCCP	85
%RUP	32 33	StaDCP	17	DCCFATh	64	DCOM	56
%DRUP	88 88	AppDCP	15	DC(S+S)	15		
%RUSTA	- -			DCNFEh	3		
%DASH	65 65			DCPpo	27		
DASHmax	53 53						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	694 /kg	NE2015	5.35 MJ/kg	MEpo	5.86 MJ/kg	MErab	8.35 MJ/kg
VEVI	672 /kg	NE2015	1279 kcal/kg	MEpo	1401 kcal/kg	MErab	1995 kcal/kg
FOM-91	423 g/kg	EW2015	0.61 /kg	MEla	5.91 MJ/kg		
FOMr-07	416 g/kg	StaDP	1.8 g/kg	MEla	1413 kcal/kg		
FOMr2-07	157 g/kg	AppDP	1.6 g/kg	DPpo	2.9 g/kg		
FOMr2/FOMr	0.38 /kg						
DVE-91	113 g/kg			**Broilers**		**Horses**	
DVE-07	105 g/kg			MEbr	5.32 MJ/kg	NEm	5.12 MJ/kg
OEB-91	135 g/kg			MEbr	1271 kcal/kg	NEm	1224 kcal/kg
OEB-07	144 g/kg			DPpo	2.9 g/kg	EWpa	0.574 /kg
OEB2-07	57 g/kg					DCPho	262 g/kg
DVMET-91	2.9 g/kg						
DVLYS-91	5.1 g/kg						
DVMET-07	2.7 g/kg						
DVLYS-07	4.8 g/kg						
SW	0.45 /kg						
VW	0.33 /kg						

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Sunflower seed meal, solvent extracted-partly dehulled, CF 195 - 245 g/kg 3003.407/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			308	80	-	77	237	-	-
LYS	3.5	0.2	10.8	79	8.5	76	8.2	-	-
MET	2.2	0.1	6.8	88	5.9	86	5.8	-	-
CYS	1.7	0.1	5.2	77	4.0	74	3.9	-	-
THR	3.7	0.2	11.4	80	9.1	75	8.6	-	-
TRP	1.2	0.1	3.7	83	3.1	79	2.9	-	-
ILE	4.1	0.2	12.6	83	10.4	80	10.1	-	-
ARG	8.1	0.5	24.9	92	22.9	91	22.6	-	-
PHE	4.6	0.2	14.2	82	11.6	80	11.4	-	-
HIS	2.5	0.2	7.7	82	6.3	80	6.2	-	-
LEU	6.3	0.2	19.4	81	15.7	79	15.3	-	-
TYR	2.5	0.2	7.7	83	6.4	80	6.1	-	-
VAL	4.9	0.2	15.1	81	12.2	78	11.7	-	-
ALA	4.3	0.2	13.2	78	10.3	75	9.9	-	-
ASP	9.2	0.4	28.3	81	22.9	78	22.2	-	-
GLU	19.3	0.9	59.4	88	52.3	86	51.3	-	-
GLY	5.7	0.3	17.5	73	12.7	68	11.9	-	-
PRO	4.3	0.3	13.2	86	11.4	79	10.4	-	-
SER	4.3	0.2	13.2	82	10.8	77	10.2	-	-
Sum AA	92.4		284	-	237	-	229	-	-

Fatty acids	% FA	g/kg
CFAT(h)		16.4
<=C10	0.1	0.0
C12:0	0.2	0.0
C14:0	0.3	0.0
C16:0	7.0	0.7
C16:1	0.3	0.0
C18:0	4.0	0.4
C18:1	22.0	2.3
C:18:2	65.0	6.9
C18:3	0.4	0.0
>=C20	0.3	0.0
Sum FA	99.6	10.6
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Sunflower seed meal, solvent extracted-non-dehulled, CF > 245 g/kg
3003.407/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	885	62	272	16	22	268	269	262
sdc	6	3	11	6	5	13	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	38	8	-	36	400	305	88	494	94
sdc	3	-	-	7	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	3.5	9.7	7.7	5.6	13.5	0.2	1.1	-	2.5
sdc	0.4	0.9	-	0.7	1.3	0.1	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	232	42	89	33	2.2	0.6	0.3
sdc	97	7	17	-	-	-	-

IP/P	84	SUGe/SUG	60	EB (meq/kg)	321
		CF_DI	0.95	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	86		DCCP	74	DCCP	85	DCCP	76
DCCFAT	81		DCCFATh	61	DCCFAT	51	DCCFAT	75
DCCF	22		DCCF	23	DCNFE	15	DCCF	5
DCNFE	66		DCNFE	51	DCPpo	27	DCNFE	65
DCOM	59		DCOM	50				
			DCNSPh	31	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	82	DCCP	-
%RUP	32	33	StaDCP	17	DCCFATh	64	DCOM	-
%DRUP	88	88	AppDCP	15	DC(S+S)	15		
%RUSTA	-	-			DCNFEh	2		
%DASH	65	65			DCPpo	27		
DASHmax	50	50						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	610 /kg	NE2015	4.86 MJ/kg	MEpo	5.17 MJ/kg	MErab	7.57 MJ/kg
VEVI	568 /kg	NE2015	1162 kcal/kg	MEpo	1236 kcal/kg	MErab	1809 kcal/kg
FOM-91	380 g/kg	EW2015	0.55 /kg	MEla	5.22 MJ/kg		
FOMr-07	366 g/kg	StaDP	1.6 g/kg	MEla	1247 kcal/kg		
FOMr2-07	135 g/kg	AppDP	1.5 g/kg	DPpo	2.6 g/kg		
FOMr2/FOMr	0.37 /kg						
DVE-91	94 g/kg			**Broilers**		**Horses**	
DVE-07	86 g/kg			MEbr	4.67 MJ/kg	NEm	-
OEB-91	119 g/kg			MEbr	1117 kcal/kg	NEm	-
OEB-07	128 g/kg			DPpo	2.6 g/kg	EWpa	-
OEB2-07	51 g/kg					DCPho	-
DVMET-91	2.4 g/kg						
DVLYS-91	4.2 g/kg						
DVMET-07	2.3 g/kg						
DVLYS-07	3.9 g/kg						
SW	0.50 /kg						
VW	0.35 /kg						

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Sunflower seed meal, solvent extracted-non-dehulled, CF > 245 g/kg
3003.407/3/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			272	80	-	77	208	-	-
LYS	3.5	0.2	9.5	79	7.5	76	7.2	-	-
MET	2.2	0.1	6.0	88	5.2	86	5.1	-	-
CYS	1.7	0.1	4.6	77	3.6	73	3.4	-	-
THR	3.7	0.2	10.1	80	8.0	75	7.5	-	-
TRP	1.2	0.1	3.3	83	2.7	79	2.6	-	-
ILE	4.1	0.2	11.1	83	9.2	80	8.9	-	-
ARG	8.1	0.5	22.0	92	20.3	90	19.9	-	-
PHE	4.6	0.2	12.5	82	10.3	80	10.0	-	-
HIS	2.5	0.2	6.8	82	5.6	80	5.4	-	-
LEU	6.3	0.2	17.1	81	13.9	79	13.5	-	-
TYR	2.5	0.2	6.8	83	5.6	79	5.4	-	-
VAL	4.9	0.2	13.3	81	10.8	77	10.3	-	-
ALA	4.3	0.2	11.7	78	9.1	74	8.7	-	-
ASP	9.2	0.4	25.0	81	20.2	78	19.5	-	-
GLU	19.3	0.9	52.5	88	46.2	86	45.2	-	-
GLY	5.7	0.3	15.5	73	11.3	68	10.5	-	-
PRO	4.3	0.3	11.7	86	10.1	78	9.1	-	-
SER	4.3	0.2	11.7	82	9.5	77	9.0	-	-
Sum AA	92.4		251	-	209	-	201	-	-

Fatty acids	% FA	g/kg
CFAT(h)		15.6
<=C10	0.1	0.0
C12:0	0.2	0.0
C14:0	0.3	0.0
C16:0	7.0	0.7
C16:1	0.3	0.0
C18:0	4.0	0.4
C18:1	22.0	2.2
C:18:2	65.0	6.6
C18:3	0.4	0.0
>=C20	0.3	0.0
Sum FA	99.6	10.1
% FA in CFAT-fraction		65

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Sweet potatoes, dried 4007.611/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	878	38	40	6	6	27	767	767
sdc	10	13	4	1	-	4	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	618	592	-	68	50	37	10	136	87
sdc	26	-	-	10	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.7	1.3	0.3	-	5.8	2.6	1.7	1.2	0.3
sdc	-	-	-	-	0.8	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	6	6	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	20	SUGe/SUG	75	EB (meq/kg)	214	
		CF_DI	0.96	CAD (meq/kg)	121	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	50	DCCP	20	DCCP	40
DCCFAT	53	DCCFATh	15	DCCFAT	-	DCCFAT	-
DCCF	11	DCCF	81	DCNFE	91	DCCF	92
DCNFE	92	DCNFE	97	DCPpo	74	DCNFE	92
DCOM	85	DCOM	94				
		DCNSPh	81	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	41	DCCP	-
%RUP	40	52	StaDCP	60	DCCFATh	89	DCOM	-
%DRUP	80	80	AppDCP	46	DC(S+S)	100		
%RUSTA	10	9			DCNFEh	86		
%DASH	50	50			DCPpo	74		
DASHmax	25	25						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	939 /kg	NE2015	10.53 MJ/kg	MEpo	12.24 MJ/kg	MErab	12.78 MJ/kg
VEVI	1030 /kg	NE2015	2517 kcal/kg	MEpo	2925 kcal/kg	MErab	3055 kcal/kg
FOM-91	631 g/kg	EW2015	1.20 /kg	MEla	12.24 MJ/kg		
FOMr-07	720 g/kg	StaDP	0.8 g/kg	MEla	2925 kcal/kg		
FOMr2-07	572 g/kg	AppDP	0.6 g/kg	DPpo	1.0 g/kg		
FOMr2/FOMr	0.79 /kg						
DVE-91	63 g/kg			**Broilers**		**Horses**	
DVE-07	87 g/kg			MEbr	11.90 MJ/kg	NEm	-
OEB-91	-72 g/kg			MEbr	2845 kcal/kg	NEm	-
OEB-07	-109 g/kg			DPpo	1.0 g/kg	EWpa	-
OEB2-07	-89 g/kg					DCPho	-
DVMET-91	1.6 g/kg						
DVLYS-91	4.6 g/kg						
DVMET-07	2.2 g/kg						
DVLYS-07	6.3 g/kg						
SW	-0.23 /kg						
VW	0.25 /kg						

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Sweet potatoes, dried 4007.611/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			40	54	-	29	12	-	-
LYS	4.0	-	1.6	54	0.9	33	0.5	57	0.9
MET	1.6	-	0.6	55	0.4	40	0.3	58	0.4
CYS	1.4	-	0.6	55	0.3	22	0.1	51	0.3
THR	3.2	-	1.3	54	0.7	13	0.2	53	0.7
TRP	1.1	-	0.4	55	0.2	27	0.1	52	0.2
ILE	3.1	-	1.2	54	0.7	28	0.4	55	0.7
ARG	4.1	-	1.6	54	0.9	34	0.6	51	0.8
PHE	4.0	-	1.6	54	0.9	36	0.6	56	0.9
HIS	1.6	-	0.6	54	0.3	29	0.2	51	0.3
LEU	5.5	-	2.2	54	1.2	35	0.8	55	1.2
TYR	2.7	-	1.1	54	0.6	31	0.3	53	0.6
VAL	3.9	-	1.6	54	0.9	25	0.4	55	0.9
ALA	4.2	-	1.7	54	0.9	29	0.5	58	1.0
ASP	11.4	-	4.6	54	2.5	39	1.8	54	2.5
GLU	13.0	-	5.2	53	2.8	34	1.8	53	2.8
GLY	3.7	-	1.5	54	0.8	1	0.0	53	0.8
PRO	4.0	-	1.6	53	0.8	-	-0.1	54	0.9
SER	3.4	-	1.4	53	0.7	11	0.2	51	0.7
Sum AA	75.9		30	-	16	-	8	-	16

Fatty acids

	% FA	g/kg
CFAT(h)		6.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Tapioca starch 4008.201/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	880	1	11	2	2	2	864	864
sdc	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	855	855	-	-	4	2	-	11	7
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.2	0.4	0.1	-	-	0.1	-	-	-
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	15	SUGe/SUG	75	EB (meq/kg)	-
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	100		DCCP	-	DCCP	-	DCCP	-
DCCFAT	90		DCCFATh	0	DCCFAT	-	DCCFAT	-
DCCF	94		DCCF	-	DCNFE	99	DCCF	-
DCNFE	94		DCNFE	99	DCPpo	59	DCNFE	-
DCOM	94		DCOM	97				
			DCNSPh	0	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	40	52	StaDCP	60	DCCFATh	89	DCOM	89
%DRUP	80	80	AppDCP	10	DC(S+S)	100		
%RUSTA	10	9			DCNFEh	99		
%DASH	50	50			DCPpo	59		
DASHmax	-	-						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1129 /kg	NE2015	12.09 MJ/kg	MEpo	14.82 MJ/kg	MErab	-
VEVI	1283 /kg	NE2015	2891 kcal/kg	MEpo	3541 kcal/kg	MErab	-
FOM-91	736 g/kg	EW2015	1.37 /kg	MEla	14.82 MJ/kg		
FOMr-07	794 g/kg	StaDP	0.2 g/kg	MEla	3541 kcal/kg		
FOMr2-07	657 g/kg	AppDP	0.0 g/kg	DPpo	0.2 g/kg		
FOMr2/FOMr	0.83 /kg						
DVE-91	70 g/kg			**Broilers**		**Horses**	
DVE-07	94 g/kg			MEbr	14.85 MJ/kg	NEm	9.94 MJ/kg
OEB-91	-104 g/kg			MEbr	3549 kcal/kg	NEm	2375 kcal/kg
OEB-07	-141 g/kg			DPpo	0.2 g/kg	EWpa	1.113 /kg
OEB2-07	-114 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-0.43 /kg						
VW	0.25 /kg						

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Tapioca starch 4008.201/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			11	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	0	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg
CFAT(h)		1.8
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Tapioca, dried-STAew < 630 g/kg 4008.611/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	883	58	23	5	9	62	735	732
sdc	7	7	2	1	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	618	593	-	9	120	87	23	196	76
sdc	10	-	-	5	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	4.1	0.7	0.1	1.0	6.0	0.1	0.4	0.2	0.1
sdc	2.2	0.1	-	-	0.7	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	791	33	8	3	0.2	0.3	-
sdc	-	-	-	-	-	-	-

IP/P	15	SUGe/SUG	75	EB (meq/kg)	145
		CF_DI	0.99	CAD (meq/kg)	126

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	-7	DCCP	13	DCCP	40
DCCFAT	47	DCCFATh	37	DCCFAT	-	DCCFAT	-
DCCF	26	DCCF	41	DCNFE	90	DCCF	31
DCNFE	92	DCNFE	93	DCPpo	66	DCNFE	95
DCOM	83	DCOM	86				
		DCNSPh	55	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	24	DCCP	-
%RUP	40	52	StaDCP	60	DCCFATh	89	DCOM	83
%DRUP	80	80	AppDCP	36	DC(S+S)	100		
%RUSTA	10	9			DCNFEh	82		
%DASH	35	35			DCPpo	66		
DASHmax	25	25						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	894 /kg	NE2015	9.62 MJ/kg	MEpo	11.36 MJ/kg	MErab	12.43 MJ/kg
VEVI	973 /kg	NE2015	2299 kcal/kg	MEpo	2715 kcal/kg	MErab	2971 kcal/kg
FOM-91	612 g/kg	EW2015	1.09 /kg	MEla	11.36 MJ/kg		
FOMr-07	665 g/kg	StaDP	0.4 g/kg	MEla	2715 kcal/kg		
FOMr2-07	510 g/kg	AppDP	0.3 g/kg	DPpo	0.5 g/kg		
FOMr2/FOMr	0.77 /kg						
DVE-91	53 g/kg			**Broilers**		**Horses**	
DVE-07	72 g/kg			MEbr	10.82 MJ/kg	NEm	8.57 MJ/kg
OEB-91	-79 g/kg			MEbr	2586 kcal/kg	NEm	2049 kcal/kg
OEB-07	-109 g/kg			DPpo	0.5 g/kg	EWpa	0.960 /kg
OEB2-07	-83 g/kg					DCPho	-
DVMET-91	1.4 g/kg						
DVLYS-91	4.0 g/kg						
DVMET-07	1.8 g/kg						
DVLYS-07	5.5 g/kg						
SW	-0.16 /kg						
VW	0.26 /kg						

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Tapioca, dried-STAew < 630 g/kg 4008.611/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			23	54	-	9	2	-	-
LYS	3.7	0.4	0.8	54	0.5	13	0.1	56	0.5
MET	1.3	0.2	0.3	55	0.2	22	0.1	58	0.2
CYS	1.2	0.3	0.3	55	0.1	-	0.0	50	0.1
THR	3.3	0.3	0.7	53	0.4	-	-0.1	52	0.4
TRP	1.1	0.2	0.2	55	0.1	5	0.0	51	0.1
ILE	3.1	0.3	0.7	54	0.4	7	0.1	55	0.4
ARG	4.9	0.9	1.1	54	0.6	23	0.3	51	0.6
PHE	3.4	0.7	0.8	53	0.4	16	0.1	55	0.4
HIS	2.4	0.7	0.5	53	0.3	24	0.1	50	0.3
LEU	5.4	0.6	1.2	54	0.7	20	0.2	55	0.7
TYR	2.1	0.4	0.5	53	0.3	-	0.0	52	0.2
VAL	4.1	0.3	0.9	54	0.5	4	0.0	55	0.5
ALA	5.2	0.7	1.2	54	0.6	17	0.2	57	0.7
ASP	7.6	0.7	1.7	53	0.9	13	0.2	53	0.9
GLU	13.9	1.9	3.1	52	1.6	19	0.6	51	1.6
GLY	3.7	0.6	0.8	53	0.4	-	-0.4	52	0.4
PRO	3.9	0.7	0.9	51	0.5	-	-0.5	53	0.5
SER	3.6	0.4	0.8	52	0.4	-	-0.2	49	0.4
Sum AA	73.9		17	-	9	-	1	-	9

Fatty acids	% FA	g/kg
CFAT(h)		5.1
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Tapioca, dried-STAew < 630 g/kg:

1. This product may be contaminated with sand / soil; this is the case when the ASH content is higher than approximately 26 g/kg DM.

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Tapioca, dried-STAew 630 - 680 g/kg 4008.611/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	879	58	23	5	8	53	740	737
sdc	9	8	2	1	-	6	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	647	620	-	8	103	75	19	165	63
sdc	11	-	-	4	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.5	0.7	0.1	1.0	6.2	0.1	0.4	1.1	0.1
sdc	0.5	0.1	-	-	0.8	0.0	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	787	33	8	3	0.2	0.3	-
sdc	-	-	1	-	-	-	-

IP/P	15	SUGe/SUG	75	EB (meq/kg)	149
		CF_DI	0.99	CAD (meq/kg)	75

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	0	DCCP	20	DCCP	40
DCCFAT	44	DCCFATh	31	DCCFAT	-	DCCFAT	-
DCCF	26	DCCF	41	DCNFE	91	DCCF	31
DCNFE	93	DCNFE	94	DCPpo	66	DCNFE	96
DCOM	84	DCOM	88				
		DCNSPh	55	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	24	DCCP	-
%RUP	40	52	StaDCP	60	DCCFATh	89	DCOM	84
%DRUP	80	80	AppDCP	36	DC(S+S)	100		
%RUSTA	10	9			DCNFEh	85		
%DASH	35	35			DCPpo	66		
DASHmax	25	25						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	907 /kg	NE2015	9.82 MJ/kg	MEpo	11.61 MJ/kg	MErab	12.59 MJ/kg
VEVI	993 /kg	NE2015	2347 kcal/kg	MEpo	2775 kcal/kg	MErab	3010 kcal/kg
FOM-91	617 g/kg	EW2015	1.12 /kg	MEla	11.61 MJ/kg		
FOMr-07	673 g/kg	StaDP	0.4 g/kg	MEla	2775 kcal/kg		
FOMr2-07	522 g/kg	AppDP	0.3 g/kg	DPpo	0.5 g/kg		
FOMr2/FOMr	0.78 /kg						
DVE-91	54 g/kg			**Broilers**		**Horses**	
DVE-07	74 g/kg			MEbr	11.24 MJ/kg	NEm	8.65 MJ/kg
OEB-91	-80 g/kg			MEbr	2688 kcal/kg	NEm	2067 kcal/kg
OEB-07	-110 g/kg			DPpo	0.5 g/kg	EWpa	0.969 /kg
OEB2-07	-86 g/kg					DCPho	-
DVMET-91	1.4 g/kg						
DVLYS-91	4.1 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	5.6 g/kg						
SW	-0.19 /kg						
VW	0.25 /kg						

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Tapioca, dried-STAew 630 - 680 g/kg 4008.611/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			23	54	-	9	2	-	-
LYS	3.7	0.4	0.8	54	0.5	13	0.1	56	0.5
MET	1.3	0.2	0.3	55	0.2	22	0.1	58	0.2
CYS	1.2	0.3	0.3	55	0.1	-	0.0	50	0.1
THR	3.3	0.3	0.7	53	0.4	-	-0.1	52	0.4
TRP	1.1	0.2	0.2	55	0.1	5	0.0	51	0.1
ILE	3.1	0.3	0.7	54	0.4	7	0.1	55	0.4
ARG	4.9	0.9	1.1	54	0.6	23	0.3	51	0.6
PHE	3.4	0.7	0.8	53	0.4	16	0.1	55	0.4
HIS	2.4	0.7	0.5	53	0.3	24	0.1	50	0.3
LEU	5.4	0.6	1.2	54	0.7	20	0.2	55	0.7
TYR	2.1	0.4	0.5	53	0.3	-	0.0	52	0.2
VAL	4.1	0.3	0.9	54	0.5	4	0.0	55	0.5
ALA	5.2	0.7	1.2	54	0.6	18	0.2	57	0.7
ASP	7.6	0.7	1.7	53	0.9	13	0.2	53	0.9
GLU	13.9	1.9	3.1	52	1.6	19	0.6	51	1.6
GLY	3.7	0.6	0.8	53	0.4	-	-0.3	52	0.4
PRO	3.9	0.7	0.9	51	0.4	-	-0.5	53	0.5
SER	3.6	0.4	0.8	52	0.4	-	-0.2	49	0.4
Sum AA	73.9		17	-	9	-	1	-	9

Fatty acids	% FA	g/kg
CFAT(h)		4.8
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Tapioca, dried-STAew 630 - 680 g/kg:

1. This product may be contaminated with sand / soil; this is the case when the ASH content is higher than approximately 26 g/kg DM.

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Tapioca, dried-STAew 680 - 730 g/kg 4008.611/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	873	51	23	4	7	48	746	744
sdc	6	5	3	1	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	681	653	-	7	92	66	17	135	44
sdc	6	-	-	3	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.0	0.9	0.1	1.0	6.6	0.1	0.4	1.9	0.1
sdc	0.5	0.1	-	-	1.0	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	635	26	8	3	0.2	0.3	-
sdc	158	8	1	1	-	-	-

IP/P	15	SUGe/SUG	75	EB (meq/kg)	160
		CF_DI	0.99	CAD (meq/kg)	32

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	5	DCCP	28	DCCP	40
DCCFAT	38	DCCFATh	24	DCCFAT	-	DCCFAT	-
DCCF	26	DCCF	41	DCNFE	93	DCCF	31
DCNFE	93	DCNFE	95	DCPpo	66	DCNFE	97
DCOM	85	DCOM	88				
		DCNSPh	49	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	25	DCCP	-
%RUP	40	StaDCP	60	DCCFATh	89	DCOM	85
%DRUP	80	AppDCP	40	DC(S+S)	100		
%RUSTA	10			DCNFEh	89		
%DASH	35			DCPpo	66		
DASHmax	23						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	917 /kg	NE2015	10.02 MJ/kg	MEpo	11.79 MJ/kg	MErab	12.80 MJ/kg
VEVI	1006 /kg	NE2015	2394 kcal/kg	MEpo	2818 kcal/kg	MErab	3059 kcal/kg
FOM-91	620 g/kg	EW2015	1.14 /kg	MEla	11.79 MJ/kg		
FOMr-07	684 g/kg	StaDP	0.5 g/kg	MEla	2818 kcal/kg		
FOMr2-07	536 g/kg	AppDP	0.4 g/kg	DPpo	0.6 g/kg		
FOMr2/FOMr	0.78 /kg						
DVE-91	56 g/kg			**Broilers**		**Horses**	
DVE-07	77 g/kg			MEbr	11.77 MJ/kg	NEm	8.80 MJ/kg
OEB-91	-80 g/kg			MEbr	2812 kcal/kg	NEm	2103 kcal/kg
OEB-07	-113 g/kg			DPpo	0.6 g/kg	EWpa	0.985 /kg
OEB2-07	-89 g/kg					DCPho	-
DVMET-91	1.4 g/kg						
DVLYS-91	4.2 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	5.8 g/kg						
SW	-0.22 /kg						
VW	0.25 /kg						

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Tapioca, dried-STAew 680 - 730 g/kg 4008.611/3/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			23	54	-	10	2	-	-
LYS	3.7	0.4	0.8	54	0.5	14	0.1	56	0.5
MET	1.3	0.2	0.3	55	0.2	23	0.1	58	0.2
CYS	1.2	0.3	0.3	55	0.2	-	0.0	50	0.1
THR	3.3	0.3	0.8	53	0.4	-	-0.1	52	0.4
TRP	1.1	0.2	0.3	55	0.1	6	0.0	51	0.1
ILE	3.1	0.3	0.7	54	0.4	8	0.1	55	0.4
ARG	4.9	0.9	1.1	54	0.6	24	0.3	51	0.6
PHE	3.4	0.7	0.8	53	0.4	17	0.1	55	0.4
HIS	2.4	0.7	0.5	53	0.3	25	0.1	50	0.3
LEU	5.4	0.6	1.2	54	0.7	20	0.3	55	0.7
TYR	2.1	0.4	0.5	53	0.3	0	0.0	52	0.2
VAL	4.1	0.3	0.9	54	0.5	5	0.0	55	0.5
ALA	5.2	0.7	1.2	54	0.6	18	0.2	57	0.7
ASP	7.6	0.7	1.7	53	0.9	14	0.2	53	0.9
GLU	13.9	1.9	3.2	52	1.7	20	0.6	51	1.6
GLY	3.7	0.6	0.8	53	0.4	-	-0.3	52	0.4
PRO	3.9	0.7	0.9	51	0.5	-	-0.5	53	0.5
SER	3.6	0.4	0.8	52	0.4	-	-0.1	49	0.4
Sum AA	73.9		17	-	9	-	1	-	9

Fatty acids		
	% FA	g/kg
CFAT(h)		4.2
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products		
	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Tapioca, dried-STAew 680 - 730 g/kg:

1. This product may be contaminated with sand / soil; this is the case when the ASH content is higher than approximately 26 g/kg DM.

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Triticale 1012.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	867	17	103	13	19	22	712	706
sdc	7	1	7	2	3	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	595	546	-	29	102	32	9	160	59
sdc	14	-	-	4	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.4	3.2	2.1	1.2	4.8	0.1	0.5	0.1	1.0
sdc	-	0.3	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	46	33	42	5	0.4	0.0	-
sdc	20	3	13	1	-	-	-

IP/P	65	SUGe/SUG	75	EB (meq/kg)	111	
		CF_DI	0.96	CAD (meq/kg)	43	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	72		DCCP	80	DCCP	-	DCCP	-
DCCFAT	71		DCCFATh	60	DCCFAT	-	DCCFAT	-
DCCF	30		DCCF	17	DCNFE	-	DCCF	-
DCNFE	94		DCNFE	95	DCPpo	-	DCNFE	-
DCOM	89		DCOM	91				
			DCNSPh	67	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	82	DCCP	78
%RUP	21	23	StaDCP	30	DCCFATh	24	DCOM	88
%DRUP	88	88	AppDCP	25	DC(S+S)	93		
%RUSTA	10	9			DCNFEh	76		
%DASH	65	65			DCPpo	-		
DASHmax	18	18						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1032 /kg	NE2015	10.45 MJ/kg	MEpo	-	MErab	-
VEVI	1144 /kg	NE2015	2497 kcal/kg	MEpo	-	MErab	-
FOM-91	668 g/kg	EW2015	1.19 /kg	MEla	-		
FOMr-07	703 g/kg	StaDP	1.0 g/kg	MEla	-		
FOMr2-07	482 g/kg	AppDP	0.8 g/kg	DPpo	-		
FOMr2/FOMr	0.69 /kg						
DVE-91	78 g/kg			**Broilers**		**Horses**	
DVE-07	99 g/kg			MEbr	10.93 MJ/kg	NEm	9.43 MJ/kg
OEB-91	-22 g/kg			MEbr	2613 kcal/kg	NEm	2254 kcal/kg
OEB-07	-54 g/kg			DPpo	-	EWpa	1.056 /kg
OEB2-07	-48 g/kg					DCPho	80 g/kg
DVMET-91	1.9 g/kg						
DVLYS-91	5.2 g/kg						
DVMET-07	2.4 g/kg						
DVLYS-07	6.8 g/kg						
SW	-0.15 /kg						
VW	0.25 /kg						

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Triticale 1012.000/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			103	85	-	75	78	-	-
LYS	3.3	0.3	3.4	83	2.8	73	2.5	82	2.8
MET	1.7	0.1	1.8	89	1.6	83	1.5	91	1.6
CYS	2.3	0.1	2.4	90	2.1	82	1.9	75	1.8
THR	3.1	0.2	3.2	78	2.5	62	2.0	79	2.5
TRP	1.1	0.1	1.1	80	0.9	69	0.8	80	0.9
ILE	3.4	0.1	3.5	88	3.1	79	2.8	83	2.9
ARG	5.0	0.3	5.2	87	4.5	80	4.1	80	4.1
PHE	4.5	0.3	4.6	87	4.0	81	3.8	87	4.0
HIS	2.3	0.1	2.4	86	2.1	80	1.9	79	1.9
LEU	6.5	0.1	6.7	87	5.9	81	5.4	85	5.7
TYR	2.8	0.2	2.9	86	2.5	77	2.2	82	2.4
VAL	4.6	0.3	4.7	88	4.2	78	3.7	85	4.0
ALA	4.0	0.2	4.1	83	3.4	73	3.0	80	3.3
ASP	6.1	0.4	6.3	83	5.3	73	4.6	77	4.8
GLU	25.3	1.8	26.1	93	24.2	89	23.2	93	24.3
GLY	4.2	0.2	4.3	81	3.5	63	2.7	79	3.4
PRO	9.4	0.7	9.7	93	9.0	83	8.0	89	8.6
SER	4.5	0.2	4.6	88	4.1	76	3.5	84	3.9
Sum AA	94.1		97	-	86	-	78	-	83

Fatty acids	% FA	g/kg
CFAT(h)		13.2
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Triticale:

1. The STaDCP of triticale including endogenous phytase activity is 50%.

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Vinasse, beet-CP < 240 g/kg 4004.306/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	652	176	206	-	-	1	269	269
sdc	27	15	14	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	40	2	1	-	232	230
sdc	-	-	-	12	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	4.1	1.2	0.1	1.0	68.6	16.0	10.0	5.7	1.1
sdc	1.3	0.9	-	0.5	12.3	4.7	3.8	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	229	49	72	8	-	-	-
sdc	36	14	32	2	-	-	-

IP/P	5	SUGe/SUG	10	EB (meq/kg)	2171
		CF_DI	0.96	CAD (meq/kg)	1749

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	85	DCCP	40	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	-	DCCF	-
DCNFE	94	DCNFE	96	DCPpo	-	DCNFE	-
DCOM	90	DCOM	71				
		DCNSPh	95	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	85
%RUP	5 5	StaDCP	65	DCCFATh	-	DCOM	71
%DRUP	- 0	AppDCP	54	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	65 65			DCPpo	-		
DASHmax	130 130						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	572 /kg	NE2015	3.49 MJ/kg	MEpo	-	MErab	-
VEVI	618 /kg	NE2015	833 kcal/kg	MEpo	-	MErab	-
FOM-91	417 g/kg	EW2015	0.40 /kg	MEla	-		
FOMr-07	438 g/kg	StaDP	0.8 g/kg	MEla	-		
FOMr2-07	384 g/kg	AppDP	0.6 g/kg	DPpo	-		
FOMr2/FOMr	0.88 /kg						
DVE-91	31 g/kg			**Broilers**		**Horses**	
DVE-07	27 g/kg			MEbr	-	NEm	4.02 MJ/kg
OEB-91	132 g/kg			MEbr	-	NEm	960 kcal/kg
OEB-07	139 g/kg			DPpo	-	EWpa	0.450 /kg
OEB2-07	144 g/kg					DCPho	175 g/kg
DVMET-91	0.9 g/kg						
DVLYS-91	2.6 g/kg						
DVMET-07	0.8 g/kg						
DVLYS-07	2.3 g/kg						
SW	0.17 /kg						
VW	0.19 /kg						

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Vinasse, beet-CP < 240 g/kg 4004.306/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			206	95	-	91	188	-	-
LYS	0.8	-	1.6	95	1.6	79	1.3	-	-
MET	2.0	-	4.1	95	3.9	93	3.8	-	-
CYS	0.4	-	0.8	95	0.8	78	0.6	-	-
THR	0.9	-	1.9	94	1.7	74	1.4	-	-
TRP	0.4	-	0.8	95	0.8	84	0.7	-	-
ILE	1.2	-	2.5	95	2.3	85	2.1	-	-
ARG	0.4	-	0.8	94	0.8	63	0.5	-	-
PHE	0.7	-	1.4	94	1.4	80	1.1	-	-
HIS	0.6	-	1.2	94	1.2	85	1.0	-	-
LEU	1.5	-	3.1	95	2.9	85	2.6	-	-
TYR	0.9	-	1.9	95	1.8	84	1.6	-	-
VAL	1.3	-	2.7	95	2.5	82	2.2	-	-
ALA	2.1	-	4.3	95	4.1	87	3.8	-	-
ASP	3.8	-	7.8	95	7.4	88	6.9	-	-
GLU	26.0	-	53.5	95	50.8	93	50.0	-	-
GLY	1.7	-	3.5	95	3.3	78	2.7	-	-
PRO	1.5	-	3.1	94	2.9	71	2.2	-	-
SER	1.4	-	2.9	94	2.7	80	2.3	-	-
Sum AA	47.6		98	-	93	-	87	-	-

Fatty acids	% FA	g/kg
CFAT(h)		0.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Vinasse, beet-CP < 240 g/kg:

1. The CP fraction contains a substantial amount of NPN that yields no energy. For the NE2015 calculation the DCCP is therefore set at 40%.

2. The S-i content of this product is variable; for a correct calculation of the CAD value of a batch the S-i content should be analysed.

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Vinasse, beet-CP > 240 g/kg 4004.306/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	657	98	270	2	-	-	286	288
sdc	45	22	17	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	44	2	-	-	243	241
sdc	-	-	-	18	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.3	1.7	0.1	0.6	26.6	19.3	19.1	6.4	1.4
sdc	1.1	0.9	-	0.4	18.6	1.9	3.5	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	266	65	13	7	-	-	-
sdc	41	13	6	-	-	-	-

IP/P	5	SUGe/SUG	10	EB (meq/kg)	982
		CF_DI	0.96	CAD (meq/kg)	494

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	87	DCCP	40	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	0	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	-	DCCF	-
DCNFE	94	DCNFE	96	DCPpo	-	DCNFE	-
DCOM	90	DCOM	69				
		DCNSPh	95	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	87
%RUP	5	5	StaDCP	65	DCCFATh	-	DCOM	67
%DRUP	-	0	AppDCP	57	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	75	75						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	675 /kg	NE2015	3.96 MJ/kg	MEpo	-	MErab	-
VEVI	728 /kg	NE2015	946 kcal/kg	MEpo	-	MErab	-
FOM-91	488 g/kg	EW2015	0.45 /kg	MEla	-		
FOMr-07	514 g/kg	StaDP	1.1 g/kg	MEla	-		
FOMr2-07	456 g/kg	AppDP	0.9 g/kg	DPpo	-		
FOMr2/FOMr	0.89 /kg						
DVE-91	40 g/kg			**Broilers**		**Horses**	
DVE-07	34 g/kg			MEbr	-	NEm	4.40 MJ/kg
OEB-91	182 g/kg			MEbr	-	NEm	1051 kcal/kg
OEB-07	192 g/kg			DPpo	-	EWpa	0.492 /kg
OEB2-07	197 g/kg					DCPho	235 g/kg
DVMET-91	1.1 g/kg						
DVLYS-91	3.2 g/kg						
DVMET-07	0.9 g/kg						
DVLYS-07	2.8 g/kg						
SW	0.16 /kg						
VW	0.19 /kg						

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Vinasse, beet-CP > 240 g/kg 4004.306/2/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			270	95	-	92	249	-	-
LYS	0.8	-	2.2	95	2.0	83	1.8	-	-
MET	2.0	-	5.4	95	5.1	94	5.1	-	-
CYS	0.4	-	1.1	95	1.0	82	0.9	-	-
THR	0.9	-	2.4	94	2.3	79	1.9	-	-
TRP	0.4	-	1.1	95	1.0	86	0.9	-	-
ILE	1.2	-	3.2	95	3.1	87	2.8	-	-
ARG	0.4	-	1.1	94	1.0	71	0.8	-	-
PHE	0.7	-	1.9	94	1.8	83	1.6	-	-
HIS	0.6	-	1.6	95	1.5	87	1.4	-	-
LEU	1.5	-	4.1	95	3.8	87	3.5	-	-
TYR	0.9	-	2.4	95	2.3	87	2.1	-	-
VAL	1.3	-	3.5	95	3.3	85	3.0	-	-
ALA	2.1	-	5.7	95	5.4	89	5.1	-	-
ASP	3.8	-	10.3	95	9.7	90	9.2	-	-
GLU	26.0	-	70.3	95	66.7	94	65.9	-	-
GLY	1.7	-	4.6	95	4.4	82	3.8	-	-
PRO	1.5	-	4.1	94	3.8	77	3.1	-	-
SER	1.4	-	3.8	94	3.6	83	3.1	-	-
Sum AA	47.6		129	-	122	-	116	-	-

Fatty acids		
	% FA	g/kg
CFAT(h)		2.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products		
	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Vinasse, beet-CP > 240 g/kg:

1. The CP fraction contains a substantial amount of NPN that yields no energy. For the NE2015 calculation the DCCP is therefore set at 40%.

2. The S-i content of this product is variable; for a correct calculation of the CAD value of a batch the S-i content should be analysed.

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Wheat 1010.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	867	15	110	15	21	23	704	698
sdc	9	1	9	2	1	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	592	578	-	25	117	35	7	125	8
sdc	13	-	-	3	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.3	2.9	1.9	0.9	3.8	0.1	0.6	0.1	1.0
sdc	0.1	0.2	-	0.1	0.4	0.0	0.3	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	50	31	30	3	0.7	0.0	18.1
sdc	26	9	11	1	0.3	-	40.4

IP/P	65	SUGe/SUG	60	EB (meq/kg)	83	
		CF_DI	0.95	CAD (meq/kg)	13	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	74		DCCP	81	DCCP	81	DCCP	77
DCCFAT	70		DCCFATh	62	DCCFAT	60	DCCFAT	87
DCCF	30		DCCF	17	DCNFE	90	DCCF	20
DCNFE	94		DCNFE	95	DCPpo	38	DCNFE	89
DCOM	89		DCOM	91				
			DCNSPh	56	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	84	DCCP	81
%RUP	23	24	StaDCP	30	DCCFATh	54	DCOM	88
%DRUP	91	91	AppDCP	24	DC(S+S)	98		
%RUSTA	10	9			DCNFEh	84		
%DASH	65	65			DCPpo	38		
DASHmax	16	16						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1033 /kg	NE2015	10.61 MJ/kg	MEpo	12.93 MJ/kg	MErab	12.89 MJ/kg
VEVI	1143 /kg	NE2015	2536 kcal/kg	MEpo	3090 kcal/kg	MErab	3081 kcal/kg
FOM-91	658 g/kg	EW2015	1.21 /kg	MEla	12.98 MJ/kg		
FOMr-07	687 g/kg	StaDP	0.9 g/kg	MEla	3103 kcal/kg		
FOMr2-07	480 g/kg	AppDP	0.7 g/kg	DPpo	1.1 g/kg		
FOMr2/FOMr	0.70 /kg						
DVE-91	81 g/kg			**Broilers**		**Horses**	
DVE-07	99 g/kg			MEbr	12.27 MJ/kg	NEm	9.51 MJ/kg
OEB-91	-16 g/kg			MEbr	2932 kcal/kg	NEm	2274 kcal/kg
OEB-07	-46 g/kg			DPpo	1.1 g/kg	EWpa	1.065 /kg
OEB2-07	-48 g/kg					DCPho	89 g/kg
DVMET-91	1.9 g/kg						
DVLYS-91	5.1 g/kg						
DVMET-07	2.4 g/kg						
DVLYS-07	6.6 g/kg						
SW	-0.17 /kg						
VW	0.25 /kg						

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Wheat 1010.000/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			110	89	-	80	88	-	-
LYS	2.8	0.2	3.1	84	2.6	73	2.2	82	2.5
MET	1.6	0.1	1.8	90	1.6	84	1.5	89	1.6
CYS	2.2	0.2	2.4	90	2.2	82	2.0	85	2.1
THR	2.9	0.2	3.2	86	2.7	70	2.2	82	2.6
TRP	1.2	0.1	1.3	88	1.2	78	1.0	87	1.2
ILE	3.4	0.2	3.7	90	3.4	82	3.1	89	3.3
ARG	4.7	0.3	5.2	90	4.7	84	4.3	83	4.3
PHE	4.5	0.3	5.0	90	4.5	85	4.2	90	4.5
HIS	2.3	0.2	2.5	90	2.3	84	2.1	83	2.1
LEU	6.6	0.2	7.3	90	6.5	84	6.1	89	6.5
TYR	2.8	0.3	3.1	91	2.8	83	2.6	85	2.6
VAL	4.3	0.3	4.7	88	4.2	79	3.7	87	4.1
ALA	3.7	0.3	4.1	83	3.4	73	3.0	82	3.3
ASP	5.3	0.4	5.8	83	4.9	72	4.2	82	4.8
GLU	28.3	2.5	31.2	96	29.9	93	28.9	95	29.6
GLY	4.0	0.2	4.4	87	3.9	70	3.1	84	3.7
PRO	9.7	0.8	10.7	96	10.2	87	9.3	94	10.0
SER	4.6	0.2	5.1	92	4.7	81	4.1	88	4.5
Sum AA	94.9		105	-	96	-	88	-	93

Fatty acids

	% FA	g/kg
CFAT(h)		15.1
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.1	0.0
C16:0	19.0	2.0
C16:1	1.0	0.1
C18:0	1.0	0.1
C18:1	15.0	1.6
C:18:2	57.0	6.0
C18:3	5.0	0.5
>=C20	1.0	0.1
Sum FA	99.1	10.5
% FA in CFAT-fraction		70

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Wheat:

1. The STaDCP of wheat including endogenous phytase activity is 52%.

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Wheat germ feed 1010.114/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	866	40	179	46	53	52	550	543
sdc	11	2	4	2	-	4	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	283	245	-	65	242	72	16	295	53
sdc	16	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.9	9.1	7.7	2.9	10.3	0.1	0.4	0.1	1.6
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	103	86	10	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	81	SUGe/SUG	70	EB (meq/kg)	255	
		CF_DI	0.96	CAD (meq/kg)	149	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	83		DCCP	79	DCCP	77	DCCP	77
DCCFAT	79		DCCFATh	70	DCCFAT	76	DCCFAT	75
DCCF	30		DCCF	17	DCNFE	67	DCCF	20
DCNFE	86		DCNFE	83	DCPpo	27	DCNFE	80
DCOM	82		DCOM	77				
			DCNSPh	53	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	72	DCCP	80
%RUP	21	23	StaDCP	22	DCCFATh	38	DCOM	75
%DRUP	80	80	AppDCP	20	DC(S+S)	91		
%RUSTA	11	10			DCNFEh	52		
%DASH	65	65			DCPpo	27		
DASHmax	34	34						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	958 /kg	NE2015	8.68 MJ/kg	MEpo	10.27 MJ/kg	MErab	11.60 MJ/kg
VEVI	1030 /kg	NE2015	2074 kcal/kg	MEpo	2454 kcal/kg	MErab	2773 kcal/kg
FOM-91	565 g/kg	EW2015	0.99 /kg	MEla	10.47 MJ/kg		
FOMr-07	562 g/kg	StaDP	2.0 g/kg	MEla	2502 kcal/kg		
FOMr2-07	355 g/kg	AppDP	1.8 g/kg	DPpo	2.5 g/kg		
FOMr2/FOMr	0.63 /kg						
DVE-91	75 g/kg			**Broilers**		**Horses**	
DVE-07	78 g/kg			MEbr	7.95 MJ/kg	NEm	7.96 MJ/kg
OEB-91	52 g/kg			MEbr	1901 kcal/kg	NEm	1903 kcal/kg
OEB-07	47 g/kg			DPpo	2.5 g/kg	EWpa	0.892 /kg
OEB2-07	30 g/kg					DCPho	143 g/kg
DVMET-91	1.7 g/kg						
DVLYS-91	4.8 g/kg						
DVMET-07	1.8 g/kg						
DVLYS-07	5.0 g/kg						
SW	0.07 /kg						
VW	0.25 /kg						

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Wheat germ feed 1010.114/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			179	83	-	77	138	-	-
LYS	4.0	0.3	7.1	81	5.8	76	5.4	80	5.7
MET	1.6	0.1	2.9	85	2.4	82	2.3	85	2.4
CYS	2.1	0.1	3.7	82	3.1	77	2.9	80	3.0
THR	3.3	0.2	5.9	79	4.6	70	4.1	77	4.5
TRP	1.4	0.1	2.5	84	2.1	79	2.0	82	2.0
ILE	3.2	0.2	5.7	84	4.8	78	4.5	85	4.9
ARG	6.7	0.5	12.0	91	10.9	88	10.5	82	9.8
PHE	4.0	0.3	7.1	82	5.8	78	5.6	85	6.1
HIS	2.7	0.2	4.8	87	4.2	84	4.0	80	3.9
LEU	6.2	0.3	11.1	84	9.3	80	8.9	84	9.3
TYR	2.9	0.3	5.2	86	4.4	81	4.2	79	4.1
VAL	4.7	0.3	8.4	83	7.0	77	6.5	82	6.9
ALA	4.7	0.4	8.4	79	6.6	74	6.2	79	6.6
ASP	7.1	0.5	12.7	81	10.2	75	9.6	79	10.0
GLU	19.4	2.2	34.6	92	31.8	89	30.8	91	31.5
GLY	5.1	0.4	9.1	82	7.4	73	6.7	79	7.2
PRO	6.5	0.8	11.6	91	10.5	82	9.6	87	10.1
SER	4.4	0.3	7.9	87	6.8	80	6.2	82	6.4
Sum AA	90.0		161	-	138	-	130	-	134

Fatty acids	% FA	g/kg
CFAT(h)		45.8
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.1	0.0
C16:0	19.0	6.1
C16:1	1.0	0.3
C18:0	1.0	0.3
C18:1	15.0	4.8
C:18:2	57.0	18.3
C18:3	5.0	1.6
>=C20	1.0	0.3
Sum FA	99.1	31.8
% FA in CFAT-fraction		70

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Wheat germ feed:

1. The STaDCP of wheat germ feed including endogenous phytase activity is 32%.

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Wheat germs 1010.102/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	872	41	264	85	-	35	448	-
sdc	16	-	16	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	229	195	-	109	169	50	11	183	14
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.5	7.9	4.3	2.4	9.4	0.1	0.9	0.1	2.0
sdc	-	0.5	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	83	144	134	9	-	-	0.1
sdc	-	-	-	-	-	-	-

IP/P	78	SUGe/SUG	70	EB (meq/kg)	220
		CF_DI	0.96	CAD (meq/kg)	93

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	89	DCCP	86	DCCP	-	DCCP	-
DCCFAT	93	DCCFATh	83	DCCFAT	-	DCCFAT	-
DCCF	30	DCCF	17	DCNFE	-	DCCF	-
DCNFE	88	DCNFE	96	DCPpo	28	DCNFE	-
DCOM	87	DCOM	88				
		DCNSPh	75	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	21	23	StaDCP	28	DCCFATh	-	DCOM	-
%DRUP	80	80	AppDCP	26	DC(S+S)	-		
%RUSTA	11	10			DCNFEh	-		
%DASH	50	50			DCPpo	28		
DASHmax	27	27						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1125 /kg	NE2015	10.55 MJ/kg	MEpo	-	MErab	-
VEVI	1234 /kg	NE2015	2521 kcal/kg	MEpo	-	MErab	-
FOM-91	559 g/kg	EW2015	1.20 /kg	MEla	-		
FOMr-07	562 g/kg	StaDP	2.2 g/kg	MEla	-		
FOMr2-07	381 g/kg	AppDP	2.0 g/kg	DPpo	2.2 g/kg		
FOMr2/FOMr	0.68 /kg						
DVE-91	93 g/kg			**Broilers**		**Horses**	
DVE-07	95 g/kg			MEbr	-	NEm	-
OEB-91	119 g/kg			MEbr	-	NEm	-
OEB-07	116 g/kg			DPpo	2.2 g/kg	EWpa	-
OEB2-07	69 g/kg					DCPho	-
DVMET-91	2.1 g/kg						
DVLYS-91	6.5 g/kg						
DVMET-07	2.1 g/kg						
DVLYS-07	6.6 g/kg						
SW	0.05 /kg						
VW	0.25 /kg						

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Wheat germs 1010.102/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			264	85	-	81	214	-	-
LYS	6.0	0.4	15.9	80	12.7	78	12.3	81	12.8
MET	1.7	0.1	4.5	86	3.9	84	3.8	87	3.9
CYS	1.4	0.2	3.7	86	3.2	81	3.0	82	3.0
THR	3.5	0.1	9.2	83	7.7	77	7.1	80	7.4
TRP	1.1	-	2.9	84	2.4	80	2.3	84	2.4
ILE	3.3	0.1	8.7	87	7.6	83	7.3	87	7.6
ARG	7.3	0.2	19.3	87	16.8	85	16.4	83	16.0
PHE	3.4	0.1	9.0	87	7.8	84	7.5	88	7.9
HIS	2.3	0.1	6.1	87	5.3	84	5.1	82	5.0
LEU	6.0	0.2	15.9	86	13.6	83	13.2	87	13.8
TYR	2.7	-	7.1	88	6.3	84	6.0	82	5.8
VAL	4.9	0.2	12.9	85	11.0	81	10.5	85	11.0
ALA	5.6	0.3	14.8	80	11.8	77	11.4	80	11.8
ASP	7.8	0.5	20.6	80	16.5	77	15.8	80	16.5
GLU	14.2	0.7	37.5	93	34.8	90	33.8	94	35.3
GLY	5.4	0.3	14.3	84	12.0	78	11.2	82	11.7
PRO	4.4	0.2	11.6	93	10.8	84	9.8	92	10.7
SER	3.9	0.2	10.3	89	9.1	83	8.6	86	8.9
Sum AA	84.9		224	-	193	-	185	-	192

Fatty acids	% FA	g/kg
CFAT(h)		84.6
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.1	0.1
C16:0	19.0	14.5
C16:1	1.0	0.8
C18:0	1.0	0.8
C18:1	15.0	11.4
C:18:2	57.0	43.4
C18:3	5.0	3.8
>=C20	1.0	0.8
Sum FA	99.1	75.5
% FA in CFAT-fraction		90

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Wheat germs:

1. The STaDCP of wheat germs including endogenous phytase activity is 45%.

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Wheat gluten feed, dried-ASH < 40 g/kg 1010.205/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	888	36	144	31	38	55	622	614
sdc	7	2	6	2	1	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	303	294	-	82	260	76	-	296	36
sdc	14	-	-	6	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.0	6.3	4.1	2.7	11.1	1.6	2.1	-	1.2
sdc	0.1	0.5	-	0.3	1.3	0.3	0.7	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	118	80	52	9	1.1	0.0	0.0
sdc	19	4	6	2	0.2	0.0	0.0

IP/P	65	SUGe/SUG	80	EB (meq/kg)	293
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	68		DCCP	70	DCCP	-	DCCP	-
DCCFAT	70		DCCFATh	57	DCCFAT	-	DCCFAT	-
DCCF	30		DCCF	17	DCNFE	-	DCCF	-
DCNFE	87		DCNFE	85	DCPpo	-	DCNFE	-
DCOM	79		DCOM	77				
			DCNSPh	53	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	65
%RUP	34	41	StaDCP	30	DCCFATh	-	DCOM	73
%DRUP	82	82	AppDCP	27	DC(S+S)	-		
%RUSTA	10	8			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	31	31						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	922 /kg	NE2015	8.64 MJ/kg	MEpo	-	MErab	-
VEVI	982 /kg	NE2015	2065 kcal/kg	MEpo	-	MErab	-
FOM-91	560 g/kg	EW2015	0.98 /kg	MEla	-		
FOMr-07	556 g/kg	StaDP	1.9 g/kg	MEla	-		
FOMr2-07	372 g/kg	AppDP	1.7 g/kg	DPpo	-		
FOMr2/FOMr	0.67 /kg						
DVE-91	82 g/kg			**Broilers**		**Horses**	
DVE-07	93 g/kg			MEbr	-	NEm	7.89 MJ/kg
OEB-91	6 g/kg			MEbr	-	NEm	1887 kcal/kg
OEB-07	-11 g/kg			DPpo	-	EWpa	0.884 /kg
OEB2-07	-26 g/kg					DCPho	93 g/kg
DVMET-91	1.8 g/kg						
DVLYS-91	4.6 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	5.3 g/kg						
SW	0.01 /kg						
VW	0.25 /kg						

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Wheat gluten feed, dried-ASH < 40 g/kg 1010.205/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			144	78	-	71	103	-	-
LYS	3.1	0.3	4.5	81	3.7	73	3.3	-	-
MET	1.5	0.1	2.2	83	1.8	78	1.7	-	-
CYS	2.1	0.1	2.9	76	2.2	70	2.1	-	-
THR	3.3	0.1	4.7	76	3.6	65	3.1	-	-
TRP	1.3	0.1	1.8	83	1.5	76	1.4	-	-
ILE	3.2	0.1	4.6	78	3.6	71	3.3	-	-
ARG	6.1	0.3	8.8	79	6.9	75	6.5	-	-
PHE	3.9	0.2	5.6	78	4.4	73	4.1	-	-
HIS	2.6	0.1	3.7	78	2.9	74	2.7	-	-
LEU	6.3	0.2	9.1	78	7.1	74	6.7	-	-
TYR	3.0	0.2	4.3	78	3.4	72	3.1	-	-
VAL	4.9	0.3	7.1	78	5.5	72	5.1	-	-
ALA	4.7	0.1	6.8	78	5.3	72	4.9	-	-
ASP	6.8	0.3	9.7	78	7.6	71	6.9	-	-
GLU	19.5	0.9	28.1	78	22.0	75	20.9	-	-
GLY	4.9	0.2	7.1	78	5.6	67	4.8	-	-
PRO	6.4	0.4	9.2	78	7.2	68	6.2	-	-
SER	4.5	0.2	6.5	78	5.1	69	4.5	-	-
Sum AA	88.0		127	-	99	-	91	-	-

Fatty acids

	% FA	g/kg
CFAT(h)		38.4
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat gluten feed, dried-ASH 40 - 50 g/kg 1010.205/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	901	48	156	45	50	81	572	567
sdc	9	2	6	3	3	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	202	196	-	77	378	111	-	378	-1
sdc	16	-	-	10	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.1	8.8	5.7	2.7	11.8	1.7	2.1	-	1.4
sdc	0.1	0.5	-	0.3	1.0	0.6	0.7	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	120	81	53	9	1.1	0.0	0.0
sdc	19	4	6	2	0.2	0.0	0.0

IP/P	65	SUGe/SUG	80	EB (meq/kg)	317
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	70		DCCP	70	DCCP	-	DCCP	-
DCCFAT	71		DCCFATh	60	DCCFAT	-	DCCFAT	-
DCCF	30		DCCF	17	DCNFE	-	DCCF	-
DCNFE	81		DCNFE	77	DCPpo	-	DCNFE	-
DCOM	73		DCOM	69				
			DCNSPh	48	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	65
%RUP	34	41	StaDCP	30	DCCFATh	-	DCOM	73
%DRUP	82	82	AppDCP	28	DC(S+S)	-		
%RUSTA	10	8			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	40	40						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	862 /kg	NE2015	7.81 MJ/kg	MEpo	-	MErab	-
VEVI	896 /kg	NE2015	1867 kcal/kg	MEpo	-	MErab	-
FOM-91	505 g/kg	EW2015	0.89 /kg	MEla	-		
FOMr-07	475 g/kg	StaDP	2.6 g/kg	MEla	-		
FOMr2-07	273 g/kg	AppDP	2.5 g/kg	DPpo	-		
FOMr2/FOMr	0.57 /kg						
DVE-91	76 g/kg			**Broilers**		**Horses**	
DVE-07	82 g/kg			MEbr	-	NEm	7.93 MJ/kg
OEB-91	21 g/kg			MEbr	-	NEm	1896 kcal/kg
OEB-07	14 g/kg			DPpo	-	EWpa	0.888 /kg
OEB2-07	-4 g/kg					DCPho	101 g/kg
DVMET-91	1.7 g/kg						
DVLYS-91	4.1 g/kg						
DVMET-07	1.8 g/kg						
DVLYS-07	4.3 g/kg						
SW	0.13 /kg						
VW	0.27 /kg						

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Wheat gluten feed, dried-ASH 40 - 50 g/kg 1010.205/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			156	78	-	72	112	-	-
LYS	3.1	0.3	4.9	81	4.0	74	3.6	-	-
MET	1.5	0.1	2.3	83	1.9	78	1.8	-	-
CYS	2.1	0.1	3.2	76	2.4	70	2.2	-	-
THR	3.3	0.1	5.1	76	3.9	66	3.4	-	-
TRP	1.3	0.1	2.0	83	1.6	77	1.5	-	-
ILE	3.2	0.1	5.0	78	3.9	72	3.5	-	-
ARG	6.1	0.3	9.5	79	7.4	75	7.1	-	-
PHE	3.9	0.2	6.1	78	4.8	74	4.5	-	-
HIS	2.6	0.1	4.0	78	3.1	74	2.9	-	-
LEU	6.3	0.2	9.8	78	7.7	74	7.3	-	-
TYR	3.0	0.2	4.6	78	3.6	73	3.4	-	-
VAL	4.9	0.3	7.6	78	6.0	72	5.5	-	-
ALA	4.7	0.1	7.4	78	5.8	72	5.3	-	-
ASP	6.8	0.3	10.5	78	8.2	72	7.5	-	-
GLU	19.5	0.9	30.4	78	23.8	75	22.7	-	-
GLY	4.9	0.2	7.7	78	6.0	68	5.2	-	-
PRO	6.4	0.4	10.0	78	7.8	68	6.8	-	-
SER	4.5	0.2	7.0	78	5.5	70	4.9	-	-
Sum AA	88.0		137	-	107	-	99	-	-

Fatty acids	% FA	g/kg
CFAT(h)		49.9
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat gluten feed, dried-ASH 50 - 60 g/kg 1010.205/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	901	52	167	45	51	82	556	550
sdc	12	1	7	5	3	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	189	184	-	84	382	112	-	366	-16
sdc	17	-	-	9	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.1	9.6	3.9	2.7	12.5	2.8	2.1	-	1.5
sdc	0.1	0.8	-	0.3	0.8	0.9	0.7	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	120	81	53	9	1.1	0.0	0.0
sdc	19	4	6	2	0.2	0.0	0.0

IP/P	40	SUGe/SUG	80	EB (meq/kg)	383
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	71		DCCP	71	DCCP	-	DCCP	-
DCCFAT	71		DCCFATh	60	DCCFAT	-	DCCFAT	-
DCCF	30		DCCF	17	DCNFE	-	DCCF	-
DCNFE	80		DCNFE	77	DCPpo	-	DCNFE	-
DCOM	73		DCOM	69				
			DCNSPh	46	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	65
%RUP	34	41	StaDCP	55	DCCFATh	-	DCOM	73
%DRUP	82	82	AppDCP	53	DC(S+S)	-		
%RUSTA	10	8			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	43	43						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	853 /kg	NE2015	7.74 MJ/kg	MEpo	-	MErab	-
VEVI	884 /kg	NE2015	1849 kcal/kg	MEpo	-	MErab	-
FOM-91	494 g/kg	EW2015	0.88 /kg	MEla	-		
FOMr-07	465 g/kg	StaDP	5.3 g/kg	MEla	-		
FOMr2-07	263 g/kg	AppDP	5.1 g/kg	DPpo	-		
FOMr2/FOMr	0.57 /kg						
DVE-91	78 g/kg			**Broilers**		**Horses**	
DVE-07	83 g/kg			MEbr	-	NEm	7.92 MJ/kg
OEB-91	30 g/kg			MEbr	-	NEm	1893 kcal/kg
OEB-07	23 g/kg			DPpo	-	EWpa	0.887 /kg
OEB2-07	1 g/kg					DCPho	109 g/kg
DVMET-91	1.7 g/kg						
DVLYS-91	4.1 g/kg						
DVMET-07	1.8 g/kg						
DVLYS-07	4.3 g/kg						
SW	0.13 /kg						
VW	0.27 /kg						

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Wheat gluten feed, dried-ASH 50 - 60 g/kg 1010.205/3/0

Amino acids

	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			167	78	-	72	121	-	-
LYS	3.1	0.3	5.2	81	4.2	74	3.9	-	-
MET	1.5	0.1	2.5	83	2.1	79	2.0	-	-
CYS	2.1	0.1	3.4	76	2.6	71	2.4	-	-
THR	3.3	0.1	5.5	76	4.2	67	3.6	-	-
TRP	1.3	0.1	2.1	83	1.8	77	1.6	-	-
ILE	3.2	0.1	5.3	78	4.2	72	3.8	-	-
ARG	6.1	0.3	10.2	79	8.0	75	7.6	-	-
PHE	3.9	0.2	6.5	78	5.1	74	4.8	-	-
HIS	2.6	0.1	4.3	78	3.3	75	3.2	-	-
LEU	6.3	0.2	10.6	78	8.3	74	7.9	-	-
TYR	3.0	0.2	5.0	78	3.9	73	3.6	-	-
VAL	4.9	0.3	8.2	78	6.4	73	6.0	-	-
ALA	4.7	0.1	7.9	78	6.2	73	5.8	-	-
ASP	6.8	0.3	11.3	78	8.8	72	8.1	-	-
GLU	19.5	0.9	32.6	78	25.5	75	24.5	-	-
GLY	4.9	0.2	8.3	78	6.5	69	5.7	-	-
PRO	6.4	0.4	10.7	78	8.4	69	7.4	-	-
SER	4.5	0.2	7.5	78	5.9	70	5.3	-	-
Sum AA	88.0		147	-	115	-	107	-	-

Fatty acids

	% FA	g/kg
CFAT(h)		50.8
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat gluten feed, dried-ASH > 60 g/kg 1010.205/4/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	911	65	160	41	46	65	581	575
sdc	9	4	13	8	-	10	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	196	190	-	120	305	90	-	333	28
sdc	10	-	-	25	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.1	10.1	4.1	2.8	11.4	2.5	2.2	-	1.4
sdc	0.1	1.9	-	0.3	1.4	1.1	0.7	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	121	82	54	9	1.1	0.0	0.0
sdc	19	4	7	2	0.2	0.0	0.0

IP/P	40	SUGe/SUG	80	EB (meq/kg)	340	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	70		DCCP	70	DCCP	-	DCCP	-
DCCFAT	70		DCCFATh	59	DCCFAT	-	DCCFAT	-
DCCF	30		DCCF	17	DCNFE	-	DCCF	-
DCNFE	84		DCNFE	81	DCPpo	-	DCNFE	-
DCOM	77		DCOM	73				
			DCNSPh	52	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	65
%RUP	34	41	StaDCP	55	DCCFATh	-	DCOM	73
%DRUP	82	82	AppDCP	53	DC(S+S)	-		
%RUSTA	10	8			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	52	52						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	892 /kg	NE2015	8.12 MJ/kg	MEpo	-	MErab	-
VEVI	939 /kg	NE2015	1940 kcal/kg	MEpo	-	MErab	-
FOM-91	530 g/kg	EW2015	0.92 /kg	MEla	-		
FOMr-07	514 g/kg	StaDP	5.6 g/kg	MEla	-		
FOMr2-07	329 g/kg	AppDP	5.4 g/kg	DPpo	-		
FOMr2/FOMr	0.64 /kg						
DVE-91	81 g/kg			**Broilers**		**Horses**	
DVE-07	89 g/kg			MEbr	-	NEm	7.92 MJ/kg
OEB-91	20 g/kg			MEbr	-	NEm	1894 kcal/kg
OEB-07	9 g/kg			DPpo	-	EWpa	0.887 /kg
OEB2-07	-12 g/kg					DCPho	104 g/kg
DVMET-91	1.7 g/kg						
DVLYS-91	4.3 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	4.7 g/kg						
SW	0.07 /kg						
VW	0.26 /kg						

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Wheat gluten feed, dried-ASH > 60 g/kg 1010.205/4/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			160	78	-	72	115	-	-
LYS	3.1	0.3	5.0	81	4.1	74	3.7	-	-
MET	1.5	0.1	2.4	83	2.0	79	1.9	-	-
CYS	2.1	0.1	3.3	76	2.5	70	2.3	-	-
THR	3.3	0.1	5.3	76	4.0	66	3.5	-	-
TRP	1.3	0.1	2.0	83	1.7	77	1.6	-	-
ILE	3.2	0.1	5.1	78	4.0	72	3.7	-	-
ARG	6.1	0.3	9.8	79	7.7	75	7.3	-	-
PHE	3.9	0.2	6.2	78	4.9	74	4.6	-	-
HIS	2.6	0.1	4.1	78	3.2	74	3.0	-	-
LEU	6.3	0.2	10.1	78	7.9	74	7.5	-	-
TYR	3.0	0.2	4.8	78	3.7	73	3.5	-	-
VAL	4.9	0.3	7.9	78	6.2	72	5.7	-	-
ALA	4.7	0.1	7.6	78	5.9	73	5.5	-	-
ASP	6.8	0.3	10.8	78	8.5	72	7.8	-	-
GLU	19.5	0.9	31.3	78	24.5	75	23.4	-	-
GLY	4.9	0.2	7.9	78	6.2	68	5.4	-	-
PRO	6.4	0.4	10.3	78	8.0	68	7.0	-	-
SER	4.5	0.2	7.2	78	5.7	70	5.1	-	-
Sum AA	88.0		141	-	111	-	102	-	-

Fatty acids	% FA	g/kg
CFAT(h)		46.5
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat gluten meal 1010.204/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	911	9	781	-	56	5	-	60
sdc	26	1	18	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	29	29	-	28	20	5	2	8	-12
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.7	1.8	0.9	0.3	1.2	1.0	1.0	0.1	7.3
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	38	-	35	6	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	50	SUGe/SUG	80	EB (meq/kg)	46
		CF_DI	0.97	CAD (meq/kg)	-413

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	96		DCCP	94	DCCP	-	DCCP	-
DCCFAT	80		DCCFATh	63	DCCFAT	-	DCCFAT	-
DCCF	97		DCCF	90	DCNFE	-	DCCF	-
DCNFE	97		DCNFE	98	DCPpo	-	DCNFE	-
DCOM	96		DCOM	92				
			DCNSPh	81	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	95
%RUP	33	37	StaDCP	50	DCCFATh	-	DCOM	90
%DRUP	80	80	AppDCP	40	DC(S+S)	-		
%RUSTA	10	7			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	12	12						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1284 /kg	NE2015	10.64 MJ/kg	MEpo	-	MErab	-
VEVI	1381 /kg	NE2015	2542 kcal/kg	MEpo	-	MErab	-
FOM-91	544 g/kg	EW2015	1.21 /kg	MEla	-		
FOMr-07	550 g/kg	StaDP	0.9 g/kg	MEla	-		
FOMr2-07	240 g/kg	AppDP	0.7 g/kg	DPpo	-		
FOMr2/FOMr	0.44 /kg						
DVE-91	278 g/kg			**Broilers**		**Horses**	
DVE-07	269 g/kg			MEbr	-	NEm	10.19 MJ/kg
OEB-91	412 g/kg			MEbr	-	NEm	2435 kcal/kg
OEB-07	427 g/kg			DPpo	-	EWpa	1.141 /kg
OEB2-07	164 g/kg					DCPho	742 g/kg
DVMET-91	5.1 g/kg						
DVLYS-91	7.7 g/kg						
DVMET-07	4.8 g/kg						
DVLYS-07	7.1 g/kg						
SW	0.24 /kg						
VW	0.26 /kg						

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Wheat gluten meal 1010.204/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			781	100	-	98	768	-	-
LYS	1.7	0.2	13.3	99	13.1	96	12.8	-	-
MET	1.6	0.1	12.5	99	12.4	98	12.3	-	-
CYS	2.2	0.1	17.2	99	17.0	98	16.8	-	-
THR	2.5	0.1	19.5	99	19.3	96	18.8	-	-
TRP	0.9	-	7.0	99	6.9	97	6.8	-	-
ILE	3.7	0.3	28.9	100	28.9	99	28.5	-	-
ARG	3.6	0.2	28.1	100	28.0	99	27.7	-	-
PHE	5.3	0.3	41.4	98	40.4	97	40.1	-	-
HIS	2.1	0.1	16.4	100	16.3	99	16.2	-	-
LEU	7.0	0.2	54.7	99	54.3	99	53.9	-	-
TYR	3.4	0.2	26.5	99	26.2	98	25.9	-	-
VAL	4.0	0.2	31.2	100	31.2	98	30.7	-	-
ALA	2.7	0.2	21.1	99	21.0	97	20.5	-	-
ASP	3.4	0.2	26.5	99	26.2	96	25.5	-	-
GLU	34.3	4.0	267.8	100	267.5	99	266.4	-	-
GLY	3.4	0.1	26.5	100	26.5	97	25.7	-	-
PRO	12.6	0.7	98.4	100	98.3	99	97.3	-	-
SER	4.8	0.2	37.5	100	37.5	98	36.9	-	-
Sum AA	99.2		775	-	771	-	763	-	-

Fatty acids

	% FA	g/kg
CFAT(h)		56.5
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat milling by-products-Wheat flour 1010.100/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	871	16	141	24	30	11	679	672
sdc	12	6	22	10	-	6	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	593	532	-	47	78	20	4	113	35
sdc	73	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.4	4.0	3.4	1.0	3.9	0.1	0.8	-	1.3
sdc	0.2	0.7	-	-	-	-	0.1	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	35	37	35	4	0.4	0.1	0.0
sdc	-	-	-	-	-	-	-

IP/P	54	SUGe/SUG	70	EB (meq/kg)	82	
		CF_DI	0.96	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	81		DCCP	85	DCCP	82	DCCP	77
DCCFAT	75		DCCFATh	74	DCCFAT	80	DCCFAT	75
DCCF	30		DCCF	17	DCNFE	77	DCCF	20
DCNFE	95		DCNFE	97	DCPpo	27	DCNFE	90
DCOM	92		DCOM	93				
			DCNSPh	72	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	86	DCCP	84
%RUP	21	23	StaDCP	24	DCCFATh	54	DCOM	88
%DRUP	80	80	AppDCP	20	DC(S+S)	98		
%RUSTA	10	9			DCNFEh	84		
%DASH	65	65			DCPpo	27		
DASHmax	17	17						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1092 /kg	NE2015	11.02 MJ/kg	MEpo	13.56 MJ/kg	MErab	13.22 MJ/kg
VEVI	1216 /kg	NE2015	2633 kcal/kg	MEpo	3241 kcal/kg	MErab	3160 kcal/kg
FOM-91	675 g/kg	EW2015	1.25 /kg	MEla	13.67 MJ/kg		
FOMr-07	694 g/kg	StaDP	1.0 g/kg	MEla	3268 kcal/kg		
FOMr2-07	509 g/kg	AppDP	0.8 g/kg	DPpo	1.1 g/kg		
FOMr2/FOMr	0.73 /kg						
DVE-91	85 g/kg			**Broilers**		**Horses**	
DVE-07	100 g/kg			MEbr	12.56 MJ/kg	NEm	9.65 MJ/kg
OEB-91	7 g/kg			MEbr	3002 kcal/kg	NEm	2305 kcal/kg
OEB-07	-16 g/kg			DPpo	1.1 g/kg	EWpa	1.080 /kg
OEB2-07	-21 g/kg					DCPho	119 g/kg
DVMET-91	2.0 g/kg						
DVLYS-91	5.5 g/kg						
DVMET-07	2.3 g/kg						
DVLYS-07	6.6 g/kg						
SW	-0.17 /kg						
VW	0.25 /kg						

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Wheat milling by-products-Wheat flour 1010.100/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			141	91	-	84	118	-	-
LYS	3.2	0.4	4.6	89	4.1	81	3.7	82	3.8
MET	1.6	0.2	2.3	92	2.1	88	2.0	88	2.0
CYS	2.1	0.2	2.9	89	2.6	83	2.4	84	2.4
THR	2.9	0.3	4.2	89	3.7	76	3.2	82	3.4
TRP	1.4	0.1	2.0	90	1.8	84	1.7	86	1.7
ILE	3.7	0.3	5.3	93	4.9	87	4.6	89	4.7
ARG	5.5	0.6	7.8	93	7.2	89	6.9	84	6.5
PHE	4.5	0.3	6.4	91	5.8	86	5.5	89	5.7
HIS	2.4	0.4	3.4	92	3.1	87	3.0	84	2.9
LEU	6.7	0.5	9.5	92	8.7	88	8.3	88	8.4
TYR	3.1	0.3	4.4	94	4.1	88	3.9	84	3.7
VAL	4.7	0.3	6.7	91	6.1	84	5.6	86	5.7
ALA	3.8	0.3	5.3	89	4.7	81	4.3	81	4.3
ASP	5.3	0.4	7.5	89	6.6	80	6.0	81	6.1
GLU	28.7	2.7	40.5	96	38.8	93	37.8	95	38.5
GLY	4.2	0.2	5.9	90	5.3	77	4.6	84	5.0
PRO	9.1	1.2	12.8	94	12.0	86	11.1	94	12.1
SER	4.7	0.6	6.6	94	6.1	85	5.6	88	5.8
Sum AA	97.7		138	-	128	-	120	-	123

Fatty acids	% FA	g/kg
CFAT(h)		23.7
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.1	0.0
C16:0	19.0	3.2
C16:1	1.0	0.2
C18:0	1.0	0.2
C18:1	15.0	2.5
C:18:2	57.0	9.5
C18:3	5.0	0.8
>=C20	1.0	0.2
Sum FA	99.1	16.5
% FA in CFAT-fraction		70

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat milling by-products-Wheat feed flour 1010.100/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	872	29	153	38	44	45	608	602
sdc	10	5	9	5	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	362	318	-	63	206	60	15	274	68
sdc	52	-	-	11	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.8	5.5	4.7	2.2	9.7	0.2	0.7	0.1	1.4
sdc	0.3	1.1	-	-	1.7	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	108	72	57	8	-	0.1	0.0
sdc	-	-	-	-	-	-	-

IP/P	67	SUGe/SUG	70	EB (meq/kg)	238	
		CF_DI	0.96	CAD (meq/kg)	146	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	80	DCCP	78	DCCP	82	DCCP	77
DCCFAT	78	DCCFATh	68	DCCFAT	80	DCCFAT	75
DCCF	30	DCCF	17	DCNFE	77	DCCF	20
DCNFE	89	DCNFE	87	DCPpo	27	DCNFE	90
DCOM	84	DCOM	81				
		DCNSPh	57	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	87	DCCP	84
%RUP	21 23	StaDCP	23	DCCFATh	54	DCOM	81
%DRUP	80 80	AppDCP	20	DC(S+S)	98		
%RUSTA	10 9			DCNFEh	61		
%DASH	65 65			DCPpo	27		
DASHmax	26 26						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	989 /kg	NE2015	9.17 MJ/kg	MEpo	11.07 MJ/kg	MErab	12.81 MJ/kg
VEVI	1073 /kg	NE2015	2191 kcal/kg	MEpo	2645 kcal/kg	MErab	3061 kcal/kg
FOM-91	603 g/kg	EW2015	1.04 /kg	MEla	11.24 MJ/kg		
FOMr-07	603 g/kg	StaDP	1.3 g/kg	MEla	2687 kcal/kg		
FOMr2-07	389 g/kg	AppDP	1.1 g/kg	DPpo	1.5 g/kg		
FOMr2/FOMr	0.64 /kg						
DVE-91	75 g/kg			**Broilers**		**Horses**	
DVE-07	83 g/kg			MEbr	9.68 MJ/kg	NEm	8.69 MJ/kg
OEB-91	27 g/kg			MEbr	2315 kcal/kg	NEm	2077 kcal/kg
OEB-07	15 g/kg			DPpo	1.5 g/kg	EWpa	0.973 /kg
OEB2-07	8 g/kg					DCPho	128 g/kg
DVMET-91	1.7 g/kg						
DVLYS-91	4.9 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	5.5 g/kg						
SW	0.01 /kg						
VW	0.25 /kg						

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Wheat milling by-products-Wheat feed flour 1010.100/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			153	85	-	78	120	-	-
LYS	4.0	0.3	6.1	84	5.1	78	4.8	80	4.9
MET	1.6	0.1	2.4	87	2.1	83	2.0	86	2.1
CYS	2.1	0.1	3.2	84	2.7	78	2.5	81	2.6
THR	3.3	0.2	5.0	82	4.1	71	3.6	79	4.0
TRP	1.4	0.1	2.1	86	1.8	80	1.7	83	1.8
ILE	3.2	0.2	4.9	87	4.2	80	3.9	86	4.2
ARG	6.7	0.5	10.2	91	9.3	88	9.0	82	8.4
PHE	4.0	0.3	6.1	85	5.2	80	4.9	86	5.3
HIS	2.7	0.2	4.1	89	3.7	85	3.5	81	3.3
LEU	6.2	0.3	9.5	87	8.2	82	7.8	85	8.1
TYR	2.9	0.3	4.4	88	3.9	82	3.6	81	3.6
VAL	4.7	0.3	7.2	86	6.2	79	5.7	83	6.0
ALA	4.7	0.4	7.2	82	5.9	76	5.5	79	5.7
ASP	7.1	0.5	10.9	84	9.1	77	8.4	79	8.6
GLU	19.4	2.2	29.7	93	27.5	89	26.5	92	27.3
GLY	5.1	0.4	7.8	84	6.5	74	5.7	81	6.3
PRO	6.5	0.8	9.9	92	9.1	82	8.1	89	8.8
SER	4.4	0.3	6.7	89	6.0	80	5.4	84	5.7
Sum AA	90.0		138	-	121	-	113	-	117

Fatty acids

	% FA	g/kg
CFAT(h)		37.7
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.1	0.0
C16:0	19.0	5.0
C16:1	1.0	0.3
C18:0	1.0	0.3
C18:1	15.0	4.0
C:18:2	57.0	15.1
C18:3	5.0	1.3
>=C20	1.0	0.3
Sum FA	99.1	26.2
% FA in CFAT-fraction		70

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat milling by-products-Wheat feed meal 1010.100/3/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	870	43	154	36	45	72	565	556
sdc	11	6	7	5	3	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	256	220	-	63	312	94	25	357	44
sdc	32	-	-	10	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.0	8.6	7.3	3.2	12.5	0.2	0.7	0.1	1.4
sdc	0.2	1.1	-	0.3	1.8	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	149	102	76	11	0.9	0.1	-
sdc	-	27	16	1	-	-	-

IP/P	80	SUGe/SUG	70	EB (meq/kg)	311	
		CF_DI	0.96	CAD (meq/kg)	219	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	79	DCCP	71	DCCP	78	DCCP	77
DCCFAT	78	DCCFATh	59	DCCFAT	66	DCCFAT	75
DCCF	30	DCCF	17	DCNFE	60	DCCF	20
DCNFE	83	DCNFE	77	DCPpo	27	DCNFE	80
DCOM	77	DCOM	70				
		DCNSPh	46	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	71	DCCP	81
%RUP	21	23	StaDCP	22	DCCFATh	38	DCOM	71
%DRUP	80	80	AppDCP	20	DC(S+S)	91		
%RUSTA	11	10			DCNFEh	46		
%DASH	65	65			DCPpo	27		
DASHmax	36	36						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	878 /kg	NE2015	7.65 MJ/kg	MEpo	8.91 MJ/kg	MErab	11.24 MJ/kg
VEVI	928 /kg	NE2015	1829 kcal/kg	MEpo	2129 kcal/kg	MErab	2687 kcal/kg
FOM-91	546 g/kg	EW2015	0.87 /kg	MEla	9.05 MJ/kg		
FOMr-07	545 g/kg	StaDP	1.9 g/kg	MEla	2162 kcal/kg		
FOMr2-07	320 g/kg	AppDP	1.7 g/kg	DPpo	2.3 g/kg		
FOMr2/FOMr	0.59 /kg						
DVE-91	65 g/kg			**Broilers**		**Horses**	
DVE-07	69 g/kg			MEbr	7.08 MJ/kg	NEm	7.40 MJ/kg
OEB-91	36 g/kg			MEbr	1693 kcal/kg	NEm	1768 kcal/kg
OEB-07	30 g/kg			DPpo	2.3 g/kg	EWpa	0.828 /kg
OEB2-07	23 g/kg					DCPho	125 g/kg
DVMET-91	1.6 g/kg						
DVLYS-91	4.3 g/kg						
DVMET-07	1.6 g/kg						
DVLYS-07	4.6 g/kg						
SW	0.11 /kg						
VW	0.26 /kg						

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Wheat milling by-products-Wheat feed meal 1010.100/3/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			154	78	-	71	110	-	-
LYS	4.0	0.3	6.2	77	4.7	71	4.4	78	4.8
MET	1.6	0.1	2.5	82	2.0	78	1.9	83	2.0
CYS	2.1	0.1	3.2	78	2.5	72	2.3	78	2.5
THR	3.3	0.2	5.1	73	3.7	63	3.2	75	3.8
TRP	1.4	0.1	2.2	81	1.7	75	1.6	80	1.7
ILE	3.2	0.2	4.9	79	3.9	72	3.6	82	4.0
ARG	6.7	0.5	10.3	89	9.2	86	8.8	80	8.2
PHE	4.0	0.3	6.2	77	4.7	72	4.4	82	5.0
HIS	2.7	0.2	4.2	84	3.5	80	3.3	77	3.2
LEU	6.2	0.3	9.5	80	7.6	76	7.2	81	7.7
TYR	2.9	0.3	4.5	81	3.6	75	3.4	76	3.4
VAL	4.7	0.3	7.2	78	5.6	72	5.2	79	5.7
ALA	4.7	0.4	7.2	74	5.3	68	4.9	77	5.6
ASP	7.1	0.5	10.9	77	8.4	70	7.7	77	8.4
GLU	19.4	2.2	29.9	89	26.5	85	25.5	89	26.6
GLY	5.1	0.4	7.8	77	6.0	67	5.2	76	6.0
PRO	6.5	0.8	10.0	89	8.9	79	7.9	83	8.3
SER	4.4	0.3	6.8	82	5.5	73	5.0	79	5.3
Sum AA	90.0		138	-	113	-	106	-	112

Fatty acids

	% FA	g/kg
CFAT(h)		36.2
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.1	0.0
C16:0	19.0	4.8
C16:1	1.0	0.3
C18:0	1.0	0.3
C18:1	15.0	3.8
C:18:2	57.0	14.4
C18:3	5.0	1.3
>=C20	1.0	0.3
Sum FA	99.1	25.1
% FA in CFAT-fraction		70

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat milling by-products-Wheat middlings 1010.100/4/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	871	47	152	36	47	88	548	537
sdc	9	3	7	4	2	6	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	207	175	-	56	380	115	30	407	27
sdc	26	-	-	6	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.9	9.6	8.1	3.8	12.7	0.1	0.6	0.2	1.4
sdc	0.2	0.9	-	0.4	1.3	0.2	0.1	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	142	121	86	11	1.0	0.1	0.1
sdc	24	14	9	1	-	-	-

IP/P	82	SUGe/SUG	70	EB (meq/kg)	312
		CF_DI	0.97	CAD (meq/kg)	215

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	77	DCCP	67	DCCP	77	DCCP	77
DCCFAT	78	DCCFATh	54	DCCFAT	64	DCCFAT	75
DCCF	30	DCCF	17	DCNFE	50	DCCF	20
DCNFE	79	DCNFE	71	DCPpo	27	DCNFE	70
DCOM	73	DCOM	64				
		DCNSPh	43	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	71	DCCP	80
%RUP	21	23	StaDCP	20	DCCFATh	38	DCOM	65
%DRUP	80	80	AppDCP	18	DC(S+S)	91		
%RUSTA	11	10			DCNFEh	39		
%DASH	65	65			DCPpo	27		
DASHmax	39	39						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	824 /kg	NE2015	6.86 MJ/kg	MEpo	7.75 MJ/kg	MErab	10.09 MJ/kg
VEVI	856 /kg	NE2015	1639 kcal/kg	MEpo	1852 kcal/kg	MErab	2412 kcal/kg
FOM-91	517 g/kg	EW2015	0.78 /kg	MEla	7.88 MJ/kg		
FOMr-07	513 g/kg	StaDP	1.9 g/kg	MEla	1884 kcal/kg		
FOMr2-07	283 g/kg	AppDP	1.7 g/kg	DPpo	2.6 g/kg		
FOMr2/FOMr	0.55 /kg						
DVE-91	60 g/kg			**Broilers**		**Horses**	
DVE-07	62 g/kg			MEbr	6.26 MJ/kg	NEm	6.71 MJ/kg
OEB-91	39 g/kg			MEbr	1496 kcal/kg	NEm	1603 kcal/kg
OEB-07	36 g/kg			DPpo	2.6 g/kg	EWpa	0.751 /kg
OEB2-07	29 g/kg					DCPho	122 g/kg
DVMET-91	1.4 g/kg						
DVLYS-91	3.9 g/kg						
DVMET-07	1.5 g/kg						
DVLYS-07	4.1 g/kg						
SW	0.17 /kg						
VW	0.26 /kg						

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Wheat milling by-products-Wheat middlings 1010.100/4/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			152	77	-	70	107	-	-
LYS	4.0	0.3	6.1	78	4.8	73	4.4	77	4.7
MET	1.6	0.1	2.4	82	2.0	78	1.9	81	2.0
CYS	2.1	0.1	3.2	76	2.4	71	2.3	76	2.4
THR	3.3	0.2	5.0	73	3.6	62	3.1	72	3.6
TRP	1.4	0.1	2.1	81	1.7	76	1.6	77	1.6
ILE	3.2	0.2	4.9	79	3.8	72	3.5	80	3.9
ARG	6.7	0.5	10.2	91	9.2	87	8.9	79	8.1
PHE	4.0	0.3	6.1	84	5.1	79	4.8	79	4.8
HIS	2.7	0.2	4.1	84	3.4	80	3.3	75	3.1
LEU	6.2	0.3	9.4	80	7.5	75	7.1	79	7.5
TYR	2.9	0.3	4.4	83	3.7	77	3.4	73	3.2
VAL	4.7	0.3	7.1	81	5.8	74	5.3	76	5.4
ALA	4.7	0.4	7.1	77	5.5	71	5.1	75	5.4
ASP	7.1	0.5	10.8	79	8.5	73	7.9	76	8.2
GLU	19.4	2.2	29.5	90	26.7	87	25.7	87	25.7
GLY	5.1	0.4	7.8	75	5.8	65	5.0	73	5.7
PRO	6.5	0.8	9.9	89	8.8	79	7.8	79	7.8
SER	4.4	0.3	6.7	83	5.6	75	5.0	76	5.1
Sum AA	90.0		137	-	114	-	106	-	108

Fatty acids	% FA	g/kg
CFAT(h)		36.1
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.2	0.1
C16:0	19.0	4.8
C16:1	1.0	0.3
C18:0	1.0	0.3
C18:1	15.0	3.8
C:18:2	57.0	14.4
C18:3	5.0	1.3
>=C20	1.0	0.3
Sum FA	99.2	25.1
% FA in CFAT-fraction		70

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat milling by-products-Wheat bran CF < 125 g/kg 1010.100/5/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	869	53	149	32	44	109	527	515
sdc	8	5	7	4	3	6	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	162	133	-	58	437	137	37	447	9
sdc	31	-	-	7	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.0	10.6	9.0	4.6	13.3	0.2	0.6	0.1	1.3
sdc	-	1.3	-	-	-	-	0.1	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	158	141	99	11	1.1	0.1	0.1
sdc	-	-	-	-	-	-	-

IP/P	85	SUGe/SUG	70	EB (meq/kg)	333	
		CF_DI	0.96	CAD (meq/kg)	244	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	76	DCCP	62	DCCP	73	DCCP	77
DCCFAT	77	DCCFATh	43	DCCFAT	45	DCCFAT	75
DCCF	30	DCCF	17	DCNFE	41	DCCF	20
DCNFE	73	DCNFE	63	DCPpo	27	DCNFE	65
DCOM	68	DCOM	55				
		DCNSPh	35	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	71	DCCP	78
%RUP	21 23	StaDCP	18	DCCFATh	38	DCOM	59
%DRUP	77 77	AppDCP	16	DC(S+S)	91		
%RUSTA	11 13			DCNFEh	33		
%DASH	65 65			DCPpo	27		
DASHmax	44 44						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	744 /kg	NE2015	5.80 MJ/kg	MEpo	6.19 MJ/kg	MErab	9.29 MJ/kg
VEVI	754 /kg	NE2015	1386 kcal/kg	MEpo	1479 kcal/kg	MErab	2220 kcal/kg
FOM-91	479 g/kg	EW2015	0.66 /kg	MEla	6.27 MJ/kg		
FOMr-07	476 g/kg	StaDP	1.9 g/kg	MEla	1499 kcal/kg		
FOMr2-07	235 g/kg	AppDP	1.7 g/kg	DPpo	2.9 g/kg		
FOMr2/FOMr	0.49 /kg						
DVE-91	52 g/kg			**Broilers**		**Horses**	
DVE-07	52 g/kg			MEbr	5.54 MJ/kg	NEm	5.98 MJ/kg
OEB-91	43 g/kg			MEbr	1325 kcal/kg	NEm	1429 kcal/kg
OEB-07	43 g/kg			DPpo	2.9 g/kg	EWpa	0.670 /kg
OEB2-07	37 g/kg					DCPho	116 g/kg
DVMET-91	1.3 g/kg						
DVLYS-91	3.4 g/kg						
DVMET-07	1.3 g/kg						
DVLYS-07	3.4 g/kg						
SW	0.23 /kg						
VW	0.27 /kg						

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Wheat milling by-products-Wheat bran CF < 125 g/kg 1010.100/5/0

Amino acids

	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			149	68	-	61	91	-	-
LYS	4.0	0.3	6.0	68	4.1	62	3.7	75	4.5
MET	1.6	0.1	2.4	73	1.8	69	1.7	79	1.9
CYS	2.1	0.1	3.1	72	2.2	66	2.1	73	2.3
THR	3.3	0.2	4.9	60	2.9	49	2.4	69	3.4
TRP	1.4	0.1	2.1	75	1.6	69	1.4	74	1.5
ILE	3.2	0.2	4.8	67	3.2	60	2.9	77	3.7
ARG	6.7	0.5	10.0	87	8.7	83	8.3	78	7.8
PHE	4.0	0.3	6.0	60	3.6	55	3.3	76	4.5
HIS	2.7	0.2	4.0	79	3.2	75	3.0	72	2.9
LEU	6.2	0.3	9.3	70	6.4	65	6.0	76	7.0
TYR	2.9	0.3	4.3	68	3.0	62	2.7	69	3.0
VAL	4.7	0.3	7.0	65	4.6	59	4.1	73	5.1
ALA	4.7	0.4	7.0	58	4.1	52	3.7	73	5.1
ASP	7.1	0.5	10.6	66	7.0	59	6.3	74	7.8
GLU	19.4	2.2	29.0	83	24.2	80	23.1	85	24.6
GLY	5.1	0.4	7.6	67	5.1	57	4.3	69	5.3
PRO	6.5	0.8	9.7	86	8.4	76	7.4	74	7.2
SER	4.4	0.3	6.6	72	4.7	64	4.2	72	4.7
Sum AA	90.0		134	-	99	-	91	-	102

Fatty acids

	% FA	g/kg
CFAT(h)		31.6
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.1	0.0
C16:0	19.0	4.2
C16:1	1.0	0.2
C18:0	1.0	0.2
C18:1	15.0	3.3
C:18:2	57.0	12.6
C18:3	5.0	1.1
>=C20	1.0	0.2
Sum FA	99.1	21.9
% FA in CFAT-fraction		70

Fermentation products

	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat milling by-products-Wheat bran CF > 125 g/kg 1010.100/6/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	874	61	142	29	43	126	517	503
sdc	14	3	7	2	2	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	126	99	-	47	496	159	43	498	2
sdc	24	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.0	12.3	10.5	5.2	15.1	0.2	0.7	0.1	1.3
sdc	-	-	-	-	-	-	-	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	158	161	111	11	1.2	0.1	0.1
sdc	-	-	-	-	-	-	-

IP/P	87	SUGe/SUG	70	EB (meq/kg)	379	
		CF_DI	0.96	CAD (meq/kg)	293	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	73	DCCP	56	DCCP	73	DCCP	77
DCCFAT	77	DCCFATh	35	DCCFAT	45	DCCFAT	75
DCCF	30	DCCF	17	DCNFE	41	DCCF	20
DCNFE	69	DCNFE	56	DCPpo	27	DCNFE	65
DCOM	64	DCOM	49				
		DCNSPh	33	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	71	DCCP	78
%RUP	21 23	StaDCP	18	DCCFATh	38	DCOM	59
%DRUP	77 77	AppDCP	17	DC(S+S)	91		
%RUSTA	11 13			DCNFEh	26		
%DASH	65 65			DCPpo	27		
DASHmax	49 49						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	683 /kg	NE2015	4.94 MJ/kg	MEpo	4.93 MJ/kg	MErab	9.04 MJ/kg
VEVI	676 /kg	NE2015	1182 kcal/kg	MEpo	1179 kcal/kg	MErab	2161 kcal/kg
FOM-91	450 g/kg	EW2015	0.56 /kg	MEla	5.01 MJ/kg		
FOMr-07	449 g/kg	StaDP	2.2 g/kg	MEla	1197 kcal/kg		
FOMr2-07	198 g/kg	AppDP	2.0 g/kg	DPpo	3.3 g/kg		
FOMr2/FOMr	0.44 /kg						
DVE-91	45 g/kg			**Broilers**		**Horses**	
DVE-07	45 g/kg			MEbr	4.73 MJ/kg	NEm	5.90 MJ/kg
OEB-91	41 g/kg			MEbr	1130 kcal/kg	NEm	1409 kcal/kg
OEB-07	42 g/kg			DPpo	3.3 g/kg	EWpa	0.660 /kg
OEB2-07	39 g/kg					DCPho	110 g/kg
DVMET-91	1.1 g/kg						
DVLYS-91	3.0 g/kg						
DVMET-07	1.1 g/kg						
DVLYS-07	3.0 g/kg						
SW	0.28 /kg						
VW	0.28 /kg						

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Wheat milling by-products-Wheat bran CF > 125 g/kg 1010.100/6/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			142	68	-	61	86	-	-
LYS	4.0	0.3	5.7	68	3.9	62	3.5	75	4.2
MET	1.6	0.1	2.3	73	1.7	69	1.6	79	1.8
CYS	2.1	0.1	3.0	72	2.1	66	1.9	73	2.2
THR	3.3	0.2	4.7	60	2.8	49	2.3	69	3.2
TRP	1.4	0.1	2.0	75	1.5	69	1.4	74	1.5
ILE	3.2	0.2	4.5	67	3.0	60	2.7	77	3.5
ARG	6.7	0.5	9.5	87	8.2	83	7.9	78	7.4
PHE	4.0	0.3	5.7	60	3.4	55	3.1	76	4.3
HIS	2.7	0.2	3.8	79	3.0	74	2.8	72	2.8
LEU	6.2	0.3	8.8	70	6.1	65	5.7	76	6.7
TYR	2.9	0.3	4.1	68	2.8	62	2.6	69	2.8
VAL	4.7	0.3	6.7	65	4.4	58	3.9	73	4.9
ALA	4.7	0.4	6.7	58	3.9	52	3.5	73	4.9
ASP	7.1	0.5	10.1	66	6.6	59	5.9	74	7.4
GLU	19.4	2.2	27.5	83	22.9	80	21.9	85	23.4
GLY	5.1	0.4	7.2	67	4.8	56	4.1	69	5.0
PRO	6.5	0.8	9.2	86	7.9	76	7.0	74	6.8
SER	4.4	0.3	6.2	72	4.5	63	3.9	72	4.5
Sum AA	90.0		127	-	94	-	86	-	97

Fatty acids	% FA	g/kg
CFAT(h)		28.9
<=C10	-	0.0
C12:0	-	0.0
C14:0	0.1	0.0
C16:0	19.0	3.8
C16:1	1.0	0.2
C18:0	1.0	0.2
C18:1	15.0	3.0
C:18:2	57.0	11.5
C18:3	5.0	1.0
>=C20	1.0	0.2
Sum FA	99.1	20.0
% FA in CFAT-fraction		70

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Whey powder 8009.000/0/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	982	81	130	-	8	-	-	763
sdc	3	3	6	-	2	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	702	-	-	-	96	96
sdc	-	-	-	17	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	5.4	6.1	-	1.2	23.6	6.8	18.5	0.7	1.1
sdc	0.6	0.5	-	0.2	1.7	0.8	1.0	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	9	1	8	2	-	-	-
sdc	4	0	8	2	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	381	
		CF_DI	0.95	CAD (meq/kg)	271	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	77	DCCP	80	DCCP	90	DCCP	-
DCCFAT	61	DCCFATh	32	DCCFAT	84	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	70	DCCF	-
DCNFE	97	DCNFE	100	DCPpo	80	DCNFE	-
DCOM	94	DCOM	96				
		DCNSPh	100	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	21	StaDCP	85	DCCFATh	-	DCOM	-
%DRUP	90	AppDCP	82	DC(S+S)	-		
%RUSTA	-			DCNFEh	-		
%DASH	65			DCPpo	80		
DASHmax	64						

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1112 /kg	NE2015	11.18 MJ/kg	MEpo	11.63 MJ/kg	MErab	-
VEVI	1245 /kg	NE2015	2672 kcal/kg	MEpo	2779 kcal/kg	MErab	-
FOM-91	809 g/kg	EW2015	1.27 /kg	MEla	11.67 MJ/kg		
FOMr-07	842 g/kg	StaDP	5.2 g/kg	MEla	2789 kcal/kg		
FOMr2-07	738 g/kg	AppDP	5.0 g/kg	DPpo	4.9 g/kg		
FOMr2/FOMr	0.88 /kg						
DVE-91	98 g/kg			**Broilers**		**Horses**	
DVE-07	112 g/kg			MEbr	-	NEm	-
OEB-91	-22 g/kg			MEbr	-	NEm	-
OEB-07	-44 g/kg			DPpo	4.9 g/kg	EWpa	-
OEB2-07	-77 g/kg					DCPho	-
DVMET-91	2.3 g/kg						
DVLYS-91	7.6 g/kg						
DVMET-07	2.6 g/kg						
DVLYS-07	8.7 g/kg						
SW	-0.47 /kg						
VW	0.28 /kg						

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Whey powder 8009.000/0/0

Amino acids	g/16g N			Ileal digestible: AA pigs, standardized		Ileal digestible: AA pigs, apparent		Standardized ileal digestible: AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			130	90	-	81	105	-	-
LYS	7.5	0.5	9.7	92	8.9	88	8.6	94	9.1
MET	1.5	0.2	1.9	92	1.8	86	1.7	97	1.9
CYS	1.9	0.2	2.5	92	2.3	84	2.1	86	2.1
THR	5.4	0.8	7.0	90	6.3	82	5.7	88	6.2
TRP	1.4	0.1	1.8	88	1.6	80	1.5	90	1.6
ILE	5.1	0.4	6.6	90	5.9	84	5.6	90	6.0
ARG	2.4	0.3	3.1	90	2.8	77	2.4	89	2.8
PHE	3.3	0.4	4.3	90	3.8	82	3.5	90	3.9
HIS	1.8	0.2	2.3	90	2.1	82	1.9	89	2.1
LEU	8.9	0.4	11.5	90	10.4	86	9.9	90	10.4
TYR	2.4	0.3	3.1	90	2.8	81	2.5	90	2.8
VAL	4.9	0.3	6.4	90	5.7	82	5.2	90	5.7
ALA	4.3	0.2	5.6	90	5.0	81	4.5	93	5.2
ASP	9.1	0.5	11.8	90	10.6	83	9.8	89	10.5
GLU	15.5	0.6	20.1	90	18.0	84	16.9	88	17.7
GLY	2.0	0.2	2.6	89	2.3	55	1.4	90	2.3
PRO	5.5	0.5	7.1	90	6.4	74	5.3	86	6.1
SER	4.4	0.3	5.7	90	5.1	78	4.5	88	5.0
Sum AA	87.3		113	-	102	-	93	-	101

Fatty acids	% FA	g/kg
CFAT(h)		8.5
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Whey powder:

1. SUG is represented as glucose units. Lactose = 0.95 * SUG.
2. SUGe/SUG for pigs only applies when lactose containing diets are fed on a regular basis; otherwise SUGe/SUG = 0.
3. For the digestibility of the NFE fraction in poultry complete fermentation of lactose (present in limited amounts in the diet) is assumed.

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Whey powder, low lactose-ASH < 210 g/kg 8009.626/1/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	956	177	252	-	53	-	-	475
sdc	6	12	32	-	17	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	467	-	-	-	31	31
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	17.6	14.7	-	2.8	45.3	16.5	29.4	-	2.1
sdc	9.4	2.4	-	-	7.3	3.1	3.8	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	9	2	6	2	-	-	-
sdc	6	1	5	2	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	1046
		CF_DI	0.95	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	89	DCCP	88	DCCP	90	DCCP	-
DCCFAT	86	DCCFATh	81	DCCFAT	84	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	70	DCCF	-
DCNFE	97	DCNFE	100	DCPpo	80	DCNFE	-
DCOM	94	DCOM	95				
		DCNSPh	100	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	21	StaDCP	85	DCCFATh	-	DCOM	-
%DRUP	90	AppDCP	84	DC(S+S)	-		
%RUSTA	-			DCNFEh	-		
%DASH	65			DCPpo	80		
DASHmax	132						

DVE	**2007**
%RUP	22
%DRUP	90
%RUSTA	-
%DASH	65
DASHmax	132

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1061 /kg	NE2015	10.37 MJ/kg	MEpo	11.58 MJ/kg	MErab	-
VEVI	1179 /kg	NE2015	2480 kcal/kg	MEpo	2768 kcal/kg	MErab	-
FOM-91	623 g/kg	EW2015	1.18 /kg	MEla	11.84 MJ/kg		
FOMr-07	663 g/kg	StaDP	12.5 g/kg	MEla	2830 kcal/kg		
FOMr2-07	543 g/kg	AppDP	12.3 g/kg	DPpo	11.8 g/kg		
FOMr2/FOMr	0.82 /kg						
DVE-91	104 g/kg			**Broilers**		**Horses**	
DVE-07	110 g/kg			MEbr	-	NEm	-
OEB-91	100 g/kg			MEbr	-	NEm	-
OEB-07	90 g/kg			DPpo	11.8 g/kg	EWpa	-
OEB2-07	7 g/kg					DCPho	-
DVMET-91	2.2 g/kg						
DVLYS-91	8.1 g/kg						
DVMET-07	2.4 g/kg						
DVLYS-07	8.5 g/kg						
SW	-0.22 /kg						
VW	0.27 /kg						

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Whey powder, low lactose-ASH < 210 g/kg 8009.626/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			252	92	-	88	221	-	-
LYS	7.5	0.5	18.9	94	17.7	92	17.4	95	18.0
MET	1.5	0.2	3.8	94	3.5	91	3.4	97	3.7
CYS	1.9	0.2	4.8	94	4.5	90	4.3	87	4.2
THR	5.4	0.8	13.6	93	12.6	89	12.1	89	12.1
TRP	1.4	0.1	3.5	92	3.2	88	3.1	92	3.2
ILE	5.1	0.4	12.9	92	11.8	89	11.5	91	11.7
ARG	2.4	0.3	6.1	92	5.6	86	5.2	90	5.4
PHE	3.3	0.4	8.3	92	7.7	88	7.3	91	7.6
HIS	1.8	0.2	4.5	92	4.2	88	4.0	90	4.1
LEU	8.9	0.4	22.4	92	20.7	90	20.2	91	20.4
TYR	2.4	0.3	6.1	92	5.6	87	5.3	91	5.5
VAL	4.9	0.3	12.4	92	11.4	88	10.9	91	11.2
ALA	4.3	0.2	10.8	92	10.0	88	9.5	94	10.2
ASP	9.1	0.5	22.9	92	21.1	89	20.4	90	20.6
GLU	15.5	0.6	39.1	92	35.9	89	34.8	89	34.8
GLY	2.0	0.2	5.0	92	4.6	75	3.8	91	4.6
PRO	5.5	0.5	13.9	92	12.7	84	11.7	87	12.1
SER	4.4	0.3	11.1	92	10.2	86	9.6	89	9.9
Sum AA	87.3		220	-	203	-	194	-	199

Fatty acids	% FA	g/kg
CFAT(h)		53.2
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Whey powder, low lactose-ASH < 210 g/kg:

1. SUG is represented as glucose units. Lactose = 0.95 * SUG.
2. SUGe/SUG for pigs only applies when lactose containing diets are fed on a regular basis; otherwise SUGe/SUG = 0.
3. For the digestibility of the NFE fraction in poultry complete fermentation of lactose (present in limited amounts in the diet) is assumed.

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Whey powder, low lactose-ASH > 210 g/kg 8009.626/2/0

Weende analysis and carbohydrates (g/kg)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	962	230	217	-	41	-	-	474
sdc	8	12	16	-	22	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	444	-	-	-	52	52
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	33.8	19.6	-	3.1	48.7	19.3	29.4	-	1.8
sdc	9.9	2.7	-	-	1.6	3.6	1.2	-	-

Trace elements (mg/kg)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	61	12	32	3	-	-	-
sdc	8	2	8	2	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	1259
		CF_DI	0.95	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	87	DCCP	87	DCCP	90	DCCP	-
DCCFAT	84	DCCFATh	78	DCCFAT	84	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	70	DCCF	-
DCNFE	97	DCNFE	100	DCPpo	80	DCNFE	-
DCOM	93	DCOM	95				
		DCNSPh	100	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	21	StaDCP	85	DCCFATh	-	DCOM	-
%DRUP	90	AppDCP	84	DC(S+S)	-		
%RUSTA	-			DCNFEh	-		
%DASH	65			DCPpo	80		
DASHmax	171						

DVE	**2007**
%RUP	22
%DRUP	90
%RUSTA	-
%DASH	65
DASHmax	171

Nutritional value (in product)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	972 /kg	NE2015	9.51 MJ/kg	MEpo	10.60 MJ/kg	MErab	-
VEVI	1079 /kg	NE2015	2273 kcal/kg	MEpo	2533 kcal/kg	MErab	-
FOM-91	596 g/kg	EW2015	1.08 /kg	MEla	10.80 MJ/kg		
FOMr-07	631 g/kg	StaDP	16.7 g/kg	MEla	2581 kcal/kg		
FOMr2-07	516 g/kg	AppDP	16.5 g/kg	DPpo	15.7 g/kg		
FOMr2/FOMr	0.82 /kg						
DVE-91	93 g/kg			**Broilers**		**Horses**	
DVE-07	99 g/kg			MEbr	-	NEm	-
OEB-91	77 g/kg			MEbr	-	NEm	-
OEB-07	66 g/kg			DPpo	15.7 g/kg	EWpa	-
OEB2-07	-3 g/kg					DCPho	-
DVMET-91	2.0 g/kg						
DVLYS-91	7.2 g/kg						
DVMET-07	2.2 g/kg						
DVLYS-07	7.7 g/kg						
SW	-0.19 /kg						
VW	0.28 /kg						

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Whey powder, low lactose-ASH > 210 g/kg 8009.626/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized DC	Ileal digestible AA pigs standardized g/kg	Ileal digestible AA pigs apparent DC	Ileal digestible AA pigs apparent g/kg	Standardized ileal digestible AA poultry DC	Standardized ileal digestible AA poultry g/kg
	mean	sdc	g/kg	DC	g/kg	DC	g/kg	DC	g/kg
CP			217	92	-	87	188	-	-
LYS	7.5	0.5	16.2	93	15.1	91	14.8	95	15.4
MET	1.5	0.2	3.2	93	3.0	90	2.9	97	3.2
CYS	1.9	0.2	4.1	94	3.9	89	3.7	87	3.6
THR	5.4	0.8	11.7	93	10.8	88	10.3	89	10.4
TRP	1.4	0.1	3.0	91	2.8	87	2.6	92	2.8
ILE	5.1	0.4	11.0	92	10.2	89	9.8	91	10.1
ARG	2.4	0.3	5.2	92	4.8	85	4.4	90	4.7
PHE	3.3	0.4	7.1	92	6.6	87	6.2	91	6.5
HIS	1.8	0.2	3.9	92	3.6	87	3.4	90	3.5
LEU	8.9	0.4	19.3	92	17.7	90	17.3	91	17.5
TYR	2.4	0.3	5.2	92	4.8	86	4.5	91	4.7
VAL	4.9	0.3	10.6	92	9.8	87	9.2	91	9.7
ALA	4.3	0.2	9.3	92	8.6	87	8.1	94	8.8
ASP	9.1	0.5	19.7	92	18.1	88	17.3	90	17.7
GLU	15.5	0.6	33.6	92	30.8	88	29.7	89	29.9
GLY	2.0	0.2	4.3	92	4.0	72	3.1	91	3.9
PRO	5.5	0.5	11.9	92	10.9	83	9.9	87	10.4
SER	4.4	0.3	9.5	92	8.7	85	8.1	89	8.5
Sum AA	87.3		189	-	174	-	165	-	171

Fatty acids	% FA	g/kg
CFAT(h)		40.9
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Whey powder, low lactose-ASH > 210 g/kg:

1. SUG is represented as glucose units. Lactose = 0.95 * SUG.
2. SUGe/SUG for pigs only applies when lactose containing diets are fed on a regular basis; otherwise SUGe/SUG = 0.
3. For the digestibility of the NFE fraction in poultry complete fermentation of lactose (present in limited amounts in the diet) is assumed.

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High moisture industrial co-products

Brewer's grains, Meura filter process 1005.324/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	258	42	260	-	103	182	-	414
sdc	14	5	15	-	8	17	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	38	16	25	23	503	-	-	503	0
sdc	5	-	-	19	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	4.9	5.6	3.6	2.2	0.4	0.2	0.4	1.8	2.4
sdc	1.4	0.5	-	-	0.3	0.1	0.3	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	143	53	93	12	-	-	-
sdc	-	4	6	6	-	-	-

IP/P	65	SUGe/SUG	50	EB (meq/kg)	9
		CF_DI	0.96	CAD (meq/kg)	-252

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	81	DCCP	77	DCCP	-	DCCP	-
DCCFAT	90	DCCFATh	72	DCCFAT	-	DCCFAT	-
DCCF	44	DCCF	24	DCNFE	-	DCCF	-
DCNFE	56	DCNFE	63	DCPpo	-	DCNFE	-
DCOM	64	DCOM	60				
		DCNSPh	42	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	49	58	StaDCP	65	DCCFATh	-	DCOM	-
%DRUP	93	93	AppDCP	61	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	28	28						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	947 /kg	NE2015	8.28 MJ/kg	MEpo	-	MErab	-
VEVI	952 /kg	NE2015	1978 kcal/kg	MEpo	-	MErab	-
FOM-91	366 g/kg	EW2015	0.94 /kg	MEla	-		
FOMr-07	374 g/kg	StaDP	3.6 g/kg	MEla	-		
FOMr2-07	128 g/kg	AppDP	3.4 g/kg	DPpo	-		
FOMr2/FOMr	0.34 /kg						
DVE-91	138 g/kg			**Broilers**		**Horses**	
DVE-07	147 g/kg			MEbr	-	NEm	-
OEB-91	65 g/kg			MEbr	-	NEm	-
OEB-07	56 g/kg			DPpo	-	EWpa	-
OEB2-07	13 g/kg					DCPho	-
DVMET-91	3.0 g/kg						
DVLYS-91	6.1 g/kg						
DVMET-07	3.2 g/kg						
DVLYS-07	6.3 g/kg						
SW	1.00 /kg						
VW	0.55 /kg						

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Brewer's grains, Meura filter process 1005.324/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			260	74	-	69	180	-	-
LYS	3.8	0.5	9.9	77	7.6	73	7.2	-	-
MET	1.9	0.1	4.9	84	4.1	82	4.0	-	-
CYS	1.9	0.2	4.9	74	3.7	70	3.4	-	-
THR	3.7	0.2	9.6	79	7.6	73	7.0	-	-
TRP	1.2	0.1	3.1	79	2.5	75	2.3	-	-
ILE	4.1	0.2	10.6	85	9.0	81	8.7	-	-
ARG	4.9	0.6	12.7	91	11.6	88	11.2	-	-
PHE	5.2	0.6	13.5	87	11.7	84	11.4	-	-
HIS	2.3	0.2	6.0	81	4.8	78	4.6	-	-
LEU	7.9	1.4	20.5	83	17.0	81	16.5	-	-
TYR	3.2	0.5	8.3	91	7.6	87	7.3	-	-
VAL	5.4	0.4	14.0	82	11.5	78	11.0	-	-
ALA	5.3	0.6	13.8	74	10.2	70	9.7	-	-
ASP	6.9	0.6	17.9	74	13.2	69	12.4	-	-
GLU	18.4	3.0	47.8	74	35.3	71	34.1	-	-
GLY	4.0	0.3	10.4	74	7.7	65	6.8	-	-
PRO	8.9	0.6	23.1	74	17.1	69	16.0	-	-
SER	4.2	0.2	10.9	74	8.0	68	7.4	-	-
Sum AA	93.2		242	-	190	-	181	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		103.1
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	34	-
LA	30	-
AC	2	-
ETH	-	-
PR	-	-
BU	2	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Brewer's grains, Meura filter process:

1. This product has a high fermentation rate. Therefore no distinction is made between 'fresh' and 'ensiled'.

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Brewer's grains, traditional process-DM < 250 g/kg 1005.313/1/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	218	42	264	-	109	163	-	422
sdc	19	5	25	-	9	13	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	47	20	40	6	492	-	-	492	0
sdc	15	-	-	5	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	3.0	5.6	3.6	2.1	0.6	0.2	0.4	-	2.4
sdc	0.6	0.5	-	0.4	0.3	0.2	0.2	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	170	52	87	14	2.4	-	-
sdc	61	6	11	8	-	-	-

IP/P	65	SUGe/SUG	50	EB (meq/kg)	13
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	81	DCCP	77	DCCP	-	DCCP	-
DCCFAT	90	DCCFATh	60	DCCFAT	-	DCCFAT	-
DCCF	44	DCCF	23	DCNFE	-	DCCF	-
DCNFE	56	DCNFE	57	DCPpo	-	DCNFE	-
DCOM	65	DCOM	57				
		DCNSPh	38	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	49	58	StaDCP	65	DCCFATh	-	DCOM	-
%DRUP	93	93	AppDCP	61	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	28	28						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	970 /kg	NE2015	7.88 MJ/kg	MEpo	-	MErab	-
VEVI	981 /kg	NE2015	1882 kcal/kg	MEpo	-	MErab	-
FOM-91	364 g/kg	EW2015	0.90 /kg	MEla	-		
FOMr-07	374 g/kg	StaDP	3.6 g/kg	MEla	-		
FOMr2-07	129 g/kg	AppDP	3.4 g/kg	DPpo	-		
FOMr2/FOMr	0.35 /kg						
DVE-91	140 g/kg			**Broilers**		**Horses**	
DVE-07	149 g/kg			MEbr	-	NEm	-
OEB-91	67 g/kg			MEbr	-	NEm	-
OEB-07	58 g/kg			DPpo	-	EWpa	-
OEB2-07	16 g/kg					DCPho	-
DVMET-91	3.1 g/kg						
DVLYS-91	6.2 g/kg						
DVMET-07	3.3 g/kg						
DVLYS-07	6.5 g/kg						
SW	1.00 /kg						
VW	0.55 /kg						

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Brewer's grains, traditional process-DM < 250 g/kg 1005.313/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			264	74	-	70	184	-	-
LYS	3.8	0.5	10.0	77	7.7	73	7.3	-	-
MET	1.9	0.1	5.0	84	4.2	82	4.1	-	-
CYS	1.9	0.2	5.0	74	3.7	70	3.5	-	-
THR	3.7	0.2	9.8	79	7.7	73	7.1	-	-
TRP	1.2	0.1	3.2	79	2.5	75	2.4	-	-
ILE	4.1	0.2	10.8	85	9.2	81	8.8	-	-
ARG	4.9	0.6	12.9	91	11.8	88	11.4	-	-
PHE	5.2	0.6	13.7	87	11.9	85	11.6	-	-
HIS	2.3	0.2	6.1	81	4.9	78	4.7	-	-
LEU	7.9	1.4	20.9	83	17.3	81	16.8	-	-
TYR	3.2	0.5	8.4	91	7.7	87	7.4	-	-
VAL	5.4	0.4	14.3	82	11.7	78	11.1	-	-
ALA	5.3	0.6	14.0	74	10.3	70	9.9	-	-
ASP	6.9	0.6	18.2	74	13.4	69	12.7	-	-
GLU	18.4	3.0	48.6	74	35.8	71	34.7	-	-
GLY	4.0	0.3	10.6	74	7.8	65	6.9	-	-
PRO	8.9	0.6	23.5	74	17.3	69	16.2	-	-
SER	4.2	0.2	11.1	74	8.2	68	7.5	-	-
Sum AA	93.2		246	-	193	-	184	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		109.4
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	33	-
LA	25	11
AC	6	8
ETH	-	-
PR	-	-
BU	2	6
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Brewer's grains, traditional process-DM < 250 g/kg:

1. This product has a high fermentation rate. Therefore no distinction is made between 'fresh' and 'ensiled'.
2. At delivery usually salt is added. The Na-content of the product after salt addition is around 1 g/kg DM and the Cl-content 1.5 g/kg DM.

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Brewer's grains, traditional process-DM > 250 g/kg 1005.313/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	265	45	253	-	110	166	-	426
sdc	10	6	25	-	10	18	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	36	21	40	12	493	-	-	493	0
sdc	7	-	-	13	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	3.8	6.3	4.1	2.3	0.7	0.2	0.5	-	2.3
sdc	1.3	1.0	-	0.5	0.4	0.1	0.2	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	177	52	90	14	-	-	-
sdc	68	6	12	9	-	-	-

IP/P	65	SUGe/SUG	50	EB (meq/kg)	11
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	80	DCCP	77	DCCP	-	DCCP	-
DCCFAT	90	DCCFATh	60	DCCFAT	-	DCCFAT	-
DCCF	44	DCCF	23	DCNFE	-	DCCF	-
DCNFE	56	DCNFE	58	DCPpo	-	DCNFE	-
DCOM	64	DCOM	57				
		DCNSPh	38	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	49	58	StaDCP	65	DCCFATh	-	DCOM	-
%DRUP	93	93	AppDCP	62	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	30	30						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	962 /kg	NE2015	7.86 MJ/kg	MEpo	-	MErab	-
VEVI	973 /kg	NE2015	1878 kcal/kg	MEpo	-	MErab	-
FOM-91	363 g/kg	EW2015	0.89 /kg	MEla	-		
FOMr-07	376 g/kg	StaDP	4.1 g/kg	MEla	-		
FOMr2-07	134 g/kg	AppDP	3.9 g/kg	DPpo	-		
FOMr2/FOMr	0.36 /kg						
DVE-91	134 g/kg			**Broilers**		**Horses**	
DVE-07	143 g/kg			MEbr	-	NEm	-
OEB-91	62 g/kg			MEbr	-	NEm	-
OEB-07	53 g/kg			DPpo	-	EWpa	-
OEB2-07	14 g/kg					DCPho	-
DVMET-91	3.0 g/kg						
DVLYS-91	5.9 g/kg						
DVMET-07	3.1 g/kg						
DVLYS-07	6.2 g/kg						
SW	1.00 /kg						
VW	0.55 /kg						

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Brewer's grains, traditional process-DM > 250 g/kg 1005.313/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			253	74	-	69	175	-	-
LYS	3.8	0.5	9.6	77	7.4	73	7.0	-	-
MET	1.9	0.1	4.8	84	4.0	82	3.9	-	-
CYS	1.9	0.2	4.8	74	3.6	70	3.3	-	-
THR	3.7	0.2	9.4	79	7.4	72	6.8	-	-
TRP	1.2	0.1	3.0	79	2.4	74	2.3	-	-
ILE	4.1	0.2	10.4	85	8.8	81	8.4	-	-
ARG	4.9	0.6	12.4	91	11.3	88	10.9	-	-
PHE	5.2	0.6	13.2	87	11.4	84	11.1	-	-
HIS	2.3	0.2	5.8	81	4.7	78	4.5	-	-
LEU	7.9	1.4	20.0	83	16.6	81	16.1	-	-
TYR	3.2	0.5	8.1	91	7.4	87	7.1	-	-
VAL	5.4	0.4	13.7	82	11.2	78	10.7	-	-
ALA	5.3	0.6	13.4	74	9.9	70	9.4	-	-
ASP	6.9	0.6	17.5	74	12.9	69	12.1	-	-
GLU	18.4	3.0	46.6	74	34.3	71	33.2	-	-
GLY	4.0	0.3	10.1	74	7.5	65	6.6	-	-
PRO	8.9	0.6	22.5	74	16.6	69	15.5	-	-
SER	4.2	0.2	10.6	74	7.8	68	7.2	-	-
Sum AA	93.2		236	-	185	-	176	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		110.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	33	-
LA	25	11
AC	6	8
ETH	-	-
PR	-	-
BU	2	6
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Brewer's grains, traditional process-DM > 250 g/kg:

1. This product has a high fermentation rate. Therefore no distinction is made between 'fresh' and 'ensiled'.
2. At delivery usually salt is added. The Na-content of the product after salt addition is around 1 g/kg DM and the Cl-content 1.5 g/kg DM.

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Brewer's yeast, liquid-CP low 9001.314/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	150	38	233	-	18	14	-	697
sdc	16	-	22	-	8	6	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	30	48	26	-	-	-	244	244
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.4	7.3	-	1.4	10.5	0.4	2.0	0.5	1.5
sdc	2.1	1.7	-	-	2.4	1.9	0.6	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	90	14	47	12	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	25	EB (meq/kg)	230	
		CF_DI	0.96	CAD (meq/kg)	106	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	79	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	62	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	98	DCNFE	-	DCCF	-
DCNFE	-	DCNFE	95	DCPpo	-	DCNFE	-
DCOM	-	DCOM	90				
		DCNSPh	97	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	50	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	47	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	13.64 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	3261 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.55 /kg	MEla	-		
FOMr-07	-	StaDP	3.7 g/kg	MEla	-		
FOMr2-07	-	AppDP	3.5 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Brewer's yeast, liquid-CP low 9001.314/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			233	85	-	80	186	-	-
LYS	6.7	0.8	15.6	88	13.7	85	13.3	-	-
MET	1.6	0.1	3.7	81	3.0	78	2.9	-	-
CYS	1.1	0.2	2.6	69	1.8	61	1.6	-	-
THR	4.8	0.5	11.2	83	9.3	78	8.7	-	-
TRP	1.2	0.1	2.8	85	2.4	80	2.2	-	-
ILE	4.6	0.4	10.7	84	9.0	80	8.6	-	-
ARG	4.4	0.7	10.3	91	9.3	87	8.9	-	-
PHE	4.2	0.3	9.8	86	8.4	83	8.1	-	-
HIS	2.1	0.2	4.9	84	4.1	80	3.9	-	-
LEU	6.8	0.4	15.8	85	13.5	82	13.0	-	-
TYR	3.3	0.4	7.7	88	6.8	84	6.5	-	-
VAL	5.3	0.4	12.3	84	10.4	80	9.8	-	-
ALA	6.3	0.5	14.7	85	12.5	82	12.0	-	-
ASP	9.0	1.0	21.0	86	18.0	82	17.2	-	-
GLU	12.6	1.3	29.4	89	26.1	85	24.9	-	-
GLY	4.5	0.3	10.5	85	8.9	76	8.0	-	-
PRO	4.1	0.7	9.6	90	8.6	78	7.5	-	-
SER	5.0	0.4	11.7	84	9.8	78	9.1	-	-
Sum AA	87.6		204	-	175	-	166	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		17.8
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	368	-
LA	20	-
AC	6	-
ETH	343	117
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Brewer's yeast, liquid-CP low:

1. Nutrient concentrations are expressed on a DM basis; ethanol is considered part of the dry matter.
2. In reality analysed DM contents will be lower and nutrient values analysed in DM will be higher due to evaporation of ethanol during the drying process.
3. The NSPh fraction is calculated as 1000 - (ASH + CP + CFATh + STAam + GOS + CF_DI * SUG + 0.92 * LA + 0.5 * AC + ETH).
4. Average analysed content (without correction for ETH evaporation) for DM was 99 g/kg and for CP 355 g/kg DM.

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Brewer's yeast, liquid-CP average 9001.314/3/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	156	43	300	-	22	14	-	621
sdc	15	5	18	-	7	11	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	30	48	26	-	-	-	168	168
sdc	-	-	-	9	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.7	8.6	-	1.4	12.3	0.4	1.9	0.5	1.9
sdc	0.8	1.4	-	-	1.6	0.2	0.6	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	90	14	47	12	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	25	EB (meq/kg)	279	
		CF_DI	0.96	CAD (meq/kg)	128	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	80	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	67	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	98	DCNFE	-	DCCF	-
DCNFE	-	DCNFE	94	DCPpo	-	DCNFE	-
DCOM	-	DCOM	89				
		DCNSPh	97	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	50	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	48	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	13.73 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	3280 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.56 /kg	MEla	-		
FOMr-07	-	StaDP	4.3 g/kg	MEla	-		
FOMr2-07	-	AppDP	4.1 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Brewer's yeast, liquid-CP average 9001.314/3/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			300	85	-	81	243	-	-
LYS	6.7	0.8	20.1	88	17.7	86	17.3	-	-
MET	1.6	0.1	4.8	81	3.9	79	3.8	-	-
CYS	1.1	0.2	3.3	69	2.3	63	2.1	-	-
THR	4.8	0.5	14.4	83	11.9	79	11.3	-	-
TRP	1.2	0.1	3.6	85	3.1	81	2.9	-	-
ILE	4.6	0.4	13.8	84	11.6	81	11.2	-	-
ARG	4.4	0.7	13.2	91	12.0	88	11.6	-	-
PHE	4.2	0.3	12.6	86	10.8	83	10.5	-	-
HIS	2.1	0.2	6.3	84	5.3	81	5.1	-	-
LEU	6.8	0.4	20.4	85	17.3	83	16.9	-	-
TYR	3.3	0.4	9.9	88	8.7	85	8.4	-	-
VAL	5.3	0.4	15.9	84	13.3	81	12.8	-	-
ALA	6.3	0.5	18.9	85	16.1	82	15.6	-	-
ASP	9.0	1.0	27.0	86	23.2	83	22.4	-	-
GLU	12.6	1.3	37.8	89	33.6	86	32.4	-	-
GLY	4.5	0.3	13.5	85	11.5	78	10.6	-	-
PRO	4.1	0.7	12.3	90	11.0	81	9.9	-	-
SER	5.0	0.4	15.0	84	12.6	80	11.9	-	-
Sum AA	87.6		263	-	226	-	217	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		22.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	369	-
LA	20	-
AC	6	-
ETH	343	79
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Brewer's yeast, liquid-CP average:

1. Nutrient concentrations are expressed on a DM basis; ethanol is considered part of the dry matter.
2. In reality analysed DM contents will be lower and nutrient values analysed in DM will be higher due to evaporation of ethanol during the drying process.
3. The NSPh fraction is calculated as 1000 - (ASH + CP + CFATh + STAam + GOS + CF_DI * SUG + 0.92 * LA + 0.5 * AC + ETH).
4. Average analysed content (without correction for ETH evaporation) for DM was 103 g/kg and for CP 457 g/kg DM.

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Brewer's yeast, liquid-CP high 9001.314/4/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	173	46	353	-	25	14	-	562
sdc	18	11	19	-	8	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	30	48	26	-	-	-	109	109
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.3	9.6	-	1.4	13.0	0.4	1.6	0.5	2.2
sdc	0.6	1.8	-	-	2.5	0.5	0.7	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	90	14	47	12	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	25	EB (meq/kg)	305	
		CF_DI	0.96	CAD (meq/kg)	134	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	81	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	70	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	98	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	94	DCPpo	-	DCNFE	-
DCOM	-		DCOM	89				
			DCNSPh	97	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	50	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	48	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	13.79 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	3296 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.57 /kg	MEla	-		
FOMr-07	-	StaDP	4.8 g/kg	MEla	-		
FOMr2-07	-	AppDP	4.6 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Brewer's yeast, liquid-CP high 9001.314/4/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			353	85	-	82	288	-	-
LYS	6.7	0.8	23.7	88	20.8	86	20.4	-	-
MET	1.6	0.1	5.6	81	4.6	79	4.5	-	-
CYS	1.1	0.2	3.9	69	2.7	64	2.5	-	-
THR	4.8	0.5	16.9	83	14.0	79	13.5	-	-
TRP	1.2	0.1	4.2	85	3.6	82	3.5	-	-
ILE	4.6	0.4	16.2	84	13.6	82	13.3	-	-
ARG	4.4	0.7	15.5	91	14.1	88	13.7	-	-
PHE	4.2	0.3	14.8	86	12.7	84	12.4	-	-
HIS	2.1	0.2	7.4	84	6.2	81	6.0	-	-
LEU	6.8	0.4	24.0	85	20.4	83	19.9	-	-
TYR	3.3	0.4	11.6	88	10.2	85	10.0	-	-
VAL	5.3	0.4	18.7	84	15.7	81	15.2	-	-
ALA	6.3	0.5	22.2	85	18.9	83	18.4	-	-
ASP	9.0	1.0	31.8	86	27.3	83	26.5	-	-
GLU	12.6	1.3	44.5	89	39.5	86	38.3	-	-
GLY	4.5	0.3	15.9	85	13.5	79	12.6	-	-
PRO	4.1	0.7	14.5	90	13.0	82	11.9	-	-
SER	5.0	0.4	17.7	84	14.8	80	14.2	-	-
Sum AA	87.6		309	-	266	-	257	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		25.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	369	-
LA	20	-
AC	6	-
ETH	343	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Brewer's yeast, liquid-CP high:

1. Nutrient concentrations are expressed on a DM basis; ethanol is considered part of the dry matter.
2. In reality analysed DM contents will be lower and nutrient values analysed in DM will be higher due to evaporation of ethanol during the drying process.
3. The NSP fraction is calculated as 1000 - (ASH + CP + CFATh + STAam + GOS + CF_DI * SUG + 0.92 * LA + 0.5 * AC + ETH).
4. Average analysed content (without correction for ETH evaporation) for DM was 114 g/kg and for CP 537 g/kg DM.

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Carrot peelings, steam peeled 4006.634/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	52	138	96	22	37	124	620	605
sdc	10	22	19	4	17	26	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	4	-	-	25	-	-	-	485	485
sdc	-	-	-	16	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	6.1	5.0	-	2.0	46.0	4.5	5.7	-	-
sdc	1.3	1.0	-	0.4	14.1	1.7	2.2	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	1213	
		CF_DI	0.96	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	64		DCCP	-	DCCP	-	DCCP	-
DCCFAT	93		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	87		DCCF	-	DCNFE	-	DCCF	-
DCNFE	94		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	90		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	57	57	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	75	75	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	105	105						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1094 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1211 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	518 g/kg	EW2015	-	MEla	-		
FOMr-07	677 g/kg	StaDP	-	MEla	-		
FOMr2-07	389 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.58 /kg						
DVE-91	83 g/kg			**Broilers**		**Horses**	
DVE-07	84 g/kg			MEbr	-	NEm	-
OEB-91	-42 g/kg			MEbr	-	NEm	-
OEB-07	-45 g/kg			DPpo	-	EWpa	-
OEB2-07	-22 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	1.10 /kg						
VW	0.69 /kg						

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Carrot peelings, steam peeled 4006.634/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			96	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		37.3
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	328	-
LA	214	43
AC	45	15
ETH	69	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Cheese whey, fresh-CP < 175 g/kg DM 8023.000/1/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	44	96	153	-	47	-	-	703
sdc	9	18	18	-	31	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	591	-	-	-	8	8
sdc	-	-	-	98	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	9.5	7.5	-	2.0	26.1	8.2	20.8	-	1.3
sdc	2.4	1.3	-	1.1	3.0	1.8	3.1	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	66	8	15	9	-	-	-
sdc	53	11	12	9	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	438	
		CF_DI	0.95	CAD (meq/kg)	338	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	80	DCCP	87	DCCP	-	DCCP	-
DCCFAT	85	DCCFATh	79	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	-	DCCF	-
DCNFE	97	DCNFE	100	DCPpo	-	DCNFE	-
DCOM	94	DCOM	96				
		DCNSPh	78	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	5	5	StaDCP	85	DCCFATh	-	DCOM	-
%DRUP	-	0	AppDCP	82	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	75	75						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1198 /kg	NE2015	12.36 MJ/kg	MEpo	-	MErab	-
VEVI	1345 /kg	NE2015	2954 kcal/kg	MEpo	-	MErab	-
FOM-91	714 g/kg	EW2015	1.40 /kg	MEla	-		
FOMr-07	858 g/kg	StaDP	6.4 g/kg	MEla	-		
FOMr2-07	845 g/kg	AppDP	6.2 g/kg	DPpo	-		
FOMr2/FOMr	0.98 /kg						
DVE-91	61 g/kg			**Broilers**		**Horses**	
DVE-07	73 g/kg			MEbr	-	NEm	-
OEB-91	38 g/kg			MEbr	-	NEm	-
OEB-07	19 g/kg			DPpo	-	EWpa	-
OEB2-07	19 g/kg					DCPho	-
DVMET-91	1.6 g/kg						
DVLYS-91	4.9 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	5.8 g/kg						
SW	-0.40 /kg						
VW	0.30 /kg						

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Cheese whey, fresh-CP < 175 g/kg DM 8023.000/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			153	90	-	82	126	-	-
LYS	7.3	0.9	11.1	92	10.2	88	9.8	-	-
MET	1.8	0.6	2.8	91	2.6	87	2.5	-	-
CYS	1.6	0.7	2.5	92	2.3	84	2.1	-	-
THR	4.7	0.9	7.2	90	6.4	82	5.9	-	-
TRP	1.3	0.4	2.0	87	1.7	80	1.6	-	-
ILE	3.8	-	5.8	90	5.2	84	4.9	-	-
ARG	1.7	-	2.6	90	2.4	75	2.0	-	-
PHE	2.1	-	3.2	90	2.8	79	2.5	-	-
HIS	1.4	-	2.1	90	1.9	81	1.7	-	-
LEU	6.6	-	10.1	90	9.0	85	8.6	-	-
TYR	2.4	-	3.7	90	3.3	82	3.0	-	-
VAL	4.1	-	6.3	90	5.7	81	5.1	-	-
ALA	4.5	-	6.9	90	6.2	83	5.7	-	-
ASP	6.2	-	9.5	90	8.6	82	7.8	-	-
GLU	12.0	-	18.5	90	16.5	83	15.4	-	-
GLY	2.1	1.1	3.2	89	2.9	61	2.0	-	-
PRO	5.3	-	8.1	90	7.3	76	6.2	-	-
SER	3.1	-	4.8	90	4.3	76	3.6	-	-
Sum AA	72.0		110	-	99	-	90	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		47.4
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	154	-
LA	142	83
AC	8	4
ETH	4	5
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Cheese whey, fresh-CP < 175 g/kg DM:

1. SUG is represented as glucose units. Lactose = 0.95 * SUG.
2. SUGe/SUG for pigs only applies when lactose containing diets are fed on a regular basis; otherwise SUGe/SUG = 0.

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Cheese whey, fresh-CP 175 - 275 g/kg DM 8023.000/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	38	106	210	-	72	-	-	613
sdc	8	19	24	-	36	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	468	-	-	-	12	12
sdc	-	-	-	98	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	12.1	9.1	-	2.1	27.9	10.2	21.1	-	1.7
sdc	2.1	1.8	-	0.4	4.3	2.7	4.6	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	60	20	24	22	-	-	-
sdc	-	16	14	15	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	563	
		CF_DI	0.95	CAD (meq/kg)	405	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	86		DCCP	89	DCCP	-	DCCP	-
DCCFAT	87		DCCFATh	83	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	-	DCNFE	-	DCCF	-
DCNFE	97		DCNFE	100	DCPpo	-	DCNFE	-
DCOM	94		DCOM	96				
			DCNSPh	78	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	5	5	StaDCP	85	DCCFATh	-	DCOM	-
%DRUP	-	0	AppDCP	83	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	82	82						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1243 /kg	NE2015	13.21 MJ/kg	MEpo	-	MErab	-
VEVI	1393 /kg	NE2015	3156 kcal/kg	MEpo	-	MErab	-
FOM-91	649 g/kg	EW2015	1.50 /kg	MEla	-		
FOMr-07	853 g/kg	StaDP	7.7 g/kg	MEla	-		
FOMr2-07	839 g/kg	AppDP	7.5 g/kg	DPpo	-		
FOMr2/FOMr	0.98 /kg						
DVE-91	55 g/kg			**Broilers**		**Horses**	
DVE-07	67 g/kg			MEbr	-	NEm	-
OEB-91	101 g/kg			MEbr	-	NEm	-
OEB-07	83 g/kg			DPpo	-	EWpa	-
OEB2-07	82 g/kg					DCPho	-
DVMET-91	1.4 g/kg						
DVLYS-91	4.4 g/kg						
DVMET-07	1.7 g/kg						
DVLYS-07	5.3 g/kg						
SW	-0.20 /kg						
VW	0.30 /kg						

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Cheese whey, fresh-CP 175 - 275 g/kg DM 8023.000/2/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			210	90	-	84	177	-	-
LYS	7.3	0.9	15.2	92	14.0	89	13.6	-	-
MET	1.8	0.6	3.9	91	3.5	88	3.4	-	-
CYS	1.6	0.7	3.4	92	3.1	86	2.9	-	-
THR	4.7	0.9	9.8	90	8.8	84	8.2	-	-
TRP	1.3	0.4	2.7	87	2.4	82	2.2	-	-
ILE	3.8	-	8.0	90	7.2	85	6.8	-	-
ARG	1.7	-	3.6	90	3.2	79	2.9	-	-
PHE	2.1	-	4.3	90	3.9	82	3.6	-	-
HIS	1.4	-	2.9	90	2.6	83	2.4	-	-
LEU	6.6	-	13.8	90	12.4	86	11.9	-	-
TYR	2.4	-	5.0	90	4.5	84	4.2	-	-
VAL	4.1	-	8.6	90	7.8	84	7.2	-	-
ALA	4.5	-	9.4	90	8.5	85	8.0	-	-
ASP	6.2	-	13.1	90	11.7	84	10.9	-	-
GLU	12.0	-	25.3	90	22.7	85	21.5	-	-
GLY	2.1	-	4.4	89	3.9	69	3.0	-	-
PRO	5.3	-	11.1	90	10.0	80	8.9	-	-
SER	3.1	-	6.5	90	5.9	80	5.2	-	-
Sum AA	72.0		151	-	136	-	127	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		71.8
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	211	-
LA	165	102
AC	9	4
ETH	37	50
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Cheese whey, fresh-CP 175 - 275 g/kg DM:

1. SUG is represented as glucose units. Lactose = 0.95 * SUG.
2. SUGe/SUG for pigs only applies when lactose containing diets are fed on a regular basis; otherwise SUGe/SUG = 0.

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Cheese whey, fresh-CP > 275 g/kg DM 8023.000/3/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	31	141	327	-	80	-	-	452
sdc	10	51	43	-	45	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	182	-	-	-	30	30
sdc	-	-	-	136	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	16.1	12.7	-	3.6	36.1	11.8	27.7	-	2.7
sdc	5.4	3.3	-	0.6	13.2	5.9	14.6	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	51	26	34	22	-	-	-
sdc	29	8	11	12	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	656
		CF_DI	0.95	CAD (meq/kg)	438

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	91	DCCP	91	DCCP	-	DCCP	-
DCCFAT	87	DCCFATh	84	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	-	DCCF	-
DCNFE	97	DCNFE	98	DCPpo	-	DCNFE	-
DCOM	94	DCOM	94				
		DCNSPh	78	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	5	5	StaDCP	85	DCCFATh	-	DCOM	-
%DRUP	-	0	AppDCP	83	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	108	108						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1236 /kg	NE2015	16.13 MJ/kg	MEpo	-	MErab	-
VEVI	1373 /kg	NE2015	3854 kcal/kg	MEpo	-	MErab	-
FOM-91	463 g/kg	EW2015	1.83 /kg	MEla	-		
FOMr-07	975 g/kg	StaDP	10.8 g/kg	MEla	-		
FOMr2-07	957 g/kg	AppDP	10.6 g/kg	DPpo	-		
FOMr2/FOMr	0.98 /kg						
DVE-91	36 g/kg			**Broilers**		**Horses**	
DVE-07	59 g/kg			MEbr	-	NEm	-
OEB-91	239 g/kg			MEbr	-	NEm	-
OEB-07	205 g/kg			DPpo	-	EWpa	-
OEB2-07	202 g/kg					DCPho	-
DVMET-91	1.0 g/kg						
DVLYS-91	2.9 g/kg						
DVMET-07	1.6 g/kg						
DVLYS-07	4.7 g/kg						
SW	-0.10 /kg						
VW	0.30 /kg						

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Cheese whey, fresh-CP > 275 g/kg DM 8023.000/3/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			327	90	-	86	283	-	-
LYS	7.3	0.9	23.7	92	21.8	90	21.4	-	-
MET	1.8	0.6	6.0	91	5.5	89	5.4	-	-
CYS	1.6	0.7	5.3	92	4.9	88	4.7	-	-
THR	4.7	0.9	15.3	90	13.8	86	13.2	-	-
TRP	1.3	0.4	4.3	87	3.7	84	3.6	-	-
ILE	3.8	0.6	12.4	90	11.2	87	10.8	-	-
ARG	1.7	0.4	5.6	90	5.1	83	4.7	-	-
PHE	2.1	0.9	6.8	90	6.1	85	5.8	-	-
HIS	1.4	0.0	4.4	90	4.0	86	3.8	-	-
LEU	6.6	0.7	21.5	90	19.3	88	18.9	-	-
TYR	2.4	-	7.9	90	7.1	86	6.8	-	-
VAL	4.1	0.1	13.5	90	12.1	86	11.6	-	-
ALA	4.5	1.6	14.7	90	13.2	87	12.7	-	-
ASP	6.2	1.2	20.3	90	18.3	86	17.5	-	-
GLU	12.0	1.1	39.4	90	35.4	87	34.2	-	-
GLY	2.1	1.1	6.9	90	6.2	77	5.3	-	-
PRO	5.3	-	17.3	90	15.6	83	14.5	-	-
SER	3.1	0.4	10.2	90	9.1	83	8.5	-	-
Sum AA	72.0		236	-	212	-	203	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		79.8
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	490	-
LA	260	-
AC	19	11
ETH	211	145
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Cheese whey, fresh-CP > 275 g/kg DM:

1. SUG is represented as glucose units. Lactose = 0.95 * SUG.
2. SUGe/SUG for pigs only applies when lactose containing diets are fed on a regular basis; otherwise SUGe/SUG = 0.

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Chicory press pulp, fresh and ensiled 4015.240/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	232	95	83	12	18	233	577	570
sdc	17	24	7	1	4	14	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	149	-	-	49	339	-	21	716	377
sdc	37	-	-	4	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	8.7	1.5	-	1.3	7.8	0.6	0.1	0.1	0.5
sdc	1.4	0.1	-	0.1	2.0	0.3	0.1	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1217	45	41	10	0.7	-	0.3
sdc	330	17	7	1	0.1	-	0.1

IP/P	-	SUGe/SUG	-	EB (meq/kg)	223	
		CF_DI	0.96	CAD (meq/kg)	182	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	53		DCCP	-	DCCP	-	DCCP	-
DCCFAT	69		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	82		DCCF	-	DCNFE	-	DCCF	-
DCNFE	90		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	84		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	57	57	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	85	85	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	35	35			DCPpo	-		
DASHmax	40	40						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	985 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1055 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	675 g/kg	EW2015	-	MEla	-		
FOMr-07	581 g/kg	StaDP	-	MEla	-		
FOMr2-07	175 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.30 /kg						
DVE-91	93 g/kg			**Broilers**		**Horses**	
DVE-07	83 g/kg			MEbr	-	NEm	-
OEB-91	-70 g/kg			MEbr	-	NEm	-
OEB-07	-56 g/kg			DPpo	-	EWpa	-
OEB2-07	-10 g/kg					DCPho	-
DVMET-91	2.2 g/kg						
DVLYS-91	7.3 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	6.5 g/kg						
SW	1.05 /kg						
VW	0.70 /kg						

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Chicory press pulp, fresh and ensiled 4015.240/0/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			83	-	-	-	-	-	-
LYS	7.2	-	6.0	-	-	-	-	-	-
MET	1.8	-	1.5	-	-	-	-	-	-
CYS	1.0	-	0.8	-	-	-	-	-	-
THR	4.5	-	3.7	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	4.3	-	3.6	-	-	-	-	-	-
ARG	5.8	-	4.8	-	-	-	-	-	-
PHE	4.1	-	3.4	-	-	-	-	-	-
HIS	2.4	-	2.0	-	-	-	-	-	-
LEU	7.2	-	6.0	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	5.1	-	4.2	-	-	-	-	-	-
ALA	4.8	-	4.0	-	-	-	-	-	-
ASP	8.5	-	7.1	-	-	-	-	-	-
GLU	9.1	-	7.6	-	-	-	-	-	-
GLY	4.4	-	3.7	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	4.4	-	3.7	-	-	-	-	-	-
Sum AA	74.6		-	-	-	-	-	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		11.9
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	54	-
LA	47	-
AC	7	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Corn cob mix (CCM), silage-without rachis, CF < 40 g/kg DM 1002.517/1/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	662	16	97	-	48	23	-	816
sdc	35	2	8	-	7	6	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	718	675	-	7	80	24	3	122	42
sdc	23	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.1	3.0	2.7	1.2	4.0	0.1	0.6	0.1	1.0
sdc	0.0	0.3	-	0.1	0.1	0.0	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	45	6	26	2	0.4	-	41.0
sdc	17	1	3	1	-	-	-

IP/P	90	SUGe/SUG	55	EB (meq/kg)	90	
		CF_DI	0.96	CAD (meq/kg)	19	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	58	DCCP	82	DCCP	72	DCCP	-
DCCFAT	77	DCCFATh	73	DCCFAT	72	DCCFAT	-
DCCF	40	DCCF	34	DCNFE	91	DCCF	-
DCNFE	92	DCNFE	98	DCPpo	30	DCNFE	-
DCOM	87	DCOM	94				
		DCNSPh	74	**Broilers**		**Horses**	
DVE	**1991**	DCiSTA	100	DCCP	-	DCCP	58
%RUP	31	StaDCP	60	DCCFATh	-	DCOM	87
%DRUP	75	AppDCP	53	DC(S+S)	-		
%RUSTA	32			DCNFEh	-		
%DASH	65			DCPpo	30		
DASHmax	18						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1208 /kg	NE2015	13.18 MJ/kg	MEpo	15.62 MJ/kg	MErab	-
VEVI	1334 /kg	NE2015	3150 kcal/kg	MEpo	3733 kcal/kg	MErab	-
FOM-91	537 g/kg	EW2015	1.50 /kg	MEla	15.82 MJ/kg		
FOMr-07	597 g/kg	StaDP	1.8 g/kg	MEla	3781 kcal/kg		
FOMr2-07	313 g/kg	AppDP	1.6 g/kg	DPpo	0.9 g/kg		
FOMr2/FOMr	0.52 /kg						
DVE-91	66 g/kg			**Broilers**		**Horses**	
DVE-07	82 g/kg			MEbr	-	NEm	11.15 MJ/kg
OEB-91	-17 g/kg			MEbr	-	NEm	2665 kcal/kg
OEB-07	-43 g/kg			DPpo	0.9 g/kg	EWpa	1.249 /kg
OEB2-07	1 g/kg					DCPho	59 g/kg
DVMET-91	1.7 g/kg						
DVLYS-91	4.1 g/kg						
DVMET-07	2.1 g/kg						
DVLYS-07	5.4 g/kg						
SW	0.40 /kg						
VW	0.65 /kg						

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Corn cob mix (CCM), silage-without rachis, CF < 40 g/kg DM 1002.517/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			97	81	-	69	67	-	-
LYS	2.9	0.3	2.8	70	2.0	56	1.6	-	-
MET	2.1	0.2	2.0	88	1.8	82	1.7	-	-
CYS	2.2	0.2	2.1	79	1.7	69	1.5	-	-
THR	3.6	0.2	3.5	79	2.8	62	2.2	-	-
TRP	0.7	0.1	0.7	71	0.5	51	0.3	-	-
ILE	3.4	0.2	3.3	81	2.7	70	2.3	-	-
ARG	4.7	0.4	4.6	81	3.7	72	3.3	-	-
PHE	4.8	0.3	4.7	81	3.8	74	3.4	-	-
HIS	3.0	0.2	2.9	81	2.4	75	2.2	-	-
LEU	12.1	0.7	11.7	81	9.5	77	9.0	-	-
TYR	3.7	0.4	3.6	81	2.9	73	2.6	-	-
VAL	4.8	0.3	4.7	81	3.8	70	3.2	-	-
ALA	7.5	0.4	7.3	81	5.9	74	5.4	-	-
ASP	6.7	0.4	6.5	81	5.2	69	4.5	-	-
GLU	18.1	1.0	17.6	81	14.2	74	13.0	-	-
GLY	3.9	0.3	3.8	81	3.1	57	2.2	-	-
PRO	8.9	0.7	8.6	81	7.0	68	5.9	-	-
SER	4.8	0.2	4.7	81	3.8	67	3.1	-	-
Sum AA	97.9		95	-	76	-	67	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		48.0
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	5.2
C16:1	0.2	0.1
C18:0	2.0	0.9
C18:1	28.0	12.1
C:18:2	55.0	23.8
C18:3	1.0	0.4
>=C20	1.0	0.4
Sum FA	99.6	43.0
% FA in CFAT-fraction		90

Fermentation products	g/kg DM	sdc
FP	42	-
LA	34	-
AC	8	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Corn cob mix (CCM), silage-partly with rachis, CF 40 - 60 g/kg DM
1002.517/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	632	18	94	-	43	45	-	800
sdc	27	2	7	-	7	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	652	613	-	3	143	51	8	194	51
sdc	32	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.1	3.0	2.7	1.2	4.0	0.1	0.6	0.1	1.0
sdc	0.0	0.3	-	0.1	0.1	0.0	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	45	6	26	2	-	-	-
sdc	17	1	3	1	-	-	-

IP/P	90	SUGe/SUG	55	EB (meq/kg)	90
		CF_DI	0.96	CAD (meq/kg)	21

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	57	DCCP	75	DCCP	-	DCCP	-
DCCFAT	76	DCCFATh	72	DCCFAT	-	DCCFAT	-
DCCF	40	DCCF	34	DCNFE	-	DCCF	-
DCNFE	92	DCNFE	95	DCPpo	-	DCNFE	-
DCOM	86	DCOM	89				
		DCNSPh	64	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	57
%RUP	32	34	StaDCP	60	DCCFATh	-	DCOM	85
%DRUP	75	75	AppDCP	53	DC(S+S)	-		
%RUSTA	32	34			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	19	19						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1176 /kg	NE2015	12.32 MJ/kg	MEpo	-	MErab	-
VEVI	1292 /kg	NE2015	2945 kcal/kg	MEpo	-	MErab	-
FOM-91	549 g/kg	EW2015	1.40 /kg	MEla	-		
FOMr-07	569 g/kg	StaDP	1.8 g/kg	MEla	-		
FOMr2-07	289 g/kg	AppDP	1.6 g/kg	DPpo	-		
FOMr2/FOMr	0.51 /kg						
DVE-91	67 g/kg			**Broilers**		**Horses**	
DVE-07	78 g/kg			MEbr	-	NEm	10.71 MJ/kg
OEB-91	-22 g/kg			MEbr	-	NEm	2560 kcal/kg
OEB-07	-39 g/kg			DPpo	-	EWpa	1.200 /kg
OEB2-07	3 g/kg					DCPho	57 g/kg
DVMET-91	1.7 g/kg						
DVLYS-91	4.1 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	5.0 g/kg						
SW	0.50 /kg						
VW	0.66 /kg						

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Corn cob mix (CCM), silage-partly with rachis, CF 40 - 60 g/kg DM

1002.517/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			94	78	-	65	62	-	-
LYS	2.9	0.3	2.7	67	1.8	52	1.4	-	-
MET	2.1	0.2	2.0	84	1.7	78	1.5	-	-
CYS	2.2	0.2	2.1	76	1.6	66	1.4	-	-
THR	3.6	0.2	3.4	75	2.6	58	2.0	-	-
TRP	0.7	0.1	0.7	68	0.4	47	0.3	-	-
ILE	3.4	0.2	3.2	78	2.5	66	2.1	-	-
ARG	4.7	0.4	4.4	78	3.4	69	3.0	-	-
PHE	4.8	0.3	4.5	78	3.5	70	3.2	-	-
HIS	3.0	0.2	2.8	78	2.2	71	2.0	-	-
LEU	12.1	0.7	11.4	78	8.9	74	8.4	-	-
TYR	3.7	0.4	3.5	78	2.7	69	2.4	-	-
VAL	4.8	0.3	4.5	78	3.5	66	3.0	-	-
ALA	7.5	0.4	7.1	78	5.5	71	5.0	-	-
ASP	6.7	0.4	6.3	77	4.9	65	4.1	-	-
GLU	18.1	1.0	17.0	77	13.2	71	12.0	-	-
GLY	3.9	0.3	3.7	77	2.8	53	1.9	-	-
PRO	8.9	0.7	8.4	78	6.5	64	5.4	-	-
SER	4.8	0.2	4.5	77	3.5	63	2.8	-	-
Sum AA	97.9		92	-	71	-	62	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		43.0
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	4.6
C16:1	0.2	0.1
C18:0	2.0	0.8
C18:1	28.0	10.8
C:18:2	55.0	21.3
C18:3	1.0	0.4
>=C20	1.0	0.4
Sum FA	99.6	38.5
% FA in CFAT-fraction		90

Fermentation products

	g/kg DM	sdc
FP	42	-
LA	34	-
AC	8	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Corn cob mix (CCM), silage-with rachis, CF > 60 g/kg DM 1002.517/3/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	525	21	97	-	43	72	-	767
sdc	-	4	19	-	-	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	625	588	-	3	200	84	13	214	14
sdc	27	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.1	3.0	2.7	1.2	4.0	0.1	0.6	0.1	1.0
sdc	0.0	0.3	-	0.1	0.1	0.0	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	45	6	26	2	-	-	-
sdc	17	1	3	1	-	-	-

IP/P	90	SUGe/SUG	55	EB (meq/kg)	90
		CF_DI	0.96	CAD (meq/kg)	19

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	58		DCCP	68	DCCP	-	DCCP	-
DCCFAT	76		DCCFATh	72	DCCFAT	-	DCCFAT	-
DCCF	40		DCCF	34	DCNFE	-	DCCF	-
DCNFE	92		DCNFE	96	DCPpo	-	DCNFE	-
DCOM	84		DCOM	87				
			DCNSPh	62	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	58
%RUP	34	35	StaDCP	60	DCCFATh	-	DCOM	82
%DRUP	75	75	AppDCP	53	DC(S+S)	-		
%RUSTA	32	34			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	22	22						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1146 /kg	NE2015	11.99 MJ/kg	MEpo	-	MErab	-
VEVI	1250 /kg	NE2015	2866 kcal/kg	MEpo	-	MErab	-
FOM-91	538 g/kg	EW2015	1.36 /kg	MEla	-		
FOMr-07	548 g/kg	StaDP	1.8 g/kg	MEla	-		
FOMr2-07	281 g/kg	AppDP	1.6 g/kg	DPpo	-		
FOMr2/FOMr	0.51 /kg						
DVE-91	66 g/kg			**Broilers**		**Horses**	
DVE-07	75 g/kg			MEbr	-	NEm	10.27 MJ/kg
OEB-91	-20 g/kg			MEbr	-	NEm	2456 kcal/kg
OEB-07	-34 g/kg			DPpo	-	EWpa	1.151 /kg
OEB2-07	6 g/kg					DCPho	59 g/kg
DVMET-91	1.7 g/kg						
DVLYS-91	4.1 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	4.8 g/kg						
SW	0.60 /kg						
VW	0.75 /kg						

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Corn cob mix (CCM), silage-with rachis, CF > 60 g/kg DM 1002.517/3/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			97	75	-	63	61	-	-
LYS	2.9	0.3	2.8	64	1.8	50	1.4	-	-
MET	2.1	0.2	2.0	81	1.6	76	1.5	-	-
CYS	2.2	0.2	2.1	73	1.6	63	1.3	-	-
THR	3.6	0.2	3.5	72	2.5	56	1.9	-	-
TRP	0.7	0.1	0.7	65	0.4	44	0.3	-	-
ILE	3.4	0.2	3.3	75	2.5	63	2.1	-	-
ARG	4.7	0.4	4.6	75	3.4	66	3.0	-	-
PHE	4.8	0.3	4.7	75	3.5	68	3.2	-	-
HIS	3.0	0.2	2.9	75	2.2	68	2.0	-	-
LEU	12.1	0.7	11.7	75	8.8	71	8.3	-	-
TYR	3.7	0.4	3.6	75	2.7	67	2.4	-	-
VAL	4.8	0.3	4.7	75	3.5	63	3.0	-	-
ALA	7.5	0.4	7.3	75	5.4	68	5.0	-	-
ASP	6.7	0.4	6.5	74	4.8	62	4.1	-	-
GLU	18.1	1.0	17.6	74	13.1	68	11.9	-	-
GLY	3.9	0.3	3.8	74	2.8	51	1.9	-	-
PRO	8.9	0.7	8.6	75	6.4	62	5.3	-	-
SER	4.8	0.2	4.7	74	3.5	60	2.8	-	-
Sum AA	97.9		95	-	70	-	61	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		43.0
<=C10	-	0.0
C12:0	0.2	0.1
C14:0	0.2	0.1
C16:0	12.0	4.6
C16:1	0.2	0.1
C18:0	2.0	0.8
C18:1	28.0	10.8
C:18:2	55.0	21.3
C18:3	1.0	0.4
>=C20	1.0	0.4
Sum FA	99.6	38.5
% FA in CFAT-fraction		90

Fermentation products	g/kg DM	sdc
FP	41	-
LA	34	-
AC	7	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Distiller's solubles, fresh 1000.304/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	73	56	324	-	105	63	-	452
sdc	6	12	29	-	10	11	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	54	54	-	33	332	212	-	421	89
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.8	9.2	5.5	3.4	13.3	1.4	-	-	-
sdc	-	4.6	-	-	1.1	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	60	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**			**Roosters/Laying hens**			**Rabbits**	
DCCP	-		DCCP	-		DCCP	-		DCCP	-
DCCFAT	-		DCCFATh	-		DCCFAT	-		DCCFAT	-
DCCF	-		DCCF	-		DCNFE	-		DCCF	-
DCNFE	-		DCNFE	-		DCPpo	-		DCNFE	-
DCOM	-		DCOM	-						
			DCNSPh	-		**Broilers**			**Horses**	
DVE	**1991**	**2007**	DCiSTA	-		DCCP	-		DCCP	-
%RUP	-	-	StaDCP	-		DCCFATh	-		DCOM	-
%DRUP	-	-	AppDCP	-		DC(S+S)	-			
%RUSTA	10	-				DCNFEh	-			
%DASH	50	50				DCPpo	-			
DASHmax	-	-								

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	-	MEpo	-	MErab	-
VEVI	-	NE2015	-	MEpo	-	MErab	-
FOM-91	-	EW2015	-	MEla	-		
FOMr-07	-	StaDP	-	MEla	-		
FOMr2-07	-	AppDP	-	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Distiller's solubles, fresh 1000.304/0/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			324	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		105.1
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	10	-
LA	8	-
AC	2	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Maize gluten feed, fresh and ensiled-STAew < 200 g/kg DM 1002.240/1/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	414	57	198	-	38	134	-	573
sdc	10	5	8	-	6	12	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	122	88	8	17	510	133	13	539	29
sdc	24	-	4	12	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.3	9.9	5.9	4.3	16.3	2.0	2.0	3.3	1.8
sdc	0.1	1.0	-	0.4	1.2	0.3	0.2	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	77	22	87	6	-	-	0.1
sdc	12	-	-	-	-	-	0.1

IP/P	60	SUGe/SUG	60	EB (meq/kg)	448	
		CF_DI	0.97	CAD (meq/kg)	130	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	74	DCCP	78	DCCP	-	DCCP	-
DCCFAT	74	DCCFATh	55	DCCFAT	-	DCCFAT	-
DCCF	75	DCCF	42	DCNFE	-	DCCF	-
DCNFE	88	DCNFE	60	DCPpo	-	DCNFE	-
DCOM	83	DCOM	61				
		DCNSPh	43	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	31	34	StaDCP	25	DCCFATh	-	DCOM	-
%DRUP	86	86	AppDCP	23	DC(S+S)	-		
%RUSTA	33	33			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	36	36						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1064 /kg	NE2015	7.12 MJ/kg	MEpo	-	MErab	-
VEVI	1137 /kg	NE2015	1701 kcal/kg	MEpo	-	MErab	-
FOM-91	620 g/kg	EW2015	0.81 /kg	MEla	-		
FOMr-07	516 g/kg	StaDP	2.5 g/kg	MEla	-		
FOMr2-07	217 g/kg	AppDP	2.3 g/kg	DPpo	-		
FOMr2/FOMr	0.42 /kg						
DVE-91	103 g/kg			**Broilers**		**Horses**	
DVE-07	90 g/kg			MEbr	-	NEm	-
OEB-91	37 g/kg			MEbr	-	NEm	-
OEB-07	58 g/kg			DPpo	-	EWpa	-
OEB2-07	71 g/kg					DCPho	-
DVMET-91	2.2 g/kg						
DVLYS-91	5.5 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	4.5 g/kg						
SW	0.60 /kg						
VW	0.55 /kg						

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Maize gluten feed, fresh and ensiled-STAew < 200 g/kg DM 1002.240/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			198	70	-	64	127	-	-
LYS	3.0	-	5.9	65	3.8	58	3.5	-	-
MET	1.6	-	3.2	81	2.6	78	2.5	-	-
CYS	2.1	-	4.2	59	2.5	54	2.2	-	-
THR	3.5	-	6.9	72	5.0	63	4.4	-	-
TRP	0.6	-	1.2	66	0.8	54	0.6	-	-
ILE	3.0	-	5.9	80	4.7	74	4.4	-	-
ARG	4.0	-	7.9	85	6.7	80	6.3	-	-
PHE	3.8	-	7.5	84	6.3	79	6.0	-	-
HIS	2.9	-	5.7	76	4.4	73	4.2	-	-
LEU	9.0	-	17.8	85	15.1	82	14.7	-	-
TYR	2.8	-	5.5	84	4.6	79	4.4	-	-
VAL	4.5	-	8.9	77	6.8	71	6.3	-	-
ALA	6.6	-	13.1	84	11.0	80	10.5	-	-
ASP	6.0	-	11.9	72	8.5	65	7.7	-	-
GLU	15.1	-	29.9	82	24.4	78	23.2	-	-
GLY	4.5	-	8.9	62	5.5	52	4.6	-	-
PRO	8.6	-	17.0	78	13.2	71	12.1	-	-
SER	4.2	-	8.3	76	6.3	68	5.6	-	-
Sum AA	85.8		170	-	132	-	123	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		38.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	62	-
LA	58	-
AC	2	-
ETH	-	-
PR	2	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Maize gluten feed, fresh and ensiled-STAew < 200 g/kg DM:

1. This product has a high fermentation rate. Therefore no distinction is made between 'fresh' and 'ensiled'.

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Maize gluten feed, fresh and ensiled-STAew > 200 g/kg DM 1002.240/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	418	39	166	-	38	86	-	671
sdc	23	5	12	-	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	343	308	-	12	362	101	7	382	20
sdc	62	-	-	9	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.3	6.8	4.1	2.8	10.6	2.0	1.7	3.3	1.5
sdc	0.1	1.2	-	0.5	1.8	0.3	0.3	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	113	15	48	5	-	-	0.1
sdc	51	4	13	0	-	-	0.1

IP/P	60	SUGe/SUG	60	EB (meq/kg)	310	
		CF_DI	0.97	CAD (meq/kg)	11	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	71		DCCP	76	DCCP	-	DCCP	-
DCCFAT	74		DCCFATh	55	DCCFAT	-	DCCFAT	-
DCCF	75		DCCF	42	DCNFE	-	DCCF	-
DCNFE	88		DCNFE	76	DCPpo	-	DCNFE	-
DCOM	83		DCOM	72				
			DCNSPh	45	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	41	43	StaDCP	25	DCCFATh	-	DCOM	-
%DRUP	86	86	AppDCP	22	DC(S+S)	-		
%RUSTA	33	33			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	26	26						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1099 /kg	NE2015	9.14 MJ/kg	MEpo	-	MErab	-
VEVI	1186 /kg	NE2015	2185 kcal/kg	MEpo	-	MErab	-
FOM-91	561 g/kg	EW2015	1.04 /kg	MEla	-		
FOMr-07	542 g/kg	StaDP	1.7 g/kg	MEla	-		
FOMr2-07	215 g/kg	AppDP	1.5 g/kg	DPpo	-		
FOMr2/FOMr	0.40 /kg						
DVE-91	105 g/kg			**Broilers**		**Horses**	
DVE-07	107 g/kg			MEbr	-	NEm	-
OEB-91	7 g/kg			MEbr	-	NEm	-
OEB-07	2 g/kg			DPpo	-	EWpa	-
OEB2-07	32 g/kg					DCPho	-
DVMET-91	2.2 g/kg						
DVLYS-91	5.3 g/kg						
DVMET-07	2.3 g/kg						
DVLYS-07	5.6 g/kg						
SW	0.60 /kg						
VW	0.55 /kg						

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Maize gluten feed, fresh and ensiled-STAew > 200 g/kg DM 1002.240/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			166	70	-	63	104	-	-
LYS	3.0	-	5.0	65	3.2	57	2.8	-	-
MET	1.6	-	2.7	81	2.2	77	2.0	-	-
CYS	2.1	-	3.5	59	2.1	53	1.8	-	-
THR	3.5	-	5.8	72	4.2	62	3.6	-	-
TRP	0.6	-	1.0	66	0.7	52	0.5	-	-
ILE	3.0	-	5.0	80	4.0	72	3.6	-	-
ARG	4.0	-	6.6	85	5.6	79	5.2	-	-
PHE	3.8	-	6.3	84	5.3	79	5.0	-	-
HIS	2.9	-	4.8	76	3.6	72	3.5	-	-
LEU	9.0	-	14.9	85	12.7	82	12.2	-	-
TYR	2.8	-	4.6	84	3.9	78	3.6	-	-
VAL	4.5	-	7.5	77	5.7	70	5.2	-	-
ALA	6.6	-	11.0	84	9.2	79	8.7	-	-
ASP	6.0	-	10.0	72	7.1	64	6.4	-	-
GLU	15.1	-	25.1	82	20.5	77	19.3	-	-
GLY	4.5	-	7.5	62	4.6	50	3.7	-	-
PRO	8.6	-	14.3	78	11.1	70	10.0	-	-
SER	4.2	-	7.0	76	5.3	66	4.6	-	-
Sum AA	85.8		142	-	111	-	102	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		38.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	62	-
LA	58	-
AC	2	-
ETH	-	-
PR	2	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Maize gluten feed, fresh and ensiled-STAew > 200 g/kg DM:

1. This product has a high fermentation rate. Therefore no distinction is made between 'fresh' and 'ensiled'.

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Maize solubles 1002.212/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	476	177	429	-	6	5	-	383
sdc	22	8	25	-	5	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	14	3	-	80	5	-	-	141	136
sdc	9	-	-	40	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.6	31.8	23.9	13.6	51.6	7.5	7.4	10.0	4.0
sdc	0.3	2.0	-	0.9	4.5	2.4	0.8	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	212	68	207	12	1.8	0.1	-
sdc	48	10	31	5	-	-	-

IP/P	75	SUGe/SUG	-	EB (meq/kg)	1439	
		CF_DI	0.97	CAD (meq/kg)	564	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	87	DCCP	-	DCCP	-	DCCP	-
DCCFAT	48	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	96	DCCF	-	DCNFE	-	DCCF	-
DCNFE	96	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	91	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	5 5	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	- 0	AppDCP	-	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	65 65			DCPpo	-		
DASHmax	133 133						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1009 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1086 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	627 g/kg	EW2015	-	MEla	-		
FOMr-07	788 g/kg	StaDP	-	MEla	-		
FOMr2-07	759 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.96 /kg						
DVE-91	50 g/kg			**Broilers**		**Horses**	
DVE-07	46 g/kg			MEbr	-	NEm	-
OEB-91	311 g/kg			MEbr	-	NEm	-
OEB-07	318 g/kg			DPpo	-	EWpa	-
OEB2-07	316 g/kg					DCPho	-
DVMET-91	1.3 g/kg						
DVLYS-91	4.0 g/kg						
DVMET-07	1.3 g/kg						
DVLYS-07	3.7 g/kg						
SW	0.10 /kg						
VW	0.30 /kg						

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Maize solubles 1002.212/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			429	-	-	-	-	-	-
LYS	3.6	-	15.4	-	-	-	-	-	-
MET	1.5	-	6.4	-	-	-	-	-	-
CYS	2.3	-	9.9	-	-	-	-	-	-
THR	3.3	-	14.2	-	-	-	-	-	-
TRP	0.4	-	1.6	-	-	-	-	-	-
ILE	2.7	-	11.6	-	-	-	-	-	-
ARG	4.1	-	17.6	-	-	-	-	-	-
PHE	2.8	-	12.0	-	-	-	-	-	-
HIS	2.7	-	11.6	-	-	-	-	-	-
LEU	7.4	-	31.7	-	-	-	-	-	-
TYR	2.5	-	10.7	-	-	-	-	-	-
VAL	4.8	-	20.6	-	-	-	-	-	-
ALA	7.7	-	33.0	-	-	-	-	-	-
ASP	5.5	-	23.6	-	-	-	-	-	-
GLU	12.1	-	51.9	-	-	-	-	-	-
GLY	4.5	-	19.3	-	-	-	-	-	-
PRO	8.1	-	34.7	-	-	-	-	-	-
SER	4.2	-	18.0	-	-	-	-	-	-
Sum AA	80.2		344	-	-	-	-	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		6.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	182	-
LA	179	16
AC	3	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato cuttings/chips, prefried-CFATh < 120 g/kg DM 4001.637/1/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	309	34	72	-	102	19	-	773
sdc	23	6	9	-	18	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	697	668	-	10	-	-	-	115	115
sdc	16	-	-	11	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.3	2.3	0.3	0.7	13.8	1.4	1.8	-	0.5
sdc	0.1	0.5	-	0.1	2.7	1.2	1.3	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	115	5	13	5	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	15	SUGe/SUG	5	EB (meq/kg)	362
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	65	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	85	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	70	DCNFE	-	DCCF	-
DCNFE	-	DCNFE	99	DCPpo	-	DCNFE	-
DCOM	-	DCOM	94				
		DCNSPh	88	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	51	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	14.17 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	3386 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.61 /kg	MEla	-		
FOMr-07	-	StaDP	1.4 g/kg	MEla	-		
FOMr2-07	-	AppDP	1.2 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Potato cuttings/chips, prefried-CFATh < 120 g/kg DM 4001.637/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			72	54	-	39	28	-	-
LYS	5.8	0.9	4.2	55	2.3	45	1.9	-	-
MET	1.5	0.2	1.1	55	0.6	45	0.5	-	-
CYS	1.5	0.2	1.1	55	0.6	36	0.4	-	-
THR	4.5	0.4	3.2	54	1.8	36	1.2	-	-
TRP	1.2	0.1	0.9	55	0.5	39	0.3	-	-
ILE	4.3	1.5	3.1	55	1.7	43	1.3	-	-
ARG	3.5	0.5	2.5	55	1.4	39	1.0	-	-
PHE	4.4	0.8	3.2	54	1.7	44	1.4	-	-
HIS	1.6	0.2	1.2	54	0.6	39	0.4	-	-
LEU	6.3	2.3	4.5	55	2.5	44	2.0	-	-
TYR	4.0	0.8	2.9	55	1.6	44	1.3	-	-
VAL	5.3	0.9	3.8	55	2.1	41	1.6	-	-
ALA	5.8	1.9	4.2	55	2.3	43	1.8	-	-
ASP	11.9	1.5	8.6	55	4.7	46	3.9	-	-
GLU	13.5	2.8	9.7	54	5.2	42	4.1	-	-
GLY	3.9	0.6	2.8	54	1.5	22	0.6	-	-
PRO	4.3	1.7	3.1	53	1.7	18	0.6	-	-
SER	4.0	0.7	2.9	54	1.6	31	0.9	-	-
Sum AA	87.3		63	-	34	-	25	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		102.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato cuttings/chips, prefried-CFATh 120 - 180 g/kg DM 4001.637/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	330	30	72	-	152	17	-	730
sdc	28	5	7	-	19	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	646	619	-	10	-	-	-	118	118
sdc	31	-	-	11	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.4	2.3	0.3	0.6	11.9	1.7	2.6	-	0.5
sdc	0.1	0.3	-	0.1	1.8	1.6	2.5	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	115	5	13	5	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	15	SUGe/SUG	5	EB (meq/kg)	305
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	65	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	87	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	70	DCNFE	-	DCCF	-
DCNFE	-	DCNFE	99	DCPpo	-	DCNFE	-
DCOM	-	DCOM	94				
		DCNSPh	88	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	51	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	15.11 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	3612 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.72 /kg	MEla	-		
FOMr-07	-	StaDP	1.4 g/kg	MEla	-		
FOMr2-07	-	AppDP	1.2 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Potato cuttings/chips, prefried-CFATh 120 - 180 g/kg DM 4001.637/2/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			72	54	-	38	28	-	-
LYS	5.8	0.9	4.2	55	2.3	45	1.9	-	-
MET	1.5	0.2	1.1	55	0.6	45	0.5	-	-
CYS	1.5	0.2	1.1	55	0.6	35	0.4	-	-
THR	4.5	0.4	3.2	54	1.7	36	1.2	-	-
TRP	1.2	0.1	0.9	55	0.5	39	0.3	-	-
ILE	4.3	1.5	3.1	55	1.7	43	1.3	-	-
ARG	3.5	0.5	2.5	55	1.4	39	1.0	-	-
PHE	4.4	0.8	3.2	54	1.7	44	1.4	-	-
HIS	1.6	0.2	1.1	54	0.6	38	0.4	-	-
LEU	6.3	3.0	4.5	55	2.5	44	2.0	-	-
TYR	4.0	0.8	2.9	55	1.6	44	1.3	-	-
VAL	5.3	0.9	3.8	55	2.1	41	1.5	-	-
ALA	5.8	1.9	4.2	55	2.3	43	1.8	-	-
ASP	11.9	1.5	8.5	55	4.7	46	3.9	-	-
GLU	13.5	2.8	9.7	54	5.2	42	4.0	-	-
GLY	3.9	0.6	2.8	54	1.5	22	0.6	-	-
PRO	4.3	1.7	3.1	53	1.6	18	0.5	-	-
SER	4.0	0.7	2.9	54	1.5	31	0.9	-	-
Sum AA	87.3		63	-	34	-	25	-	-

Fatty acids		
	% FA	g/kg DM
CFAT(h)		152.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products		
	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato cuttings/chips, prefried-CFATh > 180 g/kg DM 4001.637/3/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	352	28	63	-	212	16	-	681
sdc	33	7	7	-	18	2	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	601	576	-	10	-	-	-	111	111
sdc	38	-	-	11	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.3	2.1	0.3	0.6	10.5	2.9	4.1	-	0.5
sdc	0.1	0.2	-	0.1	1.6	3.0	4.2	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	115	5	13	5	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	15	SUGe/SUG	5	EB (meq/kg)	279
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	62	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	88	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	70	DCNFE	-	DCCF	-
DCNFE	-	DCNFE	99	DCPpo	-	DCNFE	-
DCOM	-	DCOM	93				
		DCNSPh	88	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	50	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	16.29 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	3894 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.85 /kg	MEla	-		
FOMr-07	-	StaDP	1.3 g/kg	MEla	-		
FOMr2-07	-	AppDP	1.1 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Potato cuttings/chips, prefried-CFATh > 180 g/kg DM 4001.637/3/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			63	54	-	36	23	-	-
LYS	5.8	0.9	3.7	55	2.0	44	1.6	-	-
MET	1.5	0.2	1.0	55	0.5	43	0.4	-	-
CYS	1.5	0.2	1.0	55	0.5	33	0.3	-	-
THR	4.5	0.4	2.9	54	1.5	34	1.0	-	-
TRP	1.2	0.1	0.8	55	0.4	37	0.3	-	-
ILE	4.3	1.5	2.7	55	1.5	41	1.1	-	-
ARG	3.5	0.5	2.2	55	1.2	37	0.8	-	-
PHE	4.4	0.8	2.8	54	1.5	43	1.2	-	-
HIS	1.6	0.2	1.0	54	0.5	36	0.4	-	-
LEU	6.3	2.3	4.0	55	2.2	43	1.7	-	-
TYR	4.0	0.8	2.5	55	1.4	43	1.1	-	-
VAL	5.3	0.9	3.4	55	1.8	39	1.3	-	-
ALA	5.8	1.9	3.7	55	2.0	41	1.5	-	-
ASP	11.9	1.5	7.5	55	4.1	44	3.3	-	-
GLU	13.5	2.8	8.6	54	4.6	40	3.4	-	-
GLY	3.9	0.6	2.5	54	1.3	18	0.4	-	-
PRO	4.3	1.7	2.7	53	1.5	13	0.4	-	-
SER	4.0	0.7	2.5	54	1.4	28	0.7	-	-
Sum AA	87.3		55	-	30	-	21	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		212.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato cuttings/chips, raw 4001.636/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	212	31	80	2	4	26	861	858
sdc	49	8	9	2	2	8	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	749	717	-	20	75	-	-	100	25
sdc	31	-	-	16	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.7	1.7	-	0.6	12.9	0.4	1.4	-	0.5
sdc	0.2	0.3	-	0.2	3.9	0.3	0.5	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	75	6	14	5	-	-	-
sdc	70	3	8	2	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	307	
		CF_DI	0.96	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	40		DCCP	-	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	74		DCCF	-	DCNFE	-	DCCF	-
DCNFE	93		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	88		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	30	30	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	86	86	AppDCP	-	DC(S+S)	-		
%RUSTA	43	44			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	22	22						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1128 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1247 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	487 g/kg	EW2015	-	MEla	-		
FOMr-07	596 g/kg	StaDP	-	MEla	-		
FOMr2-07	261 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.44 /kg						
DVE-91	59 g/kg			**Broilers**		**Horses**	
DVE-07	84 g/kg			MEbr	-	NEm	-
OEB-91	-19 g/kg			MEbr	-	NEm	-
OEB-07	-59 g/kg			DPpo	-	EWpa	-
OEB2-07	-12 g/kg					DCPho	-
DVMET-91	1.3 g/kg						
DVLYS-91	4.2 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	6.2 g/kg						
SW	0.60 /kg						
VW	0.55 /kg						

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Potato cuttings/chips, raw 4001.636/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			80	-	-	-	-	-	-
LYS	5.4	-	4.3	-	-	-	-	-	-
MET	1.4	-	1.1	-	-	-	-	-	-
CYS	1.3	-	1.0	-	-	-	-	-	-
THR	3.9	-	3.1	-	-	-	-	-	-
TRP	0.9	-	0.7	-	-	-	-	-	-
ILE	3.7	-	3.0	-	-	-	-	-	-
ARG	3.1	-	2.5	-	-	-	-	-	-
PHE	3.9	-	3.1	-	-	-	-	-	-
HIS	1.7	-	1.4	-	-	-	-	-	-
LEU	6.1	-	4.9	-	-	-	-	-	-
TYR	3.3	-	2.6	-	-	-	-	-	-
VAL	5.2	-	4.2	-	-	-	-	-	-
ALA	6.0	-	4.8	-	-	-	-	-	-
ASP	19.1	-	15.3	-	-	-	-	-	-
GLU	11.6	-	9.3	-	-	-	-	-	-
GLY	3.6	-	2.9	-	-	-	-	-	-
PRO	3.4	-	2.7	-	-	-	-	-	-
SER	3.7	-	3.0	-	-	-	-	-	-
Sum AA	87.3		70	-	-	-	-	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		2.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	61	-
LA	47	-
AC	14	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato fruit-juice concentrated 4001.208/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	548	290	327	-	-	-	383	383
sdc	35	31	26	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	57	-	-	-	328	328
sdc	-	-	-	39	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.9	11.1	1.7	6.4	138.5	3.3	11.3	8.0	1.7
sdc	0.2	1.0	-	0.6	12.4	2.9	1.4	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	37	111	47	-	-	-
sdc	-	12	-	-	-	-	-

IP/P	15	SUGe/SUG	-	EB (meq/kg)	3369	
		CF_DI	0.97	CAD (meq/kg)	2765	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	91	DCCP	-	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	-	DCNFE	-	DCCF	-
DCNFE	95	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	93	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	5 5	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	85 85	AppDCP	-	DC(S+S)	-		
%RUSTA	- -			DCNFEh	-		
%DASH	65 65			DCPpo	-		
DASHmax	214 214						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	896 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	978 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	645 g/kg	EW2015	-	MEla	-		
FOMr-07	666 g/kg	StaDP	-	MEla	-		
FOMr2-07	621 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.93 /kg						
DVE-91	66 g/kg			**Broilers**		**Horses**	
DVE-07	57 g/kg			MEbr	-	NEm	-
OEB-91	212 g/kg			MEbr	-	NEm	-
OEB-07	226 g/kg			DPpo	-	EWpa	-
OEB2-07	227 g/kg					DCPho	-
DVMET-91	1.5 g/kg						
DVLYS-91	4.5 g/kg						
DVMET-07	1.3 g/kg						
DVLYS-07	3.9 g/kg						
SW	0.10 /kg						
VW	0.30 /kg						

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Potato fruit-juice concentrated 4001.208/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			327	-	-	-	-	-	-
LYS	2.9	0.6	9.5	-	-	-	-	-	-
MET	0.9	0.2	2.9	-	-	-	-	-	-
CYS	1.2	0.1	3.9	-	-	-	-	-	-
THR	1.6	0.3	5.2	-	-	-	-	-	-
TRP	0.4	0.2	1.3	-	-	-	-	-	-
ILE	1.3	0.2	4.2	-	-	-	-	-	-
ARG	3.7	0.7	12.1	-	-	-	-	-	-
PHE	1.8	0.4	5.9	-	-	-	-	-	-
HIS	0.8	0.3	2.6	-	-	-	-	-	-
LEU	1.9	0.5	6.2	-	-	-	-	-	-
TYR	1.5	0.4	4.9	-	-	-	-	-	-
VAL	2.4	0.3	7.8	-	-	-	-	-	-
ALA	3.6	0.8	11.8	-	-	-	-	-	-
ASP	26.7	3.3	87.2	-	-	-	-	-	-
GLU	16.3	1.2	53.3	-	-	-	-	-	-
GLY	1.7	0.3	5.6	-	-	-	-	-	-
PRO	2.8	0.6	9.1	-	-	-	-	-	-
SER	2.0	0.3	6.5	-	-	-	-	-	-
Sum AA	73.5		240	-	-	-	-	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		0.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato peelings, steamed-STAam < 350 g/kg DM 4001.638/1/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	119	81	155	-	13	71	-	681
sdc	18	12	16	-	4	13	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	257	77	35	127	97	28	248	121
sdc	-	-	37	16	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.1	2.7	0.4	1.3	31.3	0.8	4.6	-	1.0
sdc	0.7	0.4	-	0.2	4.6	1.1	2.3	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	985	55	54	13	0.4	0.2	0.1
sdc	736	36	36	5	-	-	-

IP/P	15	SUGe/SUG	5	EB (meq/kg)	706
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	72	DCCP	74	DCCP	-	DCCP	-
DCCFAT	70	DCCFATh	50	DCCFAT	-	DCCFAT	-
DCCF	74	DCCF	70	DCNFE	-	DCCF	-
DCNFE	93	DCNFE	95	DCPpo	-	DCNFE	-
DCOM	88	DCOM	89				
		DCNSPh	78	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	28 30	StaDCP	35	DCCFATh	-	DCOM	-
%DRUP	85 85	AppDCP	28	DC(S+S)	-		
%RUSTA	11 10			DCNFEh	-		
%DASH	50 50			DCPpo	-		
DASHmax	50 50						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1082 /kg	NE2015	10.75 MJ/kg	MEpo	-	MErab	-
VEVI	1184 /kg	NE2015	2569 kcal/kg	MEpo	-	MErab	-
FOM-91	635 g/kg	EW2015	1.22 /kg	MEla	-		
FOMr-07	797 g/kg	StaDP	0.9 g/kg	MEla	-		
FOMr2-07	598 g/kg	AppDP	0.7 g/kg	DPpo	-		
FOMr2/FOMr	0.75 /kg						
DVE-91	90 g/kg			**Broilers**		**Horses**	
DVE-07	115 g/kg			MEbr	-	NEm	-
OEB-91	12 g/kg			MEbr	-	NEm	-
OEB-07	-28 g/kg			DPpo	-	EWpa	-
OEB2-07	-24 g/kg					DCPho	-
DVMET-91	1.9 g/kg						
DVLYS-91	6.3 g/kg						
DVMET-07	2.6 g/kg						
DVLYS-07	8.2 g/kg						
SW	0.55 /kg						
VW	0.45 /kg						

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Potato peelings, steamed-STAam < 350 g/kg DM 4001.638/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			155	61	-	53	82	-	-
LYS	5.5	0.6	8.5	65	5.6	61	5.2	-	-
MET	1.4	0.2	2.2	68	1.5	63	1.4	-	-
CYS	1.2	0.2	1.9	54	1.0	43	0.8	-	-
THR	3.8	0.3	5.9	64	3.8	54	3.2	-	-
TRP	1.0	0.1	1.6	53	0.8	44	0.7	-	-
ILE	3.6	0.3	5.6	61	3.4	54	3.0	-	-
ARG	3.4	0.5	5.3	61	3.2	53	2.8	-	-
PHE	4.0	0.4	6.2	60	3.7	55	3.4	-	-
HIS	1.7	0.1	2.6	60	1.6	54	1.4	-	-
LEU	6.2	0.5	9.6	61	5.8	56	5.4	-	-
TYR	3.6	0.2	5.6	61	3.4	55	3.1	-	-
VAL	4.8	0.4	7.4	61	4.5	54	4.0	-	-
ALA	6.0	1.3	9.3	61	5.6	55	5.2	-	-
ASP	17.0	2.9	26.4	61	16.0	58	15.2	-	-
GLU	11.1	1.4	17.2	60	10.4	53	9.2	-	-
GLY	3.6	0.2	5.6	60	3.4	44	2.5	-	-
PRO	3.5	0.4	5.4	60	3.3	40	2.2	-	-
SER	4.0	0.6	6.2	60	3.7	50	3.1	-	-
Sum AA	85.4		132	-	81	-	72	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		12.6
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	177	-
LA	126	38
AC	26	12
ETH	11	10
PR	9	7
BU	5	6
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Potato peelings, steamed-STAam < 350 g/kg DM:

1. DCiSTA value is valid for all batches that are not mixed with by-products containing native starch.

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Potato peelings, steamed-STAam 350 - 475 g/kg DM 4001.638/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	138	69	137	-	11	56	-	728
sdc	14	9	12	-	3	10	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	416	46	19	106	76	18	211	105
sdc	-	-	16	9	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.6	2.6	0.4	1.1	27.3	0.9	3.8	-	0.8
sdc	0.5	0.4	-	0.2	3.2	0.7	1.5	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	659	20	25	11	0.5	0.3	0.1
sdc	336	4	6	3	-	-	-

IP/P	15	SUGe/SUG	5	EB (meq/kg)	631
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	67		DCCP	73	DCCP	-	DCCP	-
DCCFAT	67		DCCFATh	43	DCCFAT	-	DCCFAT	-
DCCF	74		DCCF	70	DCNFE	-	DCCF	-
DCNFE	93		DCNFE	96	DCPpo	-	DCNFE	-
DCOM	88		DCOM	90				
			DCNSPh	78	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	28	30	StaDCP	35	DCCFATh	-	DCOM	-
%DRUP	85	85	AppDCP	27	DC(S+S)	-		
%RUSTA	11	10			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	43	43						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1097 /kg	NE2015	11.07 MJ/kg	MEpo	-	MErab	-
VEVI	1204 /kg	NE2015	2646 kcal/kg	MEpo	-	MErab	-
FOM-91	668 g/kg	EW2015	1.26 /kg	MEla	-		
FOMr-07	796 g/kg	StaDP	0.9 g/kg	MEla	-		
FOMr2-07	575 g/kg	AppDP	0.7 g/kg	DPpo	-		
FOMr2/FOMr	0.72 /kg						
DVE-91	89 g/kg			**Broilers**		**Horses**	
DVE-07	120 g/kg			MEbr	-	NEm	-
OEB-91	-6 g/kg			MEbr	-	NEm	-
OEB-07	-54 g/kg			DPpo	-	EWpa	-
OEB2-07	-44 g/kg					DCPho	-
DVMET-91	2.0 g/kg						
DVLYS-91	6.3 g/kg						
DVMET-07	2.7 g/kg						
DVLYS-07	8.7 g/kg						
SW	0.50 /kg						
VW	0.45 /kg						

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Potato peelings, steamed-STAam 350 - 475 g/kg DM 4001.638/2/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			137	61	-	52	71	-	-
LYS	5.5	0.6	7.5	65	4.9	60	4.5	-	-
MET	1.4	0.2	1.9	68	1.3	62	1.2	-	-
CYS	1.2	0.2	1.6	54	0.9	42	0.7	-	-
THR	3.8	0.3	5.2	64	3.3	53	2.7	-	-
TRP	1.0	0.1	1.4	53	0.7	42	0.6	-	-
ILE	3.6	0.3	4.9	61	3.0	53	2.6	-	-
ARG	3.4	0.5	4.6	61	2.8	52	2.4	-	-
PHE	4.0	0.4	5.5	60	3.3	55	3.0	-	-
HIS	1.7	0.1	2.3	60	1.4	53	1.2	-	-
LEU	6.2	0.5	8.5	61	5.1	55	4.7	-	-
TYR	3.6	0.2	4.9	61	3.0	55	2.7	-	-
VAL	4.8	0.4	6.6	61	4.0	53	3.4	-	-
ALA	6.0	1.3	8.2	61	5.0	55	4.5	-	-
ASP	17.0	2.9	23.2	61	14.1	57	13.3	-	-
GLU	11.1	1.4	15.2	60	9.1	52	7.9	-	-
GLY	3.6	0.2	4.9	60	3.0	42	2.1	-	-
PRO	3.5	0.4	4.8	60	2.9	37	1.8	-	-
SER	4.0	0.6	5.5	60	3.3	48	2.6	-	-
Sum AA	85.4		117	-	71	-	62	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		10.7
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	114	-
LA	89	31
AC	16	6
ETH	4	2
PR	0	0
BU	5	5
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Potato peelings, steamed-STAam 350 - 475 g/kg DM:

1. DCiSTA value is valid for all batches that are not mixed with by-products containing native starch.

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Potato peelings, steamed-STAam 475 - 600 g/kg DM 4001.638/3/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	145	57	116	-	8	40	-	779
sdc	14	6	11	-	2	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	536	24	12	90	54	7	186	96
sdc	-	-	13	7	15	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.2	2.5	0.4	1.0	24.8	0.6	2.9	-	0.7
sdc	0.4	0.3	-	0.1	2.6	0.4	0.9	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	410	16	26	10	0.5	0.3	0.1
sdc	389	7	7	4	0.1	0.3	-

IP/P	15	SUGe/SUG	5	EB (meq/kg)	579
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	60	DCCP	71	DCCP	-	DCCP	-
DCCFAT	59	DCCFATh	28	DCCFAT	-	DCCFAT	-
DCCF	74	DCCF	70	DCNFE	-	DCCF	-
DCNFE	93	DCNFE	96	DCPpo	-	DCNFE	-
DCOM	88	DCOM	92				
		DCNSPh	78	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	28	30	StaDCP	35	DCCFATh	-	DCOM	-
%DRUP	85	85	AppDCP	27	DC(S+S)	-		
%RUSTA	11	10			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	37	37						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1109 /kg	NE2015	11.40 MJ/kg	MEpo	-	MErab	-
VEVI	1221 /kg	NE2015	2726 kcal/kg	MEpo	-	MErab	-
FOM-91	696 g/kg	EW2015	1.30 /kg	MEla	-		
FOMr-07	806 g/kg	StaDP	0.9 g/kg	MEla	-		
FOMr2-07	570 g/kg	AppDP	0.7 g/kg	DPpo	-		
FOMr2/FOMr	0.71 /kg						
DVE-91	87 g/kg			**Broilers**		**Horses**	
DVE-07	122 g/kg			MEbr	-	NEm	-
OEB-91	-25 g/kg			MEbr	-	NEm	-
OEB-07	-81 g/kg			DPpo	-	EWpa	-
OEB2-07	-63 g/kg					DCPho	-
DVMET-91	2.0 g/kg						
DVLYS-91	6.2 g/kg						
DVMET-07	2.9 g/kg						
DVLYS-07	9.0 g/kg						
SW	0.45 /kg						
VW	0.45 /kg						

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Potato peelings, steamed-STAam 475 - 600 g/kg DM 4001.638/3/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			116	60	-	51	58	-	-
LYS	5.5	0.6	6.4	65	4.2	59	3.8	-	-
MET	1.4	0.2	1.6	68	1.1	61	1.0	-	-
CYS	1.2	0.2	1.4	54	0.8	39	0.5	-	-
THR	3.8	0.3	4.4	64	2.8	51	2.2	-	-
TRP	1.0	0.1	1.2	53	0.6	41	0.5	-	-
ILE	3.6	0.3	4.2	61	2.5	52	2.1	-	-
ARG	3.4	0.5	3.9	60	2.4	51	2.0	-	-
PHE	4.0	0.4	4.6	60	2.8	53	2.5	-	-
HIS	1.7	0.1	2.0	60	1.2	51	1.0	-	-
LEU	6.2	0.5	7.2	60	4.3	54	3.9	-	-
TYR	3.6	0.2	4.2	61	2.5	54	2.2	-	-
VAL	4.8	0.4	5.5	61	3.4	51	2.8	-	-
ALA	6.0	1.3	6.9	61	4.2	54	3.7	-	-
ASP	17.0	2.9	19.6	61	11.9	57	11.1	-	-
GLU	11.1	1.4	12.8	60	7.7	51	6.5	-	-
GLY	3.6	0.2	4.2	60	2.5	39	1.6	-	-
PRO	3.5	0.4	4.0	60	2.4	32	1.3	-	-
SER	4.0	0.6	4.6	60	2.8	46	2.1	-	-
Sum AA	85.4		99	-	60	-	51	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		8.1
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	73	-
LA	59	31
AC	10	6
ETH	2	2
PR	0	0
BU	2	1
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Potato peelings, steamed-STAam 475 - 600 g/kg DM:

1. DCiSTA value is valid for all batches that are not mixed with by-products containing native starch.

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Potato peelings, steamed-STAam > 600 g/kg DM 4001.638/4/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	157	53	102	-	8	34	-	805
sdc	26	7	12	-	2	6	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	633	15	9	76	46	3	137	61
sdc	-	-	13	4	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.9	2.5	0.4	0.9	22.9	0.4	2.5	-	0.6
sdc	0.3	0.3	-	0.1	3.5	0.3	0.6	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	261	24	24	23	0.5	0.3	0.1
sdc	327	8	19	-	-	-	-

IP/P	15	SUGe/SUG	5	EB (meq/kg)	534
		CF_DI	0.96	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	54	DCCP	70	DCCP	-	DCCP	-
DCCFAT	57	DCCFATh	23	DCCFAT	-	DCCFAT	-
DCCF	74	DCCF	70	DCNFE	-	DCCF	-
DCNFE	93	DCNFE	98	DCPpo	-	DCNFE	-
DCOM	88	DCOM	93				
		DCNSPh	79	**Broilers**		**Horses**	
DVE	**1991** **2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	28 30	StaDCP	35	DCCFATh	-	DCOM	-
%DRUP	85 85	AppDCP	27	DC(S+S)	-		
%RUSTA	11 10			DCNFEh	-		
%DASH	50 50			DCPpo	-		
DASHmax	34 34						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1113 /kg	NE2015	11.94 MJ/kg	MEpo	-	MErab	-
VEVI	1228 /kg	NE2015	2854 kcal/kg	MEpo	-	MErab	-
FOM-91	702 g/kg	EW2015	1.36 /kg	MEla	-		
FOMr-07	816 g/kg	StaDP	0.9 g/kg	MEla	-		
FOMr2-07	575 g/kg	AppDP	0.7 g/kg	DPpo	-		
FOMr2/FOMr	0.70 /kg						
DVE-91	84 g/kg			**Broilers**		**Horses**	
DVE-07	125 g/kg			MEbr	-	NEm	-
OEB-91	-35 g/kg			MEbr	-	NEm	-
OEB-07	-100 g/kg			DPpo	-	EWpa	-
OEB2-07	-76 g/kg					DCPho	-
DVMET-91	1.9 g/kg						
DVLYS-91	6.1 g/kg						
DVMET-07	3.0 g/kg						
DVLYS-07	9.2 g/kg						
SW	0.40 /kg						
VW	0.45 /kg						

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Potato peelings, steamed-STAam > 600 g/kg DM 4001.638/4/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			102	60	-	49	50	-	-
LYS	5.5	0.6	5.6	65	3.7	58	3.3	-	-
MET	1.4	0.2	1.4	68	1.0	60	0.9	-	-
CYS	1.2	0.2	1.2	54	0.7	37	0.5	-	-
THR	3.8	0.3	3.9	64	2.5	49	1.9	-	-
TRP	1.0	0.1	1.0	53	0.5	39	0.4	-	-
ILE	3.6	0.3	3.7	61	2.2	50	1.8	-	-
ARG	3.4	0.5	3.5	60	2.1	49	1.7	-	-
PHE	4.0	0.4	4.1	60	2.4	52	2.1	-	-
HIS	1.7	0.1	1.7	60	1.0	50	0.9	-	-
LEU	6.2	0.5	6.3	60	3.8	53	3.3	-	-
TYR	3.6	0.2	3.7	60	2.2	53	1.9	-	-
VAL	4.8	0.4	4.9	61	3.0	50	2.4	-	-
ALA	6.0	1.3	6.1	61	3.7	53	3.2	-	-
ASP	17.0	2.9	17.3	61	10.5	56	9.7	-	-
GLU	11.1	1.4	11.3	60	6.8	50	5.6	-	-
GLY	3.6	0.2	3.7	60	2.2	36	1.3	-	-
PRO	3.5	0.4	3.6	60	2.1	29	1.0	-	-
SER	4.0	0.6	4.1	60	2.4	44	1.8	-	-
Sum AA	85.4		87	-	53	-	44	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		7.5
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	56	-
LA	39	18
AC	7	5
ETH	1	1
PR	-	-
BU	9	8
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Potato peelings, steamed-STAam > 600 g/kg DM:

1. DCiSTA value is valid for all batches that are not mixed with by-products containing native starch.

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Potato pulp, pressed, 4001.227/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	150	62	109	2	7	194	633	628
sdc	14	24	47	0	-	19	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	225	12	11	321	157	47	539	218
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.2	1.7	0.3	1.3	29.0	0.8	2.7	19.3	0.8
sdc	0.6	0.8	-	0.5	10.9	0.8	1.3	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	41	12	18	5	-	-	-
sdc	22	4	11	2	-	-	-

IP/P	15	SUGe/SUG	-	EB (meq/kg)	702	
		CF_DI	0.97	CAD (meq/kg)	-554	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	57		DCCP	-	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	74		DCCF	-	DCNFE	-	DCCF	-
DCNFE	93		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	85		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	70	70	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	77	77	AppDCP	-	DC(S+S)	-		
%RUSTA	43	61			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	39	39						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1019 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1095 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	595 g/kg	EW2015	-	MEla	-		
FOMr-07	509 g/kg	StaDP	-	MEla	-		
FOMr2-07	158 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.31 /kg						
DVE-91	109 g/kg			**Broilers**		**Horses**	
DVE-07	102 g/kg			MEbr	-	NEm	-
OEB-91	-65 g/kg			MEbr	-	NEm	-
OEB-07	-57 g/kg			DPpo	-	EWpa	-
OEB2-07	-13 g/kg					DCPho	-
DVMET-91	2.1 g/kg						
DVLYS-91	7.7 g/kg						
DVMET-07	2.0 g/kg						
DVLYS-07	7.3 g/kg						
SW	0.80 /kg						
VW	0.55 /kg						

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Potato pulp, pressed, 4001.227/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			109	-	-	-	-	-	-
LYS	6.2	-	6.8	-	-	-	-	-	-
MET	1.3	-	1.4	-	-	-	-	-	-
CYS	1.8	-	2.0	-	-	-	-	-	-
THR	3.7	-	4.0	-	-	-	-	-	-
TRP	1.5	-	1.6	-	-	-	-	-	-
ILE	3.5	-	3.8	-	-	-	-	-	-
ARG	4.2	-	4.6	-	-	-	-	-	-
PHE	3.7	-	4.0	-	-	-	-	-	-
HIS	2.1	-	2.3	-	-	-	-	-	-
LEU	6.1	-	6.6	-	-	-	-	-	-
TYR	3.8	-	4.1	-	-	-	-	-	-
VAL	5.3	-	5.8	-	-	-	-	-	-
ALA	3.2	-	3.5	-	-	-	-	-	-
ASP	9.6	-	10.5	-	-	-	-	-	-
GLU	8.7	-	9.5	-	-	-	-	-	-
GLY	3.7	-	4.0	-	-	-	-	-	-
PRO	4.0	-	4.4	-	-	-	-	-	-
SER	3.8	-	4.1	-	-	-	-	-	-
Sum AA	76.2		83	-	-	-	-	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		2.1
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	51	-
LA	36	-
AC	15	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Potato pulp, pressed, :

1. This product has a high fermentation rate. Therefore no distinction is made between 'fresh' and 'ensiled'.
2. For this product analysis of starch should be based on STAam. STAew is an artefact.
3. The S-i content of this product is variable; for a correct calculation of the CAD value of a batch the S-i content should be analysed.

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Potato pulp, pressed, Dutch origin 4001.226/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	161	43	81	2	7	206	667	662
sdc	13	10	9	0	-	22	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	191	12	11	341	166	50	577	236
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.4	0.9	0.1	0.7	18.0	0.5	1.5	0.4	0.6
sdc	0.6	0.3	-	0.1	5.5	0.3	0.7	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	30	7	9	4	-	-	-
sdc	10	2	3	2	-	-	-

IP/P	15	SUGe/SUG	-	EB (meq/kg)	438	
		CF_DI	0.97	CAD (meq/kg)	375	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	41	DCCP	-	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	74	DCCF	-	DCNFE	-	DCCF	-
DCNFE	93	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	84	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	70	70	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	77	77	AppDCP	-	DC(S+S)	-		
%RUSTA	43	61			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	29	29						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1031 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1108 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	611 g/kg	EW2015	-	MEla	-		
FOMr-07	566 g/kg	StaDP	-	MEla	-		
FOMr2-07	213 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.38 /kg						
DVE-91	94 g/kg			**Broilers**		**Horses**	
DVE-07	91 g/kg			MEbr	-	NEm	-
OEB-91	-74 g/kg			MEbr	-	NEm	-
OEB-07	-69 g/kg			DPpo	-	EWpa	-
OEB2-07	-20 g/kg					DCPho	-
DVMET-91	1.9 g/kg						
DVLYS-91	6.8 g/kg						
DVMET-07	1.9 g/kg						
DVLYS-07	6.6 g/kg						
SW	0.80 /kg						
VW	0.55 /kg						

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Potato pulp, pressed, Dutch origin 4001.226/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			81	-	-	-	-	-	-
LYS	6.2	-	5.0	-	-	-	-	-	-
MET	1.3	-	1.1	-	-	-	-	-	-
CYS	1.8	-	1.5	-	-	-	-	-	-
THR	3.7	-	3.0	-	-	-	-	-	-
TRP	1.5	-	1.2	-	-	-	-	-	-
ILE	3.5	-	2.8	-	-	-	-	-	-
ARG	4.2	-	3.4	-	-	-	-	-	-
PHE	3.7	-	3.0	-	-	-	-	-	-
HIS	2.1	-	1.7	-	-	-	-	-	-
LEU	6.1	-	5.0	-	-	-	-	-	-
TYR	3.8	-	3.1	-	-	-	-	-	-
VAL	5.3	-	4.3	-	-	-	-	-	-
ALA	3.2	-	2.6	-	-	-	-	-	-
ASP	9.6	-	7.8	-	-	-	-	-	-
GLU	8.7	-	7.1	-	-	-	-	-	-
GLY	3.7	-	3.0	-	-	-	-	-	-
PRO	4.0	-	3.2	-	-	-	-	-	-
SER	3.8	-	3.1	-	-	-	-	-	-
Sum AA	76.2		62	-	-	-	-	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		2.2
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	110	-
LA	66	19
AC	44	21
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

Remarks

Potato pulp, pressed, Dutch origin:

1. This product has a high fermentation rate. Therefore no distinction is made between 'fresh' and 'ensiled'.
2. For this product analysis of starch should be based on STAam. STAew is an artefact.

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Potato starch, gelatinised-STAam < 400 g/kg DM 4001.231/1/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	133	71	169	-	21	37	-	702
sdc	21	40	33	-	7	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	360	337	128	23	-	-	-	212	212
sdc	41	-	-	15	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.9	4.1	0.6	1.0	8.0	0.8	1.3	-	1.2
sdc	1.2	1.1	-	-	2.1	0.4	0.6	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1057	-	45	15	-	-	-
sdc	-	-	22	7	-	-	-

IP/P	15	SUGe/SUG	25	EB (meq/kg)	202
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	75	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	66	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	70	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	97	DCPpo	-	DCNFE	-
DCOM	-		DCOM	91				
			DCNSPh	83	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	55	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	11.08 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	2648 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.26 /kg	MEla	-		
FOMr-07	-	StaDP	2.5 g/kg	MEla	-		
FOMr2-07	-	AppDP	2.3 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Potato starch, gelatinised-STAam < 400 g/kg DM 4001.231/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			169	-	-	-	-	-	-
LYS	6.6	0.9	11.2	-	-	-	-	-	-
MET	1.8	0.4	3.0	-	-	-	-	-	-
CYS	1.2	0.2	2.0	-	-	-	-	-	-
THR	4.7	0.7	7.9	-	-	-	-	-	-
TRP	1.1	-	1.9	-	-	-	-	-	-
ILE	4.1	-	6.9	-	-	-	-	-	-
ARG	4.0	-	6.8	-	-	-	-	-	-
PHE	4.5	-	7.6	-	-	-	-	-	-
HIS	1.8	-	3.0	-	-	-	-	-	-
LEU	7.2	-	12.2	-	-	-	-	-	-
TYR	4.3	-	7.3	-	-	-	-	-	-
VAL	5.7	-	9.6	-	-	-	-	-	-
ALA	5.7	-	9.6	-	-	-	-	-	-
ASP	10.3	-	17.4	-	-	-	-	-	-
GLU	9.9	-	16.7	-	-	-	-	-	-
GLY	4.5	-	7.6	-	-	-	-	-	-
PRO	5.2	-	8.8	-	-	-	-	-	-
SER	5.0	-	8.5	-	-	-	-	-	-
Sum AA	87.6		148	-	-	-	-	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		21.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	46	-
LA	38	14
AC	5	3
ETH	-	-
PR	1	2
BU	2	2
Glycerol	-	-
	% of CP	
NH3	-	

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Potato starch, gelatinised-STAam 400 - 525 g/kg DM 4001.231/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	132	51	155	-	25	39	-	731
sdc	14	18	34	-	12	11	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	499	467	80	23	-	-	-	160	160
sdc	36	-	-	15	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.5	3.0	0.5	0.7	6.9	0.8	1.3	-	1.1
sdc	1.4	1.0	-	0.3	2.8	0.4	0.6	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1057	-	45	15	-	-	-
sdc	-	-	22	7	-	-	-

IP/P	15	SUGe/SUG	25	EB (meq/kg)	174
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	74	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	70	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	70	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	98	DCPpo	-	DCNFE	-
DCOM	-		DCOM	92				
			DCNSPh	84	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	53	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	11.82 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	2824 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.34 /kg	MEla	-		
FOMr-07	-	StaDP	1.8 g/kg	MEla	-		
FOMr2-07	-	AppDP	1.6 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Potato starch, gelatinised-STAam 400 - 525 g/kg DM 4001.231/2/0

Amino acids

	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			155	-	-	-	-	-	-
LYS	6.6	0.9	10.2	-	-	-	-	-	-
MET	1.8	0.4	2.8	-	-	-	-	-	-
CYS	1.2	0.2	1.9	-	-	-	-	-	-
THR	4.7	0.7	7.3	-	-	-	-	-	-
TRP	1.1	-	1.7	-	-	-	-	-	-
ILE	4.1	-	6.4	-	-	-	-	-	-
ARG	4.0	-	6.2	-	-	-	-	-	-
PHE	4.5	-	7.0	-	-	-	-	-	-
HIS	1.8	-	2.8	-	-	-	-	-	-
LEU	7.2	-	11.2	-	-	-	-	-	-
TYR	4.3	-	6.7	-	-	-	-	-	-
VAL	5.7	-	8.8	-	-	-	-	-	-
ALA	5.7	-	8.8	-	-	-	-	-	-
ASP	10.3	-	16.0	-	-	-	-	-	-
GLU	9.9	-	15.3	-	-	-	-	-	-
GLY	4.5	-	7.0	-	-	-	-	-	-
PRO	5.2	-	8.1	-	-	-	-	-	-
SER	5.0	-	7.8	-	-	-	-	-	-
Sum AA	87.6		136	-	-	-	-	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		25.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	46	-
LA	38	14
AC	5	3
ETH	-	-
PR	1	2
BU	2	2
Glycerol	-	-
	% of CP	
NH3	-	

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Potato starch, gelatinised-STAam 525 - 625 g/kg DM 4001.231/3/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	134	39	117	-	14	33	-	797
sdc	15	11	18	-	6	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	613	574	40	23	-	-	-	155	155
sdc	31	-	-	15	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.5	2.7	0.4	0.7	6.9	0.8	1.3	-	0.8
sdc	1.1	0.6	-	0.2	-	0.4	0.6	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1057	-	45	15	-	-	-
sdc	-	-	22	7	-	-	-

IP/P	15	SUGe/SUG	25	EB (meq/kg)	174
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	72	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	54	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	70	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	98	DCPpo	-	DCNFE	-
DCOM	-		DCOM	93				
			DCNSPh	84	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	53	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	11.99 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	2865 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.36 /kg	MEla	-		
FOMr-07	-	StaDP	1.6 g/kg	MEla	-		
FOMr2-07	-	AppDP	1.4 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Potato starch, gelatinised-STAam 525 - 625 g/kg DM 4001.231/3/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			117	-	-	-	-	-	-
LYS	6.6	0.9	7.7	-	-	-	-	-	-
MET	1.8	0.4	2.1	-	-	-	-	-	-
CYS	1.2	0.2	1.4	-	-	-	-	-	-
THR	4.7	0.7	5.5	-	-	-	-	-	-
TRP	1.1	-	1.3	-	-	-	-	-	-
ILE	4.1	-	4.8	-	-	-	-	-	-
ARG	4.0	-	4.7	-	-	-	-	-	-
PHE	4.5	-	5.3	-	-	-	-	-	-
HIS	1.8	-	2.1	-	-	-	-	-	-
LEU	7.2	-	8.4	-	-	-	-	-	-
TYR	4.3	-	5.0	-	-	-	-	-	-
VAL	5.7	-	6.7	-	-	-	-	-	-
ALA	5.7	-	6.7	-	-	-	-	-	-
ASP	10.3	-	12.1	-	-	-	-	-	-
GLU	9.9	-	11.6	-	-	-	-	-	-
GLY	4.5	-	5.3	-	-	-	-	-	-
PRO	5.2	-	6.1	-	-	-	-	-	-
SER	5.0	-	5.9	-	-	-	-	-	-
Sum AA	87.6		102	-	-	-	-	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		13.7
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	46	-
LA	38	14
AC	5	3
ETH	-	-
PR	1	2
BU	2	2
Glycerol	-	-
	% of CP	
NH3	-	

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Potato starch, gelatinised-STAam > 625 g/kg DM 4001.231/4/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	132	22	67	-	13	22	-	876
sdc	13	5	14	-	5	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	705	660	40	23	-	-	-	137	137
sdc	35	-	-	15	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.3	1.9	0.3	0.4	3.7	0.8	1.3	-	0.5
sdc	0.2	0.2	-	-	2.5	0.4	0.6	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1057	-	45	15	-	-	-
sdc	-	-	22	7	-	-	-

IP/P	15	SUGe/SUG	25	EB (meq/kg)	92
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	64	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	52	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	70	DCNFE	-	DCCF	-
DCNFE	-	DCNFE	98	DCPpo	-	DCNFE	-
DCOM	-	DCOM	95				
		DCNSPh	84	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	49	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	12.56 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	3001 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.43 /kg	MEla	-		
FOMr-07	-	StaDP	1.1 g/kg	MEla	-		
FOMr2-07	-	AppDP	0.9 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Potato starch, gelatinised-STAam > 625 g/kg DM 4001.231/4/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			67	-	-	-	-	-	-
LYS	6.6	0.9	4.4	-	-	-	-	-	-
MET	1.8	0.4	1.2	-	-	-	-	-	-
CYS	1.2	0.2	0.8	-	-	-	-	-	-
THR	4.7	0.7	3.1	-	-	-	-	-	-
TRP	1.1	-	0.7	-	-	-	-	-	-
ILE	4.1	-	2.7	-	-	-	-	-	-
ARG	4.0	-	2.7	-	-	-	-	-	-
PHE	4.5	-	3.0	-	-	-	-	-	-
HIS	1.8	-	1.2	-	-	-	-	-	-
LEU	7.2	-	4.8	-	-	-	-	-	-
TYR	4.3	-	2.9	-	-	-	-	-	-
VAL	5.7	-	3.8	-	-	-	-	-	-
ALA	5.7	-	3.8	-	-	-	-	-	-
ASP	10.3	-	6.9	-	-	-	-	-	-
GLU	9.9	-	6.6	-	-	-	-	-	-
GLY	4.5	-	3.0	-	-	-	-	-	-
PRO	5.2	-	3.5	-	-	-	-	-	-
SER	5.0	-	3.4	-	-	-	-	-	-
Sum AA	87.6		59	-	-	-	-	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		13.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	46	-
LA	38	14
AC	5	3
ETH	-	-
PR	1	2
BU	2	2
Glycerol	-	-
	% of CP	
NH3	-	

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Potato starch, untreated, liquid-STAam < 600 g/kg DM 4001.222/1/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	201	66	112	5	16	43	774	762
sdc	28	33	23	5	6	11	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	555	519	21	23	72	35	10	207	135
sdc	55	-	-	17	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.2	2.6	0.4	0.6	4.7	0.9	1.4	-	-
sdc	0.8	0.8	-	0.2	1.2	0.6	1.0	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1272	22	31	11	-	-	-
sdc	771	16	12	4	-	-	-

IP/P	15	SUGe/SUG	-	EB (meq/kg)	120	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	59	DCCP	-	DCCP	-	DCCP	-
DCCFAT	40	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	74	DCCF	-	DCNFE	-	DCCF	-
DCNFE	93	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	88	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	22	22	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	85	85	AppDCP	-	DC(S+S)	-		
%RUSTA	31	32			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	41	41						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1090 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1199 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	602 g/kg	EW2015	-	MEla	-		
FOMr-07	648 g/kg	StaDP	-	MEla	-		
FOMr2-07	327 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.50 /kg						
DVE-91	70 g/kg			**Broilers**		**Horses**	
DVE-07	85 g/kg			MEbr	-	NEm	-
OEB-91	-5 g/kg			MEbr	-	NEm	-
OEB-07	-31 g/kg			DPpo	-	EWpa	-
OEB2-07	14 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.10 /kg						
VW	0.30 /kg						

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Potato starch, untreated, liquid-STAam < 600 g/kg DM 4001.222/1/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			112	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids		
	% FA	g/kg DM
CFAT(h)		5.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products		
	g/kg DM	sdc
FP	61	-
LA	40	12
AC	18	10
ETH	-	-
PR	-	-
BU	2	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato starch, untreated, liquid-STAam 600 - 750 g/kg DM 4001.222/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	268	32	75	3	10	30	860	853
sdc	39	12	16	2	3	12	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	725	678	21	22	50	24	7	122	72
sdc	39	-	-	11	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.3	2.1	0.3	0.4	3.3	0.4	0.7	-	-
sdc	0.4	0.5	-	0.1	0.9	0.2	0.4	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	875	15	21	7	-	-	-
sdc	530	11	9	3	-	-	-

IP/P	15	SUGe/SUG	-	EB (meq/kg)	82	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	35		DCCP	-	DCCP	-	DCCP	-
DCCFAT	7		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	74		DCCF	-	DCNFE	-	DCCF	-
DCNFE	93		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	88		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	22	22	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	85	85	AppDCP	-	DC(S+S)	-		
%RUSTA	31	32			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	23	23						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1126 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1245 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	592 g/kg	EW2015	-	MEla	-		
FOMr-07	683 g/kg	StaDP	-	MEla	-		
FOMr2-07	345 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.50 /kg						
DVE-91	62 g/kg			**Broilers**		**Horses**	
DVE-07	88 g/kg			MEbr	-	NEm	-
OEB-91	-32 g/kg			MEbr	-	NEm	-
OEB-07	-74 g/kg			DPpo	-	EWpa	-
OEB2-07	-13 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.00 /kg						
VW	0.30 /kg						

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Potato starch, untreated, liquid-STAam 600 - 750 g/kg DM 4001.222/2/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			75	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		3.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	61	-
LA	40	12
AC	18	10
ETH	-	-
PR	-	-
BU	2	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato starch, untreated, liquid-STAam > 750 g/kg DM 4001.222/3/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	329	18	46	3	9	21	912	906
sdc	55	6	15	-	3	11	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	834	780	21	17	35	17	5	68	33
sdc	18	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.8	1.7	0.3	0.2	2.1	0.4	0.5	-	-
sdc	0.2	0.3	-	0.1	0.6	0.2	0.3	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	697	12	17	6	-	-	-
sdc	423	9	7	2	-	-	-

IP/P	15	SUGe/SUG	-	EB (meq/kg)	57	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	99	DCCP	-	DCCP	-	DCCP	-
DCCFAT	90	DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	73	DCCF	-	DCNFE	-	DCCF	-
DCNFE	93	DCNFE	-	DCPpo	-	DCNFE	-
DCOM	93	DCOM	-				
		DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	22	22	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	85	85	AppDCP	-	DC(S+S)	-		
%RUSTA	31	32			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	15	15						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1233 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1390 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	624 g/kg	EW2015	-	MEla	-		
FOMr-07	698 g/kg	StaDP	-	MEla	-		
FOMr2-07	349 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.50 /kg						
DVE-91	63 g/kg			**Broilers**		**Horses**	
DVE-07	92 g/kg			MEbr	-	NEm	-
OEB-91	-59 g/kg			MEbr	-	NEm	-
OEB-07	-104 g/kg			DPpo	-	EWpa	-
OEB2-07	-31 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-0.10 /kg						
VW	0.30 /kg						

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Potato starch, untreated, liquid-STAam > 750 g/kg DM 4001.222/3/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			46	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		2.6
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	61	-
LA	40	12
AC	18	10
ETH	-	-
PR	-	-
BU	2	-
Glycerol	-	-
	% of CP	
NH3	-	

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Potato starch, untreated, solid 4001.223/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	451	19	22	-	4	14	-	941
sdc	34	12	11	-	2	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	922	863	-	2	-	-	-	78	78
sdc	27	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.7	1.1	0.2	0.2	2.3	0.3	0.2	-	-
sdc	0.4	0.2	-	0.1	0.8	0.1	0.1	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	250	-	-	-	-	-	-
sdc	113	-	-	-	-	-	-

IP/P	15	SUGe/SUG	-	EB (meq/kg)	64
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	99		DCCP	-	DCCP	-	DCCP	-
DCCFAT	90		DCCFATh	-	DCCFAT	-	DCCFAT	-
DCCF	73		DCCF	-	DCNFE	-	DCCF	-
DCNFE	93		DCNFE	-	DCPpo	-	DCNFE	-
DCOM	93		DCOM	-				
			DCNSPh	-	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	-	DCCP	-	DCCP	-
%RUP	22	22	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	85	85	AppDCP	-	DC(S+S)	-		
%RUSTA	31	32			DCNFEh	-		
%DASH	50	50			DCPpo	-		
DASHmax	15	15						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1235 /kg	NE2015	-	MEpo	-	MErab	-
VEVI	1396 /kg	NE2015	-	MEpo	-	MErab	-
FOM-91	623 g/kg	EW2015	-	MEla	-		
FOMr-07	666 g/kg	StaDP	-	MEla	-		
FOMr2-07	288 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.43 /kg						
DVE-91	58 g/kg			**Broilers**		**Horses**	
DVE-07	88 g/kg			MEbr	-	NEm	-
OEB-91	-77 g/kg			MEbr	-	NEm	-
OEB-07	-124 g/kg			DPpo	-	EWpa	-
OEB2-07	-42 g/kg					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	0.10 /kg						
VW	0.30 /kg						

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Potato starch, untreated, solid 4001.223/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			22	-	-	-	-	-	-
LYS	-	-	-	-	-	-	-	-	-
MET	-	-	-	-	-	-	-	-	-
CYS	-	-	-	-	-	-	-	-	-
THR	-	-	-	-	-	-	-	-	-
TRP	-	-	-	-	-	-	-	-	-
ILE	-	-	-	-	-	-	-	-	-
ARG	-	-	-	-	-	-	-	-	-
PHE	-	-	-	-	-	-	-	-	-
HIS	-	-	-	-	-	-	-	-	-
LEU	-	-	-	-	-	-	-	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	-	-	-	-	-	-	-	-	-
ALA	-	-	-	-	-	-	-	-	-
ASP	-	-	-	-	-	-	-	-	-
GLU	-	-	-	-	-	-	-	-	-
GLY	-	-	-	-	-	-	-	-	-
PRO	-	-	-	-	-	-	-	-	-
SER	-	-	-	-	-	-	-	-	-
Sum AA	-		-	-	-	-	-	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		3.8
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	18	-
LA	10	3
AC	8	3
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Sugarbeet pulp, pressed, ensiled 4004.244/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	248	77	82	8	13	189	644	639
sdc	20	19	6	2	4	8	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	10	-	53	480	229	9	727	248
sdc	-	-	-	23	62	17	1	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	9.9	1.0	0.2	2.2	4.4	0.3	0.2	1.4	0.6
sdc	1.5	0.1	-	0.2	1.0	0.1	0.2	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	611	70	43	5	0.2	0.2	0.2
sdc	276	13	12	1	0.0	0.1	0.1

IP/P	20	SUGe/SUG	100	EB (meq/kg)	118
		CF_DI	0.97	CAD (meq/kg)	-9

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	61		DCCP	46	DCCP	-	DCCP	-
DCCFAT	58		DCCFATh	52	DCCFAT	-	DCCFAT	-
DCCF	88		DCCF	87	DCNFE	-	DCCF	-
DCNFE	92		DCNFE	92	DCPpo	-	DCNFE	-
DCOM	88		DCOM	86				
			DCNSPh	89	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	45
%RUP	58	61	StaDCP	60	DCCFATh	-	DCOM	81
%DRUP	85	85	AppDCP	40	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	35	35			DCPpo	-		
DASHmax	33	33						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1067 /kg	NE2015	10.98 MJ/kg	MEpo	-	MErab	-
VEVI	1165 /kg	NE2015	2624 kcal/kg	MEpo	-	MErab	-
FOM-91	733 g/kg	EW2015	1.25 /kg	MEla	-		
FOMr-07	603 g/kg	StaDP	0.6 g/kg	MEla	-		
FOMr2-07	182 g/kg	AppDP	0.4 g/kg	DPpo	-		
FOMr2/FOMr	0.30 /kg						
DVE-91	105 g/kg			**Broilers**		**Horses**	
DVE-07	95 g/kg			MEbr	-	NEm	8.59 MJ/kg
OEB-91	-79 g/kg			MEbr	-	NEm	2054 kcal/kg
OEB-07	-63 g/kg			DPpo	-	EWpa	0.962 /kg
OEB2-07	-17 g/kg					DCPho	37 g/kg
DVMET-91	2.4 g/kg						
DVLYS-91	8.0 g/kg						
DVMET-07	2.2 g/kg						
DVLYS-07	7.2 g/kg						
SW	1.05 /kg						
VW	0.70 /kg						

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Sugarbeet pulp, pressed, ensiled 4004.244/0/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			82	36	-	22	18	-	-
LYS	7.0	0.3	5.8	80	4.7	74	4.3	-	-
MET	1.8	0.2	1.5	80	1.2	73	1.1	-	-
CYS	1.4	0.1	1.2	41	0.5	23	0.3	-	-
THR	4.6	0.2	3.7	49	1.8	33	1.2	-	-
TRP	1.0	0.0	0.8	54	0.4	37	0.3	-	-
ILE	3.8	0.3	3.1	36	1.1	25	0.8	-	-
ARG	4.5	0.2	3.7	36	1.4	26	1.0	-	-
PHE	3.8	0.2	3.1	36	1.1	26	0.8	-	-
HIS	3.4	0.5	2.8	36	1.0	30	0.8	-	-
LEU	6.2	0.3	5.1	36	1.9	27	1.4	-	-
TYR	5.1	0.4	4.2	36	1.5	30	1.2	-	-
VAL	5.8	0.3	4.7	37	1.7	25	1.2	-	-
ALA	4.7	0.3	3.8	36	1.4	24	0.9	-	-
ASP	7.7	0.3	6.3	36	2.3	24	1.5	-	-
GLU	9.3	0.5	7.7	36	2.7	20	1.6	-	-
GLY	4.2	0.2	3.4	36	1.2	10	0.3	-	-
PRO	4.3	0.2	3.5	36	1.3	5	0.2	-	-
SER	4.8	0.2	3.9	36	1.4	20	0.8	-	-
Sum AA	83.4		69	-	29	-	20	-	-

Fatty acids	% FA	g/kg DM
CFAT(h)		7.8
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products	g/kg DM	sdc
FP	51	-
LA	36	14
AC	15	11
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	5	

Remarks

Sugarbeet pulp, pressed, ensiled:

1. The NE2015 and EW2015 have been calculated including an addition for reduced activity.

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Wheat starch-STAam < 200 g/kg DM 1010.234/1/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	244	30	136	-	37	22	-	775
sdc	26	11	23	-	5	12	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	159	154	145	279	94	-	-	172	78
sdc	28	-	50	64	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.8	3.4	-	1.2	7.0	1.9	2.5	-	1.3
sdc	0.1	0.5	-	0.2	1.4	0.6	0.7	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	117	30	36	7	-	-	-
sdc	110	-	12	4	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	192
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	90	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	76	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	69	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	95	DCPpo	-	DCNFE	-
DCOM	-		DCOM	93				
			DCNSPh	73	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	54	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	12.39 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	2961 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.41 /kg	MEla	-		
FOMr-07	-	StaDP	2.0 g/kg	MEla	-		
FOMr2-07	-	AppDP	1.8 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Wheat starch-STAam < 200 g/kg DM 1010.234/1/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			136	95	-	87	118	-	-
LYS	4.3	0.6	5.8	100	5.8	93	5.4	-	-
MET	1.6	0.1	2.2	96	2.1	91	2.0	-	-
CYS	2.2	0.2	3.0	98	2.9	91	2.7	-	-
THR	3.2	0.4	4.3	99	4.3	86	3.7	-	-
TRP	1.0	0.2	1.4	100	1.4	90	1.2	-	-
ILE	3.1	0.3	4.2	95	4.0	86	3.6	-	-
ARG	5.4	0.7	7.3	95	7.0	90	6.6	-	-
PHE	3.9	0.3	5.3	95	5.0	89	4.7	-	-
HIS	2.4	0.2	3.3	95	3.1	90	2.9	-	-
LEU	5.9	0.5	8.0	95	7.6	89	7.2	-	-
TYR	3.5	0.5	4.8	95	4.5	89	4.2	-	-
VAL	5.1	0.5	6.9	95	6.6	88	6.1	-	-
ALA	5.8	0.3	7.9	95	7.5	89	7.0	-	-
ASP	5.8	0.2	7.9	95	7.5	85	6.7	-	-
GLU	16.3	1.9	22.1	95	21.0	90	19.9	-	-
GLY	4.8	0.3	6.5	95	6.2	81	5.3	-	-
PRO	6.7	1.3	9.1	95	8.6	83	7.5	-	-
SER	4.0	-	5.4	95	5.2	83	4.5	-	-
Sum AA	85.0		115	-	110	-	101	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		36.6
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	73	-
LA	56	9
AC	7	4
ETH	9	9
PR	1	2
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat starch-STAam 200 - 400 g/kg DM 1010.234/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	234	25	125	-	35	23	-	791
sdc	28	5	20	-	7	14	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	315	306	88	175	93	-	-	186	93
sdc	57	-	50	48	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.8	3.2	-	1.2	6.6	2.3	2.5	-	1.2
sdc	0.1	0.4	-	0.2	1.1	1.0	0.7	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	117	30	30	7	-	-	-
sdc	110	-	15	4	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	196
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	89	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	76	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	69	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	95	DCPpo	-	DCNFE	-
DCOM	-		DCOM	93				
			DCNSPh	75	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	54	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	12.52 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	2993 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.42 /kg	MEla	-		
FOMr-07	-	StaDP	1.9 g/kg	MEla	-		
FOMr2-07	-	AppDP	1.7 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Wheat starch-STAam 200 - 400 g/kg DM 1010.234/2/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			125	95	-	86	108	-	-
LYS	4.3	0.6	5.4	100	5.4	93	5.0	-	-
MET	1.6	0.1	2.0	96	1.9	90	1.8	-	-
CYS	2.2	0.2	2.8	98	2.7	90	2.5	-	-
THR	3.2	0.4	4.0	99	4.0	85	3.4	-	-
TRP	1.0	0.2	1.3	100	1.3	89	1.1	-	-
ILE	3.1	0.3	3.9	95	3.7	86	3.3	-	-
ARG	5.4	0.7	6.8	95	6.5	89	6.1	-	-
PHE	3.9	0.3	4.9	95	4.6	88	4.3	-	-
HIS	2.4	0.2	3.0	95	2.9	89	2.7	-	-
LEU	5.9	0.5	7.4	95	7.0	89	6.6	-	-
TYR	3.5	0.5	4.4	95	4.2	89	3.9	-	-
VAL	5.1	0.5	6.4	95	6.1	87	5.6	-	-
ALA	5.8	0.3	7.3	95	6.9	88	6.4	-	-
ASP	5.8	0.2	7.3	95	6.9	84	6.1	-	-
GLU	16.3	1.9	20.4	95	19.4	89	18.3	-	-
GLY	4.8	0.3	6.0	95	5.7	80	4.8	-	-
PRO	6.7	1.3	8.4	95	8.0	82	6.9	-	-
SER	3.9	0.4	4.9	95	4.6	82	4.0	-	-
Sum AA	84.9		106	-	102	-	93	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.3
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	87	-
LA	61	20
AC	16	11
ETH	9	8
PR	1	2
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat starch-STAam 400 - 600 g/kg DM 1010.234/3/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	219	23	104	-	30	25	-	818
sdc	30	6	23	-	8	12	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	496	481	48	84	104	-	-	171	67
sdc	50	-	32	38	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.8	3.4	-	0.8	5.6	2.4	1.8	-	1.0
sdc	0.1	0.6	-	0.3	1.6	1.2	0.9	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	117	26	34	7	-	-	-
sdc	110	14	10	4	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	197
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	87	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	73	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	69	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	94	DCPpo	-	DCNFE	-
DCOM	-		DCOM	92				
			DCNSPh	69	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	54	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	12.60 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	3011 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.43 /kg	MEla	-		
FOMr-07	-	StaDP	2.0 g/kg	MEla	-		
FOMr2-07	-	AppDP	1.8 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Wheat starch-STAam 400 - 600 g/kg DM 1010.234/3/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible
				AA pigs				AA poultry
				standardized		apparent		
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			104	95	-	84	87	-	-
LYS	4.3	0.6	4.5	100	4.5	91	4.1	-	-
MET	1.6	0.1	1.7	96	1.6	89	1.5	-	-
CYS	2.2	0.2	2.3	98	2.2	89	2.0	-	-
THR	3.2	0.4	3.3	99	3.3	82	2.7	-	-
TRP	1.0	0.2	1.0	100	1.0	87	0.9	-	-
ILE	3.1	0.3	3.2	95	3.1	84	2.7	-	-
ARG	5.4	0.7	5.6	95	5.3	88	5.0	-	-
PHE	3.9	0.3	4.1	95	3.9	87	3.5	-	-
HIS	2.4	0.2	2.5	95	2.4	88	2.2	-	-
LEU	5.9	0.5	6.1	95	5.8	87	5.4	-	-
TYR	3.5	0.5	3.6	95	3.5	87	3.2	-	-
VAL	5.1	0.5	5.3	95	5.1	85	4.5	-	-
ALA	5.8	0.3	6.0	95	5.7	87	5.3	-	-
ASP	5.8	0.2	6.0	95	5.7	82	4.9	-	-
GLU	16.3	1.9	17.0	95	16.1	88	14.9	-	-
GLY	4.8	0.3	5.0	95	4.7	77	3.8	-	-
PRO	6.7	1.3	7.0	95	6.6	79	5.5	-	-
SER	3.9	0.4	4.1	95	3.8	79	3.2	-	-
Sum AA	84.9		88	-	84	-	75	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		29.6
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	84	-
LA	57	23
AC	17	11
ETH	9	8
PR	1	2
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat starch-STAam > 600 g/kg DM 1010.234/4/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	218	15	62	-	21	19	-	883
sdc	32	10	17	-	3	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	674	654	22	34	78	-	-	154	76
sdc	34	-	13	18	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	0.7	2.0	-	0.6	2.6	1.6	1.2	-	0.6
sdc	0.1	0.5	-	0.3	1.0	0.8	0.5	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	117	14	16	7	-	-	-
sdc	110	7	11	4	-	-	-

IP/P	-	SUGe/SUG	89	EB (meq/kg)	102	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-		DCCP	78	DCCP	-	DCCP	-
DCCFAT	-		DCCFATh	66	DCCFAT	-	DCCFAT	-
DCCF	-		DCCF	69	DCNFE	-	DCCF	-
DCNFE	-		DCNFE	96	DCPpo	-	DCNFE	-
DCOM	-		DCOM	94				
			DCNSPh	74	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	50	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	12.92 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	3087 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.47 /kg	MEla	-		
FOMr-07	-	StaDP	1.2 g/kg	MEla	-		
FOMr2-07	-	AppDP	1.0 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Wheat starch-STAam > 600 g/kg DM 1010.234/4/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			62	95	-	77	48	-	-
LYS	4.3	0.6	2.7	100	2.7	85	2.3	-	-
MET	1.6	0.1	1.0	96	1.0	85	0.8	-	-
CYS	2.2	0.2	1.4	98	1.3	82	1.1	-	-
THR	3.2	0.4	2.0	99	2.0	70	1.4	-	-
TRP	1.0	0.2	0.6	100	0.6	77	0.5	-	-
ILE	3.1	0.3	1.9	95	1.8	76	1.5	-	-
ARG	5.4	0.7	3.3	95	3.2	84	2.8	-	-
PHE	3.9	0.3	2.4	95	2.3	82	2.0	-	-
HIS	2.4	0.2	1.5	95	1.4	83	1.2	-	-
LEU	5.9	0.5	3.7	95	3.5	82	3.0	-	-
TYR	3.5	0.5	2.2	95	2.1	82	1.8	-	-
VAL	5.1	0.5	3.2	95	3.0	78	2.5	-	-
ALA	5.8	0.3	3.6	95	3.4	82	2.9	-	-
ASP	5.8	0.2	3.6	95	3.4	73	2.6	-	-
GLU	16.3	1.9	10.1	95	9.6	84	8.4	-	-
GLY	4.8	0.3	3.0	95	2.8	65	1.9	-	-
PRO	6.7	1.3	4.2	95	3.9	69	2.8	-	-
SER	3.9	0.4	2.4	95	2.3	68	1.6	-	-
Sum AA	84.9		53	-	50	-	41	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		21.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	58	-
LA	34	16
AC	14	9
ETH	9	8
PR	1	2
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat starch, French origin 1010.236/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	286	39	183	-	36	23	-	720
sdc	16	8	15	-	5	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	189	177	79	222	82	25	8	208	126
sdc	32	-	32	55	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.7	4.8	-	1.8	11.0	4.3	4.5	-	1.7
sdc	0.2	0.7	-	-	1.6	1.0	0.8	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	342	
		CF_DI	0.97	CAD (meq/kg)	253	

Digestibility coëfficients (%)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	-	DCCP	74	DCCP	-	DCCP	-
DCCFAT	-	DCCFATh	76	DCCFAT	-	DCCFAT	-
DCCF	-	DCCF	94	DCNFE	-	DCCF	-
DCNFE	-	DCNFE	97	DCPpo	-	DCNFE	-
DCOM	-	DCOM	92				
		DCNSPh	90	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	-	-	StaDCP	60	DCCFATh	-	DCOM	-
%DRUP	-	-	AppDCP	56	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	-	-			DCPpo	-		
DASHmax	-	-						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	-	NE2015	11.74 MJ/kg	MEpo	-	MErab	-
VEVI	-	NE2015	2807 kcal/kg	MEpo	-	MErab	-
FOM-91	-	EW2015	1.33 /kg	MEla	-		
FOMr-07	-	StaDP	2.9 g/kg	MEla	-		
FOMr2-07	-	AppDP	2.7 g/kg	DPpo	-		
FOMr2/FOMr	-						
DVE-91	-			**Broilers**		**Horses**	
DVE-07	-			MEbr	-	NEm	-
OEB-91	-			MEbr	-	NEm	-
OEB-07	-			DPpo	-	EWpa	-
OEB2-07	-					DCPho	-
DVMET-91	-						
DVLYS-91	-						
DVMET-07	-						
DVLYS-07	-						
SW	-						
VW	-						

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Wheat starch, French origin 1010.236/0/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized DC	Ileal digestible AA pigs standardized g/kg DM	Ileal digestible AA pigs apparent DC	Ileal digestible AA pigs apparent g/kg DM	Standardized ileal digestible AA poultry DC	Standardized ileal digestible AA poultry g/kg DM
	mean	sdc	g/kg DM						
CP			183	-	-	-	-	-	-
LYS	4.3	0.6	7.9	-	-	-	-	-	-
MET	1.6	0.1	2.9	-	-	-	-	-	-
CYS	2.2	0.2	4.0	-	-	-	-	-	-
THR	3.2	0.4	5.9	-	-	-	-	-	-
TRP	1.0	0.2	1.8	-	-	-	-	-	-
ILE	3.1	0.3	5.7	-	-	-	-	-	-
ARG	5.4	0.7	9.9	-	-	-	-	-	-
PHE	3.9	0.3	7.1	-	-	-	-	-	-
HIS	2.4	0.2	4.4	-	-	-	-	-	-
LEU	5.9	0.5	10.8	-	-	-	-	-	-
TYR	3.5	0.5	6.4	-	-	-	-	-	-
VAL	5.1	0.5	9.3	-	-	-	-	-	-
ALA	5.8	0.3	10.6	-	-	-	-	-	-
ASP	5.8	0.2	10.6	-	-	-	-	-	-
GLU	16.3	1.9	29.8	-	-	-	-	-	-
GLY	4.8	0.3	8.8	-	-	-	-	-	-
PRO	6.7	1.3	12.3	-	-	-	-	-	-
SER	3.9	0.4	7.1	-	-	-	-	-	-
Sum AA	84.9		155	-	-	-	-	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.6
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C:18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	74	-
LA	66	12
AC	4	1
ETH	4	3
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Wheat yeast concentrate-CP < 275 g/kg DM 1010.689/1/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	259	64	261	-	64	33	-	578
sdc	19	21	10	-	11	8	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	34	15	19	143	144	49	-	298	154
sdc	8	-	14	43	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	2.0	8.1	-	2.4	15.6	11.1	6.4	8.5	2.1
sdc	0.5	1.4	-	0.5	2.8	7.3	1.4	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	147	71	66	12	-	-	-
sdc	81	28	27	5	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	702
		CF_DI	0.96	CAD (meq/kg)	37

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	78		DCCP	78	DCCP	-	DCCP	-
DCCFAT	86		DCCFATh	83	DCCFAT	-	DCCFAT	-
DCCF	70		DCCF	-	DCNFE	-	DCCF	-
DCNFE	93		DCNFE	88	DCPpo	-	DCNFE	-
DCOM	87		DCOM	81				
			DCNSPh	65	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	37	37	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	90	88	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	52	52						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1196 /kg	NE2015	10.45 MJ/kg	MEpo	-	MErab	-
VEVI	1308 /kg	NE2015	2496 kcal/kg	MEpo	-	MErab	-
FOM-91	583 g/kg	EW2015	1.19 /kg	MEla	-		
FOMr-07	616 g/kg	StaDP	-	MEla	-		
FOMr2-07	395 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.64 /kg						
DVE-91	142 g/kg			**Broilers**		**Horses**	
DVE-07	126 g/kg			MEbr	-	NEm	-
OEB-91	66 g/kg			MEbr	-	NEm	-
OEB-07	83 g/kg			DPpo	-	EWpa	-
OEB2-07	49 g/kg					DCPho	-
DVMET-91	2.8 g/kg						
DVLYS-91	7.7 g/kg						
DVMET-07	2.6 g/kg						
DVLYS-07	7.0 g/kg						
SW	0.14 /kg						
VW	0.30 /kg						

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Wheat yeast concentrate-CP < 275 g/kg DM 1010.689/1/0

Amino acids	g/16g N			Ileal digestible AA pigs standardized		Ileal digestible AA pigs apparent		Standardized ileal digestible AA poultry	
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			261	79	-	75	194	-	-
LYS	4.2	0.5	11.0	80	8.7	76	8.3	-	-
MET	1.6	0.2	4.2	82	3.4	80	3.3	-	-
CYS	1.8	0.2	4.7	64	3.0	60	2.8	-	-
THR	3.5	0.2	9.1	75	6.9	69	6.3	-	-
TRP	1.1	0.1	2.9	77	2.2	72	2.1	-	-
ILE	3.4	0.2	8.9	81	7.2	77	6.9	-	-
ARG	4.9	0.4	12.8	89	11.3	86	11.0	-	-
PHE	3.8	0.4	9.9	83	8.3	80	7.9	-	-
HIS	2.2	0.3	5.7	82	4.7	79	4.5	-	-
LEU	6.2	0.5	16.2	82	13.3	79	12.8	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	4.6	0.5	12.0	83	9.9	78	9.4	-	-
ALA	4.8	0.4	12.5	81	10.2	77	9.7	-	-
ASP	6.4	0.5	16.7	69	11.6	65	10.8	-	-
GLU	18.4	3.7	48.0	84	40.4	82	39.3	-	-
GLY	4.2	0.3	11.0	85	9.4	77	8.5	-	-
PRO	6.1	1.0	15.9	90	14.3	83	13.2	-	-
SER	4.3	0.2	11.2	77	8.7	72	8.0	-	-
Sum AA	81.5		-	-	-	-	-	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		64.0
<=C10	0.2	-
C12:0	0.3	-
C14:0	0.2	-
C16:0	23.9	-
C16:1	0.4	-
C18:0	1.8	-
C18:1	12.7	-
C:18:2	53.2	-
C18:3	3.8	-
>=C20	1.6	-
Sum FA	98.1	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	66	-
LA	56	30
AC	4	2
ETH	1	1
PR	5	3
BU	-	-
Glycerol	85.0	47.2
	% of CP	
NH3	-	

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Wheat yeast concentrate-CP 275 - 325 g/kg DM 1010.689/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	256	62	296	-	63	29	-	551
sdc	20	18	14	-	8	10	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	31	11	19	124	127	44	-	273	146
sdc	11	-	14	41	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.9	8.4	-	2.4	16.5	7.2	5.8	8.8	2.4
sdc	0.4	1.4	-	0.5	3.5	5.5	1.6	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	147	75	66	12	-	-	-
sdc	81	22	27	5	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	572
		CF_DI	0.96	CAD (meq/kg)	-129

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	79		DCCP	78	DCCP	-	DCCP	-
DCCFAT	86		DCCFATh	83	DCCFAT	-	DCCFAT	-
DCCF	70		DCCF	-	DCNFE	-	DCCF	-
DCNFE	94		DCNFE	90	DCPpo	-	DCNFE	-
DCOM	88		DCOM	83				
			DCNSPh	68	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	37	37	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	90	89	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	51	51						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1203 /kg	NE2015	10.66 MJ/kg	MEpo	-	MErab	-
VEVI	1314 /kg	NE2015	2548 kcal/kg	MEpo	-	MErab	-
FOM-91	567 g/kg	EW2015	1.21 /kg	MEla	-		
FOMr-07	618 g/kg	StaDP	-	MEla	-		
FOMr2-07	398 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.64 /kg						
DVE-91	153 g/kg			**Broilers**		**Horses**	
DVE-07	138 g/kg			MEbr	-	NEm	-
OEB-91	89 g/kg			MEbr	-	NEm	-
OEB-07	108 g/kg			DPpo	-	EWpa	-
OEB2-07	64 g/kg					DCPho	-
DVMET-91	3.0 g/kg						
DVLYS-91	8.2 g/kg						
DVMET-07	2.7 g/kg						
DVLYS-07	7.4 g/kg						
SW	0.15 /kg						
VW	0.30 /kg						

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Wheat yeast concentrate-CP 275 - 325 g/kg DM 1010.689/2/0

Amino acids				Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
	g/16g N			standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			296	79	-	75	222	-	-
LYS	4.2	0.5	12.4	80	9.9	76	9.5	-	-
MET	1.6	0.2	4.7	82	3.9	80	3.8	-	-
CYS	1.8	0.2	5.3	64	3.4	60	3.2	-	-
THR	3.5	0.2	10.4	75	7.8	70	7.2	-	-
TRP	1.1	0.1	3.3	77	2.5	73	2.4	-	-
ILE	3.4	0.2	10.1	81	8.2	78	7.8	-	-
ARG	4.9	0.4	14.5	89	12.9	86	12.5	-	-
PHE	3.8	0.4	11.2	83	9.4	80	9.0	-	-
HIS	2.2	0.3	6.5	82	5.4	80	5.2	-	-
LEU	6.2	0.5	18.4	82	15.0	79	14.6	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	4.6	0.5	13.6	83	11.2	79	10.7	-	-
ALA	4.8	0.4	14.2	81	11.6	78	11.1	-	-
ASP	6.4	0.5	18.9	69	13.1	65	12.4	-	-
GLU	18.4	3.7	54.5	84	45.9	82	44.7	-	-
GLY	4.2	0.3	12.4	85	10.6	78	9.7	-	-
PRO	6.1	1.0	18.1	90	16.2	84	15.1	-	-
SER	4.3	0.2	12.7	77	9.8	72	9.2	-	-
Sum AA	81.5		-	-	-	-	-	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		62.7
<=C10	0.2	-
C12:0	0.3	-
C14:0	0.2	-
C16:0	23.9	-
C16:1	0.4	-
C18:0	1.8	-
C18:1	12.7	-
C:18:2	53.2	-
C18:3	3.8	-
>=C20	1.6	-
Sum FA	98.1	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	69	-
LA	56	30
AC	4	2
ETH	4	4
PR	5	3
BU	-	-
Glycerol	101.0	55.6
	% of CP	
NH3	-	

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Wheat yeast concentrate-CP > 325 g/kg DM 1010.689/3/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CP	CFAT	CFATh	CF	NFE	NFEh
mean	261	80	382	51	58	14	474	467
sdc	15	10	34	3	9	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	38	16	19	117	58	27	-	192	134
sdc	21	-	14	40	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S-i	S-o
mean	1.8	12.8	-	4.1	23.8	1.5	3.1	8.5	3.1
sdc	0.4	1.9	-	0.6	4.7	1.4	0.9	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	147	71	66	12	-	-	-
sdc	81	28	27	5	-	-	-

IP/P	-	SUGe/SUG	100	EB (meq/kg)	584
		CF_DI	0.96	CAD (meq/kg)	-143

Digestibility coëfficients (%)

Ruminants			**Pigs**		**Roosters/Laying hens**		**Rabbits**	
DCCP	81		DCCP	79	DCCP	-	DCCP	-
DCCFAT	85		DCCFATh	82	DCCFAT	-	DCCFAT	-
DCCF	70		DCCF	-	DCNFE	-	DCCF	-
DCNFE	96		DCNFE	96	DCPpo	-	DCNFE	-
DCOM	89		DCOM	87				
			DCNSPh	83	**Broilers**		**Horses**	
DVE	**1991**	**2007**	DCiSTA	100	DCCP	-	DCCP	-
%RUP	37	37	StaDCP	-	DCCFATh	-	DCOM	-
%DRUP	90	92	AppDCP	-	DC(S+S)	-		
%RUSTA	-	-			DCNFEh	-		
%DASH	65	65			DCPpo	-		
DASHmax	63	63						

Nutritional value (in DM)

Ruminants		**Pigs**		**Roosters/Laying hens**		**Rabbits**	
VEM	1189 /kg	NE2015	10.81 MJ/kg	MEpo	-	MErab	-
VEVI	1291 /kg	NE2015	2585 kcal/kg	MEpo	-	MErab	-
FOM-91	539 g/kg	EW2015	1.23 /kg	MEla	-		
FOMr-07	615 g/kg	StaDP	-	MEla	-		
FOMr2-07	412 g/kg	AppDP	-	DPpo	-		
FOMr2/FOMr	0.67 /kg						
DVE-91	183 g/kg			**Broilers**		**Horses**	
DVE-07	168 g/kg			MEbr	-	NEm	-
OEB-91	144 g/kg			MEbr	-	NEm	-
OEB-07	165 g/kg			DPpo	-	EWpa	-
OEB2-07	95 g/kg					DCPho	-
DVMET-91	3.5 g/kg						
DVLYS-91	9.3 g/kg						
DVMET-07	3.2 g/kg						
DVLYS-07	8.6 g/kg						
SW	0.09 /kg						
VW	0.30 /kg						

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Wheat yeast concentrate-CP > 325 g/kg DM 1010.689/3/0

Amino acids	g/16g N			Ileal digestible				Standardized ileal digestible	
				AA pigs				AA poultry	
				standardized		apparent			
	mean	sdc	g/kg DM	DC	g/kg DM	DC	g/kg DM	DC	g/kg DM
CP			382	79	-	76	290	-	-
LYS	4.2	0.5	16.0	80	12.8	77	12.4	-	-
MET	1.6	0.2	6.1	82	5.0	80	4.9	-	-
CYS	1.8	0.2	6.9	64	4.4	61	4.2	-	-
THR	3.5	0.2	13.4	75	10.1	71	9.5	-	-
TRP	1.1	0.1	4.2	77	3.2	73	3.1	-	-
ILE	3.4	0.2	13.0	81	10.6	79	10.2	-	-
ARG	4.9	0.4	18.7	89	16.6	87	16.2	-	-
PHE	3.8	0.4	14.5	83	12.1	81	11.8	-	-
HIS	2.2	0.3	8.4	82	6.9	80	6.7	-	-
LEU	6.2	0.5	23.7	82	19.4	80	19.0	-	-
TYR	-	-	-	-	-	-	-	-	-
VAL	4.6	0.5	17.6	83	14.5	80	14.0	-	-
ALA	4.8	0.4	18.3	81	14.9	79	14.4	-	-
ASP	6.4	0.5	24.4	69	17.0	66	16.2	-	-
GLU	18.4	3.7	70.3	84	59.2	83	58.0	-	-
GLY	4.2	0.3	16.0	85	13.7	80	12.8	-	-
PRO	6.1	1.0	23.3	90	20.9	85	19.8	-	-
SER	4.3	0.2	16.4	77	12.7	73	12.0	-	-
Sum AA	81.5		-	-	-	-	-	-	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		58.0
<=C10	0.2	-
C12:0	0.3	-
C14:0	0.2	-
C16:0	23.9	-
C16:1	0.4	-
C18:0	1.8	-
C18:1	12.7	-
C:18:2	53.2	-
C18:3	3.8	-
>=C20	1.6	-
Sum FA	98.1	-
% FA in CFAT-fraction		-

Fermentation products

	g/kg DM	sdc
FP	69	-
LA	56	30
AC	4	2
ETH	4	4
PR	5	3
BU	-	-
Glycerol	85.0	-
	% of CP	
NH3	-	

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Roughages and related products

Apples, fresh 6020.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	157	23	26	26	19	-	65	868	-
sdc	14	2	-	7	-	-	13	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	40	36	-	642	-	-	-	277	277
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	0.6	0.7	-	0.4	8.1	0.2	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	-
DCCFAT	77
DCCF	56
DCNFE	94
DCOM	88

DVE	**1991**	**2007**
%RUP	58	61
%DRUP	75	75
%RUSTA	10	-
%DASH	65	65
DASHmax	23	23

Nutritional value (in DM)

Ruminants

VEM	1130 /kg
VEVI	1251 /kg
FOM-91	823 g/kg
FOMr-07	836 g/kg
FOMr2-07	658 g/kg
FOMr2/FOMr	0.79 /kg
DVE-91	82 g/kg
DVE-07	95 g/kg
OEB-91	-114 g/kg
OEB-07	-135 g/kg
OEB2-07	-111 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.60 /kg
VW	0.55 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			26
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		19.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Barley straw 1005.508/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	884	72	43	43	26	-	423	437	-
sdc	29	27	-	11	-	-	39	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	860	860
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	3.4	0.9	-	0.9	15.1	0.4	-	1.1
sdc	1.3	0.5	-	0.4	5.9	0.4	-	0.3

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	117	27	22	3	0.9	0.0	0.1
sdc	83	15	11	1	0.5	0.0	0.1

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants

DCCP	17	
DCCFAT	62	
DCCF	55	
DCNFE	43	
DCOM	48	
DVE	**1991**	**2007**
%RUP	68	68
%DRUP	70	70
%RUSTA	-	-
%DASH	35	35
DASHmax	31	31

Nutritional value (in DM)

Ruminants

VEM	521 /kg
VEVI	450 /kg
FOM-91	389 g/kg
FOMr-07	263 g/kg
FOMr2-07	26 g/kg
FOMr2/FOMr	0.10 /kg
DVE-91	20 g/kg
DVE-07	0 g/kg
OEB-91	-48 g/kg
OEB-07	-18 g/kg
OEB2-07	8 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	4.30 /kg
VW	1.66 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			43
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	19 %
DCOM	37 %
NEm	3.19 MJ/kg
NEm	762 kcal/kg
EWpa	0.357 /kg
DCPho	8 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		26.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Bean straw (Phaseolus) 2001.508/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	863	113	107	107	15	-	380	385	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	765	765
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	13.7	1.7	-	1.8	15.4	1.0	4.5	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	311
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants

DCCP	62
DCCFAT	38
DCCF	50
DCNFE	72
DCOM	61

DVE	**1991**	**2007**
%RUP	68	68
%DRUP	75	75
%RUSTA	-	-
%DASH	50	50
DASHmax	67	67

Nutritional value (in DM)

Ruminants

VEM	641 /kg
VEVI	602 /kg
FOM-91	451 g/kg
FOMr-07	256 g/kg
FOMr2-07	41 g/kg
FOMr2/FOMr	0.16 /kg
DVE-91	72 g/kg
DVE-07	42 g/kg
OEB-91	-41 g/kg
OEB-07	4 g/kg
OEB2-07	23 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	4.30 /kg
VW	1.66 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			107
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		15.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Bean straw (Vicia) 2002.508/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	840	73	80	80	15	-	470	362	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	832	832
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	13.7	1.7	-	1.8	15.4	1.0	4.5	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	311
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants

DCCP	46
DCCFAT	53
DCCF	42
DCNFE	65
DCOM	52

DVE	**1991**	**2007**
%RUP	68	68
%DRUP	75	75
%RUSTA	-	-
%DASH	50	50
DASHmax	45	45

Nutritional value (in DM)

Ruminants

VEM	554 /kg
VEVI	487 /kg
FOM-91	408 g/kg
FOMr-07	267 g/kg
FOMr2-07	35 g/kg
FOMr2/FOMr	0.13 /kg
DVE-91	48 g/kg
DVE-07	24 g/kg
OEB-91	-41 g/kg
OEB-07	-6 g/kg
OEB2-07	17 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	4.30 /kg
VW	1.66 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			80
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		15.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Beetroot 4010.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	136	78	91	91	20	-	74	737	-
sdc	33	23	-	34	-	-	20	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	475	-	-	-	353	353
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	3.6	-	-	34.5	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants		
DCCP	58	
DCCFAT	58	
DCCF	67	
DCNFE	96	
DCOM	89	
DVE	**1991**	**2007**
%RUP	58	61
%DRUP	60	60
%RUSTA	-	-
%DASH	50	50
DASHmax	48	48

Nutritional value (in DM)

Ruminants	
VEM	1080 /kg
VEVI	1189 /kg
FOM-91	749 g/kg
FOMr-07	721 g/kg
FOMr2-07	492 g/kg
FOMr2/FOMr	0.68 /kg
DVE-91	96 g/kg
DVE-07	102 g/kg
OEB-91	-79 g/kg
OEB-07	-88 g/kg
OEB2-07	-75 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.00 /kg
VW	0.69 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			91
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		20.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Cabbage (Brussels sprouts) 6023.102/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	162	84	227	227	27	-	139	523	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	200	-	-	-	469	469
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	6.6	-	-	27.8	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	87
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	88

DVE	**1991**	**2007**
%RUP	29	31
%DRUP	65	65
%RUSTA	-	-
%DASH	65	65
DASHmax	67	67

Nutritional value (in DM)

Ruminants

VEM	1072 /kg
VEVI	1156 /kg
FOM-91	712 g/kg
FOMr-07	614 g/kg
FOMr2-07	281 g/kg
FOMr2/FOMr	0.46 /kg
DVE-91	105 g/kg
DVE-07	91 g/kg
OEB-91	46 g/kg
OEB-07	68 g/kg
OEB2-07	16 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.29 /kg
VW	0.90 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			227
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		27.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Cabbage (Brussels sprouts, stem and leaves) 6023.101/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	180	110	187	187	35	-	180	488	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	668	668
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	3.7	-	-	26.3	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	85
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	84

DVE	**1991**	**2007**
%RUP	35	36
%DRUP	65	65
%RUSTA	-	-
%DASH	65	65
DASHmax	85	85

Nutritional value (in DM)

Ruminants

VEM	1007 /kg
VEVI	1074 /kg
FOM-91	645 g/kg
FOMr-07	485 g/kg
FOMr2-07	89 g/kg
FOMr2/FOMr	0.18 /kg
DVE-91	93 g/kg
DVE-07	70 g/kg
OEB-91	18 g/kg
OEB-07	54 g/kg
OEB2-07	35 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.82 /kg
VW	0.90 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			187
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Cabbage (cauliflower) 6023.103/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	72	138	295	295	22	-	111	434	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	150	-	-	-	400	400
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	6.0	-	-	42.5	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	91
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	90

DVE	**1991**	**2007**
%RUP	25	27
%DRUP	65	65
%RUSTA	-	-
%DASH	50	50
DASHmax	81	81

Nutritional value (in DM)

Ruminants

VEM	1030 /kg
VEVI	1109 /kg
FOM-91	679 g/kg
FOMr-07	601 g/kg
FOMr2-07	260 g/kg
FOMr2/FOMr	0.43 /kg
DVE-91	106 g/kg
DVE-07	92 g/kg
OEB-91	111 g/kg
OEB-07	132 g/kg
OEB2-07	46 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.92 /kg
VW	0.90 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			295
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		22.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Cabbage (marrowstem) 6023.105/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	120	130	172	172	35	-	180	483	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	663	663
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	2.5	-	-	23.0	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	84
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	83

DVE	**1991**	**2007**
%RUP	36	37
%DRUP	65	65
%RUSTA	-	-
%DASH	65	65
DASHmax	99	99

Nutritional value (in DM)

Ruminants

VEM	981 /kg
VEVI	1045 /kg
FOM-91	628 g/kg
FOMr-07	464 g/kg
FOMr2-07	82 g/kg
FOMr2/FOMr	0.18 /kg
DVE-91	88 g/kg
DVE-07	65 g/kg
OEB-91	9 g/kg
OEB-07	45 g/kg
OEB2-07	31 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.82 /kg
VW	0.90 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			172
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Cabbage (red/white/sav.), fresh 6023.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	105	116	181	181	35	-	163	505	-
sdc	23	39	-	32	-	-	37	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	200	-	-	-	475	475
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	3.7	-	-	33.0	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	85
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	85

DVE	**1991**	**2007**
%RUP	34	36
%DRUP	65	65
%RUSTA	-	-
%DASH	65	65
DASHmax	89	89

Nutritional value (in DM)

Ruminants

VEM	1007 /kg
VEVI	1079 /kg
FOM-91	656 g/kg
FOMr-07	564 g/kg
FOMr2-07	261 g/kg
FOMr2/FOMr	0.46 /kg
DVE-91	93 g/kg
DVE-07	80 g/kg
OEB-91	14 g/kg
OEB-07	34 g/kg
OEB2-07	3 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.60 /kg
VW	0.90 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			181
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Cabbage (turnip cabbage), fresh 4012.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	110	130	134	134	5	-	90	641	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	731	731
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	2.0	-	-	25.0	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	67
DCCFAT	40
DCCF	75
DCNFE	95
DCOM	88

DVE	**1991**	**2007**
%RUP	58	61
%DRUP	65	65
%RUSTA	-	-
%DASH	35	35
DASHmax	54	54

Nutritional value (in DM)

Ruminants

VEM	1013 /kg
VEVI	1107 /kg
FOM-91	686 g/kg
FOMr-07	541 g/kg
FOMr2-07	93 g/kg
FOMr2/FOMr	0.17 /kg
DVE-91	107 g/kg
DVE-07	97 g/kg
OEB-91	-54 g/kg
OEB-07	-39 g/kg
OEB2-07	0 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.00 /kg
VW	0.69 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			134
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		5.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Cabbage (winterrape) 6023.104/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	100	150	201	201	35	-	175	439	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	614	614
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	2.5	-	-	23.0	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	87
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	83

DVE	**1991**	**2007**
%RUP	34	35
%DRUP	65	65
%RUSTA	-	-
%DASH	65	65
DASHmax	114	114

Nutritional value (in DM)

Ruminants

VEM	958 /kg
VEVI	1017 /kg
FOM-91	606 g/kg
FOMr-07	471 g/kg
FOMr2-07	92 g/kg
FOMr2/FOMr	0.19 /kg
DVE-91	89 g/kg
DVE-07	68 g/kg
OEB-91	34 g/kg
OEB-07	67 g/kg
OEB2-07	39 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.76 /kg
VW	0.90 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			201
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Carrots 4006.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	112	91	82	82	16	-	89	722	-
sdc	25	14	-	23	-	-	18	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	70	-	-	344	-	95	-	479	479
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	4.0	3.2	-	1.4	27.8	6.0	5.0	-
sdc	0.4	0.7	-	0.4	2.9	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	831
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants

DCCP	59	
DCCFAT	54	
DCCF	87	
DCNFE	94	
DCOM	90	
DVE	**1991**	**2007**
%RUP	58	61
%DRUP	60	60
%RUSTA	-	-
%DASH	50	50
DASHmax	55	55

Nutritional value (in DM)

Ruminants

VEM	1071 /kg
VEVI	1182 /kg
FOM-91	751 g/kg
FOMr-07	678 g/kg
FOMr2-07	382 g/kg
FOMr2/FOMr	0.56 /kg
DVE-91	93 g/kg
DVE-07	94 g/kg
OEB-91	-83 g/kg
OEB-07	-84 g/kg
OEB2-07	-57 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.00 /kg
VW	0.69 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			82
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	78 %
DCOM	98 %
NEm	10.99 MJ/kg
NEm	2627 kcal/kg
EWpa	1.231 /kg
DCPho	64 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		16.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction -

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Chicory leaves, ensiled 4015.639/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	175	341	115	115	20	-	141	383	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	524	524
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	34
DCCFAT	38
DCCF	66
DCNFE	64
DCOM	58

DVE	**1991**	**2007**
%RUP	22	22
%DRUP	60	60
%RUSTA	-	-
%DASH	35	35
DASHmax	135	135

Nutritional value (in DM)

Ruminants

VEM	464 /kg
VEVI	434 /kg
FOM-91	339 g/kg
FOMr-07	362 g/kg
FOMr2-07	106 g/kg
FOMr2/FOMr	0.29 /kg
DVE-91	7 g/kg
DVE-07	3 g/kg
OEB-91	37 g/kg
OEB-07	43 g/kg
OEB2-07	63 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.56 /kg
VW	1.00 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			115
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		20.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Chicory leaves, fresh 4015.642/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	156	202	189	189	36	-	133	440	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	573	573
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	79
DCCFAT	47
DCCF	79
DCNFE	82
DCOM	79

DVE	**1991**	**2007**
%RUP	37	39
%DRUP	80	80
%RUSTA	-	-
%DASH	35	35
DASHmax	81	81

Nutritional value (in DM)

Ruminants

VEM	835 /kg
VEVI	870 /kg
FOM-91	523 g/kg
FOMr-07	430 g/kg
FOMr2-07	82 g/kg
FOMr2/FOMr	0.19 /kg
DVE-91	90 g/kg
DVE-07	72 g/kg
OEB-91	32 g/kg
OEB-07	58 g/kg
OEB2-07	35 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.93 /kg
VW	0.92 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			189
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		36.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Chicory roots, forced, clean 6019.644/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	149	82	51	51	10	-	89	769	-
sdc	-	16	-	14	-	-	17	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	210	-	-	-	655	655
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	3.3	2.5	-	0.9	21.8	0.9	-	-
sdc	1.4	0.5	-	0.2	2.6	0.9	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	94	4	15	10	-	-	-
sdc	103	2	1	3	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	61
DCCFAT	65
DCCF	71
DCNFE	89
DCOM	85

DVE	**1991**	**2007**
%RUP	58	61
%DRUP	65	65
%RUSTA	-	-
%DASH	35	35
DASHmax	35	35

Nutritional value (in DM)

Ruminants

VEM	1026 /kg
VEVI	1122 /kg
FOM-91	745 g/kg
FOMr-07	656 g/kg
FOMr2-07	272 g/kg
FOMr2/FOMr	0.41 /kg
DVE-91	76 g/kg
DVE-07	76 g/kg
OEB-91	-93 g/kg
OEB-07	-93 g/kg
OEB2-07	-41 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.00 /kg
VW	0.69 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			51
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	61 %
DCOM	81 %
NEm	8.35 MJ/kg
NEm	1996 kcal/kg
EWpa	0.935 /kg
DCPho	31 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		10.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Chicory roots, not forced 6019.643/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	200	100	65	65	10	-	60	765	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	110	-	-	-	719	719
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	2.2	-	-	18.4	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	49
DCCFAT	45
DCCF	86
DCNFE	97
DCOM	92

DVE	**1991**	**2007**
%RUP	58	61
%DRUP	65	65
%RUSTA	-	-
%DASH	35	35
DASHmax	42	42

Nutritional value (in DM)

Ruminants

VEM	1110 /kg
VEVI	1239 /kg
FOM-91	783 g/kg
FOMr-07	610 g/kg
FOMr2-07	187 g/kg
FOMr2/FOMr	0.31 /kg
DVE-91	92 g/kg
DVE-07	82 g/kg
OEB-91	-94 g/kg
OEB-07	-79 g/kg
OEB2-07	-25 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.80 /kg
VW	0.69 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			65
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	50 %
DCOM	84 %
NEm	8.14 MJ/kg
NEm	1945 kcal/kg
EWpa	0.912 /kg
DCPho	33 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		10.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Clover red, artificially dried 5003.610/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	899	116	189	189	40	-	239	416	-
sdc	27	29	-	47	-	-	55	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	655	655
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	14.6	3.3	-	3.5	22.2	1.8	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	62
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	68

DVE	**1991**	**2007**
%RUP	40	48
%DRUP	73	73
%RUSTA	-	-
%DASH	50	50
DASHmax	69	69

Nutritional value (in DM)

Ruminants

VEM	784 /kg
VEVI	779 /kg
FOM-91	489 g/kg
FOMr-07	459 g/kg
FOMr2-07	91 g/kg
FOMr2/FOMr	0.20 /kg
DVE-91	83 g/kg
DVE-07	81 g/kg
OEB-91	32 g/kg
OEB-07	37 g/kg
OEB2-07	38 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	2.95 /kg
VW	0.36 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			189
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		40.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Clover red, ensiled 5003.602/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	364	153	196	196	34	-	270	347	-
sdc	95	38	-	52	-	-	87	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	42	-	-	-	513	513
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	10.6	2.9	-	2.9	38.6	0.8	-	-
sdc	-	-	-	0.9	15.0	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	174	17	24	11	2.6	0.0	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	73
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	64

DVE	**1991**	**2007**
%RUP	27	27
%DRUP	50	50
%RUSTA	-	-
%DASH	50	50
DASHmax	89	89

Nutritional value (in DM)

Ruminants

VEM	672 /kg
VEVI	643 /kg
FOM-91	413 g/kg
FOMr-07	523 g/kg
FOMr2-07	256 g/kg
FOMr2/FOMr	0.49 /kg
DVE-91	39 g/kg
DVE-07	38 g/kg
OEB-91	75 g/kg
OEB-07	77 g/kg
OEB2-07	85 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	2.86 /kg
VW	0.93 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			196
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		34.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	77	-
LA	61	-
AC	15	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Clover red, fresh 5003.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	130	116	208	208	40	-	218	418	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	47	636	636
sdc	-	-	-	-	-	-	11	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	81
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	71

DVE	**1991**	**2007**
%RUP	41	43
%DRUP	88	88
%RUSTA	-	-
%DASH	50	50
DASHmax	69	69

Nutritional value (in DM)

Ruminants

VEM	822 /kg
VEVI	827 /kg
FOM-91	502 g/kg
FOMr-07	475 g/kg
FOMr2-07	92 g/kg
FOMr2/FOMr	0.19 /kg
DVE-91	108 g/kg
DVE-07	95 g/kg
OEB-91	38 g/kg
OEB-07	55 g/kg
OEB2-07	37 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.60 /kg
VW	0.98 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			208
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		40.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Clover red, hay 5003.606/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	830	100	182	182	35	-	344	339	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	683	683
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	3.1	-	-	27.9	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	61
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	59

DVE	**1991**	**2007**
%RUP	51	51
%DRUP	75	75
%RUSTA	-	-
%DASH	50	50
DASHmax	60	60

Nutritional value (in DM)

Ruminants

VEM	649 /kg
VEVI	602 /kg
FOM-91	404 g/kg
FOMr-07	417 g/kg
FOMr2-07	91 g/kg
FOMr2/FOMr	0.22 /kg
DVE-91	84 g/kg
DVE-07	71 g/kg
OEB-91	19 g/kg
OEB-07	37 g/kg
OEB2-07	50 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	4.35 /kg
VW	1.40 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			182
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Clover red, straw 5003.508/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	830	68	100	100	24	-	476	332	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	808	808
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	44
DCCFAT	33
DCCF	37
DCNFE	50
DCOM	42

DVE	**1991**	**2007**
%RUP	68	68
%DRUP	70	70
%RUSTA	-	-
%DASH	50	50
DASHmax	42	42

Nutritional value (in DM)

Ruminants

VEM	445 /kg
VEVI	357 /kg
FOM-91	302 g/kg
FOMr-07	267 g/kg
FOMr2-07	40 g/kg
FOMr2/FOMr	0.15 /kg
DVE-91	39 g/kg
DVE-07	25 g/kg
OEB-91	-20 g/kg
OEB-07	1 g/kg
OEB2-07	22 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	4.30 /kg
VW	1.66 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			100
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		24.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Cucumber, fresh 6006.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	58	102	156	156	20	-	136	586	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	391	-	-	-	345	345
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	38.8	6.1	-	10.6	38.5	-	1.9	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	230	106	65	2	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	57
DCCFAT	40
DCCF	70
DCNFE	90
DCOM	80

DVE	**1991**	**2007**
%RUP	58	61
%DRUP	75	75
%RUSTA	-	-
%DASH	65	65
DASHmax	79	79

Nutritional value (in DM)

Ruminants

VEM	907 /kg
VEVI	953 /kg
FOM-91	610 g/kg
FOMr-07	662 g/kg
FOMr2-07	420 g/kg
FOMr2/FOMr	0.63 /kg
DVE-91	116 g/kg
DVE-07	126 g/kg
OEB-91	-35 g/kg
OEB-07	-51 g/kg
OEB2-07	-54 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.00 /kg
VW	0.55 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			156
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		20.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Endive, fresh 6010.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	52	164	290	290	22	-	122	402	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	156	-	-	-	373	373
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	5.5	-	1.3	74.6	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	85
DCCFAT	55
DCCF	80
DCNFE	91
DCOM	86

DVE	**1991**	**2007**
%RUP	26	28
%DRUP	70	70
%RUSTA	-	-
%DASH	65	65
DASHmax	124	124

Nutritional value (in DM)

Ruminants

VEM	954 /kg
VEVI	1015 /kg
FOM-91	621 g/kg
FOMr-07	582 g/kg
FOMr2-07	260 g/kg
FOMr2/FOMr	0.45 /kg
DVE-91	102 g/kg
DVE-07	92 g/kg
OEB-91	112 g/kg
OEB-07	127 g/kg
OEB2-07	43 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.00 /kg
VW	0.92 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			290
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		22.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Field beans (Vicia faba) ensiled 5001.602/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	326	87	178	164	24	-	292	434	-
sdc	132	17	-	21	-	-	43	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	146	-	1	454	-	-	486	32
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	15.2	2.7	-	1.5	25.9	0.8	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	70
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	64

DVE	**1991**	**2007**
%RUP	35	36
%DRUP	55	55
%RUSTA	14	17
%DASH	50	50
DASHmax	53	53

Nutritional value (in DM)

Ruminants

VEM	709 /kg
VEVI	681 /kg
FOM-91	427 g/kg
FOMr-07	501 g/kg
FOMr2-07	284 g/kg
FOMr2/FOMr	0.57 /kg
DVE-91	51 g/kg
DVE-07	47 g/kg
OEB-91	44 g/kg
OEB-07	52 g/kg
OEB2-07	66 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	2.52 /kg
VW	0.90 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			164
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		24.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	93	-
LA	75	-
AC	19	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	8

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Fodderbeets, fresh 4005.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	139	95	78	78	10	-	59	757	-
sdc	17	25	-	17	-	-	9	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	587	-	-	-	247	247
sdc	-	-	-	94	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	1.4	2.0	-	1.4	22.9	2.3	-	-
sdc	0.4	0.4	-	0.3	4.6	1.6	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	291	69	89	-	-	-	-
sdc	244	43	52	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	62	
DCCFAT	45	
DCCF	71	
DCNFE	95	
DCOM	90	
DVE	**1991**	**2007**
%RUP	58	61
%DRUP	60	60
%RUSTA	-	-
%DASH	50	50
DASHmax	57	57

Nutritional value (in DM)

Ruminants

VEM	1056 /kg
VEVI	1169 /kg
FOM-91	760 g/kg
FOMr-07	752 g/kg
FOMr2-07	583 g/kg
FOMr2/FOMr	0.78 /kg
DVE-91	92 g/kg
DVE-07	101 g/kg
OEB-91	-86 g/kg
OEB-07	-99 g/kg
OEB2-07	-92 g/kg
DVMET-91	1.9 g/kg
DVLYS-91	5.9 g/kg
DVMET-07	2.2 g/kg
DVLYS-07	6.6 g/kg
SW	1.05 /kg
VW	0.69 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			78
LYS	3.0	-	2.4
MET	0.9	-	0.7
CYS	0.7	-	0.5
THR	2.5	-	2.0
TRP	-	-	-
ILE	2.2	-	1.7
ARG	2.6	-	2.0
PHE	1.6	-	1.3
HIS	1.5	-	1.2
LEU	3.5	-	2.7
TYR	2.2	-	1.7
VAL	2.8	-	2.2
ALA	3.6	-	2.8
ASP	7.5	-	5.9
GLU	23.1	-	18.1
GLY	2.4	-	1.9
PRO	2.2	-	1.7
SER	3.1	-	2.4
Sum AA	65.4		-

Horses

DCCP	67 %
DCOM	86 %
NEm	9.92 MJ/kg
NEm	2370 kcal/kg
EWpa	1.111 /kg
DCPho	53 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		10.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Gherkin, fresh 6018.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	49	84	226	226	21	-	167	502	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	335	-	-	-	346	346
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	63
DCCFAT	41
DCCF	70
DCNFE	90
DCOM	79

DVE	**1991**	**2007**
%RUP	58	61
%DRUP	75	75
%RUSTA	-	-
%DASH	65	65
DASHmax	67	67

Nutritional value (in DM)

Ruminants

VEM	905 /kg
VEVI	937 /kg
FOM-91	568 g/kg
FOMr-07	637 g/kg
FOMr2-07	376 g/kg
FOMr2/FOMr	0.59 /kg
DVE-91	146 g/kg
DVE-07	154 g/kg
OEB-91	-4 g/kg
OEB-07	-18 g/kg
OEB2-07	-38 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.00 /kg
VW	0.55 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			226
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		21.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass hay, a) poor quality 5010.701/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	845	89	106	106	28	-	334	443	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	20	6	-	98	668	384	66	676	8
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.0	3.0	-	2.3	34.1	2.3	12.3	3.0
sdc	1.0	0.5	-	0.4	4.2	0.9	-	0.5

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	443	98	42	8	2.1	-	0.2
sdc	211	67	8	1	1.6	-	0.1

IP/P	-	SUGe/SUG	-	EB (meq/kg)	626
		CF_DI	0.97	CAD (meq/kg)	439

Digestibility coëfficients (%)

Ruminants

DCCP	52
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	63

DVE	**1991**	**2007**
%RUP	43	43
%DRUP	66	65
%RUSTA	-	-
%DASH	50	50
DASHmax	54	54

Nutritional value (in DM)

Ruminants

VEM	698 /kg
VEVI	670 /kg
FOM-91	503 g/kg
FOMr-07	415 g/kg
FOMr2-07	155 g/kg
FOMr2/FOMr	0.37 /kg
DVE-91	53 g/kg
DVE-07	37 g/kg
OEB-91	-20 g/kg
OEB-07	4 g/kg
OEB2-07	14 g/kg
DVMET-91	1.3 g/kg
DVLYS-91	3.5 g/kg
DVMET-07	1.0 g/kg
DVLYS-07	2.4 g/kg
SW	4.21 /kg
VW	1.45 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			106
LYS	4.2	0.6	4.5
MET	1.6	0.1	1.7
CYS	1.1	0.1	1.2
THR	4.0	0.2	4.2
TRP	1.3	0.2	1.4
ILE	3.8	0.2	4.0
ARG	4.4	0.4	4.7
PHE	4.8	0.4	5.1
HIS	1.7	0.3	1.8
LEU	7.2	0.4	7.6
TYR	2.7	0.3	2.9
VAL	5.0	0.2	5.3
ALA	5.9	0.3	6.3
ASP	8.8	0.7	9.3
GLU	9.9	0.7	10.5
GLY	4.9	0.3	5.2
PRO	5.6	0.7	5.9
SER	3.9	0.2	4.1
Sum AA	80.8		86

Horses

DCCP	52 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		28.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass hay, b) average quality 5010.702/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	845	100	132	132	28	-	288	452	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	20	6	-	98	585	297	34	639	54
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.0	3.4	-	2.3	34.1	2.3	12.3	3.0
sdc	1.0	0.5	-	0.4	4.2	0.9	-	0.5

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	443	98	42	8	2.1	-	0.2
sdc	211	67	8	1	1.6	-	0.1

IP/P	-	SUGe/SUG	-	EB (meq/kg)	626
		CF_DI	0.97	CAD (meq/kg)	439

Digestibility coëfficients (%)

Ruminants

DCCP	60
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	68

DVE	**1991**	**2007**
%RUP	46	46
%DRUP	67	67
%RUSTA	-	-
%DASH	50	50
DASHmax	60	60

Nutritional value (in DM)

Ruminants

VEM	756 /kg
VEVI	746 /kg
FOM-91	522 g/kg
FOMr-07	456 g/kg
FOMr2-07	172 g/kg
FOMr2/FOMr	0.38 /kg
DVE-91	70 g/kg
DVE-07	56 g/kg
OEB-91	-14 g/kg
OEB-07	8 g/kg
OEB2-07	20 g/kg
DVMET-91	1.6 g/kg
DVLYS-91	4.3 g/kg
DVMET-07	1.3 g/kg
DVLYS-07	3.4 g/kg
SW	3.60 /kg
VW	1.40 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			132
LYS	4.2	0.6	5.5
MET	1.6	0.1	2.1
CYS	1.1	0.1	1.5
THR	4.0	0.2	5.3
TRP	1.3	0.2	1.7
ILE	3.8	0.2	5.0
ARG	4.4	0.4	5.8
PHE	4.8	0.4	6.3
HIS	1.7	0.3	2.2
LEU	7.2	0.4	9.5
TYR	2.7	0.3	3.6
VAL	5.0	0.2	6.6
ALA	5.9	0.3	7.8
ASP	8.8	0.7	11.6
GLU	9.9	0.7	13.1
GLY	4.9	0.3	6.5
PRO	5.6	0.7	7.4
SER	3.9	0.2	5.1
Sum AA	80.8		107

Horses

DCCP	60 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		28.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	-	

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Grass hay, c) good quality 5010.703/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	845	109	170	170	28	-	244	449	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	20	6	-	98	512	270	-	592	80
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.0	3.9	-	2.3	34.1	2.3	12.3	3.0
sdc	1.0	0.5	-	0.4	4.2	0.9	-	0.5

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	443	98	42	8	2.1	-	0.2
sdc	211	67	8	1	1.6	-	0.1

IP/P	-	SUGe/SUG	-	EB (meq/kg)	626
		CF_DI	0.97	CAD (meq/kg)	439

Digestibility coëfficients (%)

Ruminants

DCCP	68
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	74

DVE	**1991**	**2007**
%RUP	41	41
%DRUP	67	72
%RUSTA	-	-
%DASH	50	50
DASHmax	65	65

Nutritional value (in DM)

Ruminants

VEM	835 /kg
VEVI	848 /kg
FOM-91	559 g/kg
FOMr-07	499 g/kg
FOMr2-07	192 g/kg
FOMr2/FOMr	0.38 /kg
DVE-91	84 g/kg
DVE-07	73 g/kg
OEB-91	8 g/kg
OEB-07	31 g/kg
OEB2-07	32 g/kg
DVMET-91	1.9 g/kg
DVLYS-91	5.1 g/kg
DVMET-07	1.6 g/kg
DVLYS-07	4.3 g/kg
SW	3.02 /kg
VW	1.35 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			170
LYS	4.2	0.6	7.1
MET	1.6	0.1	2.7
CYS	1.1	0.1	1.9
THR	4.0	0.2	6.8
TRP	1.3	0.2	2.2
ILE	3.8	0.2	6.5
ARG	4.4	0.4	7.5
PHE	4.8	0.4	8.2
HIS	1.7	0.3	2.9
LEU	7.2	0.4	12.2
TYR	2.7	0.3	4.6
VAL	5.0	0.2	8.5
ALA	5.9	0.3	10.0
ASP	8.8	0.7	15.0
GLU	9.9	0.7	16.8
GLY	4.9	0.3	8.3
PRO	5.6	0.7	9.5
SER	3.9	0.2	6.6
Sum AA	80.8		137

Horses

DCCP	68 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		28.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass hay, d) horses, fine 5010.704/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	843	81	136	136	28	-	256	499	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	160	-	-	-	601	601
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.0	3.5	-	2.3	19.6	2.3	12.3	3.0
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	443	98	42	8	2.1	-	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	255	
		CF_DI	0.97	CAD (meq/kg)	68	

Digestibility coëfficients (%)

Ruminants

DCCP	61	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	71	
DVE	**1991**	**2007**
%RUP	-	-
%DRUP	-	-
%RUSTA	-	-
%DASH	-	-
DASHmax	-	-

Nutritional value (in DM)

Ruminants

VEM	-
VEVI	-
FOM-91	-
FOMr-07	-
FOMr2-07	-
FOMr2/FOMr	-
DVE-91	-
DVE-07	-
OEB-91	-
OEB-07	-
OEB2-07	-
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	-
VW	-

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			136
LYS	4.2	-	5.7
MET	1.6	-	2.2
CYS	1.1	-	1.5
THR	4.0	-	5.4
TRP	1.3	-	1.8
ILE	3.8	-	5.2
ARG	4.4	-	6.0
PHE	4.8	-	6.5
HIS	1.7	-	2.3
LEU	7.2	-	9.8
TYR	2.7	-	3.7
VAL	5.0	-	6.8
ALA	5.9	-	8.0
ASP	8.8	-	12.0
GLU	9.9	-	13.5
GLY	4.9	-	6.7
PRO	5.6	-	7.6
SER	3.9	-	5.3
Sum AA	80.8		110

Horses

DCCP	61 %
DCOM	65 %
NEm	6.61 MJ/kg
NEm	1580 kcal/kg
EWpa	0.740 /kg
DCPho	80 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		28.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass hay, e) horses, middle 5010.705/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	835	75	95	95	28	-	308	494	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	120	-	-	-	686	686
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.0	2.8	-	2.3	18.5	2.3	12.3	3.0
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	443	98	42	8	2.1	-	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	227	
		CF_DI	0.97	CAD (meq/kg)	40	

Digestibility coëfficients (%)

Ruminants

DCCP	48	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	65	

DVE	**1991**	**2007**
%RUP	-	-
%DRUP	-	-
%RUSTA	-	-
%DASH	-	-
DASHmax	-	-

Nutritional value (in DM)

Ruminants

VEM	-
VEVI	-
FOM-91	-
FOMr-07	-
FOMr2-07	-
FOMr2/FOMr	-
DVE-91	-
DVE-07	-
OEB-91	-
OEB-07	-
OEB2-07	-
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	-
VW	-

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			95
LYS	4.2	-	4.0
MET	1.6	-	1.5
CYS	1.1	-	1.0
THR	4.0	-	3.8
TRP	1.3	-	1.2
ILE	3.8	-	3.6
ARG	4.4	-	4.2
PHE	4.8	-	4.6
HIS	1.7	-	1.6
LEU	7.2	-	6.8
TYR	2.7	-	2.6
VAL	5.0	-	4.8
ALA	5.9	-	5.6
ASP	8.8	-	8.4
GLU	9.9	-	9.4
GLY	4.9	-	4.7
PRO	5.6	-	5.3
SER	3.9	-	3.7
Sum AA	80.8		77

Horses

DCCP	48 %
DCOM	58 %
NEm	5.63 MJ/kg
NEm	1346 kcal/kg
EWpa	0.631 /kg
DCPho	44 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		28.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass hay, f) horses, course 5010.711/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	839	105	78	78	28	-	359	430	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	89	-	-	-	703	703
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.0	2.4	-	2.3	17.2	2.3	12.3	3.0
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	443	98	42	8	2.1	-	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	194	
		CF_DI	0.97	CAD (meq/kg)	6	

Digestibility coëfficients (%)

Ruminants

DCCP	38	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	62	

DVE	**1991**	**2007**
%RUP	-	-
%DRUP	-	-
%RUSTA	-	-
%DASH	-	-
DASHmax	-	-

Nutritional value (in DM)

Ruminants

VEM	-
VEVI	-
FOM-91	-
FOMr-07	-
FOMr2-07	-
FOMr2/FOMr	-
DVE-91	-
DVE-07	-
OEB-91	-
OEB-07	-
OEB2-07	-
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	-
VW	-

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			78
LYS	4.2	-	3.3
MET	1.6	-	1.2
CYS	1.1	-	0.9
THR	4.0	-	3.1
TRP	1.3	-	1.0
ILE	3.8	-	3.0
ARG	4.4	-	3.4
PHE	4.8	-	3.7
HIS	1.7	-	1.3
LEU	7.2	-	5.6
TYR	2.7	-	2.1
VAL	5.0	-	3.9
ALA	5.9	-	4.6
ASP	8.8	-	6.9
GLU	9.9	-	7.7
GLY	4.9	-	3.8
PRO	5.6	-	4.4
SER	3.9	-	3.0
Sum AA	80.8		63

Horses

DCCP	38 %
DCOM	54 %
NEm	4.91 MJ/kg
NEm	1172 kcal/kg
EWpa	0.549 /kg
DCPho	30 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		28.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass seed straw 5010.508/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	854	65	62	62	15	-	370	487	-
sdc	32	17	-	16	-	-	32	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	59	-	-	-	801	801
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	3.6	1.9	-	1.2	16.2	1.0	-	1.6
sdc	0.9	0.4	-	0.4	4.0	0.7	-	0.4

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	152	67	28	4	1.4	0.0	0.1
sdc	65	64	12	2	0.9	0.0	0.0

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants

DCCP	36	
DCCFAT	65	
DCCF	58	
DCNFE	54	
DCOM	55	
DVE	**1991**	**2007**
%RUP	68	68
%DRUP	70	70
%RUSTA	-	-
%DASH	50	50
DASHmax	41	41

Nutritional value (in DM)

Ruminants

VEM	600 /kg
VEVI	548 /kg
FOM-91	453 g/kg
FOMr-07	308 g/kg
FOMr2-07	85 g/kg
FOMr2/FOMr	0.28 /kg
DVE-91	42 g/kg
DVE-07	20 g/kg
OEB-91	-52 g/kg
OEB-07	-20 g/kg
OEB2-07	3 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	4.30 /kg
VW	1.66 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			62
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	36 %
DCOM	45 %
NEm	4.02 MJ/kg
NEm	960 kcal/kg
EWpa	0.450 /kg
DCPho	22 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		15.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass silage, a) clay soil, before 21 June 5010.140/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	450	94	185	168	37	-	231	470	-
sdc	-	3	-	32	-	-	21	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	86	532	303	24	571	39
sdc	-	-	-	33	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.7	4.1	-	2.1	34.3	2.6	13.1	2.9
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	532	74	34	8	1.8	0.4	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	622
		CF_DI	0.97	CAD (meq/kg)	441

Digestibility coëfficients (%)

Ruminants		
DCCP	70	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	79	
DVE	**1991**	**2007**
%RUP	33	33
%DRUP	73	64
%RUSTA	-	-
%DASH	50	50
DASHmax	57	57

Nutritional value (in DM)

Ruminants	
VEM	945 /kg
VEVI	987 /kg
FOM-91	601 g/kg
FOMr-07	534 g/kg
FOMr2-07	239 g/kg
FOMr2/FOMr	0.45 /kg
DVE-91	89 g/kg
DVE-07	66 g/kg
OEB-91	27 g/kg
OEB-07	54 g/kg
OEB2-07	63 g/kg
DVMET-91	1.8 g/kg
DVLYS-91	5.0 g/kg
DVMET-07	1.3 g/kg
DVLYS-07	3.7 g/kg
SW	2.69 /kg
VW	0.98 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			168
LYS	3.3	0.5	5.5
MET	1.2	0.2	2.0
CYS	0.7	0.2	1.2
THR	3.4	0.4	5.7
TRP	1.0	0.2	1.7
ILE	3.7	0.4	6.2
ARG	2.5	0.6	4.2
PHE	4.3	0.5	7.2
HIS	1.4	0.3	2.4
LEU	6.3	0.6	10.6
TYR	2.2	0.5	3.7
VAL	4.9	0.4	8.2
ALA	6.0	0.7	10.1
ASP	7.5	0.9	12.6
GLU	7.4	0.8	12.4
GLY	4.3	0.4	7.2
PRO	5.2	1.0	8.7
SER	3.2	0.4	5.4
Sum AA	68.5		115

Horses

DCCP	70 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		37.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	36	-
LA	30	-
AC	6	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	9

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Grass silage, b) sandy soil, before 21 June 5010.141/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	450	93	175	159	37	-	245	466	-
sdc	-	5	-	26	-	-	23	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	76	551	314	26	586	35
sdc	-	-	-	22	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	4.7	4.0	-	2.5	34.2	2.6	12.6	2.9
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	290	90	44	8	1.8	0.3	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	633
		CF_DI	0.97	CAD (meq/kg)	452

Digestibility coëfficients (%)

Ruminants

DCCP	68	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	78	
DVE	**1991**	**2007**
%RUP	34	34
%DRUP	70	63
%RUSTA	-	-
%DASH	50	50
DASHmax	56	56

Nutritional value (in DM)

Ruminants

VEM	931 /kg
VEVI	968 /kg
FOM-91	592 g/kg
FOMr-07	521 g/kg
FOMr2-07	229 g/kg
FOMr2/FOMr	0.44 /kg
DVE-91	84 g/kg
DVE-07	62 g/kg
OEB-91	20 g/kg
OEB-07	48 g/kg
OEB2-07	59 g/kg
DVMET-91	1.7 g/kg
DVLYS-91	4.8 g/kg
DVMET-07	1.3 g/kg
DVLYS-07	3.5 g/kg
SW	2.86 /kg
VW	1.01 /kg

Amino acids

	g/16g N		g/kg DM
	mean	sdc	
CP			159
LYS	3.3	0.5	5.2
MET	1.2	0.2	1.9
CYS	0.7	0.2	1.1
THR	3.4	0.4	5.4
TRP	1.0	0.2	1.6
ILE	3.7	0.4	5.9
ARG	2.5	0.6	4.0
PHE	4.3	0.5	6.8
HIS	1.4	0.3	2.2
LEU	6.3	0.6	10.0
TYR	2.2	0.5	3.5
VAL	4.9	0.4	7.8
ALA	6.0	0.7	9.5
ASP	7.5	0.9	11.9
GLU	7.4	0.8	11.8
GLY	4.3	0.4	6.8
PRO	5.2	1.0	8.3
SER	3.2	0.4	5.1
Sum AA	68.5		109

Horses

DCCP	68 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		37.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	42	-
LA	36	-
AC	6	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	9

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Grass silage, c) peat soil, before 21 June 5010.142/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	450	96	201	183	39	-	224	458	-
sdc	-	3	-	23	-	-	24	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	80	523	298	23	556	33
sdc	-	-	-	19	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.3	4.2	-	2.4	34.1	2.6	13.8	3.4
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	761	136	40	9	2.5	0.9	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	597
		CF_DI	0.97	CAD (meq/kg)	385

Digestibility coëfficients (%)

Ruminants

DCCP	72	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	80	
DVE	**1991**	**2007**
%RUP	32	32
%DRUP	66	65
%RUSTA	-	-
%DASH	50	50
DASHmax	58	58

Nutritional value (in DM)

Ruminants

VEM	956 /kg
VEVI	999 /kg
FOM-91	600 g/kg
FOMr-07	538 g/kg
FOMr2-07	242 g/kg
FOMr2/FOMr	0.45 /kg
DVE-91	87 g/kg
DVE-07	69 g/kg
OEB-91	40 g/kg
OEB-07	67 g/kg
OEB2-07	72 g/kg
DVMET-91	1.8 g/kg
DVLYS-91	5.0 g/kg
DVMET-07	1.4 g/kg
DVLYS-07	3.8 g/kg
SW	2.60 /kg
VW	0.97 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			183
LYS	3.3	0.5	6.0
MET	1.2	0.2	2.2
CYS	0.7	0.2	1.3
THR	3.4	0.4	6.2
TRP	1.0	0.2	1.8
ILE	3.7	0.4	6.8
ARG	2.5	0.6	4.6
PHE	4.3	0.5	7.9
HIS	1.4	0.3	2.6
LEU	6.3	0.6	11.5
TYR	2.2	0.5	4.0
VAL	4.9	0.4	9.0
ALA	6.0	0.7	11.0
ASP	7.5	0.9	13.7
GLU	7.4	0.8	13.5
GLY	4.3	0.4	7.9
PRO	5.2	1.0	9.5
SER	3.2	0.4	5.9
Sum AA	68.5		125

Horses

DCCP	72 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		39.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	36	-
LA	30	-
AC	6	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	9

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Grass silage, d) clay soil, 21 June - 21 August 5010.150/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	450	90	153	138	34	-	251	487	-
sdc	-	5	-	15	-	-	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	86	558	318	26	609	51
sdc	-	-	-	17	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.7	3.7	-	2.1	34.3	2.6	13.1	2.9
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	532	74	34	8	1.8	0.4	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	622
		CF_DI	0.97	CAD (meq/kg)	441

Digestibility coëfficients (%)

Ruminants

DCCP	65
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	78

DVE	**1991**	**2007**
%RUP	35	36
%DRUP	71	62
%RUSTA	-	-
%DASH	50	50
DASHmax	55	55

Nutritional value (in DM)

Ruminants

VEM	920 /kg
VEVI	956 /kg
FOM-91	600 g/kg
FOMr-07	518 g/kg
FOMr2-07	223 g/kg
FOMr2/FOMr	0.43 /kg
DVE-91	81 g/kg
DVE-07	59 g/kg
OEB-91	3 g/kg
OEB-07	31 g/kg
OEB2-07	48 g/kg
DVMET-91	1.7 g/kg
DVLYS-91	4.8 g/kg
DVMET-07	1.2 g/kg
DVLYS-07	3.4 g/kg
SW	2.94 /kg
VW	1.02 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			138
LYS	3.3	0.5	4.6
MET	1.2	0.2	1.7
CYS	0.7	0.2	1.0
THR	3.4	0.4	4.7
TRP	1.0	0.2	1.4
ILE	3.7	0.4	5.1
ARG	2.5	0.6	3.5
PHE	4.3	0.5	5.9
HIS	1.4	0.3	1.9
LEU	6.3	0.6	8.7
TYR	2.2	0.5	3.0
VAL	4.9	0.4	6.8
ALA	6.0	0.7	8.3
ASP	7.5	0.9	10.4
GLU	7.4	0.8	10.2
GLY	4.3	0.4	5.9
PRO	5.2	1.0	7.2
SER	3.2	0.4	4.4
Sum AA	68.5		95

Horses

DCCP	65 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		34.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	36	-
LA	30	-
AC	6	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	10

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Grass silage, e) sandy soil, 21 June - 21 August 5010.151/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	450	91	149	135	34	-	267	473	-
sdc	-	5	-	17	-	-	5	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	70	575	327	28	628	53
sdc	-	-	-	16	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	4.7	3.7	-	2.5	34.2	2.6	12.6	2.9
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	290	90	44	8	1.8	0.3	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	633
		CF_DI	0.97	CAD (meq/kg)	452

Digestibility coëfficients (%)

Ruminants		
DCCP	64	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	77	
DVE	**1991**	**2007**
%RUP	36	36
%DRUP	68	60
%RUSTA	-	-
%DASH	50	50
DASHmax	55	55

Nutritional value (in DM)

Ruminants	
VEM	902 /kg
VEVI	931 /kg
FOM-91	591 g/kg
FOMr-07	500 g/kg
FOMr2-07	205 g/kg
FOMr2/FOMr	0.41 /kg
DVE-91	77 g/kg
DVE-07	54 g/kg
OEB-91	1 g/kg
OEB-07	30 g/kg
OEB2-07	48 g/kg
DVMET-91	1.6 g/kg
DVLYS-91	4.6 g/kg
DVMET-07	1.1 g/kg
DVLYS-07	3.2 g/kg
SW	3.14 /kg
VW	1.05 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			135
LYS	3.3	0.5	4.5
MET	1.2	0.2	1.6
CYS	0.7	0.2	0.9
THR	3.4	0.4	4.6
TRP	1.0	0.2	1.4
ILE	3.7	0.4	5.0
ARG	2.5	0.6	3.4
PHE	4.3	0.5	5.8
HIS	1.4	0.3	1.9
LEU	6.3	0.6	8.5
TYR	2.2	0.5	3.0
VAL	4.9	0.4	6.6
ALA	6.0	0.7	8.1
ASP	7.5	0.9	10.1
GLU	7.4	0.8	10.0
GLY	4.3	0.4	5.8
PRO	5.2	1.0	7.0
SER	3.2	0.4	4.3
Sum AA	68.5		92

Horses

DCCP	64 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		34.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	36	-
LA	30	-
AC	6	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	9

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Grass silage, f) peat soil, 21 June - 21 August 5010.152/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	450	89	178	160	37	-	252	462	-
sdc	-	1	-	4	-	-	4	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	65	558	318	26	603	45
sdc	-	-	-	7	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.3	4.0	-	2.4	34.1	2.6	13.8	3.4
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	761	136	40	9	2.5	0.9	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	597
		CF_DI	0.97	CAD (meq/kg)	385

Digestibility coëfficients (%)

Ruminants

DCCP	69	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	78	
DVE	**1991**	**2007**
%RUP	34	34
%DRUP	64	62
%RUSTA	-	-
%DASH	50	50
DASHmax	54	54

Nutritional value (in DM)

Ruminants

VEM	933 /kg
VEVI	969 /kg
FOM-91	596 g/kg
FOMr-07	514 g/kg
FOMr2-07	216 g/kg
FOMr2/FOMr	0.42 /kg
DVE-91	82 g/kg
DVE-07	62 g/kg
OEB-91	21 g/kg
OEB-07	51 g/kg
OEB2-07	63 g/kg
DVMET-91	1.7 g/kg
DVLYS-91	4.8 g/kg
DVMET-07	1.3 g/kg
DVLYS-07	3.4 g/kg
SW	2.95 /kg
VW	1.02 /kg

Amino acids

	g/16g N		g/kg DM
	mean	sdc	
CP			160
LYS	3.3	0.5	5.3
MET	1.2	0.2	1.9
CYS	0.7	0.2	1.1
THR	3.4	0.4	5.4
TRP	1.0	0.2	1.6
ILE	3.7	0.4	5.9
ARG	2.5	0.6	4.0
PHE	4.3	0.5	6.9
HIS	1.4	0.3	2.2
LEU	6.3	0.6	10.1
TYR	2.2	0.5	3.5
VAL	4.9	0.4	7.8
ALA	6.0	0.7	9.6
ASP	7.5	0.9	12.0
GLU	7.4	0.8	11.8
GLY	4.3	0.4	6.9
PRO	5.2	1.0	8.3
SER	3.2	0.4	5.1
Sum AA	68.5		110

Horses

DCCP	69 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		37.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	36	-
LA	30	-
AC	6	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	10

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Grass silage, g) clay soil, after 21 August 5010.160/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	450	105	157	143	35	-	217	500	-
sdc	-	6	-	14	-	-	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	141	512	292	23	536	24
sdc	-	-	-	31	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.7	3.8	-	2.1	34.3	2.6	13.1	2.9
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	532	74	34	8	1.8	0.4	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	622
		CF_DI	0.97	CAD (meq/kg)	441

Digestibility coëfficients (%)

Ruminants

DCCP	66	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	79	
DVE	**1991**	**2007**
%RUP	34	34
%DRUP	69	65
%RUSTA	-	-
%DASH	50	50
DASHmax	63	63

Nutritional value (in DM)

Ruminants

VEM	924 /kg
VEVI	966 /kg
FOM-91	598 g/kg
FOMr-07	553 g/kg
FOMr2-07	274 g/kg
FOMr2/FOMr	0.50 /kg
DVE-91	80 g/kg
DVE-07	65 g/kg
OEB-91	8 g/kg
OEB-07	28 g/kg
OEB2-07	41 g/kg
DVMET-91	1.7 g/kg
DVLYS-91	4.7 g/kg
DVMET-07	1.4 g/kg
DVLYS-07	3.8 g/kg
SW	2.51 /kg
VW	0.97 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			143
LYS	3.3	0.5	4.7
MET	1.2	0.2	1.7
CYS	0.7	0.2	1.0
THR	3.4	0.4	4.9
TRP	1.0	0.2	1.4
ILE	3.7	0.4	5.3
ARG	2.5	0.6	3.6
PHE	4.3	0.5	6.1
HIS	1.4	0.3	2.0
LEU	6.3	0.6	9.0
TYR	2.2	0.5	3.1
VAL	4.9	0.4	7.0
ALA	6.0	0.7	8.6
ASP	7.5	0.9	10.7
GLU	7.4	0.8	10.6
GLY	4.3	0.4	6.1
PRO	5.2	1.0	7.4
SER	3.2	0.4	4.6
Sum AA	68.5		98

Horses

DCCP	66 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	36	-
LA	30	-
AC	6	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	9

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Grass silage, h) sandy soil, after 21 August 5010.161/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	450	110	177	161	37	-	229	463	-
sdc	-	5	-	19	-	-	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	97	529	301	24	552	23
sdc	-	-	-	23	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	4.7	4.0	-	2.5	34.2	2.6	12.6	2.9
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	290	90	44	8	1.8	0.3	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	633
		CF_DI	0.97	CAD (meq/kg)	452

Digestibility coëfficients (%)

Ruminants		
DCCP	69	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	78	
DVE	**1991**	**2007**
%RUP	33	34
%DRUP	66	64
%RUSTA	-	-
%DASH	50	50
DASHmax	66	66

Nutritional value (in DM)

Ruminants	
VEM	915 /kg
VEVI	952 /kg
FOM-91	582 g/kg
FOMr-07	527 g/kg
FOMr2-07	243 g/kg
FOMr2/FOMr	0.46 /kg
DVE-91	80 g/kg
DVE-07	64 g/kg
OEB-91	24 g/kg
OEB-07	48 g/kg
OEB2-07	58 g/kg
DVMET-91	1.6 g/kg
DVLYS-91	4.6 g/kg
DVMET-07	1.3 g/kg
DVLYS-07	3.6 g/kg
SW	2.66 /kg
VW	0.98 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			161
LYS	3.3	0.5	5.3
MET	1.2	0.2	1.9
CYS	0.7	0.2	1.1
THR	3.4	0.4	5.5
TRP	1.0	0.2	1.6
ILE	3.7	0.4	6.0
ARG	2.5	0.6	4.0
PHE	4.3	0.5	6.9
HIS	1.4	0.3	2.3
LEU	6.3	0.6	10.1
TYR	2.2	0.5	3.5
VAL	4.9	0.4	7.9
ALA	6.0	0.7	9.7
ASP	7.5	0.9	12.1
GLU	7.4	0.8	11.9
GLY	4.3	0.4	6.9
PRO	5.2	1.0	8.4
SER	3.2	0.4	5.2
Sum AA	68.5		110

Horses

DCCP	69 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		37.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	36	-
LA	30	-
AC	6	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	9

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Grass silage, i) peat soil, after 21 August 5010.162/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	450	103	191	174	38	-	218	467	-
sdc	-	5	-	11	-	-	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	99	514	293	23	541	27
sdc	-	-	-	7	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.3	4.1	-	2.4	34.1	2.6	13.8	3.4
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	761	136	40	9	2.5	0.9	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	597	
		CF_DI	0.97	CAD (meq/kg)	385	

Digestibility coëfficients (%)

Ruminants

DCCP	71	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	80	
DVE	**1991**	**2007**
%RUP	32	32
%DRUP	61	66
%RUSTA	-	-
%DASH	50	50
DASHmax	62	62

Nutritional value (in DM)

Ruminants

VEM	944 /kg
VEVI	988 /kg
FOM-91	596 g/kg
FOMr-07	543 g/kg
FOMr2-07	254 g/kg
FOMr2/FOMr	0.47 /kg
DVE-91	81 g/kg
DVE-07	68 g/kg
OEB-91	34 g/kg
OEB-07	58 g/kg
OEB2-07	64 g/kg
DVMET-91	1.7 g/kg
DVLYS-91	4.8 g/kg
DVMET-07	1.4 g/kg
DVLYS-07	3.8 g/kg
SW	2.53 /kg
VW	0.96 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			174
LYS	3.3	0.5	5.7
MET	1.2	0.2	2.1
CYS	0.7	0.2	1.2
THR	3.4	0.4	5.9
TRP	1.0	0.2	1.7
ILE	3.7	0.4	6.4
ARG	2.5	0.6	4.4
PHE	4.3	0.5	7.5
HIS	1.4	0.3	2.4
LEU	6.3	0.6	11.0
TYR	2.2	0.5	3.8
VAL	4.9	0.4	8.5
ALA	6.0	0.7	10.4
ASP	7.5	0.9	13.1
GLU	7.4	0.8	12.9
GLY	4.3	0.4	7.5
PRO	5.2	1.0	9.0
SER	3.2	0.4	5.6
Sum AA	68.5		119

Horses

DCCP	71 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		38.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	36	-
LA	30	-
AC	6	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	9

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Grass silage, j) average 5010.170/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	450	97	174	158	36	-	237	472	-
sdc	-	-	-	18	-	-	11	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	89	539	307	25	577	38
sdc	-	-	-	19	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.2	4.0	-	2.3	34.1	2.6	13.2	3.1
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	527	100	39	8	2.0	0.5	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	614
		CF_DI	0.97	CAD (meq/kg)	420

Digestibility coëfficients (%)

Ruminants		
DCCP	68	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	78	
DVE	**1991**	**2007**
%RUP	34	34
%DRUP	63	64
%RUSTA	-	-
%DASH	50	50
DASHmax	58	58

Nutritional value (in DM)

Ruminants	
VEM	929 /kg
VEVI	968 /kg
FOM-91	595 g/kg
FOMr-07	527 g/kg
FOMr2-07	235 g/kg
FOMr2/FOMr	0.45 /kg
DVE-91	80 g/kg
DVE-07	63 g/kg
OEB-91	19 g/kg
OEB-07	46 g/kg
OEB2-07	57 g/kg
DVMET-91	1.7 g/kg
DVLYS-91	4.7 g/kg
DVMET-07	1.3 g/kg
DVLYS-07	3.6 g/kg
SW	2.76 /kg
VW	0.99 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			158
LYS	3.3	0.5	5.2
MET	1.2	0.2	1.9
CYS	0.7	0.2	1.1
THR	3.4	0.4	5.4
TRP	1.0	0.2	1.6
ILE	3.7	0.4	5.8
ARG	2.5	0.6	4.0
PHE	4.3	0.5	6.8
HIS	1.4	0.3	2.2
LEU	6.3	0.6	10.0
TYR	2.2	0.5	3.5
VAL	4.9	0.4	7.7
ALA	6.0	0.7	9.5
ASP	7.5	0.9	11.9
GLU	7.4	0.8	11.7
GLY	4.3	0.4	6.8
PRO	5.2	1.0	8.2
SER	3.2	0.4	5.1
Sum AA	68.5		108

Horses

DCCP	68 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		36.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	36	-
LA	30	-
AC	6	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	9

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Grass silage, k) horses, fine 5010.190/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	568	130	174	157	40	-	244	429	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	101	-	-	-	542	542
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.0	3.8	-	2.3	32.6	2.3	12.3	3.0
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	443	98	42	8	2.1	-	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	588	
		CF_DI	0.97	CAD (meq/kg)	401	

Digestibility coëfficients (%)

Ruminants

DCCP	68	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	75	
DVE	**1991**	**2007**
%RUP	-	-
%DRUP	-	-
%RUSTA	-	-
%DASH	-	-
DASHmax	-	-

Nutritional value (in DM)

Ruminants

VEM	-
VEVI	-
FOM-91	-
FOMr-07	-
FOMr2-07	-
FOMr2/FOMr	-
DVE-91	-
DVE-07	-
OEB-91	-
OEB-07	-
OEB2-07	-
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	-
VW	-

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			157
LYS	3.3	0.5	5.2
MET	1.2	0.2	1.9
CYS	0.7	0.2	1.1
THR	3.4	0.4	5.3
TRP	1.0	0.2	1.6
ILE	3.7	0.4	5.8
ARG	2.5	0.6	3.9
PHE	4.3	0.5	6.8
HIS	1.4	0.3	2.2
LEU	6.3	0.6	9.9
TYR	2.2	0.5	3.5
VAL	4.9	0.4	7.7
ALA	6.0	0.7	9.4
ASP	7.5	0.9	11.8
GLU	7.4	0.8	11.6
GLY	4.3	0.4	6.8
PRO	5.2	1.0	8.2
SER	3.2	0.4	5.0
Sum AA	68.5		108

Horses

DCCP	68 %
DCOM	69 %
NEm	6.72 MJ/kg
NEm	1605 kcal/kg
EWpa	0.752 /kg
DCPho	114 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		40.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	20	-
LA	16	-
AC	4	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	10

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Grass silage, l) horses, middle 5010.191/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	605	106	149	134	40	-	284	436	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	95	-	-	-	601	601
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.0	3.5	-	2.3	28.8	2.3	12.3	3.0
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	443	98	42	8	2.1	-	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	490	
		CF_DI	0.97	CAD (meq/kg)	303	

Digestibility coëfficients (%)

Ruminants

DCCP	64	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	73	
DVE	**1991**	**2007**
%RUP	-	-
%DRUP	-	-
%RUSTA	-	-
%DASH	-	-
DASHmax	-	-

Nutritional value (in DM)

Ruminants

VEM	-
VEVI	-
FOM-91	-
FOMr-07	-
FOMr2-07	-
FOMr2/FOMr	-
DVE-91	-
DVE-07	-
OEB-91	-
OEB-07	-
OEB2-07	-
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	-
VW	-

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			134
LYS	3.3	0.5	4.4
MET	1.2	0.2	1.6
CYS	0.7	0.2	0.9
THR	3.4	0.4	4.6
TRP	1.0	0.2	1.3
ILE	3.7	0.4	5.0
ARG	2.5	0.6	3.4
PHE	4.3	0.5	5.8
HIS	1.4	0.3	1.9
LEU	6.3	0.6	8.4
TYR	2.2	0.5	2.9
VAL	4.9	0.4	6.6
ALA	6.0	0.7	8.0
ASP	7.5	0.9	10.1
GLU	7.4	0.8	9.9
GLY	4.3	0.4	5.8
PRO	5.2	1.0	7.0
SER	3.2	0.4	4.3
Sum AA	68.5		92

Horses

DCCP	64 %
DCOM	67 %
NEm	6.53 MJ/kg
NEm	1561 kcal/kg
EWpa	0.731 /kg
DCPho	91 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		40.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	15	-
LA	12	-
AC	3	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	10

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Grass silage, m) horses, course 5010.192/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	645	89	109	98	40	-	334	439	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	84	-	-	-	669	669
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.0	2.8	-	2.3	22.7	2.3	12.3	3.0
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	443	98	42	8	2.1	-	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	334	
		CF_DI	0.97	CAD (meq/kg)	147	

Digestibility coëfficients (%)

Ruminants

DCCP	53	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	71	

DVE	**1991**	**2007**
%RUP	-	-
%DRUP	-	-
%RUSTA	-	-
%DASH	-	-
DASHmax	-	-

Nutritional value (in DM)

Ruminants

VEM	-
VEVI	-
FOM-91	-
FOMr-07	-
FOMr2-07	-
FOMr2/FOMr	-
DVE-91	-
DVE-07	-
OEB-91	-
OEB-07	-
OEB2-07	-
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	-
VW	-

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			98
LYS	3.3	0.5	3.2
MET	1.2	0.2	1.2
CYS	0.7	0.2	0.7
THR	3.4	0.4	3.3
TRP	1.0	0.2	1.0
ILE	3.7	0.4	3.6
ARG	2.5	0.6	2.5
PHE	4.3	0.5	4.2
HIS	1.4	0.3	1.4
LEU	6.3	0.6	6.2
TYR	2.2	0.5	2.2
VAL	4.9	0.4	4.8
ALA	6.0	0.7	5.9
ASP	7.5	0.9	7.4
GLU	7.4	0.8	7.3
GLY	4.3	0.4	4.2
PRO	5.2	1.0	5.1
SER	3.2	0.4	3.1
Sum AA	68.5		67

Horses

DCCP	53 %
DCOM	64 %
NEm	6.10 MJ/kg
NEm	1459 kcal/kg
EWpa	0.683 /kg
DCPho	55 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		40.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	15	-
LA	12	-
AC	3	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	10

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Grass, artificially dried 5010.609/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	889	104	153	153	35	-	249	459	-
sdc	37	24	-	33	-	-	33	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	108	495	256	25	603	108
sdc	-	-	-	35	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	6.0	3.7	-	3.1	33.8	1.0	7.9	4.4
sdc	1.3	0.5	-	0.5	5.0	0.4	-	0.7

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	180	85	33	8	2.3	0.0	0.5
sdc	134	24	6	2	1.4	0.0	0.2

IP/P	-	SUGe/SUG	-	EB (meq/kg)	684
		CF_DI	0.97	CAD (meq/kg)	412

Digestibility coëfficients (%)

Ruminants

DCCP	63
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	76

DVE	**1991**	**2007**
%RUP	44	51
%DRUP	70	70
%RUSTA	-	-
%DASH	50	50
DASHmax	62	62

Nutritional value (in DM)

Ruminants

VEM	886 /kg
VEVI	914 /kg
FOM-91	581 g/kg
FOMr-07	497 g/kg
FOMr2-07	173 g/kg
FOMr2/FOMr	0.35 /kg
DVE-91	88 g/kg
DVE-07	80 g/kg
OEB-91	-9 g/kg
OEB-07	4 g/kg
OEB2-07	8 g/kg
DVMET-91	1.9 g/kg
DVLYS-91	5.2 g/kg
DVMET-07	1.7 g/kg
DVLYS-07	4.5 g/kg
SW	3.09 /kg
VW	0.90 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			153
LYS	3.9	-	6.0
MET	1.5	-	2.3
CYS	1.0	-	1.5
THR	4.1	-	6.3
TRP	1.4	-	2.1
ILE	3.8	-	5.8
ARG	4.2	-	6.4
PHE	4.3	-	6.6
HIS	1.9	-	2.9
LEU	6.9	-	10.6
TYR	2.7	-	4.1
VAL	5.2	-	8.0
ALA	6.4	-	9.8
ASP	9.1	-	13.9
GLU	10.0	-	15.3
GLY	4.6	-	7.0
PRO	4.6	-	7.0
SER	4.0	-	6.1
Sum AA	79.6		122

Horses

DCCP	72 %
DCOM	60 %
NEm	5.97 MJ/kg
NEm	1427 kcal/kg
EWpa	0.668 /kg
DCPho	110 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass, fresh, a) clay soil, before 21 June 5010.910/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	165	99	219	219	39	-	197	446	-
sdc	-	7	-	35	-	-	19	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	124	483	221	21	523	40
sdc	-	-	-	33	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	6.4	4.2	-	2.2	35.4	2.3	14.1	3.8
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	172	80	35	9	2.1	0.5	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	609
		CF_DI	0.97	CAD (meq/kg)	372

Digestibility coëfficients (%)

Ruminants

DCCP	79	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	84	
DVE	**1991**	**2007**
%RUP	33	34
%DRUP	80	80
%RUSTA	-	-
%DASH	50	50
DASHmax	59	59

Nutritional value (in DM)

Ruminants

VEM	1009 /kg
VEVI	1070 /kg
FOM-91	645 g/kg
FOMr-07	576 g/kg
FOMr2-07	215 g/kg
FOMr2/FOMr	0.37 /kg
DVE-91	110 g/kg
DVE-07	98 g/kg
OEB-91	43 g/kg
OEB-07	61 g/kg
OEB2-07	23 g/kg
DVMET-91	2.3 g/kg
DVLYS-91	6.4 g/kg
DVMET-07	2.0 g/kg
DVLYS-07	5.6 g/kg
SW	1.57 /kg
VW	0.91 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			219
LYS	4.0	0.4	8.8
MET	1.5	0.2	3.3
CYS	0.9	0.1	2.0
THR	3.8	0.4	8.3
TRP	1.5	0.2	3.3
ILE	3.7	0.4	8.1
ARG	4.4	0.5	9.6
PHE	4.7	0.5	10.3
HIS	1.8	0.2	3.9
LEU	6.9	0.8	15.1
TYR	2.2	0.4	4.8
VAL	5.0	0.5	11.0
ALA	6.6	0.6	14.5
ASP	8.8	0.8	19.3
GLU	10.0	0.6	21.9
GLY	4.7	0.5	10.3
PRO	4.4	0.6	9.6
SER	3.6	0.2	7.9
Sum AA	78.5		172

Horses

DCCP	79 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		39.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass, fresh, b) sandy soil, before 21 June 5010.911/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	165	98	199	199	38	-	208	457	-
sdc	-	9	-	27	-	-	20	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	128	500	233	22	541	41
sdc	-	-	-	20	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.4	4.1	-	2.5	35.4	2.3	14.4	3.4
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	141	61	43	8	1.9	0.2	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	600
		CF_DI	0.97	CAD (meq/kg)	388

Digestibility coëfficients (%)

Ruminants

DCCP	77	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	83	
DVE	**1991**	**2007**
%RUP	35	36
%DRUP	80	75
%RUSTA	-	-
%DASH	50	50
DASHmax	59	59

Nutritional value (in DM)

Ruminants

VEM	991 /kg
VEVI	1047 /kg
FOM-91	639 g/kg
FOMr-07	567 g/kg
FOMr2-07	211 g/kg
FOMr2/FOMr	0.37 /kg
DVE-91	107 g/kg
DVE-07	91 g/kg
OEB-91	27 g/kg
OEB-07	45 g/kg
OEB2-07	17 g/kg
DVMET-91	2.3 g/kg
DVLYS-91	6.3 g/kg
DVMET-07	1.9 g/kg
DVLYS-07	5.3 g/kg
SW	1.68 /kg
VW	0.90 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			199
LYS	4.0	0.4	8.0
MET	1.5	0.2	3.0
CYS	0.9	0.1	1.8
THR	3.8	0.4	7.6
TRP	1.5	0.2	3.0
ILE	3.7	0.4	7.4
ARG	4.4	0.5	8.8
PHE	4.7	0.5	9.4
HIS	1.8	0.2	3.6
LEU	6.9	0.8	13.7
TYR	2.2	0.4	4.4
VAL	5.0	0.5	10.0
ALA	6.6	0.6	13.1
ASP	8.8	0.8	17.5
GLU	10.0	0.6	19.9
GLY	4.7	0.5	9.4
PRO	4.4	0.6	8.8
SER	3.6	0.2	7.2
Sum AA	78.5		156

Horses

DCCP	77 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		38.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass, fresh, c) peat soil, before 21 June 5010.912/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	165	98	219	219	39	-	194	450	-
sdc	-	5	-	24	-	-	21	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	128	478	218	20	520	42
sdc	-	-	-	16	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.4	4.2	-	2.3	36.8	2.3	14.1	4.5
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	181	119	38	9	3.7	0.6	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	645	
		CF_DI	0.97	CAD (meq/kg)	364	

Digestibility coëfficients (%)

Ruminants

DCCP	79	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	84	
DVE	**1991**	**2007**
%RUP	32	34
%DRUP	79	80
%RUSTA	-	-
%DASH	50	50
DASHmax	59	59

Nutritional value (in DM)

Ruminants

VEM	1016 /kg
VEVI	1078 /kg
FOM-91	649 g/kg
FOMr-07	578 g/kg
FOMr2-07	219 g/kg
FOMr2/FOMr	0.38 /kg
DVE-91	110 g/kg
DVE-07	98 g/kg
OEB-91	43 g/kg
OEB-07	62 g/kg
OEB2-07	23 g/kg
DVMET-91	2.3 g/kg
DVLYS-91	6.4 g/kg
DVMET-07	2.0 g/kg
DVLYS-07	5.7 g/kg
SW	1.54 /kg
VW	0.91 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			219
LYS	4.0	0.4	8.8
MET	1.5	0.2	3.3
CYS	0.9	0.1	2.0
THR	3.8	0.4	8.3
TRP	1.5	0.2	3.3
ILE	3.7	0.4	8.1
ARG	4.4	0.5	9.6
PHE	4.7	0.5	10.3
HIS	1.8	0.2	3.9
LEU	6.9	0.8	15.1
TYR	2.2	0.4	4.8
VAL	5.0	0.5	11.0
ALA	6.6	0.6	14.5
ASP	8.8	0.8	19.3
GLU	10.0	0.6	21.9
GLY	4.7	0.5	10.3
PRO	4.4	0.6	9.6
SER	3.6	0.2	7.9
Sum AA	78.5		172

Horses

DCCP	79 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		39.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass, fresh, d) clay soil, 21 June - 21 August 5010.920/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	165	115	205	205	38	-	202	440	-
sdc	-	20	-	28	-	-	1	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	131	491	226	21	516	25
sdc	-	-	-	24	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	6.4	4.2	-	2.2	35.4	2.3	14.1	3.8
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	172	80	35	9	2.1	0.5	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	609
		CF_DI	0.97	CAD (meq/kg)	372

Digestibility coëfficients (%)

Ruminants

DCCP	78	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	83	
DVE	**1991**	**2007**
%RUP	34	35
%DRUP	77	76
%RUSTA	-	-
%DASH	50	50
DASHmax	68	68

Nutritional value (in DM)

Ruminants

VEM	975 /kg
VEVI	1030 /kg
FOM-91	625 g/kg
FOMr-07	567 g/kg
FOMr2-07	215 g/kg
FOMr2/FOMr	0.38 /kg
DVE-91	104 g/kg
DVE-07	92 g/kg
OEB-91	34 g/kg
OEB-07	50 g/kg
OEB2-07	18 g/kg
DVMET-91	2.2 g/kg
DVLYS-91	6.1 g/kg
DVMET-07	1.9 g/kg
DVLYS-07	5.3 g/kg
SW	1.62 /kg
VW	0.92 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			205
LYS	4.0	0.4	8.2
MET	1.5	0.2	3.1
CYS	0.9	0.1	1.8
THR	3.8	0.4	7.8
TRP	1.5	0.2	3.1
ILE	3.7	0.4	7.6
ARG	4.4	0.5	9.0
PHE	4.7	0.5	9.6
HIS	1.8	0.2	3.7
LEU	6.9	0.8	14.1
TYR	2.2	0.4	4.5
VAL	5.0	0.5	10.3
ALA	6.6	0.6	13.5
ASP	8.8	0.8	18.0
GLU	10.0	0.6	20.5
GLY	4.7	0.5	9.6
PRO	4.4	0.6	9.0
SER	3.6	0.2	7.4
Sum AA	78.5		161

Horses

DCCP	78 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		38.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass, fresh, e) sandy soil, 21 June - 21 August 5010.921/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	165	117	205	205	38	-	214	426	-
sdc	-	27	-	25	-	-	1	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	115	508	239	22	529	21
sdc	-	-	-	19	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.4	4.2	-	2.5	35.4	2.3	14.4	3.4
sdc	-	-	-	-	5.1	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	141	61	43	8	1.9	0.2	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	600
		CF_DI	0.97	CAD (meq/kg)	388

Digestibility coëfficients (%)

Ruminants

DCCP	78	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	81	
DVE	**1991**	**2007**
%RUP	35	36
%DRUP	77	73
%RUSTA	-	-
%DASH	50	50
DASHmax	69	69

Nutritional value (in DM)

Ruminants

VEM	953 /kg
VEVI	1000 /kg
FOM-91	610 g/kg
FOMr-07	560 g/kg
FOMr2-07	201 g/kg
FOMr2/FOMr	0.36 /kg
DVE-91	103 g/kg
DVE-07	89 g/kg
OEB-91	34 g/kg
OEB-07	50 g/kg
OEB2-07	20 g/kg
DVMET-91	2.2 g/kg
DVLYS-91	6.0 g/kg
DVMET-07	1.9 g/kg
DVLYS-07	5.2 g/kg
SW	1.74 /kg
VW	0.92 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			205
LYS	4.0	0.4	8.2
MET	1.5	0.2	3.1
CYS	0.9	0.1	1.8
THR	3.8	0.4	7.8
TRP	1.5	0.2	3.1
ILE	3.7	0.4	7.6
ARG	4.4	0.5	9.0
PHE	4.7	0.5	9.6
HIS	1.8	0.2	3.7
LEU	6.9	0.8	14.1
TYR	2.2	0.4	4.5
VAL	5.0	0.5	10.3
ALA	6.6	0.6	13.5
ASP	8.8	0.8	18.0
GLU	10.0	0.6	20.5
GLY	4.7	0.5	9.6
PRO	4.4	0.6	9.0
SER	3.6	0.2	7.4
Sum AA	78.5		161

Horses

DCCP	78 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		38.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass, fresh, f) peat soil, 21 June - 21 August 5010.922/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	165	106	220	220	39	-	204	431	-
sdc	-	1	-	8	-	-	1	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	112	494	228	21	527	33
sdc	-	-	-	7	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.4	4.2	-	2.3	36.8	2.3	14.1	4.5
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	181	119	38	9	3.7	0.6	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	645
		CF_DI	0.97	CAD (meq/kg)	364

Digestibility coëfficients (%)

Ruminants

DCCP	79	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	83	
DVE	**1991**	**2007**
%RUP	33	34
%DRUP	76	77
%RUSTA	-	-
%DASH	50	50
DASHmax	63	63

Nutritional value (in DM)

Ruminants

VEM	988 /kg
VEVI	1042 /kg
FOM-91	629 g/kg
FOMr-07	570 g/kg
FOMr2-07	205 g/kg
FOMr2/FOMr	0.36 /kg
DVE-91	106 g/kg
DVE-07	96 g/kg
OEB-91	45 g/kg
OEB-07	62 g/kg
OEB2-07	25 g/kg
DVMET-91	2.2 g/kg
DVLYS-91	6.2 g/kg
DVMET-07	2.0 g/kg
DVLYS-07	5.5 g/kg
SW	1.64 /kg
VW	0.91 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			220
LYS	4.0	0.4	8.8
MET	1.5	0.2	3.3
CYS	0.9	0.1	2.0
THR	3.8	0.4	8.4
TRP	1.5	0.2	3.3
ILE	3.7	0.4	8.1
ARG	4.4	0.5	9.7
PHE	4.7	0.5	10.3
HIS	1.8	0.2	4.0
LEU	6.9	0.8	15.2
TYR	2.2	0.4	4.8
VAL	5.0	0.5	11.0
ALA	6.6	0.6	14.5
ASP	8.8	0.8	19.4
GLU	10.0	0.6	22.0
GLY	4.7	0.5	10.3
PRO	4.4	0.6	9.7
SER	3.6	0.2	7.9
Sum AA	78.5		173

Horses

DCCP	79 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		39.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass, fresh, g) clay soil, after 21 August 5010.930/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	165	112	165	165	35	-	203	485	-
sdc	-	26	-	6	-	-	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	179	492	227	21	515	23
sdc	-	-	-	10	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	6.4	3.9	-	2.2	35.4	2.3	14.1	3.8
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	172	80	35	9	2.1	0.5	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	609
		CF_DI	0.97	CAD (meq/kg)	372

Digestibility coëfficients (%)

Ruminants

DCCP	73	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	83	

DVE	**1991**	**2007**
%RUP	37	38
%DRUP	77	73
%RUSTA	-	-
%DASH	50	50
DASHmax	67	67

Nutritional value (in DM)

Ruminants

VEM	972 /kg
VEVI	1030 /kg
FOM-91	640 g/kg
FOMr-07	568 g/kg
FOMr2-07	241 g/kg
FOMr2/FOMr	0.42 /kg
DVE-91	97 g/kg
DVE-07	83 g/kg
OEB-91	2 g/kg
OEB-07	19 g/kg
OEB2-07	1 g/kg
DVMET-91	2.1 g/kg
DVLYS-91	5.9 g/kg
DVMET-07	1.8 g/kg
DVLYS-07	5.0 g/kg
SW	1.63 /kg
VW	0.91 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			165
LYS	4.0	0.4	6.6
MET	1.5	0.2	2.5
CYS	0.9	0.1	1.5
THR	3.8	0.4	6.3
TRP	1.5	0.2	2.5
ILE	3.7	0.4	6.1
ARG	4.4	0.5	7.3
PHE	4.7	0.5	7.8
HIS	1.8	0.2	3.0
LEU	6.9	0.8	11.4
TYR	2.2	0.4	3.6
VAL	5.0	0.5	8.3
ALA	6.6	0.6	10.9
ASP	8.8	0.8	14.5
GLU	10.0	0.6	16.5
GLY	4.7	0.5	7.8
PRO	4.4	0.6	7.3
SER	3.6	0.2	5.9
Sum AA	78.5		130

Horses

DCCP	73 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass, fresh, h) sandy soil, after 21 August 5010.931/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	165	118	195	195	37	-	214	436	-
sdc	-	46	-	31	-	-	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	127	508	239	22	527	19
sdc	-	-	-	39	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.4	4.1	-	2.5	35.4	2.3	14.4	3.4
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	141	61	43	8	1.9	0.2	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	600
		CF_DI	0.97	CAD (meq/kg)	388

Digestibility coëfficients (%)

Ruminants

DCCP	77
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	81

DVE	**1991**	**2007**
%RUP	36	37
%DRUP	75	72
%RUSTA	-	-
%DASH	50	50
DASHmax	70	70

Nutritional value (in DM)

Ruminants

VEM	949 /kg
VEVI	997 /kg
FOM-91	612 g/kg
FOMr-07	560 g/kg
FOMr2-07	207 g/kg
FOMr2/FOMr	0.37 /kg
DVE-91	100 g/kg
DVE-07	87 g/kg
OEB-91	26 g/kg
OEB-07	42 g/kg
OEB2-07	16 g/kg
DVMET-91	2.1 g/kg
DVLYS-91	5.9 g/kg
DVMET-07	1.9 g/kg
DVLYS-07	5.1 g/kg
SW	1.74 /kg
VW	0.92 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			195
LYS	4.0	0.4	7.8
MET	1.5	0.2	2.9
CYS	0.9	0.1	1.8
THR	3.8	0.4	7.4
TRP	1.5	0.2	2.9
ILE	3.7	0.4	7.2
ARG	4.4	0.5	8.6
PHE	4.7	0.5	9.2
HIS	1.8	0.2	3.5
LEU	6.9	0.8	13.5
TYR	2.2	0.4	4.3
VAL	5.0	0.5	9.8
ALA	6.6	0.6	12.9
ASP	8.8	0.8	17.2
GLU	10.0	0.6	19.5
GLY	4.7	0.5	9.2
PRO	4.4	0.6	8.6
SER	3.6	0.2	7.0
Sum AA	78.5		153

Horses

DCCP	77 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		37.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass, fresh, i) peat soil, after 21 August 5010.932/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	165	105	208	208	38	-	205	444	-
sdc	-	1	-	12	-	-	3	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	125	495	229	22	528	33
sdc	-	-	-	9	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.4	4.2	-	2.3	36.8	2.3	14.1	4.5
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	181	119	38	9	3.7	0.6	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	645
		CF_DI	0.97	CAD (meq/kg)	364

Digestibility coëfficients (%)

Ruminants

DCCP	78	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	83	

DVE	**1991**	**2007**
%RUP	34	35
%DRUP	72	76
%RUSTA	-	-
%DASH	50	50
DASHmax	63	63

Nutritional value (in DM)

Ruminants

VEM	985 /kg
VEVI	1040 /kg
FOM-91	633 g/kg
FOMr-07	569 g/kg
FOMr2-07	211 g/kg
FOMr2/FOMr	0.37 /kg
DVE-91	101 g/kg
DVE-07	93 g/kg
OEB-91	35 g/kg
OEB-07	52 g/kg
OEB2-07	20 g/kg
DVMET-91	2.2 g/kg
DVLYS-91	6.0 g/kg
DVMET-07	2.0 g/kg
DVLYS-07	5.4 g/kg
SW	1.65 /kg
VW	0.91 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			208
LYS	4.0	0.4	8.3
MET	1.5	0.2	3.1
CYS	0.9	0.1	1.9
THR	3.8	0.4	7.9
TRP	1.5	0.2	3.1
ILE	3.7	0.4	7.7
ARG	4.4	0.5	9.2
PHE	4.7	0.5	9.8
HIS	1.8	0.2	3.7
LEU	6.9	0.8	14.4
TYR	2.2	0.4	4.6
VAL	5.0	0.5	10.4
ALA	6.6	0.6	13.7
ASP	8.8	0.8	18.3
GLU	10.0	0.6	20.8
GLY	4.7	0.5	9.8
PRO	4.4	0.6	9.2
SER	3.6	0.2	7.5
Sum AA	78.5		163

Horses

DCCP	78 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		38.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass, fresh, j) average 5010.940/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	165	108	204	204	38	-	205	445	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	130	494	229	21	525	31
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.8	4.1	-	2.3	35.9	2.3	14.2	3.9
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	165	86	39	9	2.6	0.5	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	619
		CF_DI	0.97	CAD (meq/kg)	375

Digestibility coëfficients (%)

Ruminants

DCCP	78	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	83	
DVE	**1991**	**2007**
%RUP	34	36
%DRUP	74	76
%RUSTA	-	-
%DASH	50	50
DASHmax	64	64

Nutritional value (in DM)

Ruminants

VEM	981 /kg
VEVI	1036 /kg
FOM-91	630 g/kg
FOMr-07	568 g/kg
FOMr2-07	214 g/kg
FOMr2/FOMr	0.38 /kg
DVE-91	102 g/kg
DVE-07	92 g/kg
OEB-91	32 g/kg
OEB-07	49 g/kg
OEB2-07	18 g/kg
DVMET-91	2.2 g/kg
DVLYS-91	6.0 g/kg
DVMET-07	1.9 g/kg
DVLYS-07	5.3 g/kg
SW	1.65 /kg
VW	0.91 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			204
LYS	4.0	0.4	8.2
MET	1.5	0.2	3.1
CYS	0.9	0.1	1.8
THR	3.8	0.4	7.8
TRP	1.5	0.2	3.1
ILE	3.7	0.4	7.5
ARG	4.4	0.5	9.0
PHE	4.7	0.5	9.6
HIS	1.8	0.2	3.7
LEU	6.9	0.8	14.1
TYR	2.2	0.4	4.5
VAL	5.0	0.5	10.2
ALA	6.6	0.6	13.5
ASP	8.8	0.8	18.0
GLU	10.0	0.6	20.4
GLY	4.7	0.5	9.6
PRO	4.4	0.6	9.0
SER	3.6	0.2	7.3
Sum AA	78.5		160

Horses

DCCP	78 %
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		38.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass, fresh, k) horses, cont. grazing 5010.991/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	177	106	182	182	41	-	246	425	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	98	-	-	-	576	576
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.8	4.0	-	2.5	30.4	2.3	15.0	3.9
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	149	95	43	9	2.7	-	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	455	
		CF_DI	0.97	CAD (meq/kg)	212	

Digestibility coëfficients (%)

Ruminants

DCCP	75	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	78	

DVE	**1991**	**2007**
%RUP	-	-
%DRUP	-	-
%RUSTA	-	-
%DASH	-	-
DASHmax	-	-

Nutritional value (in DM)

Ruminants

VEM	-
VEVI	-
FOM-91	-
FOMr-07	-
FOMr2-07	-
FOMr2/FOMr	-
DVE-91	-
DVE-07	-
OEB-91	-
OEB-07	-
OEB2-07	-
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	-
VW	-

Amino acids

	g/16g N		g/kg DM
	mean	sdc	
CP			182
LYS	4.0	0.4	7.3
MET	1.5	0.2	2.7
CYS	0.9	0.1	1.6
THR	3.8	0.4	6.9
TRP	1.5	0.2	2.7
ILE	3.7	0.4	6.7
ARG	4.4	0.5	8.0
PHE	4.7	0.5	8.6
HIS	1.8	0.2	3.3
LEU	6.9	0.8	12.6
TYR	2.2	0.4	4.0
VAL	5.0	0.5	9.1
ALA	6.6	0.6	12.0
ASP	8.8	0.8	16.0
GLU	10.0	0.6	18.2
GLY	4.7	0.5	8.6
PRO	4.4	0.6	8.0
SER	3.6	0.2	6.6
Sum AA	78.5		143

Horses

DCCP	75 %
DCOM	72 %
NEm	7.24 MJ/kg
NEm	1730 kcal/kg
EWpa	0.811 /kg
DCPho	145 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		41.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass, fresh, l) horses, fresh pasture 5010.990/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	161	102	221	221	41	-	232	404	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	95	-	-	-	544	544
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.8	4.2	-	2.5	30.4	2.3	15.0	3.9
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	149	95	43	9	2.7	-	0.1
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	455	
		CF_DI	0.97	CAD (meq/kg)	212	

Digestibility coëfficients (%)

Ruminants

DCCP	79	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	80	

DVE	**1991**	**2007**
%RUP	-	-
%DRUP	-	-
%RUSTA	-	-
%DASH	-	-
DASHmax	-	-

Nutritional value (in DM)

Ruminants

VEM	-
VEVI	-
FOM-91	-
FOMr-07	-
FOMr2-07	-
FOMr2/FOMr	-
DVE-91	-
DVE-07	-
OEB-91	-
OEB-07	-
OEB2-07	-
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	-
VW	-

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			221
LYS	4.0	0.4	8.8
MET	1.5	0.2	3.3
CYS	0.9	0.1	2.0
THR	3.8	0.4	8.4
TRP	1.5	0.2	3.3
ILE	3.7	0.4	8.2
ARG	4.4	0.5	9.7
PHE	4.7	0.5	10.4
HIS	1.8	0.2	4.0
LEU	6.9	0.8	15.2
TYR	2.2	0.4	4.9
VAL	5.0	0.5	11.1
ALA	6.6	0.6	14.6
ASP	8.8	0.8	19.4
GLU	10.0	0.6	22.1
GLY	4.7	0.5	10.4
PRO	4.4	0.6	9.7
SER	3.6	0.2	8.0
Sum AA	78.5		173

Horses

DCCP	79 %
DCOM	75 %
NEm	7.65 MJ/kg
NEm	1829 kcal/kg
EWpa	0.857 /kg
DCPho	185 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		41.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Grass/clover, silage-Red clover 5037.602/1/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	370	114	166	153	24	-	303	406	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	32	460	329	56	612	152
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	-
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	66

DVE	**1991**	**2007**
%RUP	25	25
%DRUP	72	70
%RUSTA	-	-
%DASH	50	50
DASHmax	68	68

Nutritional value (in DM)

Ruminants

VEM	718 /kg
VEVI	697 /kg
FOM-91	485 g/kg
FOMr-07	527 g/kg
FOMr2-07	240 g/kg
FOMr2/FOMr	0.45 /kg
DVE-91	53 g/kg
DVE-07	47 g/kg
OEB-91	47 g/kg
OEB-07	55 g/kg
OEB2-07	61 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	3.33 /kg
VW	0.96 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			153
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		24.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	72	-
LA	51	-
AC	12	-
ETH	9	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	8

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Remarks

Grass/clover, silage-Red clover:

1. The chemical contents, digestibility coefficients and feeding values are based on 6 batches of grass/red clover mixtures with an average clover percentage of 71%.
2. Training is required in order to make a correct visual assessment of the percentage of clover.

Grass/clover, silage-White clover 5037.602/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	456	121	167	154	33	-	279	413	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	58	460	295	31	600	140
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	-
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	72

DVE	**1991**	**2007**
%RUP	25	25
%DRUP	74	73
%RUSTA	-	-
%DASH	50	50
DASHmax	72	72

Nutritional value (in DM)

Ruminants

VEM	803 /kg
VEVI	807 /kg
FOM-91	533 g/kg
FOMr-07	556 g/kg
FOMr2-07	243 g/kg
FOMr2/FOMr	0.44 /kg
DVE-91	62 g/kg
DVE-07	56 g/kg
OEB-91	40 g/kg
OEB-07	49 g/kg
OEB2-07	59 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	3.13 /kg
VW	0.97 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			154
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		33.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	47	-
LA	22	-
AC	6	-
ETH	19	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	8

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Remarks

Grass/clover, silage-White clover:

1. The chemical contents, digestibility coefficients and feeding values are based on 5 batches of grass/red clover mixtures with an average clover percentage of 47%.
2. Training is required in order to make a correct visual assessment of the percentage of clover.

Green cereals, fresh 5028.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	160	80	110	110	35	-	250	525	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	250	230	-	-	-	-	-	545	545
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	3.9	-	-	29.0	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	69
DCCFAT	43
DCCF	69
DCNFE	85
DCOM	77

DVE	**1991**	**2007**
%RUP	44	46
%DRUP	65	65
%RUSTA	-	18
%DASH	35	35
DASHmax	34	34

Nutritional value (in DM)

Ruminants

VEM	913 /kg
VEVI	946 /kg
FOM-91	626 g/kg
FOMr-07	520 g/kg
FOMr2-07	163 g/kg
FOMr2/FOMr	0.31 /kg
DVE-91	75 g/kg
DVE-07	60 g/kg
OEB-91	-38 g/kg
OEB-07	-15 g/kg
OEB2-07	-1 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	2.10 /kg
VW	0.92 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			110
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Green cereals, silage 5028.602/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	250	80	107	98	35	-	250	537	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	218	207	-	-	-	-	-	488	488
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	3.5	3.7	-	1.5	27.3	0.5	6.7	1.6
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	372	73	41	6	1.8	-	0.4
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	532
		CF_DI	0.97	CAD (meq/kg)	432

Digestibility coëfficients (%)

Ruminants

DCCP	62
DCCFAT	63
DCCF	69
DCNFE	85
DCOM	78

DVE	**1991**	**2007**
%RUP	25	25
%DRUP	50	50
%RUSTA	-	18
%DASH	35	35
DASHmax	34	34

Nutritional value (in DM)

Ruminants

VEM	945 /kg
VEVI	990 /kg
FOM-91	607 g/kg
FOMr-07	603 g/kg
FOMr2-07	294 g/kg
FOMr2/FOMr	0.49 /kg
DVE-91	54 g/kg
DVE-07	46 g/kg
OEB-91	-14 g/kg
OEB-07	-2 g/kg
OEB2-07	31 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	2.93 /kg
VW	1.11 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			98
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	60 %
DCOM	63 %
NEm	6.61 MJ/kg
NEm	1580 kcal/kg
EWpa	0.740 /kg
DCPho	59 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	100	-
LA	80	-
AC	20	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	8

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Leek, fresh 6012.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	100	97	165	165	24	-	121	593	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	400	-	-	-	328	328
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	4.2	3.9	-	2.0	31.7	0.3	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	80
DCCFAT	50
DCCF	60
DCNFE	90
DCOM	83

DVE	**1991**	**2007**
%RUP	37	38
%DRUP	80	80
%RUSTA	-	-
%DASH	50	50
DASHmax	58	58

Nutritional value (in DM)

Ruminants

VEM	970 /kg
VEVI	1034 /kg
FOM-91	665 g/kg
FOMr-07	656 g/kg
FOMr2-07	432 g/kg
FOMr2/FOMr	0.66 /kg
DVE-91	102 g/kg
DVE-07	100 g/kg
OEB-91	-2 g/kg
OEB-07	0 g/kg
OEB2-07	-33 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.60 /kg
VW	0.92 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			165
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		24.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Lettuce, fresh 6014.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	61	175	237	237	45	-	116	427	-
sdc	15	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	100	-	-	-	447	447
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	12.2	5.3	-	3.0	56.2	1.7	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants

DCCP	82
DCCFAT	61
DCCF	80
DCNFE	91
DCOM	85

DVE	**1991**	**2007**
%RUP	30	32
%DRUP	75	75
%RUSTA	-	-
%DASH	50	50
DASHmax	101	101

Nutritional value (in DM)

Ruminants

VEM	966 /kg
VEVI	1032 /kg
FOM-91	587 g/kg
FOMr-07	513 g/kg
FOMr2-07	189 g/kg
FOMr2/FOMr	0.37 /kg
DVE-91	98 g/kg
DVE-07	85 g/kg
OEB-91	69 g/kg
OEB-07	90 g/kg
OEB2-07	35 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.60 /kg
VW	0.92 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			237
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		45.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Lucerne (alfalfa), artificially dried 5004.609/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	903	117	172	172	23	-	314	375	-
sdc	22	17	-	22	-	-	41	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	47	436	-	-	643	207
sdc	-	-	-	11	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	14.9	2.9	-	2.1	24.4	0.4	-	2.5
sdc	-	0.4	-	0.8	6.8	0.2	-	1.0

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	687	35	26	9	2.2	-	0.1
sdc	527	18	9	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	67
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	63

DVE	**1991**	**2007**
%RUP	44	44
%DRUP	73	73
%RUSTA	-	-
%DASH	50	50
DASHmax	70	70

Nutritional value (in DM)

Ruminants

VEM	671 /kg
VEVI	637 /kg
FOM-91	459 g/kg
FOMr-07	510 g/kg
FOMr2-07	147 g/kg
FOMr2/FOMr	0.29 /kg
DVE-91	77 g/kg
DVE-07	73 g/kg
OEB-91	18 g/kg
OEB-07	23 g/kg
OEB2-07	26 g/kg
DVMET-91	1.6 g/kg
DVLYS-91	4.4 g/kg
DVMET-07	1.6 g/kg
DVLYS-07	4.3 g/kg
SW	3.94 /kg
VW	1.40 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			172
LYS	4.3	-	7.4
MET	1.5	-	2.6
CYS	1.0	-	1.7
THR	4.0	-	6.9
TRP	1.4	-	2.4
ILE	4.0	-	6.9
ARG	4.1	-	7.0
PHE	4.6	-	7.9
HIS	2.0	-	3.4
LEU	6.9	-	11.8
TYR	3.1	-	5.3
VAL	5.1	-	8.7
ALA	5.1	-	8.7
ASP	11.1	-	19.0
GLU	9.6	-	16.5
GLY	4.7	-	8.1
PRO	4.8	-	8.2
SER	4.2	-	7.2
Sum AA	81.5		140

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		23.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Lucerne (alfalfa), ensiled 5004.602/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	403	142	200	184	24	-	288	361	-
sdc	108	36	-	31	6	-	40	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	25	436	326	61	515	79
sdc	-	-	-	20	59	38	10	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	12.1	3.3	-	2.6	33.1	0.6	6.7	2.8
sdc	3.0	0.6	-	0.6	6.0	0.4	2.8	0.9

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	528	54	45	9	3.7	0.0	33.5
sdc	411	28	20	2	2.0	0.0	65.8

IP/P	-	SUGe/SUG	-	EB (meq/kg)	685
		CF_DI	0.97	CAD (meq/kg)	510

Digestibility coëfficients (%)

Ruminants

DCCP	73
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	65

DVE	**1991**	**2007**
%RUP	29	29
%DRUP	55	55
%RUSTA	-	-
%DASH	50	50
DASHmax	83	83

Nutritional value (in DM)

Ruminants

VEM	678 /kg
VEVI	650 /kg
FOM-91	414 g/kg
FOMr-07	458 g/kg
FOMr2-07	288 g/kg
FOMr2/FOMr	0.63 /kg
DVE-91	46 g/kg
DVE-07	38 g/kg
OEB-91	74 g/kg
OEB-07	88 g/kg
OEB2-07	99 g/kg
DVMET-91	1.1 g/kg
DVLYS-91	2.9 g/kg
DVMET-07	0.9 g/kg
DVLYS-07	2.3 g/kg
SW	3.06 /kg
VW	0.96 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			184
LYS	4.1	0.5	7.6
MET	1.4	0.2	2.6
CYS	1.0	0.1	1.8
THR	3.9	0.2	7.2
TRP	1.0	0.2	1.8
ILE	3.9	0.4	7.2
ARG	2.9	0.6	5.3
PHE	4.2	0.6	7.7
HIS	1.7	0.2	3.1
LEU	6.5	0.6	12.0
TYR	2.7	0.4	5.0
VAL	5.1	0.3	9.4
ALA	5.8	0.7	10.7
ASP	10.6	1.6	19.5
GLU	8.1	0.8	14.9
GLY	4.5	0.4	8.3
PRO	6.0	0.9	11.1
SER	3.8	0.4	7.0
Sum AA	77.2		142

Horses

DCCP	73 %
DCOM	63 %
NEm	5.63 MJ/kg
NEm	1346 kcal/kg
EWpa	0.631 /kg
DCPho	135 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		24.4
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	119	-
LA	82	19
AC	37	3
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	8

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Lucerne (alfalfa), fresh 5004.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	201	110	210	210	30	-	233	417	-
sdc	48	31	-	-	-	-	37	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	50	390	-	-	602	212
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	3.0	-	-	32.8	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	81
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	73

DVE	**1991**	**2007**
%RUP	28	30
%DRUP	41	41
%RUSTA	-	-
%DASH	50	50
DASHmax	66	66

Nutritional value (in DM)

Ruminants

VEM	827 /kg
VEVI	834 /kg
FOM-91	560 g/kg
FOMr-07	449 g/kg
FOMr2-07	163 g/kg
FOMr2/FOMr	0.36 /kg
DVE-91	58 g/kg
DVE-07	41 g/kg
OEB-91	62 g/kg
OEB-07	88 g/kg
OEB2-07	61 g/kg
DVMET-91	1.4 g/kg
DVLYS-91	4.2 g/kg
DVMET-07	1.0 g/kg
DVLYS-07	3.0 g/kg
SW	1.74 /kg
VW	0.96 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			210
LYS	5.2	0.3	10.9
MET	1.5	0.1	3.2
CYS	1.3	0.1	2.7
THR	4.2	0.2	8.8
TRP	-	-	-
ILE	3.9	0.1	8.2
ARG	4.3	0.3	9.0
PHE	4.5	0.2	9.5
HIS	2.2	0.1	4.6
LEU	6.9	0.2	14.5
TYR	3.0	0.2	6.3
VAL	5.0	0.1	10.5
ALA	5.2	0.2	10.9
ASP	13.1	1.8	27.5
GLU	8.6	0.3	18.1
GLY	4.6	0.2	9.7
PRO	4.6	0.5	9.7
SER	4.2	0.1	8.8
Sum AA	82.3		-

Horses

DCCP	74 %
DCOM	70 %
NEm	6.77 MJ/kg
NEm	1618 kcal/kg
EWpa	0.758 /kg
DCPho	155 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		30.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Lucerne (alfalfa), hay 5004.606/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	872	101	175	175	20	-	312	392	-
sdc	25	16	-	36	-	-	44	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	50	437	330	63	656	218
sdc	-	-	-	-	59	34	11	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	12.9	2.8	-	2.5	27.6	1.0	-	2.1
sdc	3.6	0.6	-	-	6.3	-	-	0.5

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	115	24	19	-	-	-	-
sdc	65	5	4	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	67	
DCCFAT	-	
DCCF	-	
DCNFE	-	
DCOM	62	
DVE	**1991**	**2007**
%RUP	50	50
%DRUP	75	75
%RUSTA	-	-
%DASH	50	50
DASHmax	60	60

Nutritional value (in DM)

Ruminants

VEM	663 /kg
VEVI	625 /kg
FOM-91	450 g/kg
FOMr-07	450 g/kg
FOMr2-07	135 g/kg
FOMr2/FOMr	0.30 /kg
DVE-91	87 g/kg
DVE-07	75 g/kg
OEB-91	10 g/kg
OEB-07	28 g/kg
OEB2-07	40 g/kg
DVMET-91	1.8 g/kg
DVLYS-91	5.2 g/kg
DVMET-07	1.5 g/kg
DVLYS-07	4.4 g/kg
SW	3.92 /kg
VW	1.40 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			175
LYS	4.8	0.6	8.4
MET	1.5	0.1	2.6
CYS	1.3	0.1	2.3
THR	4.4	0.3	7.7
TRP	1.4	0.2	2.5
ILE	4.1	0.4	7.2
ARG	4.6	0.5	8.1
PHE	4.7	0.5	8.2
HIS	2.0	0.2	3.5
LEU	7.2	0.6	12.6
TYR	3.4	0.3	6.0
VAL	5.2	0.4	9.1
ALA	5.5	0.4	9.6
ASP	11.1	1.1	19.5
GLU	9.6	0.5	16.8
GLY	5.0	0.2	8.8
PRO	5.4	0.6	9.5
SER	4.2	0.2	7.4
Sum AA	85.4		150

Horses

DCCP	70 %
DCOM	60 %
NEm	5.57 MJ/kg
NEm	1331 kcal/kg
EWpa	0.624 /kg
DCPho	123 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		20.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Maize silage-DM 300 - 340 g/kg 5008.602/1/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	324	37	74	69	31	-	184	679	-
sdc	11	4	-	6	3	-	13	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	334	-	14	382	213	17	453	71
sdc	-	-	-	3	23	14	2	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	1.7	1.9	-	1.3	10.7	0.1	2.3	1.0
sdc	0.3	0.2	-	0.2	1.3	0.1	0.5	0.1

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	106	25	35	4	0.5	0.2	0.0
sdc	34	10	9	1	0.2	0.1	0.0

IP/P	-	SUGe/SUG	-	EB (meq/kg)	214
		CF_DI	0.97	CAD (meq/kg)	153

Digestibility coëfficients (%)

Ruminants

DCCP	45
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	74

DVE	**1991**	**2007**
%RUP	35	43
%DRUP	63	63
%RUSTA	22	26
%DASH	50	50
DASHmax	25	25

Nutritional value (in DM)

Ruminants

VEM	940 /kg
VEVI	973 /kg
FOM-91	547 g/kg
FOMr-07	531 g/kg
FOMr2-07	264 g/kg
FOMr2/FOMr	0.50 /kg
DVE-91	50 g/kg
DVE-07	51 g/kg
OEB-91	-37 g/kg
OEB-07	-38 g/kg
OEB2-07	-3 g/kg
DVMET-91	1.3 g/kg
DVLYS-91	3.3 g/kg
DVMET-07	1.3 g/kg
DVLYS-07	3.2 g/kg
SW	1.56 /kg
VW	0.80 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			69
LYS	2.3	0.4	1.6
MET	1.5	0.2	1.0
CYS	1.3	0.3	0.9
THR	3.2	0.3	2.2
TRP	0.5	0.1	0.3
ILE	3.3	0.3	2.3
ARG	1.9	0.4	1.3
PHE	3.8	0.5	2.6
HIS	1.6	0.3	1.1
LEU	8.6	1.0	5.9
TYR	2.1	0.3	1.4
VAL	4.5	0.3	3.1
ALA	7.6	0.7	5.2
ASP	5.9	0.8	4.1
GLU	11.8	1.2	8.1
GLY	3.9	0.3	2.7
PRO	6.2	0.9	4.3
SER	3.7	0.4	2.6
Sum AA	73.7		51

Horses

DCCP	68 %
DCOM	72 %
NEm	8.78 MJ/kg
NEm	2098 kcal/kg
EWpa	0.983 /kg
DCPho	47 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		31.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	68	-
LA	55	7
AC	13	3
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	7

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Remarks

Maize silage-DM 300 - 340 g/kg:

1. The nutrient contents of this product sheet are based on NIR analysis results from Eurofins Agro from the period 2015 - 2019.
2. The parameters %RUP and %RUSTA depend on the DM content and the ensiling period. For this product sheet an ensiling period of 90 days is used.
3. After a 327 ensiling period minimum values are reacted for %RUP-1991 (29), %RUP-2007 (41), %RUSTA-1991 (15) en %RUSTA-2007 (18).

Maize silage-DM 340 - 380 g/kg 5008.602/2/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	361	36	72	67	32	-	174	691	-
sdc	11	4	-	5	3	-	14	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	363	-	13	362	202	16	429	67
sdc	-	-	-	2	24	15	2	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	1.6	1.9	-	1.3	10.2	0.1	2.1	1.0
sdc	0.3	0.2	-	0.2	1.4	0.1	0.5	0.1

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	104	23	34	4	0.5	0.2	0.0
sdc	33	10	9	1	0.2	0.1	0.0

IP/P	-	SUGe/SUG	-	EB (meq/kg)	208
		CF_DI	0.97	CAD (meq/kg)	147

Digestibility coëfficients (%)

Ruminants

DCCP	43
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	75

DVE	**1991**	**2007**
%RUP	37	45
%DRUP	63	63
%RUSTA	23	28
%DASH	50	50
DASHmax	25	25

Nutritional value (in DM)

Ruminants

VEM	956 /kg
VEVI	993 /kg
FOM-91	544 g/kg
FOMr-07	528 g/kg
FOMr2-07	259 g/kg
FOMr2/FOMr	0.49 /kg
DVE-91	51 g/kg
DVE-07	53 g/kg
OEB-91	-40 g/kg
OEB-07	-43 g/kg
OEB2-07	-5 g/kg
DVMET-91	1.3 g/kg
DVLYS-91	3.3 g/kg
DVMET-07	1.3 g/kg
DVLYS-07	3.4 g/kg
SW	1.47 /kg
VW	0.81 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			67
LYS	2.3	0.4	1.5
MET	1.5	0.2	1.0
CYS	1.3	0.3	0.9
THR	3.2	0.3	2.1
TRP	0.5	0.1	0.3
ILE	3.3	0.3	2.2
ARG	1.9	0.4	1.3
PHE	3.8	0.5	2.5
HIS	1.6	0.3	1.1
LEU	8.6	1.0	5.8
TYR	2.1	0.3	1.4
VAL	4.5	0.3	3.0
ALA	7.6	0.7	5.1
ASP	5.9	0.8	4.0
GLU	11.8	1.2	7.9
GLY	3.9	0.3	2.6
PRO	6.2	0.9	4.2
SER	3.7	0.4	2.5
Sum AA	73.7		49

Horses

DCCP	68 %
DCOM	73 %
NEm	9.09 MJ/kg
NEm	2172 kcal/kg
EWpa	1.018 /kg
DCPho	46 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		32.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	66	-
LA	54	7
AC	12	3
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	7

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Remarks

Maize silage-DM 340 - 380 g/kg:

1. The nutrient contents of this product sheet are based on NIR analysis results from Eurofins Agro from the period 2015 - 2019.
2. The parameters %RUP and %RUSTA depend on the DM content and the ensiling period. For this product sheet an ensiling period of 90 days is used.
3. After a 327 ensiling period minimum values are reacted for %RUP-1991 (29), %RUP-2007 (41), %RUSTA-1991 (15) en %RUSTA-2007 (18).

Maize silage-DM 380 - 420 g/kg 5008.602/3/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	398	34	70	65	33	-	168	700	-
sdc	11	4	-	5	3	-	13	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	380	-	13	352	196	16	418	66
sdc	-	-	-	2	24	15	2	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	1.6	1.9	-	1.2	9.8	0.1	1.9	1.0
sdc	0.4	0.2	-	0.2	1.4	0.1	0.5	0.1

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	103	22	33	4	0.5	0.2	0.0
sdc	32	9	9	1	0.2	0.1	0.0

IP/P	-	SUGe/SUG	-	EB (meq/kg)	203
		CF_DI	0.97	CAD (meq/kg)	142

Digestibility coëfficients (%)

Ruminants

DCCP	42
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	75

DVE	**1991**	**2007**
%RUP	40	46
%DRUP	63	63
%RUSTA	24	30
%DASH	50	50
DASHmax	24	24

Nutritional value (in DM)

Ruminants

VEM	967 /kg
VEVI	1007 /kg
FOM-91	542 g/kg
FOMr-07	521 g/kg
FOMr2-07	247 g/kg
FOMr2/FOMr	0.47 /kg
DVE-91	52 g/kg
DVE-07	55 g/kg
OEB-91	-42 g/kg
OEB-07	-46 g/kg
OEB2-07	-7 g/kg
DVMET-91	1.3 g/kg
DVLYS-91	3.3 g/kg
DVMET-07	1.4 g/kg
DVLYS-07	3.5 g/kg
SW	1.41 /kg
VW	0.89 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			65
LYS	2.3	0.4	1.5
MET	1.5	0.2	1.0
CYS	1.3	0.3	0.8
THR	3.2	0.3	2.1
TRP	0.5	0.1	0.3
ILE	3.3	0.3	2.1
ARG	1.9	0.4	1.2
PHE	3.8	0.5	2.5
HIS	1.6	0.3	1.0
LEU	8.6	1.0	5.6
TYR	2.1	0.3	1.4
VAL	4.5	0.3	2.9
ALA	7.6	0.7	4.9
ASP	5.9	0.8	3.8
GLU	11.8	1.2	7.7
GLY	3.9	0.3	2.5
PRO	6.2	0.9	4.0
SER	3.7	0.4	2.4
Sum AA	73.7		48

Horses

DCCP	68 %
DCOM	74 %
NEm	9.30 MJ/kg
NEm	2222 kcal/kg
EWpa	1.041 /kg
DCPho	44 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		33.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	62	-
LA	52	7
AC	10	3
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-
	% of CP	
NH3	7	

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Remarks

Maize silage-DM 380 - 420 g/kg:

1. The nutrient contents of this product sheet are based on NIR analysis results from Eurofins Agro from the period 2015 - 2019.
2. The parameters %RUP and %RUSTA depend on the DM content and the ensiling period. For this product sheet an ensiling period of 90 days is used.
3. After a 327 ensiling period minimum values are reacted for %RUP-1991 (29), %RUP-2007 (41), %RUSTA-1991 (15) en %RUSTA-2007 (18).

Maize silage-DM > 420 g/kg 5008.602/4/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	435	33	70	64	33	-	162	708	-
sdc	10	4	-	5	3	-	13	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	398	-	13	343	190	15	404	61
sdc	-	-	-	2	24	15	2	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	1.5	1.9	-	1.2	9.5	0.1	1.7	1.0
sdc	0.4	0.2	-	0.2	1.3	0.1	0.5	0.1

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	103	22	32	4	0.5	0.2	0.0
sdc	33	8	9	1	0.2	0.1	0.0

IP/P	-	SUGe/SUG	-	EB (meq/kg)	201
		CF_DI	0.97	CAD (meq/kg)	141

Digestibility coëfficients (%)

Ruminants

DCCP	41
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	76

DVE	**1991**	**2007**
%RUP	42	48
%DRUP	63	63
%RUSTA	26	31
%DASH	50	50
DASHmax	23	23

Nutritional value (in DM)

Ruminants

VEM	976 /kg
VEVI	1019 /kg
FOM-91	539 g/kg
FOMr-07	515 g/kg
FOMr2-07	236 g/kg
FOMr2/FOMr	0.46 /kg
DVE-91	53 g/kg
DVE-07	57 g/kg
OEB-91	-44 g/kg
OEB-07	-49 g/kg
OEB2-07	-8 g/kg
DVMET-91	1.3 g/kg
DVLYS-91	3.4 g/kg
DVMET-07	1.4 g/kg
DVLYS-07	3.6 g/kg
SW	1.36 /kg
VW	1.04 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			64
LYS	2.3	0.4	1.5
MET	1.5	0.2	1.0
CYS	1.3	0.3	0.8
THR	3.2	0.3	2.0
TRP	0.5	0.1	0.3
ILE	3.3	0.3	2.1
ARG	1.9	0.4	1.2
PHE	3.8	0.5	2.4
HIS	1.6	0.3	1.0
LEU	8.6	1.0	5.5
TYR	2.1	0.3	1.3
VAL	4.5	0.3	2.9
ALA	7.6	0.7	4.9
ASP	5.9	0.8	3.8
GLU	11.8	1.2	7.6
GLY	3.9	0.3	2.5
PRO	6.2	0.9	4.0
SER	3.7	0.4	2.4
Sum AA	73.7		47

Horses

DCCP	68 %
DCOM	74 %
NEm	9.50 MJ/kg
NEm	2270 kcal/kg
EWpa	1.064 /kg
DCPho	44 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		33.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	59	-
LA	49	6
AC	10	3
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	8

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Remarks

Maize silage-DM > 420 g/kg:

1. The nutrient contents of this product sheet are based on NIR analysis results from Eurofins Agro from the period 2015 - 2019.
2. The parameters %RUP and %RUSTA depend on the DM content and the ensiling period. For this product sheet an ensiling period of 90 days is used.
3. After a 327 ensiling period minimum values are reacted for %RUP-1991 (29), %RUP-2007 (41), %RUSTA-1991 (15) en %RUSTA-2007 (18).

Oats straw 1004.508/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	840	70	37	37	17	-	450	426	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	876	876
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	5.2	1.6	-	1.3	17.9	-	-	1.0
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	19
DCCFAT	62
DCCF	56
DCNFE	45
DCOM	50

DVE	**1991**	**2007**
%RUP	68	68
%DRUP	70	70
%RUSTA	-	-
%DASH	35	35
DASHmax	30	30

Nutritional value (in DM)

Ruminants

VEM	531 /kg
VEVI	463 /kg
FOM-91	419 g/kg
FOMr-07	266 g/kg
FOMr2-07	25 g/kg
FOMr2/FOMr	0.09 /kg
DVE-91	21 g/kg
DVE-07	-1 g/kg
OEB-91	-54 g/kg
OEB-07	-20 g/kg
OEB2-07	7 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	4.30 /kg
VW	1.66 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			37
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	28 %
DCOM	41 %
NEm	3.40 MJ/kg
NEm	812 kcal/kg
EWpa	0.380 /kg
DCPho	10 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		17.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Onions, fresh 4009.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	118	134	135	135	25	-	115	591	-
sdc	4	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	275	-	-	-	441	441
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	9.4	3.0	-	0.8	16.5	0.6	-	-
sdc	-	0.2	-	0.0	0.9	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	75
DCCFAT	80
DCCF	85
DCNFE	95
DCOM	90

DVE	**1991**	**2007**
%RUP	35	36
%DRUP	65	65
%RUSTA	-	-
%DASH	65	65
DASHmax	102	102

Nutritional value (in DM)

Ruminants

VEM	1055 /kg
VEVI	1160 /kg
FOM-91	709 g/kg
FOMr-07	574 g/kg
FOMr2-07	313 g/kg
FOMr2/FOMr	0.54 /kg
DVE-91	89 g/kg
DVE-07	74 g/kg
OEB-91	-23 g/kg
OEB-07	0 g/kg
OEB2-07	-19 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.00 /kg
VW	0.90 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			135
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		25.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Pea leaves, ensiled 5007.639/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	227	169	183	165	26	-	258	382	-
sdc	40	59	-	24	-	-	35	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	88	-	-	-	-	-	-	538	538
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	3.7	-	2.2	21.1	0.7	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	68
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	64

DVE	**1991**	**2007**
%RUP	24	24
%DRUP	50	50
%RUSTA	-	-
%DASH	35	35
DASHmax	69	69

Nutritional value (in DM)

Ruminants

VEM	663 /kg
VEVI	640 /kg
FOM-91	415 g/kg
FOMr-07	512 g/kg
FOMr2-07	241 g/kg
FOMr2/FOMr	0.47 /kg
DVE-91	32 g/kg
DVE-07	29 g/kg
OEB-91	72 g/kg
OEB-07	78 g/kg
OEB2-07	92 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	3.03 /kg
VW	1.00 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			165
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		26.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	100	-
LA	80	-
AC	20	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	10

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Pea leaves, fresh 5007.642/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	180	93	184	184	35	-	274	414	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	688	688
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	2.7	-	-	21.1	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	77
DCCFAT	57
DCCF	51
DCNFE	81
DCOM	70

DVE	**1991**	**2007**
%RUP	43	45
%DRUP	75	75
%RUSTA	-	-
%DASH	50	50
DASHmax	56	56

Nutritional value (in DM)

Ruminants

VEM	822 /kg
VEVI	822 /kg
FOM-91	522 g/kg
FOMr-07	477 g/kg
FOMr2-07	85 g/kg
FOMr2/FOMr	0.18 /kg
DVE-91	92 g/kg
DVE-07	78 g/kg
OEB-91	18 g/kg
OEB-07	37 g/kg
OEB2-07	31 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	2.34 /kg
VW	0.92 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			184
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		35.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Pea straw 5007.508/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	710	106	106	106	16	-	368	404	-
sdc	282	28	-	32	-	-	36	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	772	772
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	21.6	1.2	-	1.6	23.3	1.0	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	58
DCCFAT	60
DCCF	41
DCNFE	55
DCOM	50

DVE	**1991**	**2007**
%RUP	68	68
%DRUP	70	70
%RUSTA	-	-
%DASH	50	50
DASHmax	63	63

Nutritional value (in DM)

Ruminants

VEM	523 /kg
VEVI	457 /kg
FOM-91	356 g/kg
FOMr-07	258 g/kg
FOMr2-07	41 g/kg
FOMr2/FOMr	0.16 /kg
DVE-91	51 g/kg
DVE-07	31 g/kg
OEB-91	-27 g/kg
OEB-07	4 g/kg
OEB2-07	23 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	4.30 /kg
VW	1.66 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			106
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		16.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Pears, fresh 6021.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	165	24	16	16	15	-	146	799	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	558	-	-	-	407	407
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	0.8	0.4	-	-	1.2	0.1	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	-
DCCFAT	73
DCCF	65
DCNFE	95
DCOM	87

DVE	**1991**	**2007**
%RUP	58	61
%DRUP	75	75
%RUSTA	-	-
%DASH	65	65
DASHmax	24	24

Nutritional value (in DM)

Ruminants

VEM	1098 /kg
VEVI	1205 /kg
FOM-91	826 g/kg
FOMr-07	807 g/kg
FOMr2-07	566 g/kg
FOMr2/FOMr	0.70 /kg
DVE-91	77 g/kg
DVE-07	87 g/kg
OEB-91	-118 g/kg
OEB-07	-134 g/kg
OEB2-07	-97 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.60 /kg
VW	0.55 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			16
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		15.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Potato peelings, ensiled 4001.525/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	220	80	98	93	12	-	188	627	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	500	485	-	5	-	-	-	295	295
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	2.9	-	-	27.2	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	53
DCCFAT	69
DCCF	74
DCNFE	93
DCOM	85

DVE	**1991**	**2007**
%RUP	30	30
%DRUP	60	60
%RUSTA	43	44
%DASH	35	35
DASHmax	34	34

Nutritional value (in DM)

Ruminants

VEM	1025 /kg
VEVI	1106 /kg
FOM-91	517 g/kg
FOMr-07	560 g/kg
FOMr2-07	197 g/kg
FOMr2/FOMr	0.35 /kg
DVE-91	55 g/kg
DVE-07	70 g/kg
OEB-91	-12 g/kg
OEB-07	-35 g/kg
OEB2-07	5 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.75 /kg
VW	0.55 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			93
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		12.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	30	-
LA	24	-
AC	6	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	5

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Potatoes, fresh 4001.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	202	57	105	105	3	-	41	794	-
sdc	25	15	-	12	-	-	20	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	638	627	-	30	-	-	-	180	180
sdc	79	-	-	7	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	0.6	2.0	-	1.1	22.2	0.2	1.6	1.6
sdc	0.2	0.5	-	0.1	3.5	0.1	0.7	0.2

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	91	7	14	4	0.3	-	-
sdc	57	2	2	1	0.1	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	531
		CF_DI	0.97	CAD (meq/kg)	430

Digestibility coëfficients (%)

Ruminants

DCCP	56
DCCFAT	7
DCCF	74
DCNFE	93
DCOM	88

DVE	**1991**	**2007**
%RUP	30	30
%DRUP	80	80
%RUSTA	43	44
%DASH	35	35
DASHmax	25	25

Nutritional value (in DM)

Ruminants

VEM	1097 /kg
VEVI	1207 /kg
FOM-91	524 g/kg
FOMr-07	565 g/kg
FOMr2-07	212 g/kg
FOMr2/FOMr	0.37 /kg
DVE-91	67 g/kg
DVE-07	85 g/kg
OEB-91	-8 g/kg
OEB-07	-37 g/kg
OEB2-07	3 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.70 /kg
VW	0.65 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			105
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	44 %
DCOM	86 %
NEm	10.53 MJ/kg
NEm	2518 kcal/kg
EWpa	1.180 /kg
DCPho	46 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		3.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Potatoes, raw, ensiled 4001.602/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	322	74	71	65	1	-	33	827	-
sdc	62	28	-	10	-	-	7	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	550	536	-	5	-	-	-	288	288
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	2.0	-	-	11.0	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	33
DCCFAT	-
DCCF	74
DCNFE	93
DCOM	88

DVE	**1991**	**2007**
%RUP	30	30
%DRUP	60	60
%RUSTA	43	44
%DASH	35	35
DASHmax	32	32

Nutritional value (in DM)

Ruminants

VEM	1079 /kg
VEVI	1194 /kg
FOM-91	549 g/kg
FOMr-07	565 g/kg
FOMr2-07	196 g/kg
FOMr2/FOMr	0.35 /kg
DVE-91	55 g/kg
DVE-07	69 g/kg
OEB-91	-35 g/kg
OEB-07	-57 g/kg
OEB2-07	-6 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.60 /kg
VW	0.65 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			65
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	33 %
DCOM	86 %
NEm	10.26 MJ/kg
NEm	2452 kcal/kg
EWpa	1.149 /kg
DCPho	29 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		1.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	30	-
LA	24	-
AC	6	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	8

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Rape seed straw 3009.508/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	849	70	38	38	8	-	523	361	-
sdc	19	24	-	10	-	-	46	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	830	663	102	884	54
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	15.6	1.1	-	1.1	14.1	1.4	2.7	3.5
sdc	-	0.4	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	345	26	12	2	0.9	0.4	0.2
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	346
		CF_DI	0.97	CAD (meq/kg)	127

Digestibility coëfficients (%)

Ruminants

DCCP	31
DCCFAT	54
DCCF	23
DCNFE	46
DCOM	33

DVE	**1991**	**2007**
%RUP	68	68
%DRUP	70	70
%RUSTA	-	-
%DASH	35	35
DASHmax	30	30

Nutritional value (in DM)

Ruminants

VEM	327 /kg
VEVI	232 /kg
FOM-91	269 g/kg
FOMr-07	269 g/kg
FOMr2-07	26 g/kg
FOMr2/FOMr	0.10 /kg
DVE-91	-7 g/kg
DVE-07	-14 g/kg
OEB-91	-31 g/kg
OEB-07	-20 g/kg
OEB2-07	7 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	4.30 /kg
VW	1.66 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			38
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		8.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Rye straw 1007.508/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	840	70	29	29	16	-	485	400	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	885	885
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	1.0	-	-	10.0	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	14	
DCCFAT	57	
DCCF	54	
DCNFE	38	
DCOM	46	
DVE	**1991**	**2007**
%RUP	68	68
%DRUP	70	70
%RUSTA	-	-
%DASH	35	35
DASHmax	30	30

Nutritional value (in DM)

Ruminants

VEM	482 /kg
VEVI	404 /kg
FOM-91	391 g/kg
FOMr-07	266 g/kg
FOMr2-07	23 g/kg
FOMr2/FOMr	0.09 /kg
DVE-91	11 g/kg
DVE-07	-8 g/kg
OEB-91	-51 g/kg
OEB-07	-22 g/kg
OEB2-07	5 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	4.30 /kg
VW	1.66 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			29
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	15 %
DCOM	38 %
NEm	3.09 MJ/kg
NEm	739 kcal/kg
EWpa	0.346 /kg
DCPho	4 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		16.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Spinach, fresh 6008.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	94	186	256	256	37	-	99	422	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	521	521
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	9.7	6.2	-	7.2	62.0	7.5	8.2	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	1682	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	84
DCCFAT	60
DCCF	80
DCNFE	90
DCOM	85

DVE	**1991**	**2007**
%RUP	29	30
%DRUP	70	70
%RUSTA	-	-
%DASH	65	65
DASHmax	139	139

Nutritional value (in DM)

Ruminants

VEM	953 /kg
VEVI	1019 /kg
FOM-91	584 g/kg
FOMr-07	483 g/kg
FOMr2-07	110 g/kg
FOMr2/FOMr	0.23 /kg
DVE-91	95 g/kg
DVE-07	77 g/kg
OEB-91	86 g/kg
OEB-07	113 g/kg
OEB2-07	56 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.00 /kg
VW	0.92 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			256
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		37.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Sugarbeet leaves with tops, fresh 4004.647/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	160	200	151	151	20	-	100	529	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	629	629
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	2.3	-	-	31.0	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	79
DCCFAT	38
DCCF	67
DCNFE	87
DCOM	82

DVE	**1991**	**2007**
%RUP	38	40
%DRUP	80	80
%RUSTA	-	-
%DASH	35	35
DASHmax	81	81

Nutritional value (in DM)

Ruminants

VEM	857 /kg
VEVI	910 /kg
FOM-91	576 g/kg
FOMr-07	421 g/kg
FOMr2-07	71 g/kg
FOMr2/FOMr	0.17 /kg
DVE-91	85 g/kg
DVE-07	62 g/kg
OEB-91	0 g/kg
OEB-07	35 g/kg
OEB2-07	26 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.60 /kg
VW	1.00 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			151
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		20.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Sugarbeet leaves, fresh 4004.642/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	115	200	182	182	20	-	110	488	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	598	598
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	2.3	-	-	35.0	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	82
DCCFAT	38
DCCF	67
DCNFE	85
DCOM	81

DVE	**1991**	**2007**
%RUP	37	38
%DRUP	80	80
%RUSTA	-	-
%DASH	35	35
DASHmax	81	81

Nutritional value (in DM)

Ruminants

VEM	844 /kg
VEVI	889 /kg
FOM-91	559 g/kg
FOMr-07	438 g/kg
FOMr2-07	82 g/kg
FOMr2/FOMr	0.19 /kg
DVE-91	91 g/kg
DVE-07	71 g/kg
OEB-91	24 g/kg
OEB-07	54 g/kg
OEB2-07	34 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.70 /kg
VW	0.92 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			182
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		20.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Sugarbeet leaves, silage 4004.639/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	182	313	126	116	20	-	137	415	-
sdc	24	88	-	31	-	-	16	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	2	-	1	298	-	-	417	119
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	13.9	3.1	-	4.5	39.3	7.6	-	2.5
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	1177	183	189	10	1.4	-	0.3
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	60
DCCFAT	38
DCCF	67
DCNFE	79
DCOM	73

DVE	**1991**	**2007**
%RUP	21	21
%DRUP	60	60
%RUSTA	-	-
%DASH	35	35
DASHmax	124	124

Nutritional value (in DM)

Ruminants

VEM	640 /kg
VEVI	653 /kg
FOM-91	384 g/kg
FOMr-07	465 g/kg
FOMr2-07	249 g/kg
FOMr2/FOMr	0.54 /kg
DVE-91	22 g/kg
DVE-07	19 g/kg
OEB-91	39 g/kg
OEB-07	44 g/kg
OEB2-07	57 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.51 /kg
VW	1.00 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			116
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		20.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	145	-
LA	116	-
AC	29	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	8

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Sugarbeet rests, ensiled 4004.617/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	135	185	110	104	5	-	147	559	-
sdc	14	45	-	15	-	-	24	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	113	-	-	2	-	-	-	698	698
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	12.4	2.2	-	2.5	14.2	2.7	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants

DCCP	55
DCCFAT	20
DCCF	69
DCNFE	84
DCOM	78

DVE	**1991**	**2007**
%RUP	58	61
%DRUP	80	80
%RUSTA	-	-
%DASH	35	35
DASHmax	75	75

Nutritional value (in DM)

Ruminants

VEM	799 /kg
VEVI	837 /kg
FOM-91	565 g/kg
FOMr-07	563 g/kg
FOMr2-07	140 g/kg
FOMr2/FOMr	0.25 /kg
DVE-91	87 g/kg
DVE-07	89 g/kg
OEB-91	-45 g/kg
OEB-07	-48 g/kg
OEB2-07	-7 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	1.40 /kg
VW	0.69 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			104
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	56 %
DCOM	84 %
NEm	6.85 MJ/kg
NEm	1638 kcal/kg
EWpa	0.767 /kg
DCPho	58 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		5.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	55	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	6

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Sugarbeets, fresh 4004.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	260	190	41	41	5	-	45	719	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	600	-	-	-	185	185
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	-	1.6	-	-	8.0	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	27
DCCFAT	20
DCCF	71
DCNFE	95
DCOM	90

DVE	**1991**	**2007**
%RUP	58	61
%DRUP	60	60
%RUSTA	-	-
%DASH	50	50
DASHmax	110	110

Nutritional value (in DM)

Ruminants

VEM	931 /kg
VEVI	1033 /kg
FOM-91	700 g/kg
FOMr-07	708 g/kg
FOMr2-07	585 g/kg
FOMr2/FOMr	0.83 /kg
DVE-91	67 g/kg
DVE-07	77 g/kg
OEB-91	-90 g/kg
OEB-07	-107 g/kg
OEB2-07	-97 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.80 /kg
VW	0.69 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			41
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	27 %
DCOM	86 %
NEm	8.77 MJ/kg
NEm	2096 kcal/kg
EWpa	0.982 /kg
DCPho	17 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		5.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction -

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Sunflower, silage 5002.602/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	184	126	119	109	58	-	307	400	-
sdc	24	26	-	12	-	-	35	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	-	-	-	614	614
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	18.0	3.7	-	3.2	38.2	0.3	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	230	30	57	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	47
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	69

DVE	**1991**	**2007**
%RUP	30	30
%DRUP	70	70
%RUSTA	-	-
%DASH	50	50
DASHmax	74	74

Nutritional value (in DM)

Ruminants

VEM	803 /kg
VEVI	805 /kg
FOM-91	456 g/kg
FOMr-07	481 g/kg
FOMr2-07	198 g/kg
FOMr2/FOMr	0.41 /kg
DVE-91	46 g/kg
DVE-07	36 g/kg
OEB-91	10 g/kg
OEB-07	25 g/kg
OEB2-07	54 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	2.66 /kg
VW	1.00 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			109
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	45 %
DCOM	58 %
NEm	5.38 MJ/kg
NEm	1285 kcal/kg
EWpa	0.602 /kg
DCPho	49 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		58.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	100	-
LA	80	-
AC	20	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	8

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Sweet pepper, fresh 6009.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	125	62	163	163	37	-	176	562	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	375	-	-	-	376	376
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	1.2	2.9	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	56
DCCFAT	70
DCCF	50
DCNFE	83
DCOM	72

DVE	**1991**	**2007**
%RUP	58	61
%DRUP	75	75
%RUSTA	-	-
%DASH	65	65
DASHmax	51	51

Nutritional value (in DM)

Ruminants

VEM	864 /kg
VEVI	880 /kg
FOM-91	541 g/kg
FOMr-07	670 g/kg
FOMr2-07	409 g/kg
FOMr2/FOMr	0.61 /kg
DVE-91	108 g/kg
DVE-07	125 g/kg
OEB-91	-22 g/kg
OEB-07	-50 g/kg
OEB2-07	-52 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.60 /kg
VW	0.55 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			163
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		37.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Tomatoes, fresh 6015.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	63	90	164	164	47	-	96	603	-
sdc	-	-	-	-	-	-	-	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	450	-	110	-	265	265
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	1.9	4.9	-	1.9	42.0	1.4	-	-
sdc	-	-	-	-	-	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-
		CF_DI	0.97	CAD (meq/kg)	-

Digestibility coëfficients (%)

Ruminants

DCCP	76
DCCFAT	55
DCCF	60
DCNFE	88
DCOM	81

DVE	**1991**	**2007**
%RUP	58	61
%DRUP	75	75
%RUSTA	-	-
%DASH	65	65
DASHmax	71	71

Nutritional value (in DM)

Ruminants

VEM	977 /kg
VEVI	1037 /kg
FOM-91	597 g/kg
FOMr-07	667 g/kg
FOMr2-07	467 g/kg
FOMr2/FOMr	0.70 /kg
DVE-91	120 g/kg
DVE-07	132 g/kg
OEB-91	-30 g/kg
OEB-07	-49 g/kg
OEB2-07	-62 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	0.60 /kg
VW	0.55 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			164
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	-
DCOM	-
NEm	-
NEm	-
EWpa	-
DCPho	-

Fatty acids

	% FA	g/kg DM
CFAT(h)		47.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Wheat straw 1010.508/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	878	84	41	41	12	-	418	446	-
sdc	58	24	-	15	-	-	31	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	-	-	-	-	745	489	-	863	118
sdc	-	-	-	-	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	4.3	0.9	-	0.7	14.8	0.3	-	-
sdc	-	0.3	-	0.2	3.0	-	-	-

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	-	-	-	-	-	-	-
sdc	-	-	-	-	-	-	-

IP/P	-	SUGe/SUG	-	EB (meq/kg)	-	
		CF_DI	0.97	CAD (meq/kg)	-	

Digestibility coëfficients (%)

Ruminants

DCCP	23	
DCCFAT	41	
DCCF	48	
DCNFE	38	
DCOM	42	
DVE	**1991**	**2007**
%RUP	68	68
%DRUP	70	70
%RUSTA	-	-
%DASH	35	35
DASHmax	36	36

Nutritional value (in DM)

Ruminants

VEM	425 /kg
VEVI	343 /kg
FOM-91	344 g/kg
FOMr-07	264 g/kg
FOMr2-07	26 g/kg
FOMr2/FOMr	0.10 /kg
DVE-91	10 g/kg
DVE-07	-5 g/kg
OEB-91	-41 g/kg
OEB-07	-18 g/kg
OEB2-07	8 g/kg
DVMET-91	-
DVLYS-91	-
DVMET-07	-
DVLYS-07	-
SW	4.30 /kg
VW	1.66 /kg

Amino acids

	g/16g N mean	g/16g N sdc	g/kg DM
CP			41
LYS	-	-	-
MET	-	-	-
CYS	-	-	-
THR	-	-	-
TRP	-	-	-
ILE	-	-	-
ARG	-	-	-
PHE	-	-	-
HIS	-	-	-
LEU	-	-	-
TYR	-	-	-
VAL	-	-	-
ALA	-	-	-
ASP	-	-	-
GLU	-	-	-
GLY	-	-	-
PRO	-	-	-
SER	-	-	-
Sum AA	-		-

Horses

DCCP	19 %
DCOM	31 %
NEm	2.53 MJ/kg
NEm	604 kcal/kg
EWpa	0.283 /kg
DCPho	8 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		12.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-

% FA in CFAT-fraction	-

	g/kg DM	sdc
FP	-	-
LA	-	-
AC	-	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	-

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Whole crop silage (cereal) 5055.000/0/0

Weende analysis and carbohydrates (g/kg DM)

	DM	ASH	CPin	CP	CFAT	CFATh	CF	NFE	NFEh
mean	325	79	122	110	30	-	248	533	-
sdc	84	34	-	28	-	-	35	-	-

	STAew	STAam	GOS	SUG	NDF	ADF	ADL	NSP	RNSP
mean	149	130	-	14	-	-	-	541	541
sdc	110	-	-	8	-	-	-	-	-

Minerals (g/kg DM)

	Ca	P	IP	Mg	K	Na	Cl	S
mean	3.7	3.0	-	1.4	19.4	0.5	6.1	1.9
sdc	1.7	0.6	-	0.3	6.0	0.5	-	0.4

Trace elements (mg/kg DM)

	Fe	Mn	Zn	Cu	Mo	J	Co
mean	275	53	38	5	1.3	-	0.1
sdc	172	27	15	2	0.7	-	0.1

IP/P	-	SUGe/SUG	-	EB (meq/kg)	349
		CF_DI	0.97	CAD (meq/kg)	231

Digestibility coëfficients (%)

Ruminants

DCCP	63
DCCFAT	-
DCCF	-
DCNFE	-
DCOM	68

DVE	**1991**	**2007**
%RUP	35	36
%DRUP	50	50
%RUSTA	9	7
%DASH	35	35
DASHmax	34	34

Nutritional value (in DM)

Ruminants

VEM	794 /kg
VEVI	792 /kg
FOM-91	489 g/kg
FOMr-07	503 g/kg
FOMr2-07	295 g/kg
FOMr2/FOMr	0.59 /kg
DVE-91	45 g/kg
DVE-07	38 g/kg
OEB-91	1 g/kg
OEB-07	12 g/kg
OEB2-07	29 g/kg
DVMET-91	1.0 g/kg
DVLYS-91	2.7 g/kg
DVMET-07	0.9 g/kg
DVLYS-07	2.4 g/kg
SW	2.51 /kg
VW	0.76 /kg

Amino acids

	g/16g N		
	mean	sdc	g/kg DM
CP			110
LYS	2.6	0.2	2.9
MET	1.0	0.1	1.1
CYS	0.7	0.1	0.8
THR	2.9	0.2	3.2
TRP	0.6	0.1	0.6
ILE	3.1	0.2	3.4
ARG	1.5	0.4	1.7
PHE	3.4	0.4	3.7
HIS	1.2	0.1	1.3
LEU	5.1	0.5	5.6
TYR	-	-	-
VAL	4.2	0.3	4.7
ALA	6.9	1.1	7.6
ASP	4.9	1.2	5.4
GLU	9.9	1.2	10.9
GLY	4.1	0.3	4.5
PRO	4.5	1.4	5.0
SER	2.8	0.2	3.1
Sum AA	59.5		-

Horses

DCCP	50 %
DCOM	64 %
NEm	6.47 MJ/kg
NEm	1547 kcal/kg
EWpa	0.725 /kg
DCPho	55 g/kg

Fatty acids

	% FA	g/kg DM
CFAT(h)		30.0
<=C10	-	-
C12:0	-	-
C14:0	-	-
C16:0	-	-
C16:1	-	-
C18:0	-	-
C18:1	-	-
C18:2	-	-
C18:3	-	-
>=C20	-	-
Sum FA	-	-
% FA in CFAT-fraction		-

	g/kg DM	sdc
FP	100	-
LA	80	-
AC	20	-
ETH	-	-
PR	-	-
BU	-	-
Glycerol	-	-

	% of CP
NH3	10

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Alfabetic index (EN, NL)

Code	English	Dutch	
1005.000	Barley	Gerst	2
1005.112	Barley feed, high grade	Gersteslijpmeel	4
1005.105	Barley, mill by-product	Gerstevoermeel	6
9011.001	Biscuits, ground CFATh < 120 g/kg	Biscuitmeel, RVETh < 120 g/kg	8
9011.002	Biscuits, ground CFATh > 120 g/kg	Biscuitmeel, RVETh > 120 g/kg	10
8002.657	Bloodmeal, spray dried	Bloedmeel, spray gedroogd	12
8005.000	Bone meal	Beendermeel	14
1010.612	Bread (remains)	Broodmeel	16
1005.301	Brewer's grains, dried	Bierbostel, gedroogd	18
9001.315	Brewer's yeast, dried	Biergist, gedroogd	20
1009.000	Canary seed	Kanariezaad	22
7008.000	Carob pods	Johannesbrood	24
8010.000	Casein	Caseine	26
4015.209	Chicory pulp, dried	Cichoreipulp, gedroogd	28
6022.305	Citrus pulp	Citruspulp	30
3015.401	Copra cake	Kokosschilfers	32
3015.401	Copra cake	Kokosschilfers	34
3015.407	Copra meal	Kokosschroot	36
3018.401	Cotton seed meal, expeller	Katoenzaadschilfers	38
3018.401	Cotton seed meal, expeller	Katoenzaadschilfers	40
3018.401	Cotton seed meal, expeller	Katoenzaadschilfers	42
3018.000	Cotton seeds	Katoenzaad	44
3018.000	Cotton seeds	Katoenzaad	46
3018.407	Cottonseed meal, extracted	Katoenzaadschroot	48
3018.407	Cottonseed meal, extracted	Katoenzaadschroot	50
3018.407	Cottonseed meal, extracted	Katoenzaadschroot	52
1002.310	DDGS, Maize	DDGS, Mais	54
1010.310	DDGS, Wheat	DDGS, Tarwe	56
8006.000	Fat/oil, Animal fat	Vet/olie, Dierlijk	58
8006.000	Fat/oil, Animal fat	Vet/olie, Dierlijk	60
3015.421	Fat/oil, Coconut oil	Vet/olie, Kokosvet	62
8015.425	Fat/oil, Fish oil	Vet/olie, Visolie	64
2013.421	Fat/oil, Groundnut oil	Vet/olie, Grondnootolie (arachideolie)	66
8050.425	Fat/oil, Lard	Vet/olie, Varkensvet	68
3006.437	Fat/oil, Linseed oil	Vet/olie, Lijnolie	70
1002.421	Fat/oil, Maize oil	Vet/olie, Maisolie	72
7001.421	Fat/oil, Olive oil	Vet/olie, Olijfolie	74
3001.437	Fat/oil, Palm oil, chemically refined	Vet/olie, Palmolie, chem. geraffineerd	76
3001.421	Fat/oil, Palmkernel oil, chemically refined	Vet/olie, Palmpitolie, chem. geraf.	78

Code	English	Dutch	
8051.425	Fat/oil, Poultry fat	Vet/olie, Kippenvet	80
3009.437	Fat/oil, Rapeseed oil	Vet/olie, Raapzaadolie	82
3013.425	Fat/oil, Safflower oil	Vet/olie, Saffloerolie	84
3012.421	Fat/oil, Soya oil	Vet/olie, Sojaolie	86
3003.421	Fat/oil, Sunflower oil, refined	Vet/olie, Zonnebloemolie, geraffineerd	88
8020.000	Fat/oil, Tallow	Vet/olie, Rundvet	90
8003.629	Feather meal, hydrolysed	Verenmeel, gehydrolyseerd	92
2001.616	Feed beans, heat treated	Bonen (Phaseolus), verhit	94
8015.000	Fish meal, treated	Vismeel, behandeld	96
8015.000	Fish meal, treated	Vismeel, behandeld	98
8015.000	Fish meal, treated	Vismeel, behandeld	100
8015.000	Fish meal, treated	Vismeel, behandeld	102
5010.610	Grass meal	Grasmeel/-brok	104
5010.610	Grass meal	Grasmeel/-brok	106
5010.610	Grass meal	Grasmeel/-brok	108
5010.610	Grass meal	Grasmeel/-brok	110
7009.000	grass seed	Graszaad	112
8007.000	Greaves meal	Kanenmeel	114
2013.401	Groundnut expeller	Grondnootschilfers	116
2013.401	Groundnut expeller	Grondnootschilfers	118
2013.401	Groundnut expeller	Grondnootschilfers	120
2013.407	Groundnut meal	Grondnootschroot	122
2013.407	Groundnut meal	Grondnootschroot	124
2013.407	Groundnut meal	Grondnootschroot	126
2013.000	Groundnuts (peanuts)	Grondnoten	128
2013.000	Groundnuts (peanuts)	Grondnoten	130
3014.000	Hemp seed	Hennepzaad	132
2002.000	Horse beans	Paardebonen bontbloeiend	134
2017.000	Horsebeans, white	Paardebonen, witbloeiend	136
2008.000	Lentils	Linzen	138
3006.000	Linseed	Lijnzaad	140
3006.401	Linseed expeller	Lijnzaadschilfers	142
3006.407	Linseed meal	Lijnzaadschroot	144
5004.610	Lucerne (alfalfa) meal	Luzernemeel/-brok	146
5004.610	Lucerne (alfalfa) meal	Luzernemeel/-brok	148
5004.610	Lucerne (alfalfa) meal	Luzernemeel/-brok	150
5004.610	Lucerne (alfalfa) meal	Luzernemeel/-brok	152
2004.000	Lupins	Lupinen	154
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1002.103	Maize feed flour	Maisvoerbloem	162
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1002.205	Maize gluten feed	Maisglutenvoer	180
1002.205	Maize gluten feed	Maisglutenvoer	182
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1002.201	Maize starch	Maiszetmeel	186
1002.629	Maize, chemical/heat treated	Mais, ontsloten	188
1002.308	Maize, distillers solubles, dried	Maisspoeling, gedroogd	190
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1005.310	Malt culms	Moutkiemen	194
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8001.001	Meat meal	Diermeel, buitenlandse herkomst	198
8001.003	Meat meal, Dutch origin	Diermeel, Nederlandse herkomst	200
8004.000	Meat-and-bone meal	Vleesbeendermeel	202
8004.000	Meat-and-bone meal	Vleesbeendermeel	204
8012.000	Milk powder, whole	Melkpoeder, volle-	206
8008.000	Milkpowder, skimmed	Melkpoeder, mager	208
1006.000	Millet	Millet (gierst)	210
1013.000	Millet, (pearl millet)	Millet (parelgierst)	212
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7002.210	Molasses, sugarcane	Melasse, riet-,	218
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1004.105	Oats mill feed, high grade	Havervoermeel	226
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Code	English	Dutch	
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2006.000	Peas	Erwten	240
3007.000	Poppy seed	Maanzaad	242
4001.664	Potato crisps	Aardappelchips	244
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4001.203	Potato protein	Aardappeleiwit	248
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4001.202	Potato pulp, dried	Aardappelvezels, gedroogd	252
4001.202	Potato pulp, dried	Aardappelvezels, gedroogd	254
4001.201	Potato starch, dried	Aardappelzetmeel, gedroogd	256
4001.232	Potato starch, heat treated, dried	Aardappelzetmeel, ontsloten, gedroogd	258
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1003.122	Rice feed meal	Rijstevoermeel	280
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3013.000	Safflower seed	Saffloerzaad	288
3005.000	Sesame seed	Sesamzaad	290
3005.401	Sesame seed expeller	Sesamzaadschilfers	292
3005.407	Sesame seed meal, solvent extracted	Sesamzaadschroot	294
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3012.401	Soya bean expeller	Sojaschilfers	300
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3012.505	Soya bean hulls	Sojabonenschillen	304
3012.505	Soya bean hulls	Sojabonenschillen	306
3012.436	Soya bean meal, rumen bypass, CovaSoy	Sojaschroot bestendig: CovaSoy	308
3012.434	Soya bean meal, rumen bypass, Mervobest	Sojaschroot bestendig: Mervobest soja	310
3012.407	Soya bean meal, solvent extracted	Sojaschroot	312

Code	English	Dutch	
3012.407	Soya bean meal, solvent extracted	Sojaschroot	314
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3012.407	Soya bean meal, solvent extracted	Sojaschroot	318
3012.407	Soya bean meal, solvent extracted	Sojaschroot	320
3012.616	Soya beans, heat treated	Sojabonen, verhit	322
3012.000	Soya beans, raw	Sojabonen, rauw	324
4004.211	Sugar	Suiker	326
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4004.209	Sugarbeet pulp, dried	Bietenpulp, gedroogd	330
4004.209	Sugarbeet pulp, dried	Bietenpulp, gedroogd	332
4004.209	Sugarbeet pulp, dried	Bietenpulp, gedroogd	334
3003.000	Sunflower seed	Zonnebloemzaad	336
3003.000	Sunflower seed	Zonnebloemzaad	338
3003.000	Sunflower seed	Zonnebloemzaad	340
3003.401	Sunflower seed expeller	Zonnebloemzaadschilfers	342
3003.401	Sunflower seed expeller	Zonnebloemzaadschilfers	344
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3003.407	Sunflower seed meal, solvent extracted	Zonnebloemzaadschroot	350
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4007.611	Sweet potatoes, dried	Bataten, gedroogd	354
4008.201	Tapioca starch	Tapiocazetmeel	356
4008.611	Tapioca, dried	Tapioca, gedroogd	358
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4004.306	Vinasse, beet	Vinasse, biet	368
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1010.205	Wheat gluten feed, dried	Tarweglutenvoer, gedroogd	378
1010.205	Wheat gluten feed, dried	Tarweglutenvoer, gedroogd	380
1010.205	Wheat gluten feed, dried	Tarweglutenvoer, gedroogd	382
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Code	English	Dutch	
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1010.100	Wheat milling by-products	Tarwemaalderijproducten	394
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8009.000	Whey powder	Weipoeder	398
8009.626	Whey powder, low lactose	Weipoeder, melksuikerarm	400
8009.626	Whey powder, low lactose	Weipoeder, melksuikerarm	402
1005.324	Brewer's grains, Meura filter process	Bierbostel, persbostel	406
1005.313	Brewer's grains, traditional process	Bierbostel, traditioneel proces	408
1005.313	Brewer's grains, traditional process	Bierbostel, traditioneel proces	410
9001.314	Brewer's yeast, liquid	Biergist, vloeibaar	412
9001.314	Brewer's yeast, liquid	Biergist, vloeibaar	414
9001.314	Brewer's yeast, liquid	Biergist, vloeibaar	416
4006.634	Carrot peelings, steam peeled	Wortelstoomschillen, vers	418
8023.000	Cheese whey, fresh	Kaaswei, vers	420
8023.000	Cheese whey, fresh	Kaaswei, vers	422
8023.000	Cheese whey, fresh	Kaaswei, vers	424
4015.240	Chicory press pulp, fresh and ensiled	Cichorei-perspulp, vers en kuil	426
1002.517	Corn cob mix (CCM), silage	Corn Cob Mix (CCM), kuil	428
1002.517	Corn cob mix (CCM), silage	Corn Cob Mix (CCM), kuil	430
1002.517	Corn cob mix (CCM), silage	Corn Cob Mix (CCM), kuil	432
1000.304	Distiller's solubles, fresh	Graanspoeling, vers	434
1002.240	Maize gluten feed, fresh and ensiled	Maisglutenvoer, vers en kuil	436
1002.240	Maize gluten feed, fresh and ensiled	Maisglutenvoer, vers en kuil	438
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4001.637	Potato cuttings/chips, prefried	Aardappelsnippers, voorgebakken	444
4001.637	Potato cuttings/chips, prefried	Aardappelsnippers, voorgebakken	446
4001.636	Potato cuttings/chips, raw	Aardappelsnippers, rauw	448
4001.208	Potato fruit-juice concentrated	Aardappeldiksap	450
4001.638	Potato peelings, steamed	Aardappelstoomschillen, vers en kuil	452
4001.638	Potato peelings, steamed	Aardappelstoomschillen, vers en kuil	454
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4001.231	Potato starch, gelatinised	Aardappelzetmeel, ontsloten, vers	468
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4001.222	Potato starch, untreated, liquid	Aardappelzetmeel, niet ontsl., vloeibaar	474
4001.222	Potato starch, untreated, liquid	Aardappelzetmeel, niet ontsl., vloeibaar	476
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4004.244	Sugarbeet pulp, pressed, ensiled	Bietenperspulp, vers en kuil	480
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1010.234	Wheat starch	Tarwezetmeel	484
1010.234	Wheat starch	Tarwezetmeel	486
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1010.689	Wheat yeast concentrate	Tarwegistconcentraat	496
6020.000	Apples, fresh	Appelen, vers	500
1005.508	Barley straw	Gerstestro	501
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2002.508	Bean straw (Vicia)	Bonenstro (Vicia)	503
4010.000	Beetroot	Kroten, rode biet	504
6023.102	Cabbage (Brussels sprouts)	Kool (spruitkool)	505
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5010.704	Grass hay, d) horses, fine	Grashooi, d) paarden, fijn	530
5010.705	Grass hay, e) horses, middle	Grashooi, e) paarden, middel	531
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5010.190	Grass silage, k) horses, fine	Graskuil, k) paarden, fijn	544
5010.191	Grass silage, l) horses, middle	Graskuil, l) paarden, middel	545
5010.192	Grass silage, m) horses, course	Graskuil, m) paarden, grof	546
5010.609	Grass, artificially dried	Gras, kunstmatig gedroogd	547
5010.910	Grass, fresh, a) clay soil, before 21 June	Gras, vers, a) kleigrond, vóór 21 juni	548
5010.911	Grass, fresh, b) sandy soil, before 21 June	Gras, vers, b) zandgrond, vóór 21 juni	549
5010.912	Grass, fresh, c) peat soil, before 21 June	Gras, vers, c) veengrond, vóór 21 juni	550
5010.920	Grass, fresh, d) clay soil, 21 June - 21 August	Gras, vers, d) kleigrond, 21 juni - 21 augustus	551
5010.921	Grass, fresh, e) sandy soil, 21 June - 21 August	Gras, vers, e) zandgrond, 21 juni - 21 augustus	552
5010.922	Grass, fresh, f) peat soil, 21 June - 21 August	Gras, vers, f) veengrond, 21 juni - 21 augustus	553
5010.930	Grass, fresh, g) clay soil, after 21 August	Gras, vers, g) kleigrond, na 21 augustus	554
5010.931	Grass, fresh, h) sandy soil, after 21 August	Gras, vers, h) zandgrond, na 21 augustus	555
5010.932	Grass, fresh, i) peat soil, after 21 August	Gras, vers, i) veengrond, na 21 augustus	556
5010.940	Grass, fresh, j) average	Gras, vers, j) gemiddelde	557
5010.991	Grass, fresh, k) horses, cont. grazing	Gras, vers, k) paarden, standweide	558
5010.990	Grass, fresh, l) horses, fresh pasture	Gras, vers, l) paarden, verse weide	559
5037.602	Grass/clover, silage	Gras/klaver, kuil	560
5037.602	Grass/clover, silage	Gras/klaver, kuil	562
5028.000	Green cereals, fresh	Snijgraan, vers	564
5028.602	Green cereals, silage	Snijgraan, kuil	565
6012.000	Leek, fresh	Prei, vers	566

Code	English	Dutch	
6014.000	Lettuce, fresh	Sla, vers	567
5004.609	Lucerne (alfalfa), artificially dried	Luzerne, kunstmatig gedroogd	568
5004.602	Lucerne (alfalfa), ensiled	Luzerne, kuil	569
5004.000	Lucerne (alfalfa), fresh	Luzerne, vers	570
5004.606	Lucerne (alfalfa), hay	Luzerne, hooi	571
5008.602	Maize silage	Snijmais, kuil	572
5008.602	Maize silage	Snijmais, kuil	574
5008.602	Maize silage	Snijmais, kuil	576
5008.602	Maize silage	Snijmais, kuil	578
1004.508	Oats straw	Haverstro	580
4009.000	Onions, fresh	Uien, vers	581
5007.639	Pea leaves, ensiled	Erwtenloof, kuil	582
5007.642	Pea leaves, fresh	Erwtenloof, vers	583
5007.508	Pea straw	Erwtenstro	584
6021.000	Pears, fresh	Peren, vers	585
4001.525	Potato peelings, ensiled	Aardappelen, schillenkuil	586
4001.000	Potatoes, fresh	Aardappelen, vers	587
4001.602	Potatoes, raw, ensiled	Aardappelen, rauw, kuil	588
3009.508	Rape seed straw	Raapzaadstro	589
1007.508	Rye straw	Roggestro	590
6008.000	Spinach, fresh	Spinazie, vers	591
4004.647	Sugarbeet leaves with tops, fresh	Bietenblad met koppen, vers	592
4004.642	Sugarbeet leaves, fresh	Bietenblad, vers	593
4004.639	Sugarbeet leaves, silage	Bietenblad, kuil	594
4004.617	Sugarbeet rests, ensiled	Bietenstaartjes, kuil	595
4004.000	Sugarbeets, fresh	Suikerbieten, vers	596
5002.602	Sunflower, silage	Zonnebloemen, kuil	597
6009.000	Sweet pepper, fresh	Paprika, vers	598
6015.000	Tomatoes, fresh	Tomaten, vers	599
1010.508	Wheat straw	Tarwestro	600
5055.000	Whole crop silage (cereal)	Gehele planten silage (graan)	601

10.4 Mineral feedstuffs

Mineral feedstuff	Composition [a]					Standardised and apparent P digestibility pigs (resp. StaDCP and AppDCP; %) **			DCPpo poultry
	Na	Cl	Ca	Mg	P	min	max	mean	mean
Salt	380	570							
Limestone			380						
Monosodium phosphate.0H_2O; NaH_2PO_4	190				239			87[b]	
Monosodium phosphate.1H_2O; NaH_2PO_4.1 H_2O	167				225			89[b]	91
Disodium phosphate	250				174	87.5	93.0	90	
Monocalcium phosphate.1H_2O $Ca(H_2PO_4)_2.H_2O$ Origin: Belgium and Scandinavia			160		226	82.5	84.2	83	85
Monodicalcium phosphate: $CaHPO_4.Ca(H_2PO_4)_2.H_2O$			*		*	74.0	87.4	82	79
Dicalcium phosphate.0 H_2O			250		200	62.7	72.1	65	55
Dicalcium phosphate.2 H_2O			240		182	68.8	79.9	71	78
Sodium calcium phosphate	60		311		181				60
Calcium magnesium phosphate $Mg(H_2PO_4)_2$ $Ca(H_2PO_4)_2.H_2O$			100	100	200			84	
Sodium magnesium phosphate; $NaMgPO_4$	131		78	41	173			81[b]	
Magnesium oxide 80 %				480					
Magnesium oxide 72 %				436					

[a]: The mineral composition in this Table is based on the molecular relationships in the pure product.
[b]: This figure is based on only one digestibility trial with a product form one manufacturer.
*: the Ca/P ratio in this product is not constant.
**: Because of the high P contents the standardised and apparent P digestibilities only differ 0.1% from each other. After rounding the values for both parameters the values for both are the same.

10.5 Miscellaneous

10.5.1 Energy values organic acids

10.5.1.1 ATP yielding capacity for organic acids, glucose, sucrose and starch

	Molecular formula	Molecular mass	ATP (mol/mol) Literature based	ATP-yield (Mol/g)	ATP yield relative to starch (%)
Ethanol	C_2H_6O	46	15	0.3261	146.74
Malic acid	$C_4H_6O_5$	134	17	0.1269	57.09
Acetic acid	$C_2H_4O_2$	60	10	0.1667	75.00
Buteric acid	$C_4H_8O_2$	88	27	0.3068	138.07
Citric acid	$C_6H_8O_7$	192	26	0.1354	60.94
Fumaric acid	$C_4H_4O_4$	116	17	0.1466	65.95
Lactic acid	$C_3H_6O_3$	90	17	0.1889	85.00
Propionic acid	$C_3H_6O_2$	74	17	0.2297	103.38
Propylene glycol	$C_3H_8O_2$	76	21	0.2763	124.34
Glycerol	$C_3H_8O_3$	92	20	0.2174	97.83
Glucose	$C_6H_{12}O_6$	180	36	0.2000	90.00
Sucrose	$C_{12}H_{22}O_{11}$	342	72	0.2105	94.74
Starch	$C_6H_{10}O_5$ [1)]	162	36	0.2222 [2)]	100.00

1): The molecular formula represents a glucose unit within starch.

2) The ATP yield is based on an ATP yield of 36 Mol ATP per g of glucose. The earlier Feed Table 2011 had a high ATP yield of 0.2346 Mol per g of glucose and was based on a ATP yield of 38 Mol per Mol of glucose.

10.5.1.2 VEM en VEVI values of organic acids, glucose, sucrose, and starch

	ATP yield relative to starch (%)	VEM	VEVI	ATP loss due to fermentation (%)	VEM	VEVI
		Excluding fermentation loss			Including fermentation loss	
Ethanol	146.74	2385	2759	10	2146	2483
Acetic acid	75.00	1219	1410	0	1219	1410
Buteric acid	138.07	2244	2596	0	2244	2596
Lactic acid	85.00	1381	1598	10	1243	1438
Propionic acid	103.38	1680	1944	0	1680	1944
Propylene glycol	124.34	2021	2338	0	2021	2338
Glycerol	97.83	1590	1839	30	1113	1287
Glucose	90.00	1463	1692	30	1024	1184
Sucrose	94.74	1539	1781	30	1078	1247
Starch	100.00	1625	1880	25	1219	1410

10.5.1.3 NE_{2015}, EW_{2015}, MEpo, MEla, and MEbr values of organic acids, glucose, sucrose and starch

	ATP yield relative to starch (%)	NE_{2015} (MJ/kg)	EW_{2015}	OEpl = OElh = OEvlk (MJ/kg)
Ethanol	146.74	20.75	2.36	25.42
Malic acid	57.09	8.07	0.92	9.89
Acetic acid	75.00	10.61	1.21	12.99
Buteric acid	138.07	19.52	2.22	23.91
Citric acid	60.94	8.62	0.98	10.55
Fumaric acid	65.95	9.33	1.06	11.42
Lactic acid	85.00	12.02	1.37	14.72
Propionic acid	103.38	14.62	1.66	17.91
Propylene glycol	124.34	17.58	2.00	21.54
Glycerol	97.83	13.83	1.57	16.94
Glucose	90.00	12.73	1.45	15.59
Sucrose	94.74	13.40	1.52	16.41
Starch	100.00	14.14	1.61	17.32

10.5.2 Energy value amino acids

Amino acid *	mol ATP/ mol AA according Van Milgen (2002)	ATP yielding capacity relative to starch	NE_{2015} at NE_{2015} Sta = 14.14 MJ/kg	EW_{2015} at NE_{2015} Sta = 14.14 MJ/kg and EW_{2015} = NE_{2015}/8.8	MEpo, MEla, MEbr at ME DNFE = 17.32 MJ/kg
LYS	37	114	16.13	1.83	19.75
MET	29,5	89	12.60	1.43	15.43
THR	22	83	11.76	1.34	14.41
TRP	45	99	14.04	1.60	17.19
ILE	41	1.41	19.91	2.26	24.39
ARG	29	75	10.61	1.21	12.99
LEU	40	137	19.43	2.21	23.80
VAL	32	123	17.40	1.98	21.32
GLY	7	42	5.94	0.67	7.27

*: The energy values are valid for the pure products; for commercial products the energy values presented in this Table must be corrected for the inclusion percentage in the commercial product. For example; Lysine-HCl contains 78% LYS; the energy value of LYS shown in this Table must then be multiplied with the factor 0.78.

10.5.3 Protein value miscellaneous products

10.5.1.2.1 Protein value of urea in the DVE/OEB 1991 system

Product	CP g/kg	DVE g/kg	OEB g/kg
Urea (100 %) [a]	2920 [b]	0	2920

a) Based on the purity of the commercial product the values shown in this Table should be adapted.
b) Based on N (= 46,6 %) x 6.25.