2017.1

Your Levy at Work

Rumen8

Feed Companion

Compiled by Richard Morris & Dr Martin Staines
Western Dairy RD&E Hub and Dairy Australia
support@rumen8.com.au

FOREWORD

This manual accompanies the Rumen8 software. Rumen8 is a free nutrition software package designed for easy formulation of dairy diets, to ensure the correct balance of energy, protein, fibre, minerals and other nutritional components for Australian dairy cows at different stages of production.

A main feature of Rumen8 is its user friendliness, so that it can be used regularly by dairy farmers to adjust their dairy cow diets with periodic help from a nutritionist. Having the tools on farm to adjust diets to match what the cows are getting in the paddock while maximising financial margin over feed cost is going to result in the best outcome for farmers.

The Rumen8 Feed Companion provides a printed summary of typical nutritional values of the most common feeds used for feeding Australian dairy cows. It covers commodity feeds such as cereal grains, protein meals and by products, as well as grazed and conserved pastures and other forages. A total of over 160 feeds are included in this manual.

For ease of use, all feeds are listed alphabetically, with one page per feed showing typical nutritional values, including metabolisable energy, protein and protein rumen degradability characteristics, fibre, starch, sugar, fat, minerals and DCAD. Feeds are colour coded by feed groups.

The format adopted for the Rumen8 Feed Companion is loosely based on similar manuals that have been published such as 'The Feeds Directory' by Dr. Wesley Ewing in the U.K.

Thank you to Cameron Gourley, Bill Wales, Richard Rawnsley and Steve Little for contributing feed data to this project.

We hope that this manual will assist in the easier and better formulation of cost effective diets on Australian dairy farms.

Richard Morris and Martin Staines
March 2017

GLOSSARY

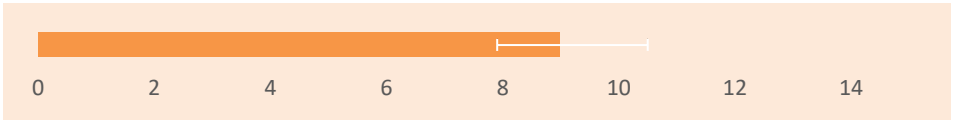
Category	Feeds are colour coded by feed groups: Grazed pasture, Other grazed forages, Hays, Silages, Grains and concentrates, By-products (including straws), Minerals and additives.
Dry matter	Expressed as a % of the feed weight.
Metabolisable energy	The metabolisable energy content of a feed in megajoules (MJ) per kg DM
Crude protein	The crude protein (nitrogen*6.25) content of a feed expressed as a % in feed DM weight.
Protein degradability	**a** the proportion of water soluble protein in the total feed protein **b** the proportion of potentially degradable protein (other than water soluble protein) in the total feed protein **c** the fractional rumen degradation rate per hour of the b fraction of feed protein with time **Protein degradation graph.** The protein degradation graph shows the degradation of protein with time in the rumen. The protein degradation values at 6 hr or at 18 hrs are approximations for high-yielding and low-yielding dairy cows.
ADIN	The acid detergent insoluble nitrogen content of a feed as a % of feed DM weight.
NDF	The neutral detergent fibre content of a feed (the fibreous parts, mainly cellulose, lignin and hemicellulose) expressed as a % of feed DM weight.
eNDF	Effective neutral detergent fibre The part of neutral detergent fibre which is effective in stimulating the cow to ruminate.
Starch	The starch content of a feed expressed as a % of feed DM weight.
Sugar	The sugar (water soluble carbohydrate) content of a feed expressed as a % of feed DM weight.
Fat	The fat content of a feed expressed as a % of feed DM weight.
Ash	The ash (inorganic matter) content of a feed expressed as a % of feed DM weight.
Calcium	The calcium (Ca) content of a feed expressed as a % of feed DM weight.
Phosphorus	The phosphorus (P) content of a feed expressed as a % of feed DM weight.
Magnesium	The magnesium (Mg) content of a feed expressed as a % of feed DM weight.
Potassium	The potassium (K) content of a feed expressed as a % of feed DM weight.
Sodium	The sodium (Na) content of a feed expressed as a % of feed DM weight.
Chloride	The chloride (Cl) content of a feed expressed as a % of feed DM weight.
Sulphur	The sulphur (S) content of a feed expressed as a % of feed DM weight.
DCAD	Dietary cation anion difference. Calculated as (%Na*434.98) + (%K*255.74)-(%Cl*282.06) - (%S*623.75) expressed in mEq per kg DM (for details see Lean and DeGaris 2010).

Name	Almond hulls - milled

Category

By-product (inc. straws)

Dry matter (DM)	87.7	% of DM
Metabolisible energy (ME)	9.0	MJ/kg DM

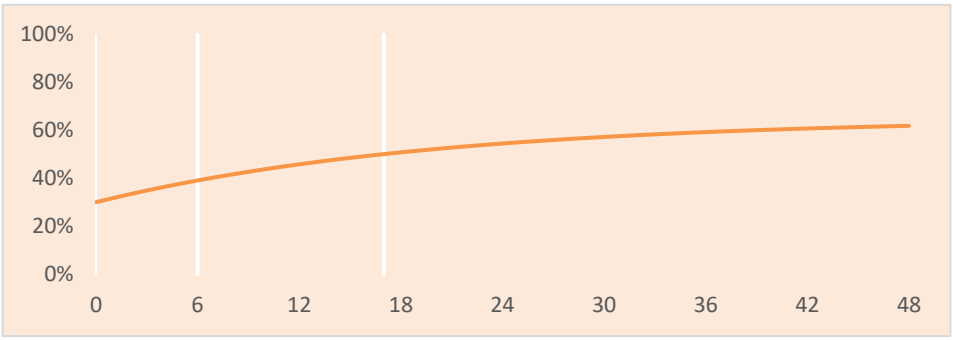


Protein

Crude protein (CP)	5.2	% of DM

Protein degradability

a	0.30
b	0.35
c	0.05
ADIN	0.27 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	35.4	% of DM
eNDF	34	% of NDF

Starch	2.0	% of DM

Sugar	28.3	(22.3-33.8)	% of DM (Typical range)
Fat	3.0	(2.0-4.0)	% of DM (Typical range)
Ash	7.8	(6.1-10.7)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.28	0.12	0.12	2.76	0.02	0.05	0.06	663
Absorption %	60	70	16					

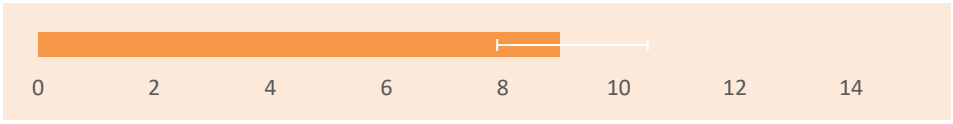
Comment

Feed value varies according to proportions of outer hull and inner husk. Milling increases density but reduces effective fibre level. Potential mycotoxin risk

Name Almond hulls - whole

Category By-product (inc. straws)

Dry matter (DM)	87.7	% of DM
Metabolisible energy (ME)	9.0	MJ/kg DM



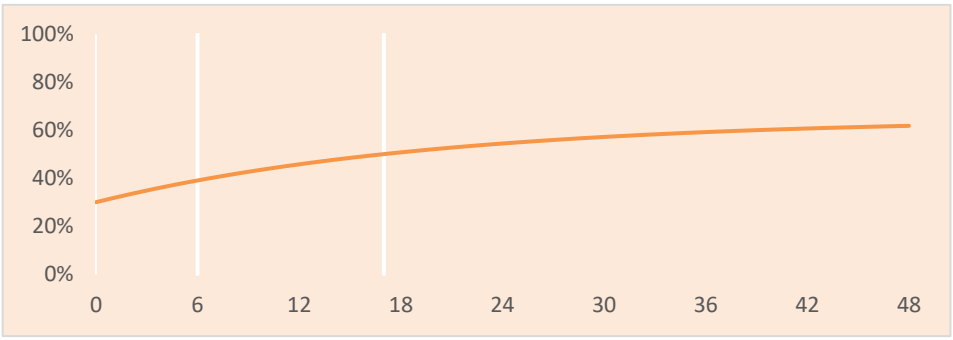
Protein

Crude protein (CP)	5.2	% of DM

Protein degradability

a	0.30
b	0.35
c	0.05

ADIN 0.27 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	35.4	% of DM
eNDF	90	% of NDF

Starch	2.0	% of DM

Sugar	28.3	(22.3-33.8)	% of DM (Typical range)
Fat	3.0	(2.0-4.0)	% of DM (Typical range)
Ash	7.8	(6.1-10.7)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.28	0.12	0.12	2.76	0.02	0.05	0.06	663
Absorption %	30	64	16					

Comment Feed value varies according to proportions of outer hull and inner husk. Potential mycotoxin risk

Name Ammonium chloride

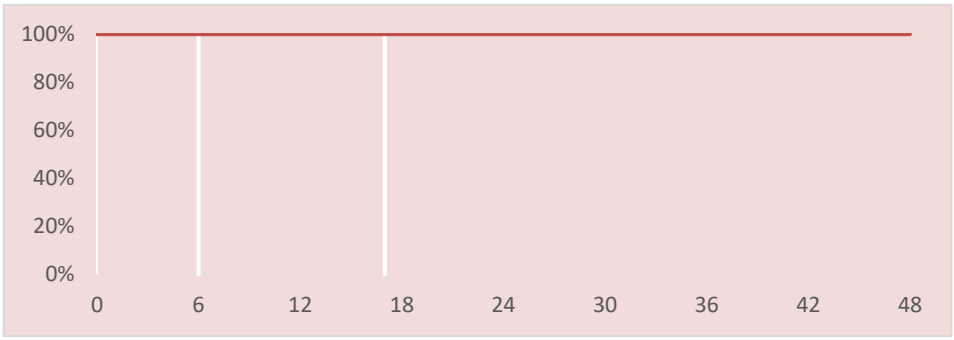
Category Mineral or Additives

Dry matter (DM)	99.8	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	163.5	% of DM

Protein degradability	
a	1.00
b	0.00
c	0.00
ADIN	0.00 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM
Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	100.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	0.00	0.00	0.00	0.00	66.23	0.00	-18679
Absorption %	0	0	0					

Comment

Name	Ammonium sulphate

Category

Mineral or Additives

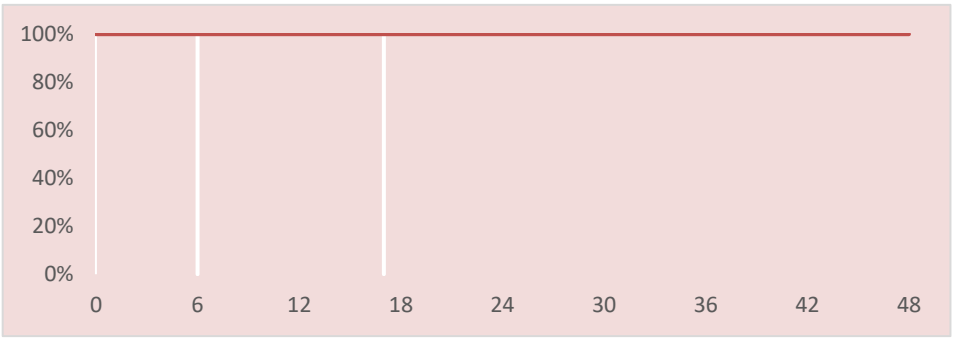
Dry matter (DM)	96.3	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	133.0	% of DM

Protein degradability

a	1.00
b	0.00
c	0.00
ADIN	0.00 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF

Starch	0.0	% of DM

Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	100.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	0.00	0.00	0.00	0.00	0.00	24.11	-15040
Absorption %	0	0	0					

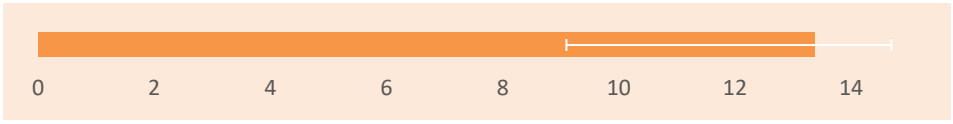
Comment

Name	Bakery waste / Bread

Category

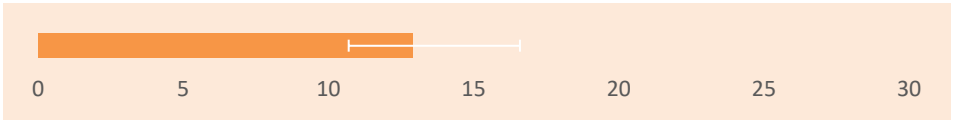
By-product (inc. straws)

Dry matter (DM)	77.6	% of DM
Metabolisible energy (ME)	13.4	MJ/kg DM



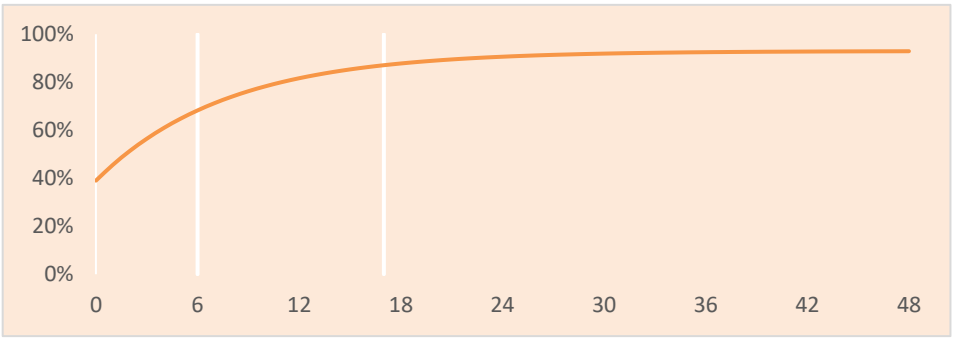
Protein

Crude protein (CP)	12.9	% of DM



Protein degradability

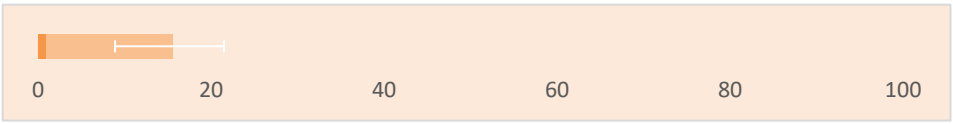
a	0.39	
b	0.54	
c	0.13	
ADIN	0.09	% of DM



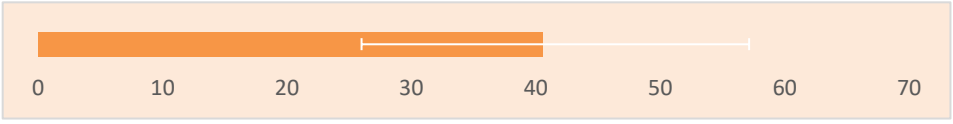
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	15.6	% of DM
eNDF	6	% of NDF



Starch	40.5	% of DM



Sugar	10.1	(7.5-12.8)	% of DM (Typical range)
Fat	6.9	(2.2-12.7)	% of DM (Typical range)
Ash	3.5	(2.8-4.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.13	0.26	0.15	0.34	0.99	0.98	0.12	169
Absorption %	60	70	16					

Comment

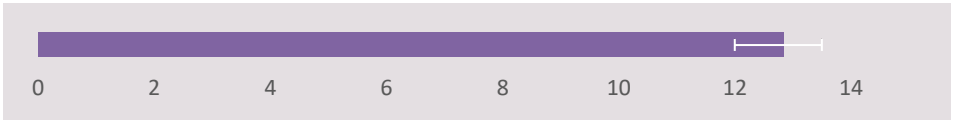
Ruminal acidosis risk (risk level depends on many herd, feed and feeding management factors). Nutritional values are highly variable.

Name	Barley grain

Category

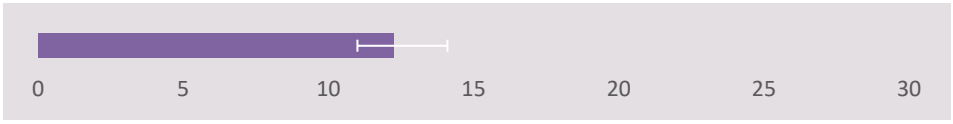
Grain or Concentrates

Dry matter (DM)	87.8	% of DM
Metabolisible energy (ME)	12.8	MJ/kg DM

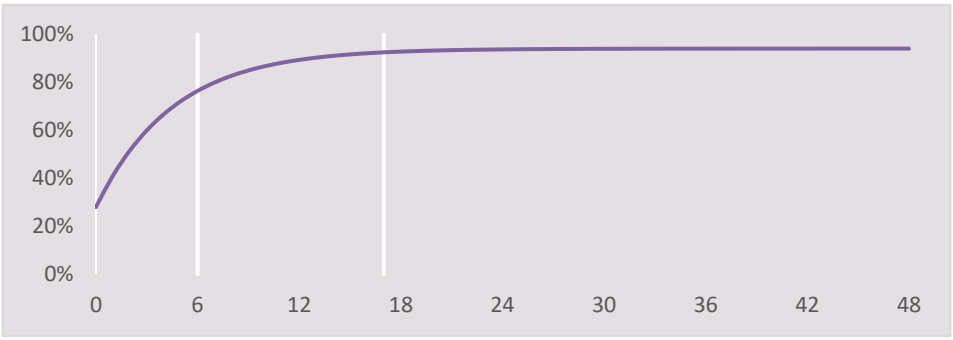


Protein

Crude protein (CP)	12.2	% of DM



Protein degradability	
a	0.28
b	0.66
c	0.22
ADIN	0.07 % of DM

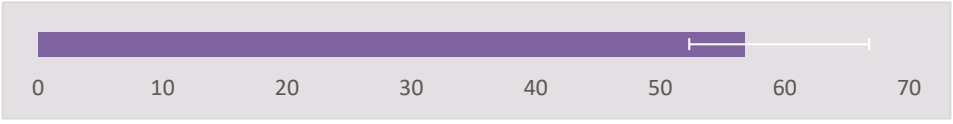


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	20.0	% of DM
eNDF	32	% of NDF

Starch	56.8	% of DM



Sugar	3.4	(2.1-6.0)	% of DM (Typical range)
Fat	2.1	(1.6-2.8)	% of DM (Typical range)
Ash	2.5	(1.4-3.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.07	0.38	0.14	0.55	0.02	0.15	0.15	10
Absorption %	60	70	16					

Comment: Ruminal acidosis risk (risk level depends on many herd, feed and feeding management factors)

Name	Barley hay

Category

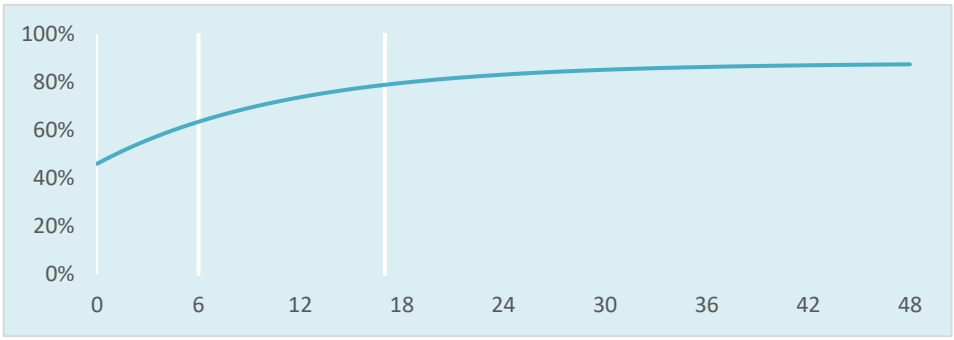
Hays

Dry matter (DM)	89.3	% of DM
Metabolisible energy (ME)	8.9	MJ/kg DM

Protein

Crude protein (CP)	9.5	% of DM

Protein degradability	
a	0.46
b	0.42
c	0.09
ADIN	0.11 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	57.7	% of DM
eNDF	99	% of NDF
Starch	3.3	% of DM

Sugar	11.2	(8.4-14.0)	% of DM (Typical range)
Fat	2.2	(2.0-2.5)	% of DM (Typical range)
Ash	7.7	(7.2-8.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.33	0.28	0.18	1.56	0.16	0.70	0.18	159
Absorption %	30	64	16					

Comment: Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name	Barley silage

Category

Silages

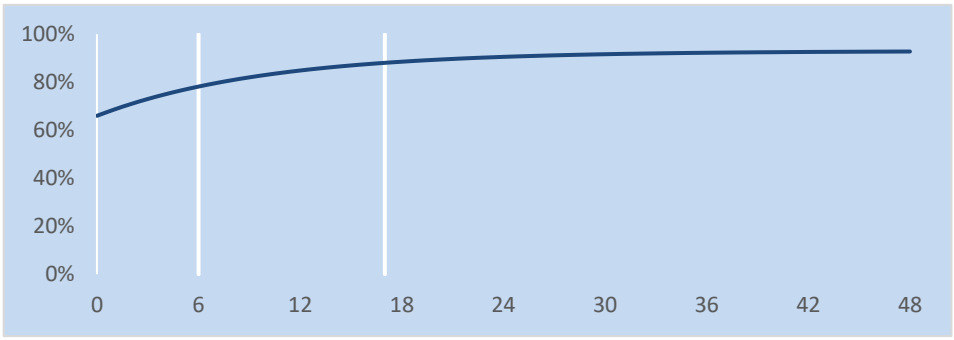
Dry matter (DM)	37.8	% of DM
Metabolisible energy (ME)	8.9	MJ/kg DM

Protein

Crude protein (CP)	11.0	% of DM

Protein degradability

a	0.66	
b	0.27	
c	0.10	
ADIN	0.14	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	56.1	% of DM
eNDF	77	% of NDF
Starch	8.3	% of DM

Sugar	6.9	(6.9-7.0)	% of DM (Typical range)
Fat	3.0	(2.0-3.5)	% of DM (Typical range)
Ash	8.4	(7.5-9.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.47	0.30	0.18	2.19	0.18	0.88	0.17	284
Absorption %	30	64	16					

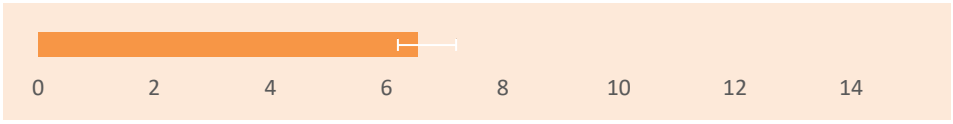
Comment: Potential residue risk (insecticides, herbicides, fungicides)

Name	Barley straw

Category

By-product (inc. straws)

Dry matter (DM)	88.3	% of DM
Metabolisible energy (ME)	6.5	MJ/kg DM



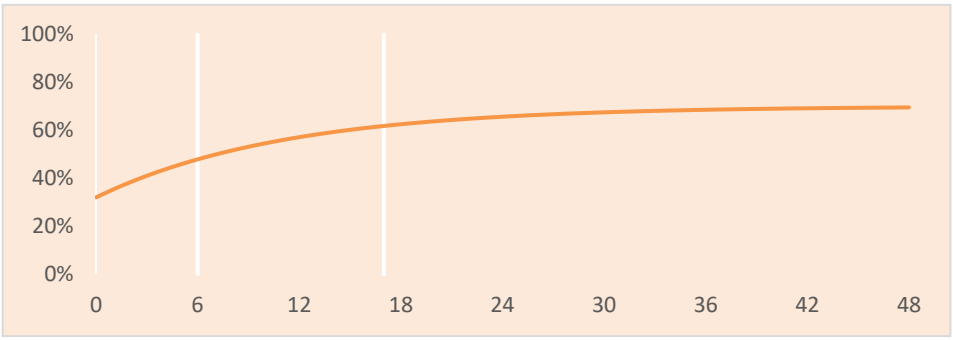
Protein

Crude protein (CP)	4.2	% of DM

Protein degradability

a	0.32
b	0.38
c	0.09

ADIN	0.24	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	78.1	% of DM
eNDF	99	% of NDF

Starch	2.6	% of DM

Sugar	1.7	(1.5-1.8)	% of DM (Typical range)
Fat	1.7	(1.4-1.9)	% of DM (Typical range)
Ash	7.0	(5.7-8.2)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.31	0.07	0.23	2.31	0.14	0.67	0.17	360
Absorption %	30	64	16					

Comment	Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name	Bean kibble

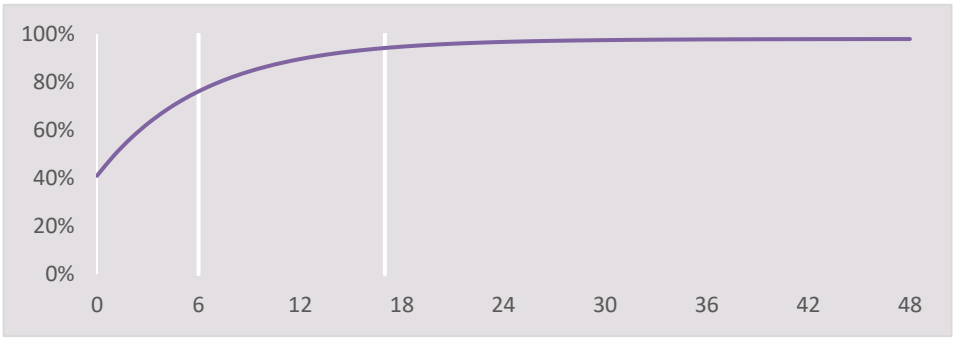
Category

Grain or Concentrates

Dry matter (DM)	90.0	% of DM
Metabolisible energy (ME)	13.0	MJ/kg DM

Protein

Crude protein (CP)	25.0	% of DM
Protein degradability		
a	0.41	
b	0.57	
c	0.16	
ADIN	0.05	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	18.0	% of DM
eNDF	27	% of NDF
Starch	5.5	% of DM
Sugar	30.0	% of DM
Fat	1.4	% of DM
Ash	3.1	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.11	0.48	0.15	1.29	0.06	0.08	0.23	194
Absorption %	60	70	16					

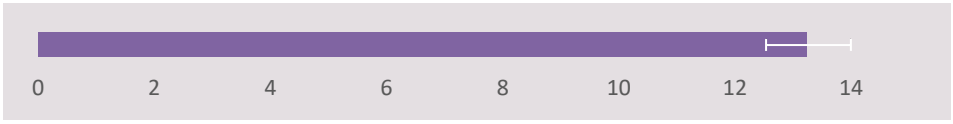
Comment: Potential residue risk (insecticides, herbicides, fungicides)

Name	Beans

Category

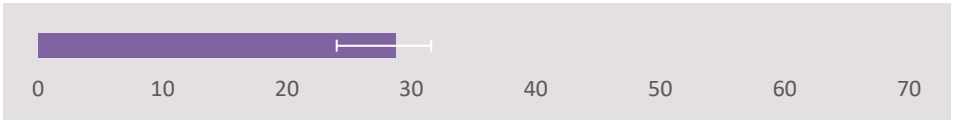
Grain or Concentrates

Dry matter (DM)	87.5	% of DM
Metabolisible energy (ME)	13.2	MJ/kg DM



Protein

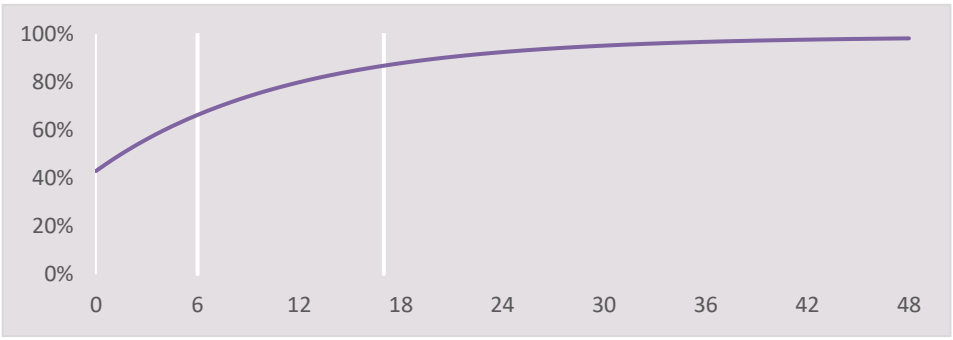
Crude protein (CP)	28.8	% of DM



Protein degradability

a	0.43
b	0.56
c	0.09

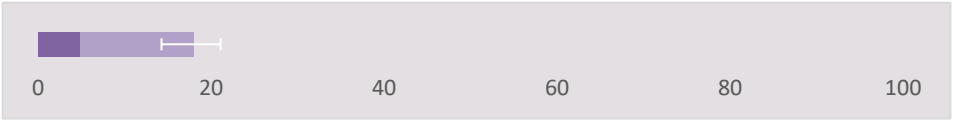
ADIN	0.05	% of DM



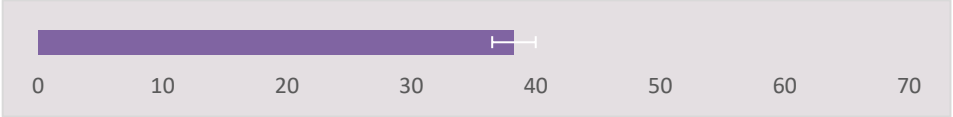
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	18.0	% of DM
eNDF	27	% of NDF



Starch	38.3	% of DM



Sugar	5.3	(5.0-5.5)	% of DM (Typical range)
Fat	1.3	(0.1-1.8)	% of DM (Typical range)
Ash	3.9	(3.0-5.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.15	0.64	0.15	1.29	0.06	0.08	0.23	194
Absorption %	60	70	16					

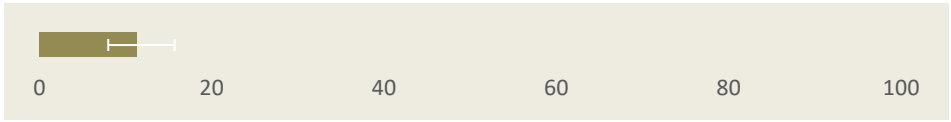
Comment	Potential residue risk (insecticides, herbicides, fungicides)

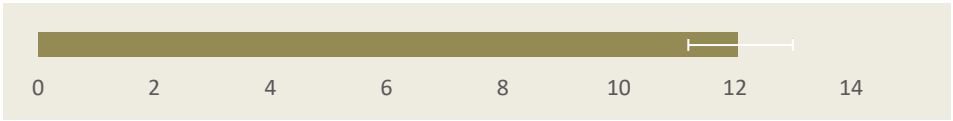
Name	Brassica - Summer

Category

Other grazed forages

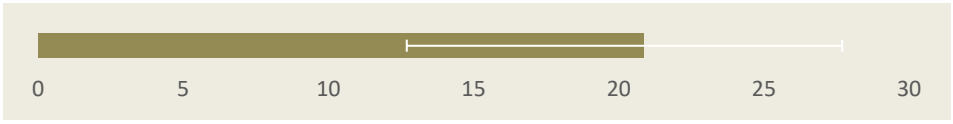
Dry matter (DM)	11.3	% of DM
Metabolisible energy (ME)	12.0	MJ/kg DM





Protein

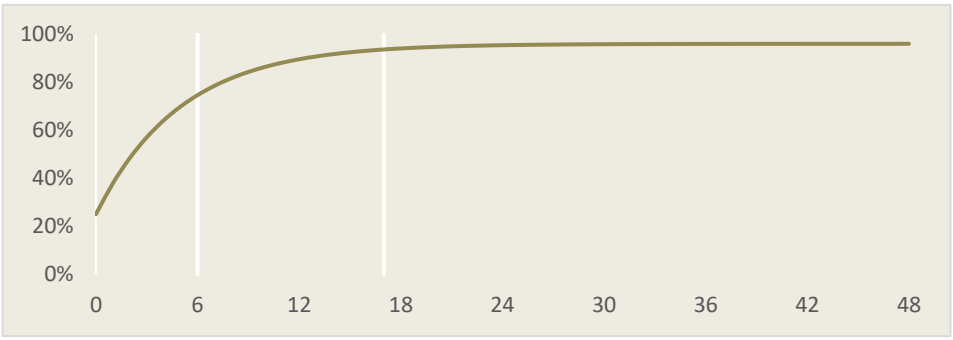
Crude protein (CP)	20.9	% of DM



Protein degradability

a	0.25
b	0.71
c	0.20

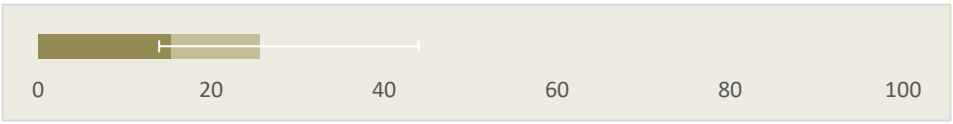
ADIN	0.14	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	25.7	% of DM
eNDF	60	% of NDF



Starch	1.0	% of DM

Sugar	18.3	(12.5-27.9)	% of DM (Typical range)
Fat	2.6	(2.0-3.6)	% of DM (Typical range)
Ash	14.0	(8.5-18.1)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

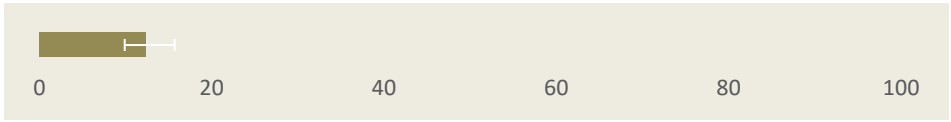
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.79	0.37	0.38	3.04	0.65	2.74	0.60	-88
Absorption %	30	64	16					

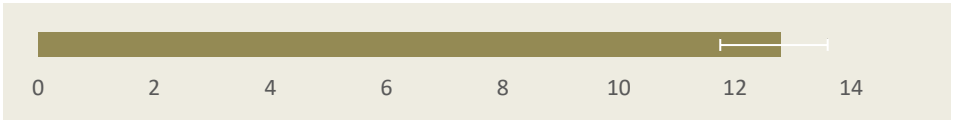
Comment

Name Brassica Rape - Winter

Category Other grazed forages

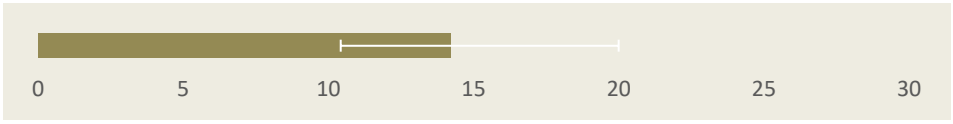
Dry matter (DM)	12.4	% of DM
Metabolisible energy (ME)	12.8	MJ/kg DM





Protein

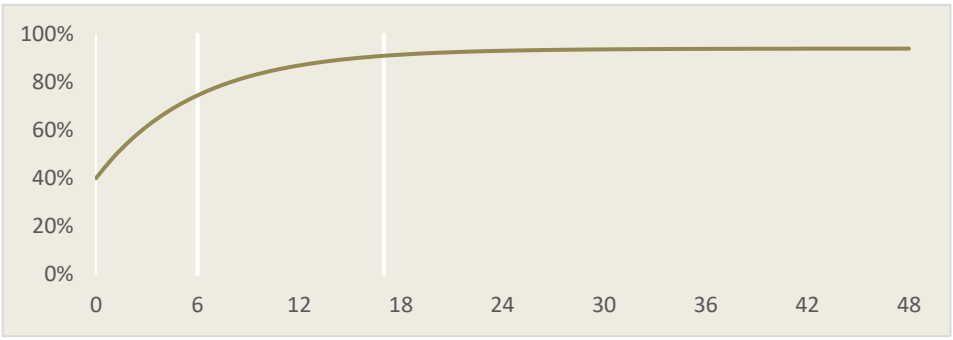
Crude protein (CP)	14.2	% of DM



Protein degradability

a	0.40
b	0.54
c	0.17

ADIN	0.12	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	22.6	% of DM
eNDF	60	% of NDF

Starch	7.4	% of DM

Sugar	18.8	(11.2-27.9)	% of DM (Typical range)
Fat	2.2	(1.4-3.0)	% of DM (Typical range)
Ash	11.9	(8.5-14.8)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

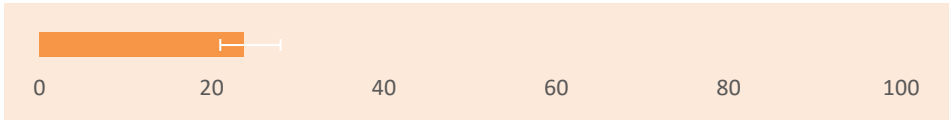
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.65	0.42	0.28	1.56	0.41	0.65	0.54	54
Absorption %	30	64	16					

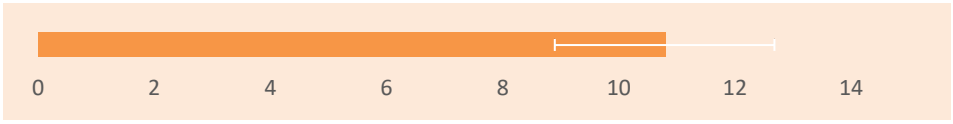
Comment

Name	Brewers grain (wet)

Category By-product (inc. straws)

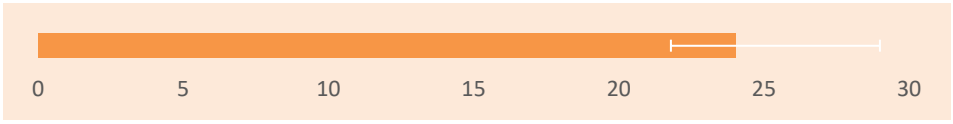
Dry matter (DM)	23.8	% of DM
Metabolisible energy (ME)	10.8	MJ/kg DM





Protein

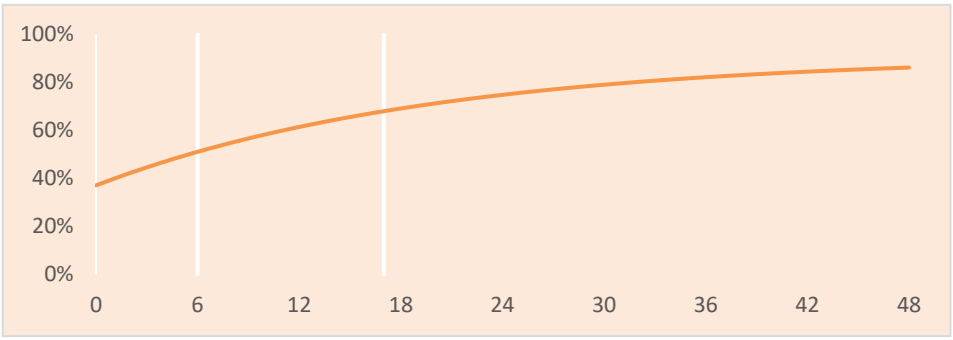
Crude protein (CP)	24.0	% of DM



Protein degradability

a	0.37
b	0.54
c	0.05

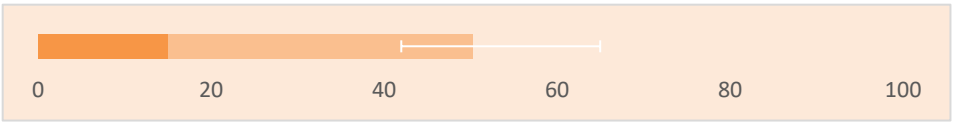
ADIN 0.37 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	50.3	% of DM
eNDF	30	% of NDF



Starch	6.0	% of DM

Sugar	2.7	(0.7-5.2)	% of DM (Typical range)
Fat	7.2	(2.0-10.1)	% of DM (Typical range)
Ash	4.3	(3.4-4.9)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.32	0.53	0.18	0.16	0.08	0.13	0.32	-159
Absorption %	60	70	16					

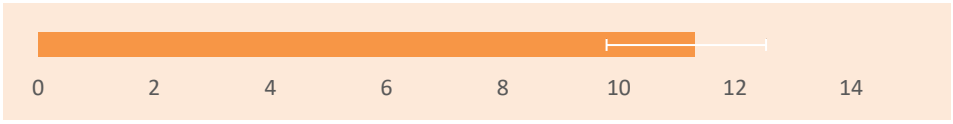
Comment High moisture content - storage requires care, potential mycotoxins.

Name	Brewers grains

Category

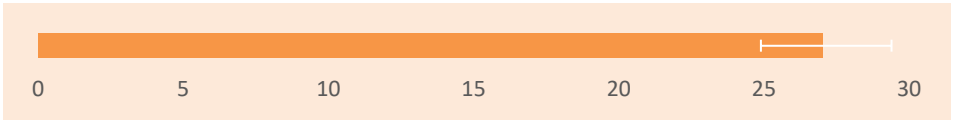
By-product (inc. straws)

Dry matter (DM)	91.0	% of DM
Metabolisible energy (ME)	11.3	MJ/kg DM



Protein

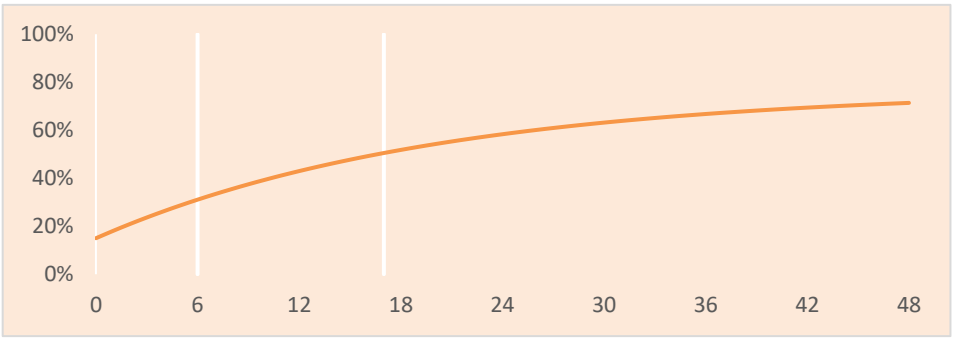
Crude protein (CP)	27.0	% of DM



Protein degradability

a	0.15
b	0.62
c	0.05

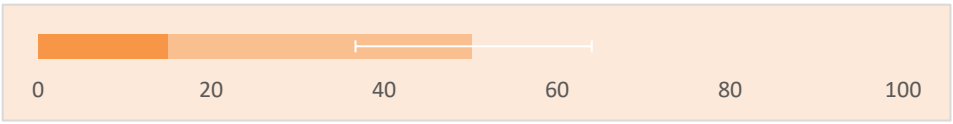
ADIN	0.44	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	50.1	% of DM
eNDF	30	% of NDF



Starch	6.9	% of DM

Sugar	2.6	(1.0-4.0)	% of DM (Typical range)
Fat	7.1	(5.2-8.3)	% of DM (Typical range)
Ash	4.2	(3.8-4.7)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.26	0.72	0.29	0.32	0.03	0.12	0.31	-130
Absorption %	60	70	16					

Comment	Check oil/fat level as high inclusion levels can reduce milk fat %. Very dark product with a burnt smell is likely to be overheated and so protein availability will be low. Potential mycotoxins

Name	Calcium chloride-di

Category

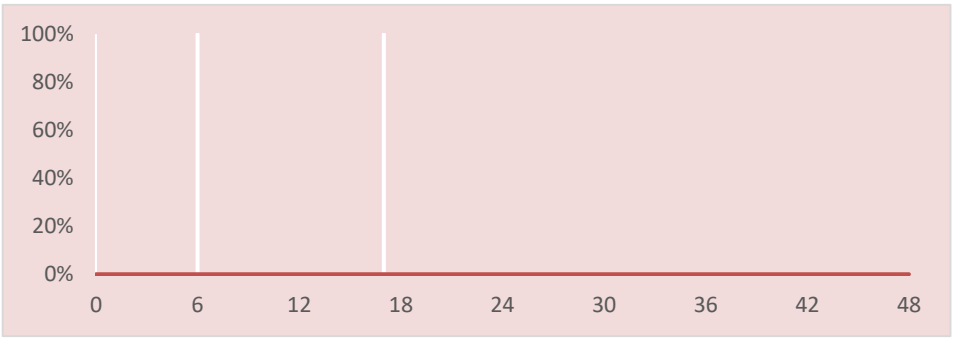
Mineral or Additives

Dry matter (DM)	100.0	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM

Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF

Starch	0.0	% of DM

Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	100.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	30.37	0.00	0.00	0.00	0.00	53.43	0.00	-15071
Absorption %	95	0	0					

Comment

Name	Calcium sulphate

Category

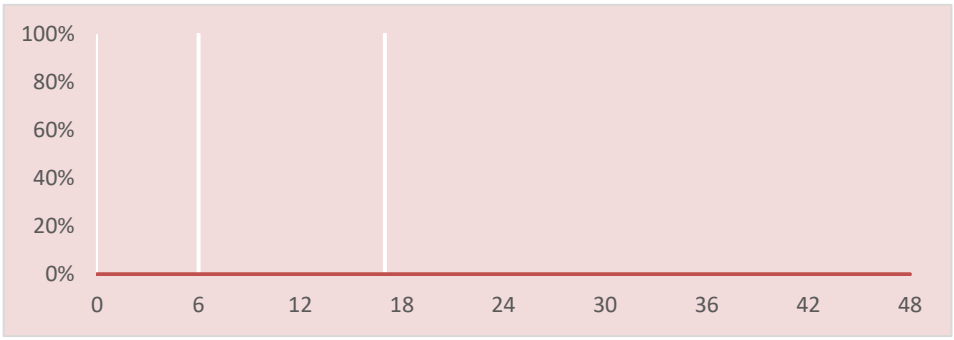
Mineral or Additives

Dry matter (DM)	97.0	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM

Protein degradability	
a	0.00
b	0.00
c	0.00
ADIN	0.00 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM

Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	97.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	23.25	0.00	0.00	0.00	0.00	0.00	18.61	-11610
Absorption %	70	0	0					

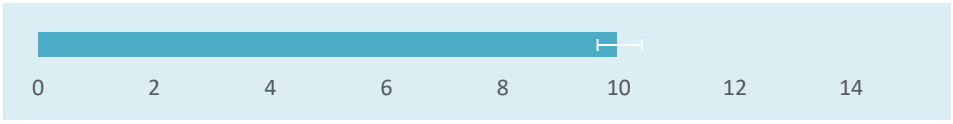
Comment

Name	Canola hay

Category

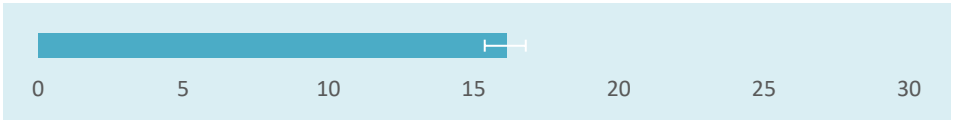
Hays

Dry matter (DM)	85.0	% of DM
Metabolisible energy (ME)	10.0	MJ/kg DM

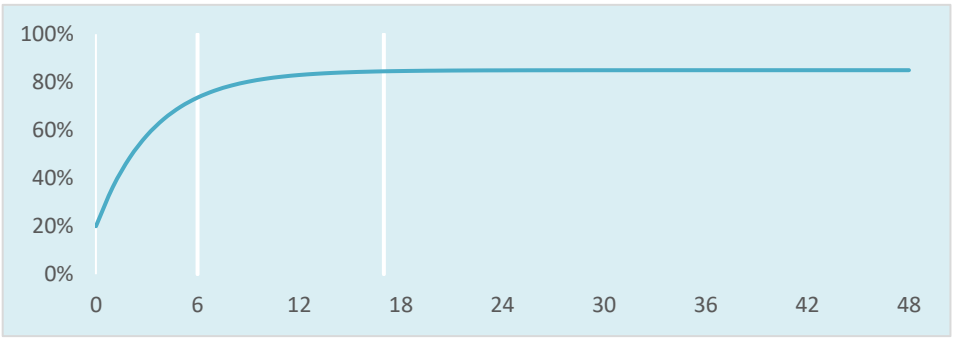


Protein

Crude protein (CP)	16.1	% of DM



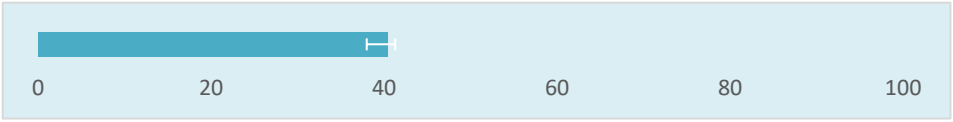
Protein degradability		
a	0.20	
b	0.65	
c	0.29	
ADIN	0.20	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	40.4	% of DM
eNDF	100	% of NDF



Starch	1.8	% of DM

Sugar	4.4	% of DM
Fat	4.4	% of DM
Ash	12.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	2.00	0.40	0.40	1.24	0.70	0.07	0.56	252
Absorption %	30	64	16					

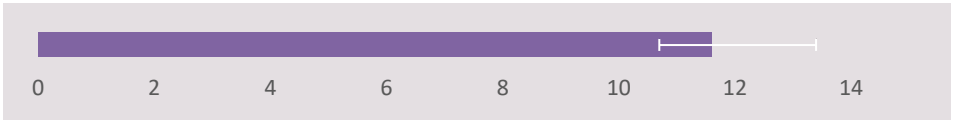
Comment: Risk of sulphur toxicity. Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name	Canola meal

Category

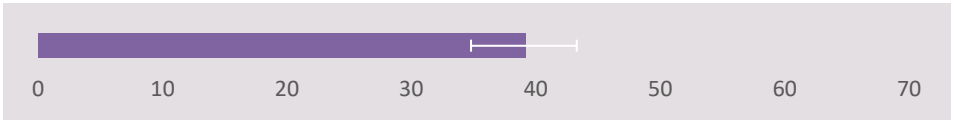
Grain or Concentrates

Dry matter (DM)	90.0	% of DM
Metabolisible energy (ME)	11.6	MJ/kg DM

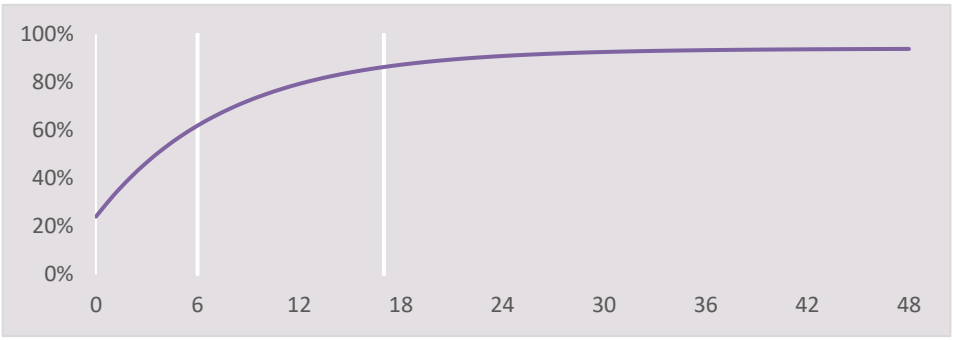


Protein

Crude protein (CP)	39.2	% of DM



Protein degradability		
a	0.24	
b	0.70	
c	0.13	
ADIN	0.39	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	29.6	% of DM
eNDF	31	% of NDF

Starch	2.9	% of DM

Sugar	10.9	(8.7-13.3)	% of DM (Typical range)
Fat	3.6	(1.0-5.4)	% of DM (Typical range)
Ash	7.4	(5.5-8.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

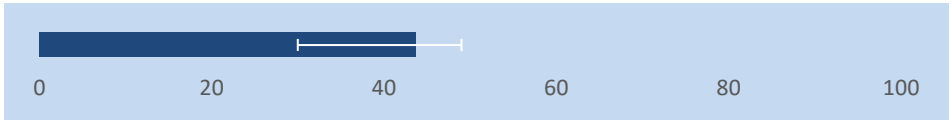
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.77	1.15	0.55	1.26	0.11	0.07	0.68	-73
Absorption %	60	70	16					

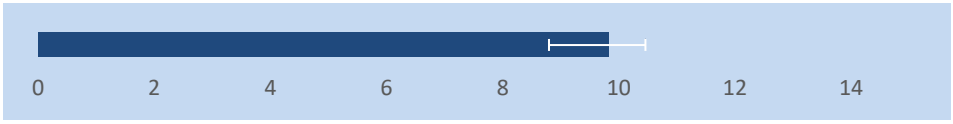
Comment

Name Canola silage

Category Silages

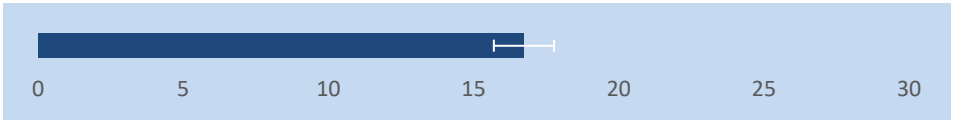
Dry matter (DM)	43.8	% of DM
Metabolisible energy (ME)	9.8	MJ/kg DM





Protein

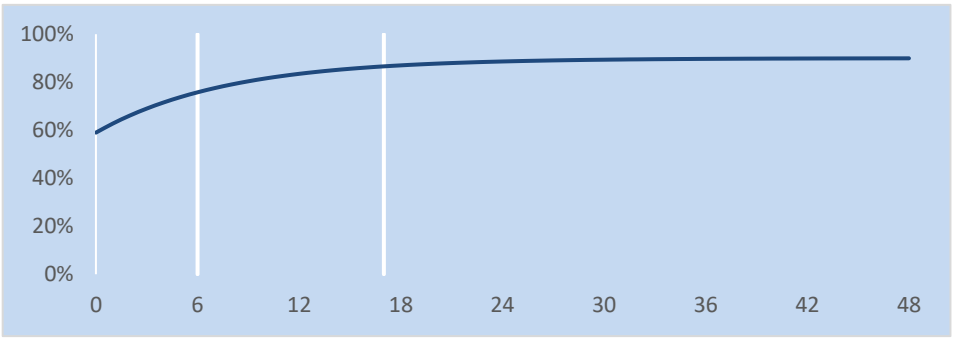
Crude protein (CP)	16.7	% of DM



Protein degradability

a	0.59
b	0.31
c	0.13

ADIN	0.12	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	40.3	% of DM
eNDF	90	% of NDF

Starch	1.8	% of DM

Sugar	4.4		% of DM
Fat	4.4	(2.7-6.0)	% of DM (Typical range)
Ash	13.9	(12.0-15.8)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

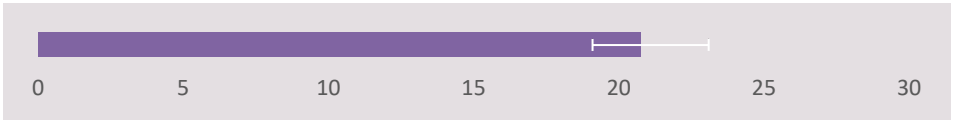
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	2.75	0.36	0.56	1.24	0.12	0.07	0.90	-211
Absorption %	30	64	16					

Comment Risk of sulphur toxicity. Potential residue risk (insecticides, herbicides, fungicides)

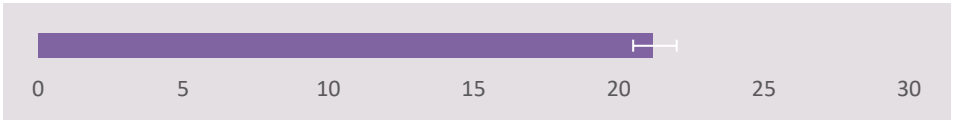
Name	Canola whole seed crushed

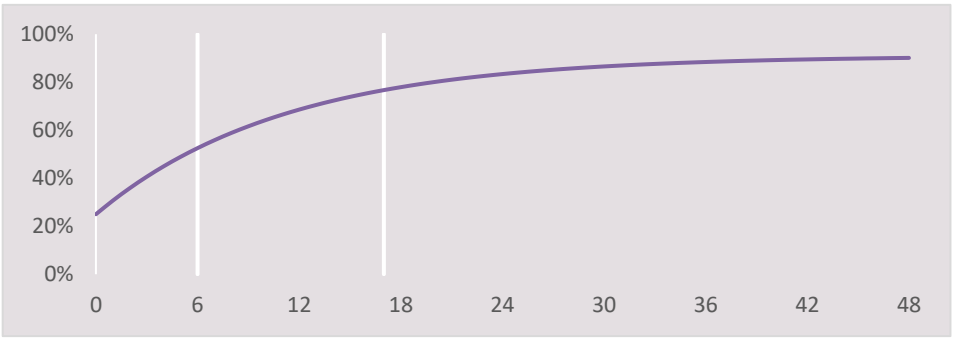
Category

Grain or Concentrates

Dry matter (DM)	92.8	% of DM	
Metabolisible energy (ME)	20.8	MJ/kg DM	

Protein

Crude protein (CP)	21.2	% of DM	

Protein degradability			
a	0.25		
b	0.66		
c	0.09		
ADIN	0.19	% of DM	

Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	24.0	% of DM	
eNDF	30	% of NDF	
Starch	1.5	% of DM	

Sugar	4.6	(3.5-5.5)	% of DM (Typical range)
Fat	44.9	(40.5-48.5)	% of DM (Typical range)
Ash	4.7	(4.3-5.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

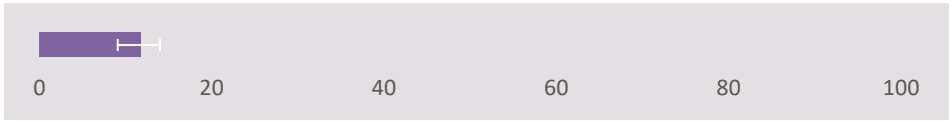
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.45	0.73	0.24	0.85	0.03	0.07	0.39	-31
Absorption %	60	70	16					

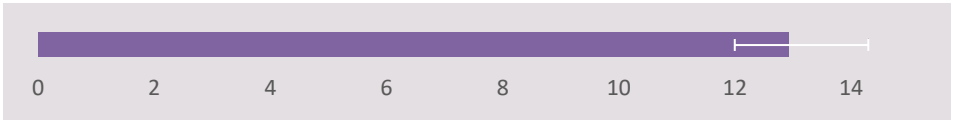
Comment: Potential residue risk (insecticides, herbicides, fungicides)

Name Carrots (fresh)

Category Grain or Concentrates

Dry matter (DM)	11.8	% of DM
Metabolisible energy (ME)	12.9	MJ/kg DM



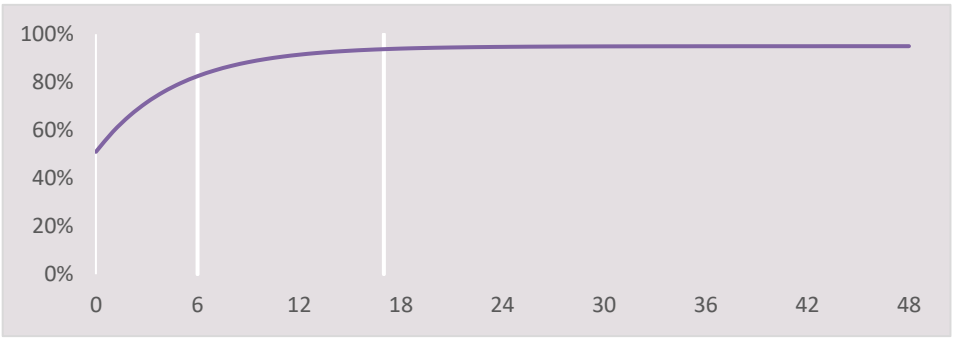


Protein

Crude protein (CP)	8.9	% of DM

Protein degradability

a	0.51
b	0.44
c	0.21
ADIN	0.04 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	14.5	% of DM
eNDF	10	% of NDF

Starch	10.0	% of DM

Sugar	40.0	(30.0-60.0)	% of DM (Typical range)
Fat	1.1	(0.5-1.5)	% of DM (Typical range)
Ash	8.9	(7.0-10.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

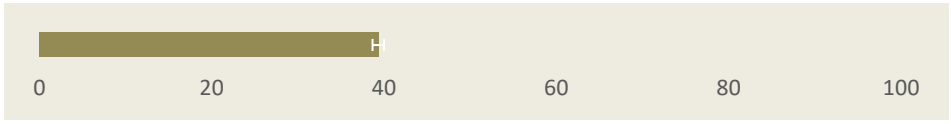
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.48	0.34	0.20	2.65	1.04	0.50	0.17	883
Absorption %	60	70	16					

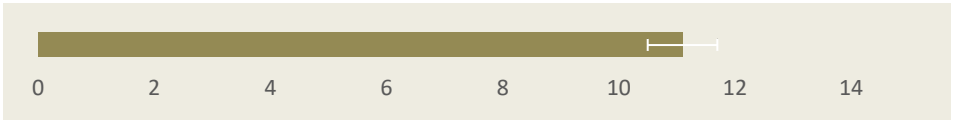
Comment Potential residue risk (insecticides, herbicides, fungicides)

Name Cereal - Dryland

Category Other grazed forages

Dry matter (DM)	39.3	% of DM
Metabolisible energy (ME)	11.1	MJ/kg DM

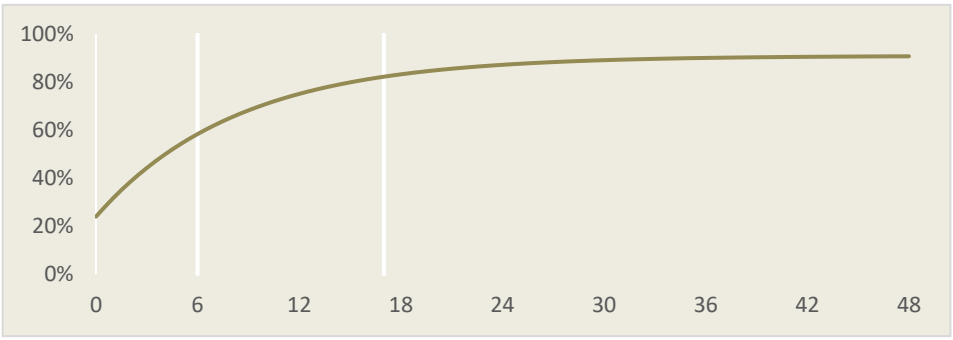




Protein

Crude protein (CP)	8.8	% of DM

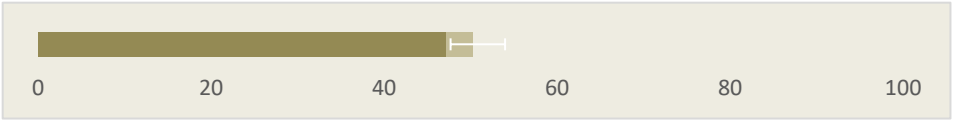
Protein degradability		
a	0.24	
b	0.67	
c	0.12	
ADIN	0.12	% of DM



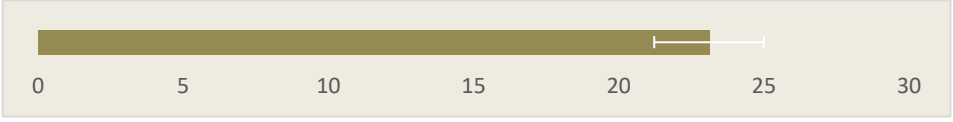
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	50.2	% of DM
eNDF	94	% of NDF



Starch	23.1	% of DM



Sugar	6.2	(1.0-12.5)	% of DM (Typical range)
Fat	2.5		% of DM
Ash	7.5		% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.32	0.27	0.10	1.50	0.02	0.67	0.19	86
Absorption %	30	64	16					

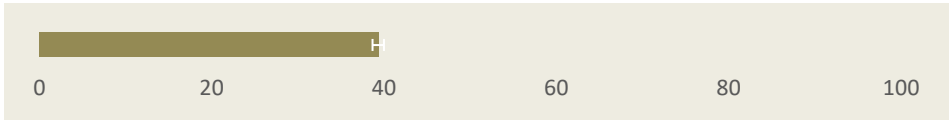
Comment

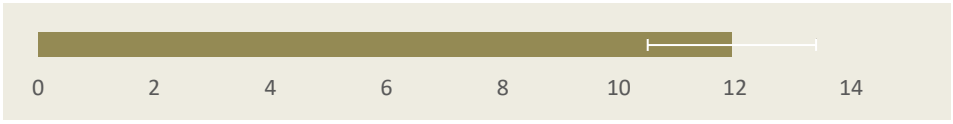
Name	Cereal - Irrigated

Category

Other grazed forages

Dry matter (DM)	39.3	% of DM
Metabolisible energy (ME)	12.0	MJ/kg DM

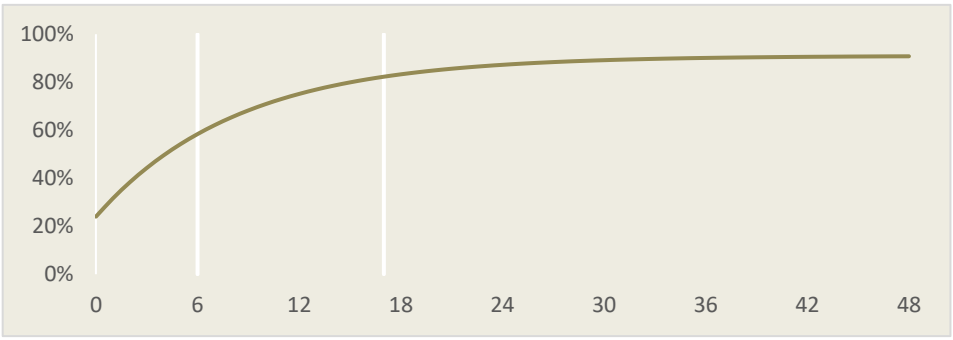




Protein

Crude protein (CP)	8.8	% of DM

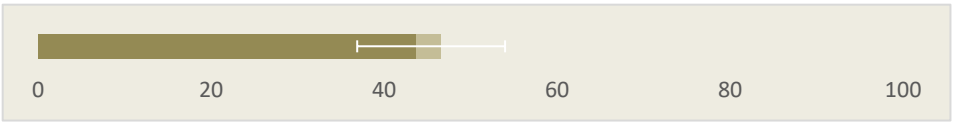
Protein degradability	
a	0.24
b	0.67
c	0.12
ADIN	0.12 % of DM



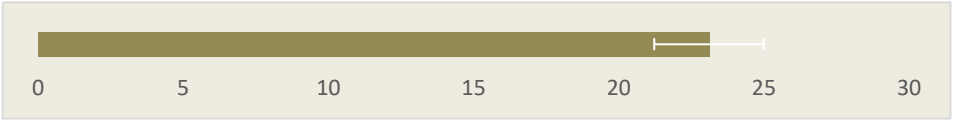
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	46.6	% of DM
eNDF	94	% of NDF



Starch	23.1	% of DM



Sugar	6.5	(1.0-12.5)	% of DM (Typical range)
Fat	2.5		% of DM
Ash	7.5		% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.32	0.27	0.10	1.50	0.02	0.67	0.19	86
Absorption %	30	64	16					

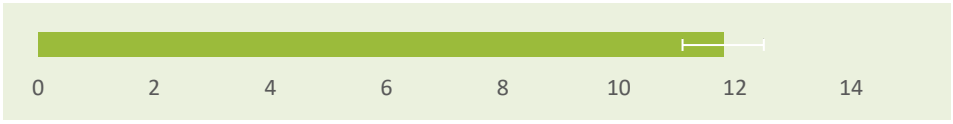
Comment

Name	Chicory

Category

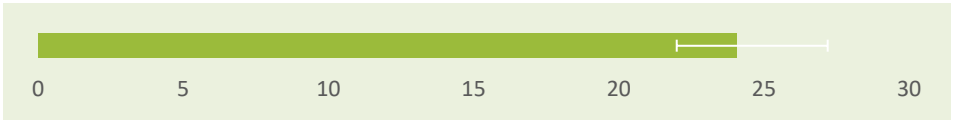
Grazed pastures

Dry matter (DM)	13.0	% of DM	
Metabolisible energy (ME)	11.8	MJ/kg DM	

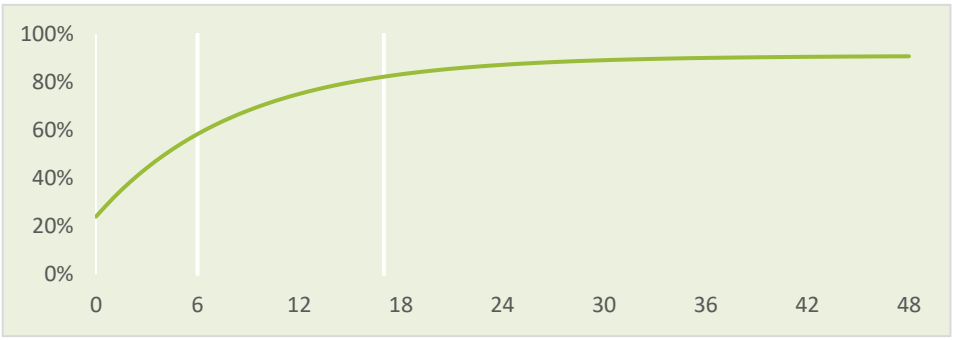


Protein

Crude protein (CP)	24.1	% of DM



Protein degradability		
a	0.24	
b	0.67	
c	0.12	
ADIN	0.15	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	28.5	% of DM	
eNDF	60	% of NDF	
Starch	4.8	% of DM	

Sugar	8.8		% of DM
Fat	5.3		% of DM
Ash	13.1	(11.5-14.7)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

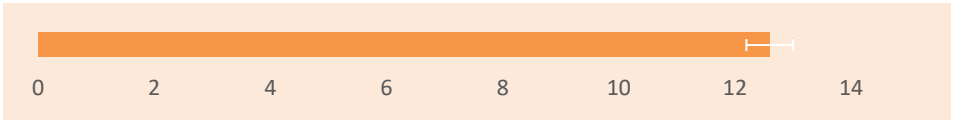
Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.50	0.50	0.38	3.30	0.69	0.20	0.53	757
Absorption %	30	64	16					

Comment

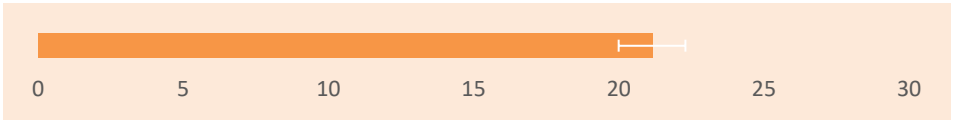
Name	Choc malt
Category	By-product (inc. straws)

Dry matter (DM)	92.6	% of DM
Metabolisible energy (ME)	12.6	MJ/kg DM

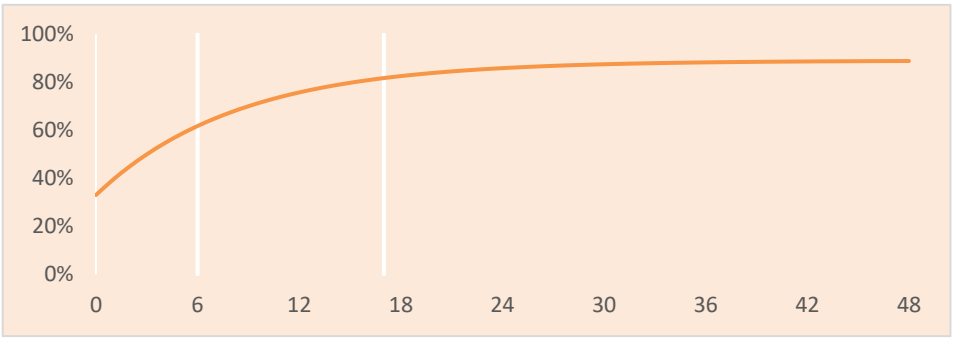


Protein

Crude protein (CP)	21.2	% of DM



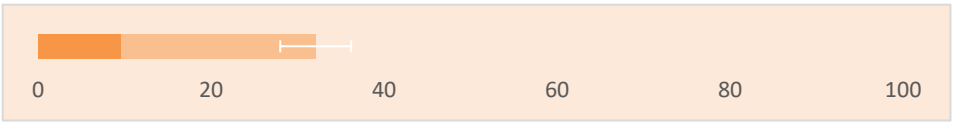
Protein degradability		
a	0.33	
b	0.56	
c	0.12	
ADIN	0.15	% of DM



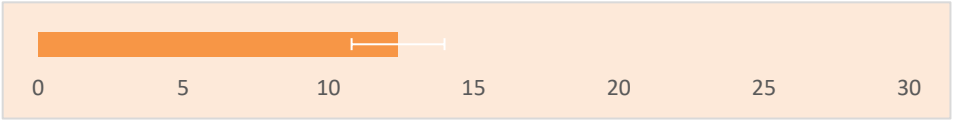
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	32.1	% of DM
eNDF	30	% of NDF



Starch	12.4	% of DM



Sugar	17.3	(16.4-18.2)	% of DM (Typical range)
Fat	6.6	(5.3-8.0)	% of DM (Typical range)
Ash	7.6		% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

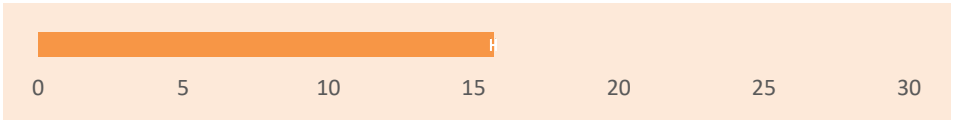
Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.19	0.49	0.18	1.33	0.11	0.50	0.25	91
Absorption %	60	70	16					

Comment	High sugar and fat contents

Name	Chocolate waste
Category	By-product (inc. straws)

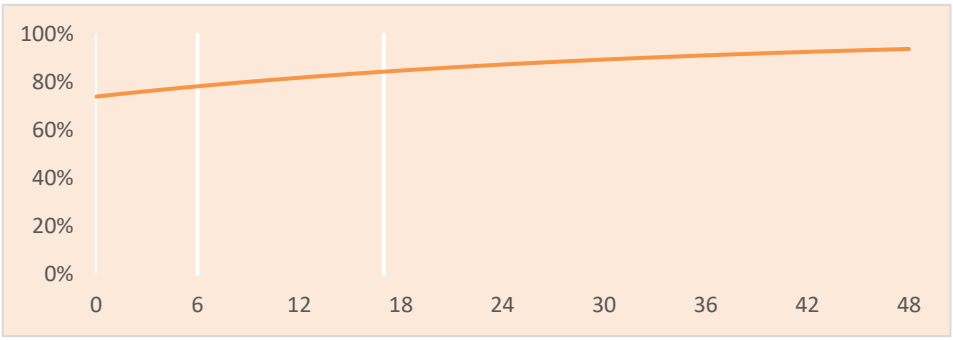
Dry matter (DM)	92.9	% of DM
Metabolisible energy (ME)	15.7	MJ/kg DM



Protein

Crude protein (CP)	9.8	% of DM

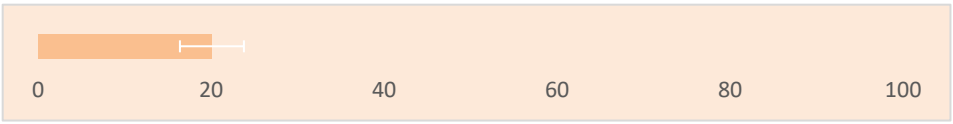
Protein degradability		
a	0.74	
b	0.26	
c	0.03	
ADIN	0.14	% of DM



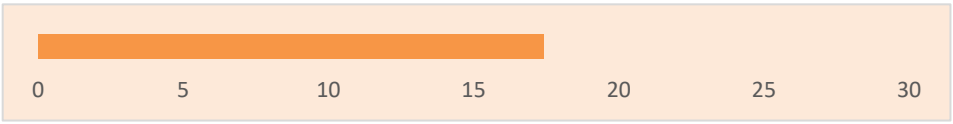
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	20.1	% of DM
eNDF	0	% of NDF



Starch	17.4	% of DM



Sugar	38.7		% of DM
Fat	17.2	(13.9-20.5)	% of DM (Typical range)
Ash	4.5	(2.1-6.9)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.23	0.23	0.16	0.96	0.12	0.33	0.11	136
Absorption %	60	70	16					

Comment	High fat content and/or sugar content

Name Citrus pulp

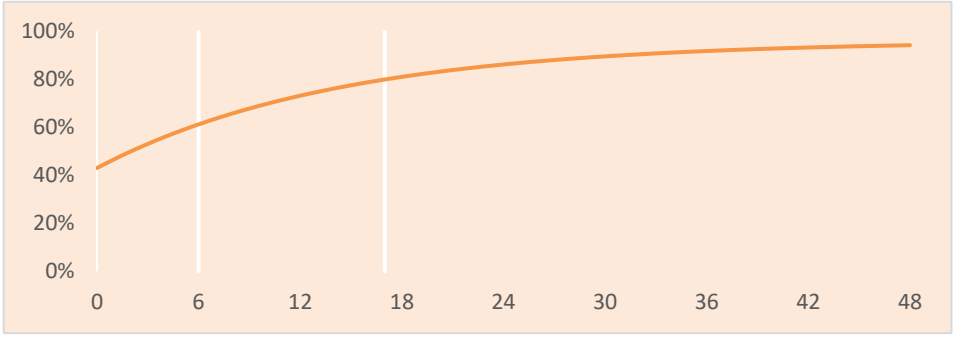
Category By-product (inc. straws)

Dry matter (DM)	19.1	% of DM
Metabolisible energy (ME)	12.1	MJ/kg DM

Protein

Crude protein (CP)	7.7	% of DM

Protein degradability	
a	0.43
b	0.53
c	0.07
ADIN	0.13 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	25.4	% of DM
eNDF	41	% of NDF
Starch	5.8	% of DM

Sugar	19.2	(9.3-26.5)	% of DM (Typical range)
Fat	3.7	(1.8-9.7)	% of DM (Typical range)
Ash	6.8	(5.3-8.8)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.44	0.11	0.15	0.95	0.21	0.08	0.10	251
Absorption %	60	70	16					

Comment

Good intake characteristics, but when removed from diet can lead to feed rejection. Limonin in seeds (lemon and grapefruit) is toxic to young animals and can make the feed unpalatable to older stock. Poorly stored fresh material can mould easily leading to mycotoxin contamination. High feed levels can lead to milk taint.

Name	Clover - Red - vegetative

Category

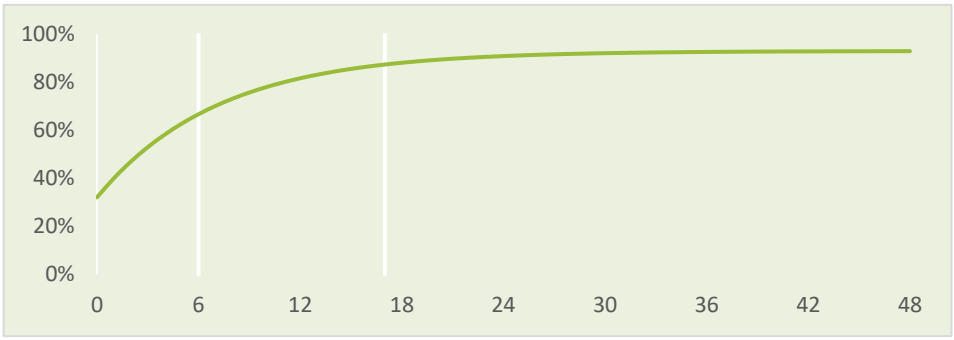
Grazed pastures

Dry matter (DM)	21.1	% of DM
Metabolisible energy (ME)	10.4	MJ/kg DM

Protein

Crude protein (CP)	22.4	% of DM

Protein degradability	
a	0.32
b	0.61
c	0.14
ADIN	0.10 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	35.6	% of DM
eNDF	74	% of NDF
Starch	2.6	% of DM
Sugar	11.3	% of DM
Fat	3.4	% of DM
Ash	9.4	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.77	0.36	0.39	2.58	0.16	0.44	0.21	473
Absorption %	30	64	16					

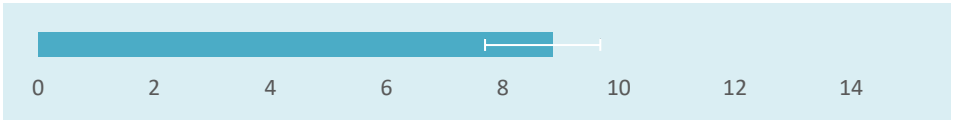
Comment

Name	Clover hay

Category

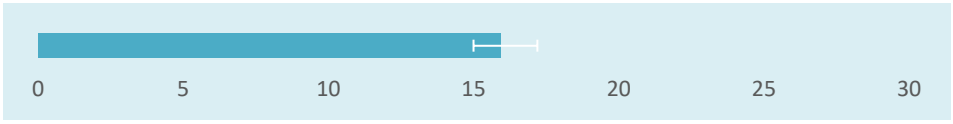
Hays

Dry matter (DM)	87.1	% of DM
Metabolisible energy (ME)	8.9	MJ/kg DM



Protein

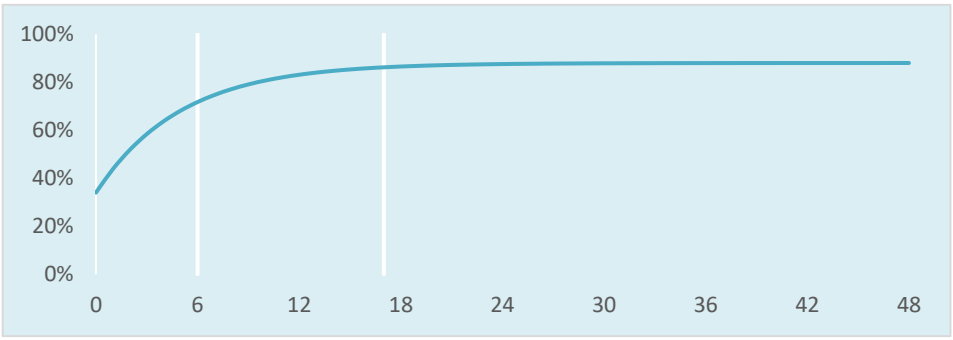
Crude protein (CP)	15.9	% of DM



Protein degradability

a	0.34
b	0.54
c	0.20

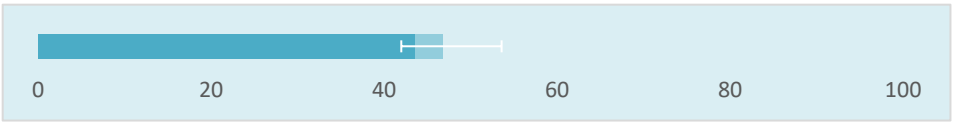
ADIN	0.23	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	46.8	% of DM
eNDF	93	% of NDF



Starch	2.0	% of DM

Sugar	9.0		% of DM
Fat	2.4	(1.7-2.7)	% of DM (Typical range)
Ash	8.9	(8.0-10.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

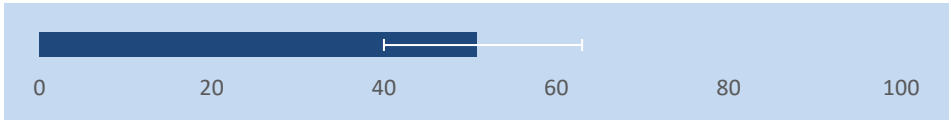
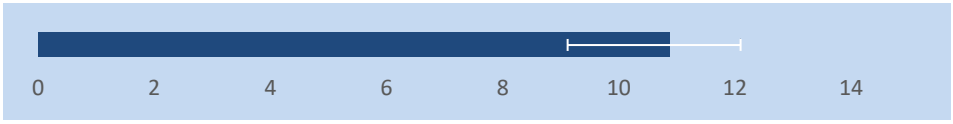
Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.30	0.24	0.29	1.58	0.15	0.29	0.20	261
Absorption %	30	64	16					

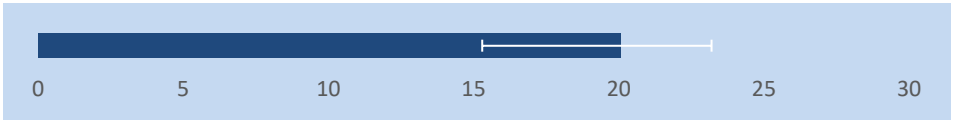
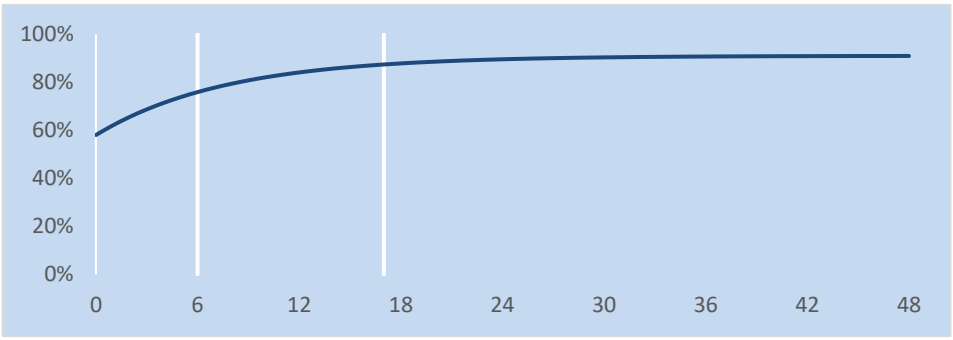
Comment	Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name Clover silage

Category Silages

Dry matter (DM)	50.8	% of DM	
Metabolisible energy (ME)	10.9	MJ/kg DM	

Protein

Crude protein (CP)	20.1	% of DM	
Protein degradability			
a	0.58		
b	0.33		
c	0.13		
ADIN	0.19	% of DM	

Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	36.3	% of DM	
eNDF	80	% of NDF	
Starch	2.5	% of DM	

Sugar	3.7		% of DM
Fat	3.3	(2.3-4.2)	% of DM (Typical range)
Ash	11.9	(9.0-17.6)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.46	0.33	0.29	2.73	0.04	0.68	0.28	351
Absorption %	30	64	16					

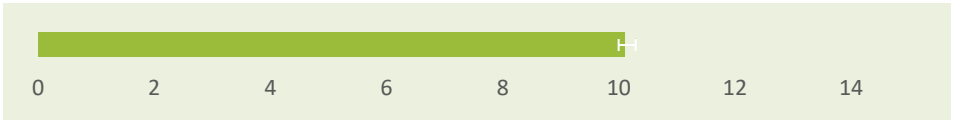
Comment Potential residue risk (insecticides, herbicides, fungicides)

Name	Cocksfoot

Category

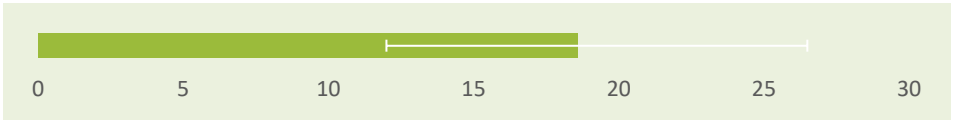
Grazed pastures

Dry matter (DM)	22.9	% of DM
Metabolisible energy (ME)	10.1	MJ/kg DM



Protein

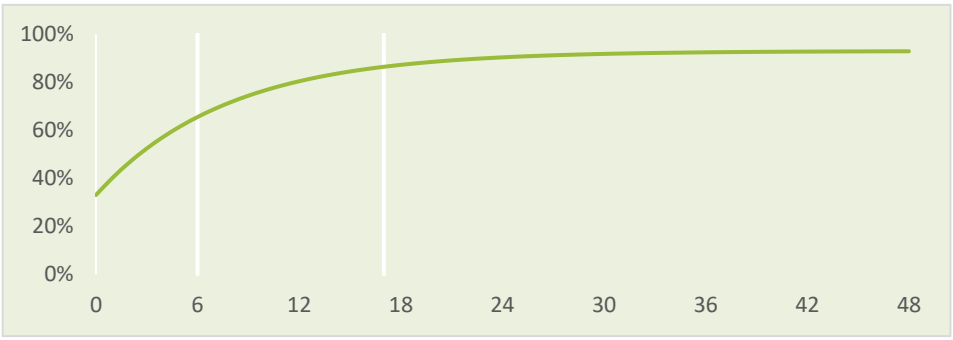
Crude protein (CP)	18.6	% of DM



Protein degradability

a	0.33
b	0.60
c	0.13

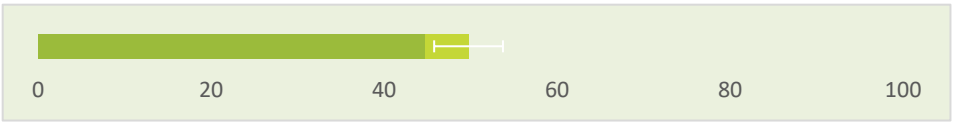
ADIN	0.12	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	49.8	% of DM
eNDF	90	% of NDF



Starch	3.0	% of DM

Sugar	7.7	(7.5-7.9)	% of DM (Typical range)
Fat	2.4	(2.0-2.7)	% of DM (Typical range)
Ash	8.7	(7.5-9.8)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.73	0.35	0.21	3.08	0.02	0.56	0.23	498
Absorption %	30	64	16					

Comment

Name	Copper sulphate

Category

Mineral or Additives

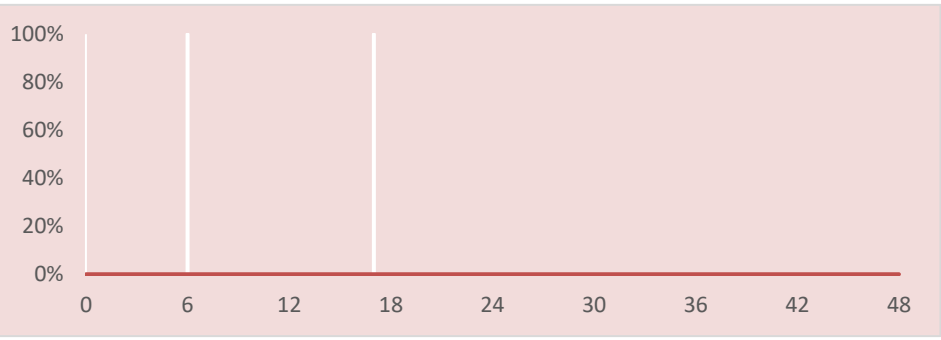
Dry matter (DM)	100.0	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM

Protein degradability	
a	0.00
b	0.00
c	0.00

ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM

Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	100.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

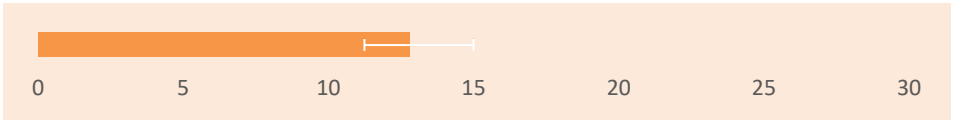
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	0.00	0.00	0.00	0.00	0.00	12.82	-7996
Absorption %	0	0	0					

Comment

Name	Copra meal (expeller extraction)

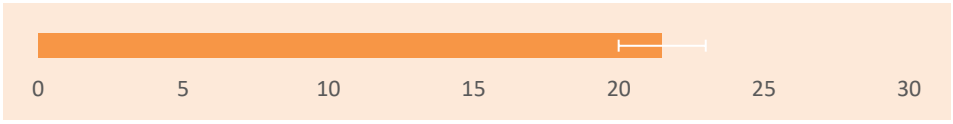
Category By-product (inc. straws)

Dry matter (DM)	90.9	% of DM
Metabolisible energy (ME)	12.8	MJ/kg DM



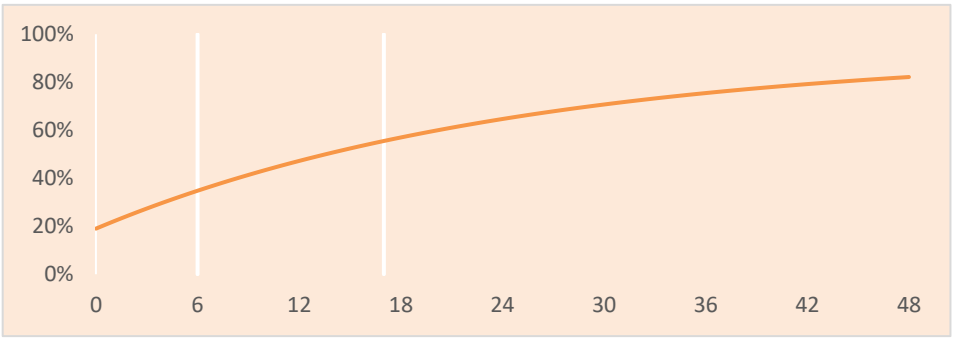
Protein

Crude protein (CP)	21.5	% of DM



Protein degradability

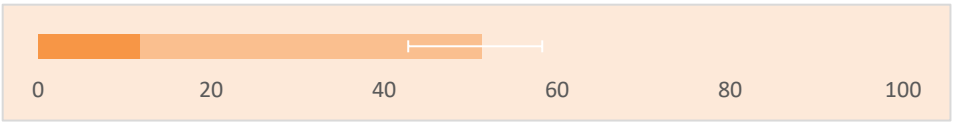
a	0.19
b	0.74
c	0.04
ADIN	0.25 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	51.3	% of DM
eNDF	23	% of NDF



Starch	1.1	% of DM

Sugar	9.4	(5.5-11.4)	% of DM (Typical range)
Fat	9.7	(2.0-19.1)	% of DM (Typical range)
Ash	6.7	(6.1-7.4)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

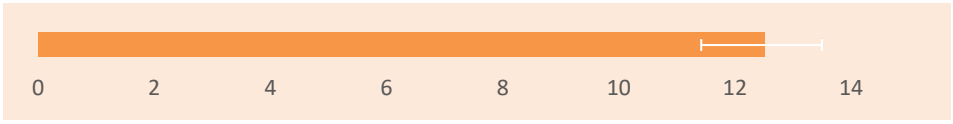
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.20	0.51	0.31	1.39	0.06	0.56	0.31	31
Absorption %	60	70	16					

Comment High fat content. Aflatoxin risk

Name	Corn gluten feed

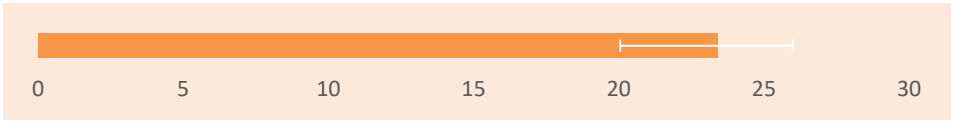
Category By-product (inc. straws)

Dry matter (DM)	89.2	% of DM
Metabolisible energy (ME)	12.5	MJ/kg DM



Protein

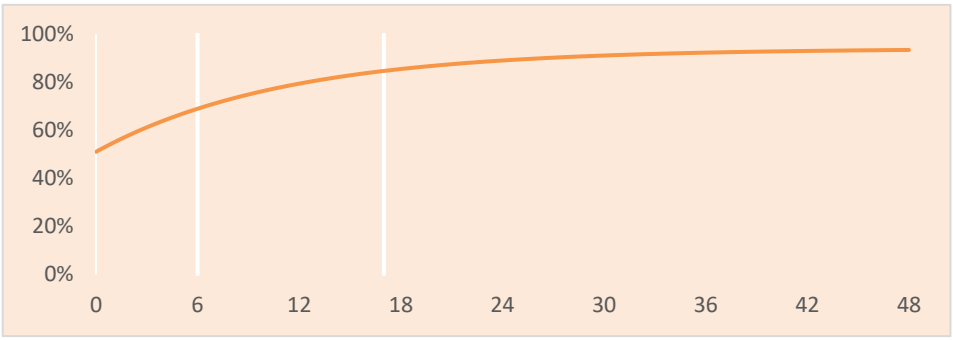
Crude protein (CP)	23.4	% of DM



Protein degradability

a	0.51
b	0.43
c	0.09

ADIN 0.19 % of DM

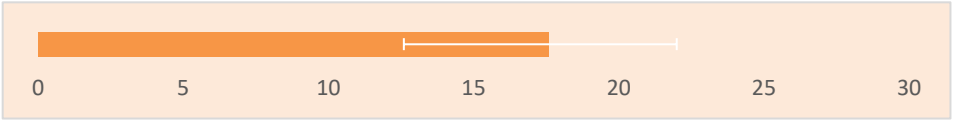


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	41.0	% of DM
eNDF	37	% of NDF

Starch	17.6	% of DM



Sugar	5.0	(1.9-13.1)	% of DM (Typical range)
Fat	3.6	(2.4-5.2)	% of DM (Typical range)
Ash	6.9	(6.1-7.9)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

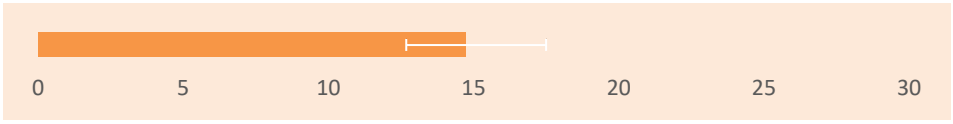
Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.18	0.95	0.39	1.16	0.18	0.24	0.36	77
Absorption %	60	70	16					

Comment

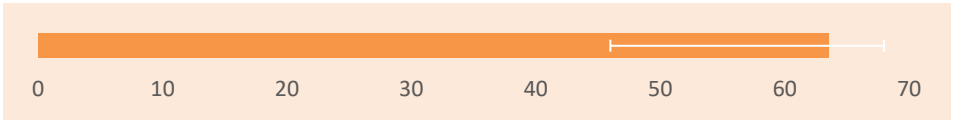
Name	Corn gluten meal
Category	By-product (inc. straws)

Dry matter (DM)	90.0	% of DM
Metabolisible energy (ME)	14.7	MJ/kg DM

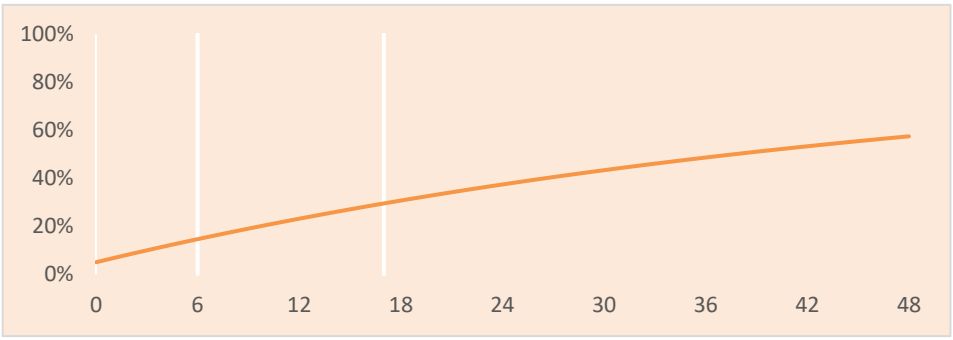


Protein

Crude protein (CP)	63.6	% of DM



Protein degradability	
a	0.05
b	0.85
c	0.02
ADIN	0.44 % of DM

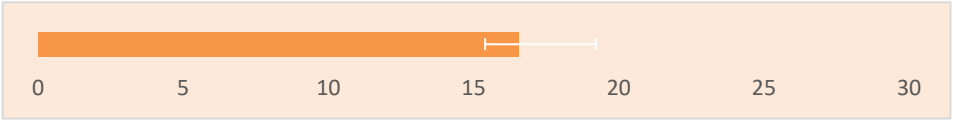


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	14.8	% of DM
eNDF	21	% of NDF

Starch	16.5	% of DM



Sugar	2.3	(0.3-8.5)	% of DM (Typical range)
Fat	3.4	(2.5-6.9)	% of DM (Typical range)
Ash	2.6	(1.1-3.7)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

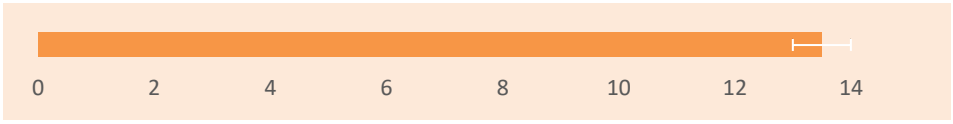
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.12	0.46	0.17	0.44	0.08	0.13	0.57	-245
Absorption %	60	70	16					

Comment	High bypass protein content

Name	Corn steep liquor

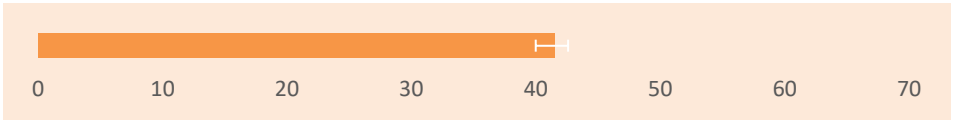
Category By-product (inc. straws)

Dry matter (DM)	44.3	% of DM
Metabolisible energy (ME)	13.5	MJ/kg DM



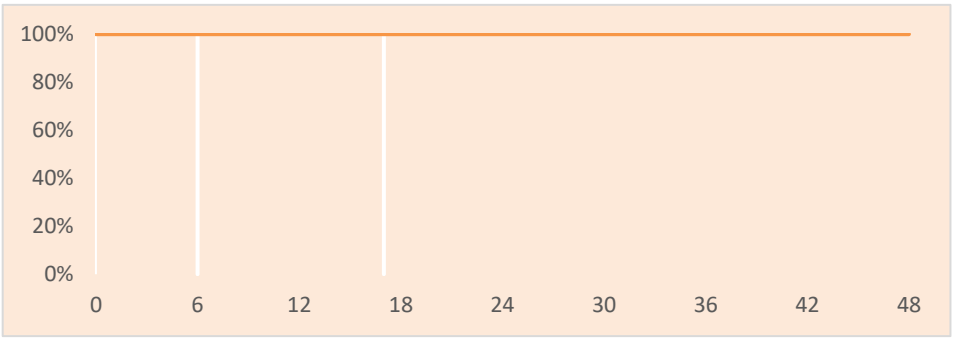
Protein

Crude protein (CP)	41.5	% of DM



Protein degradability

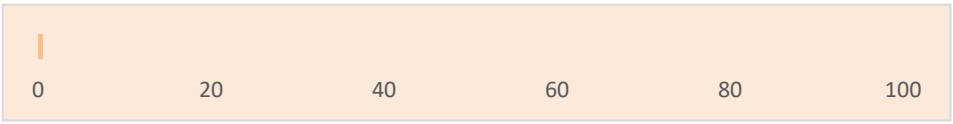
a	1.00
b	0.00
c	0.00
ADIN	0.04 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.5	% of DM
eNDF	0	% of NDF



Starch	4.2	% of DM

Sugar	16.3	(7.4-24.0)	% of DM (Typical range)
Fat	1.2	(1.0-1.7)	% of DM (Typical range)
Ash	16.4	(15.4-17.5)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.22	3.18	1.05	3.78	0.52	0.74	0.93	404
Absorption %	60	70	16					

Comment High protein and sugar contents

Name Cottonseed meal

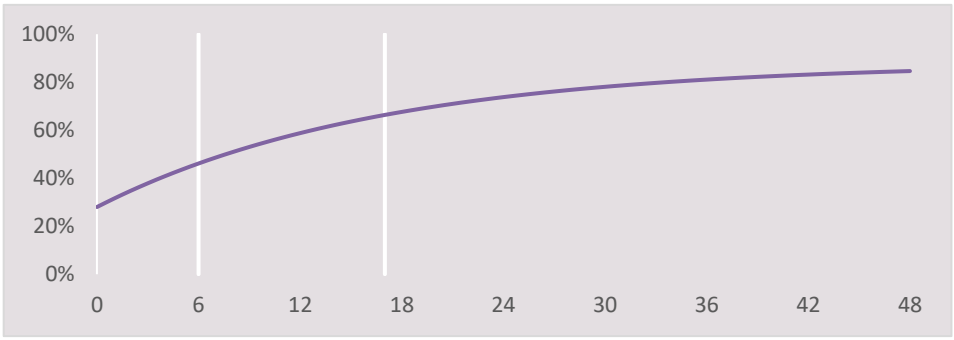
Category Grain or Concentrates

Dry matter (DM)	91.2	% of DM
Metabolisible energy (ME)	11.7	MJ/kg DM

Protein

Crude protein (CP)	43.8	% of DM

Protein degradability	
a	0.28
b	0.60
c	0.06
ADIN	0.30 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	29.1	% of DM
eNDF	35	% of NDF
Starch	1.8	% of DM

Sugar	7.2	(6.0-8.3)	% of DM (Typical range)
Fat	2.9	(1.1-6.6)	% of DM (Typical range)
Ash	7.0	(6.0-7.5)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.22	1.18	0.59	1.51	0.11	0.06	0.39	171
Absorption %	60	70	16					

Comment

Name	Dicalcium phosphate

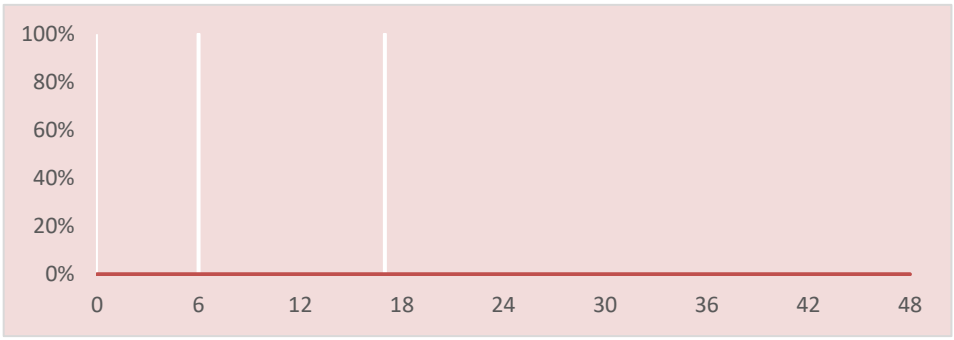
Category

Mineral or Additives

Dry matter (DM)	96.6	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM
Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM
Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	97.0 (94.0-100.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	22.20	18.91	0.24	0.05	0.03	0.00	1.09	-659
Absorption %	94	75	0					

Comment

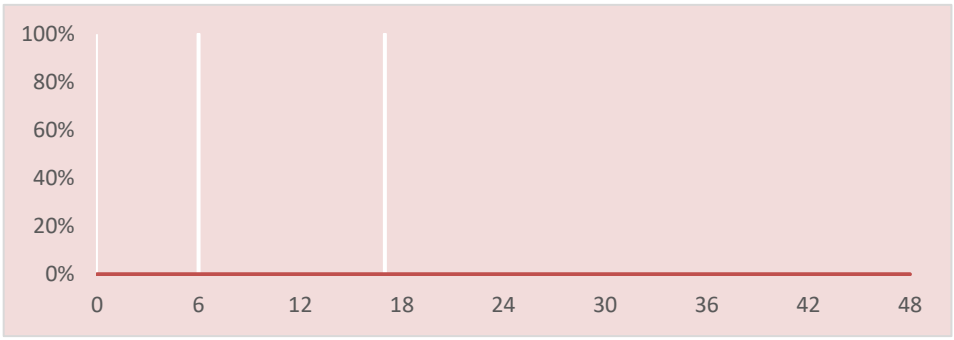
Name Disodium phosphate

Category Mineral or Additives

Dry matter (DM)	96.3	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM
Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM
Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	97.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.02	22.70	0.00	0.00	26.11	0.00	0.00	11356
Absorption %	0	90	0					

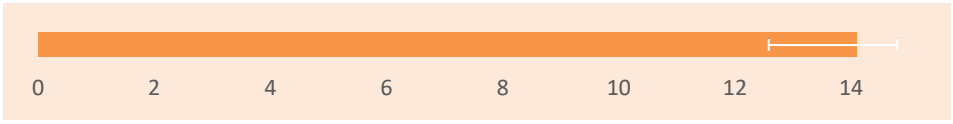
Comment

Name	Distillers grains - Maize

Category

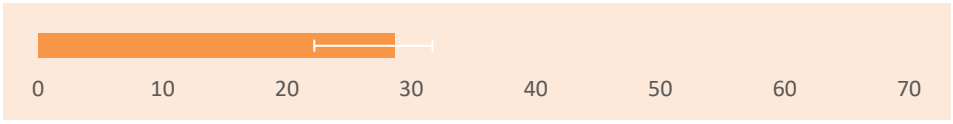
By-product (inc. straws)

Dry matter (DM)	89.6	% of DM
Metabolisible energy (ME)	14.1	MJ/kg DM



Protein

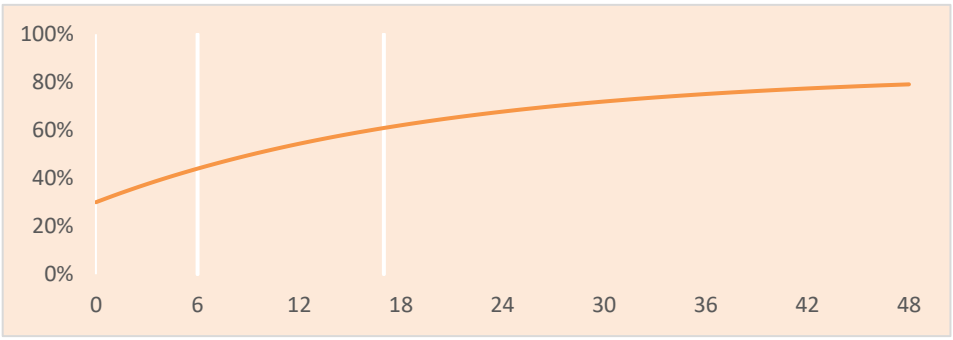
Crude protein (CP)	28.7	% of DM



Protein degradability

a	0.30
b	0.54
c	0.05

ADIN	1.15	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	39.1	% of DM
eNDF	12	% of NDF

Starch	7.7	% of DM

Sugar	3.1	(0.6-5.5)	% of DM (Typical range)
Fat	10.2	(4.4-13.0)	% of DM (Typical range)
Ash	5.1	(4.0-6.8)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.16	0.89	0.35	1.10	0.31	0.19	0.54	25
Absorption %	60	70	16					

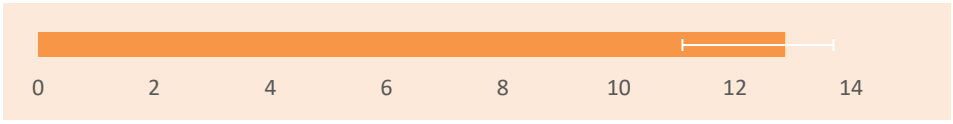
Comment	Check oil/fat level as high inclusion levels can reduce milk fat %. Very dark product with a burnt smell is likely to be overheated and so protein availability will be low. Potential mycotoxins

Name	Distillers grains - Wheat

Category

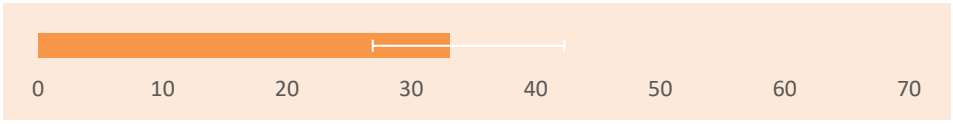
By-product (inc. straws)

Dry matter (DM)	90.6	% of DM
Metabolisible energy (ME)	12.9	MJ/kg DM



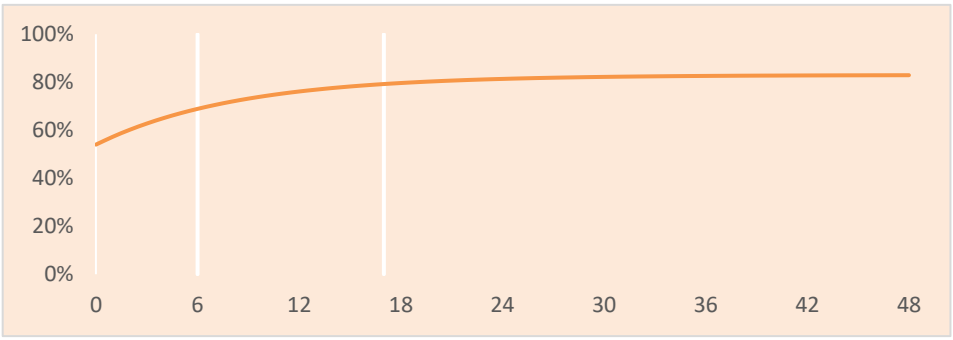
Protein

Crude protein (CP)	33.1	% of DM



Protein degradability

a	0.54	
b	0.29	
c	0.12	
ADIN	1.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	38.4	% of DM
eNDF	4	% of NDF

Starch	4.9	% of DM

Sugar	5.6	(0.9-8.6)	% of DM (Typical range)
Fat	7.4	(5.5-9.2)	% of DM (Typical range)
Ash	4.6	(4.0-5.2)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.21	0.77	0.33	1.13	0.08	0.26	0.43	-21
Absorption %	60	70	16					

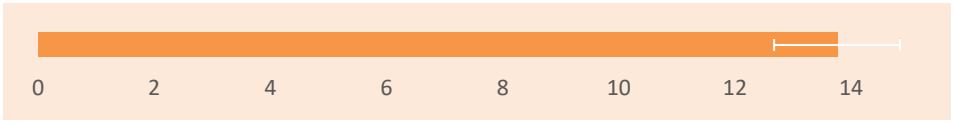
Comment

Check oil/fat level as high inclusion levels can reduce milk fat %. Very dark product with a burnt smell is likely to be overheated and so protein availability will be low. Potential mycotoxins

Name	Distillers grains + solubles

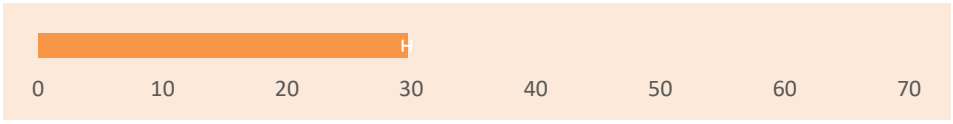
Category By-product (inc. straws)

Dry matter (DM)	89.1	% of DM
Metabolisible energy (ME)	13.8	MJ/kg DM



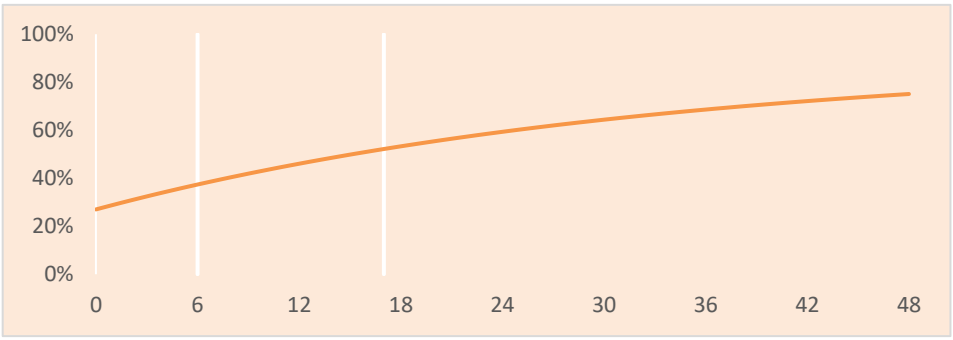
Protein

Crude protein (CP)	29.7	% of DM



Protein degradability

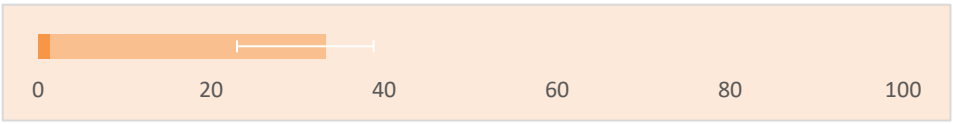
a	0.27	
b	0.63	
c	0.03	
ADIN	1.12	% of DM



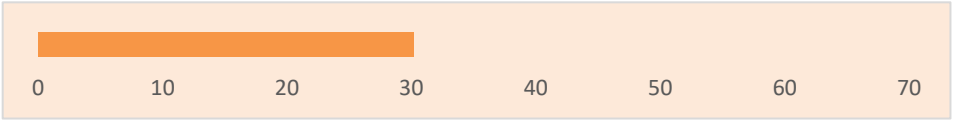
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	33.3	% of DM
eNDF	4	% of NDF



Starch	30.2	% of DM



Sugar	11.6		% of DM
Fat	8.3	(2.2-11.9)	% of DM (Typical range)
Ash	6.4	(5.2-8.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.25	0.99	0.49	1.28	0.27	0.24	0.69	-56
Absorption %	60	70	16					

Comment: Check oil/fat level as high inclusion levels can reduce milk fat %. Very dark product with a burnt smell is likely to be overheated and so protein availability will be low. Potential mycotoxins

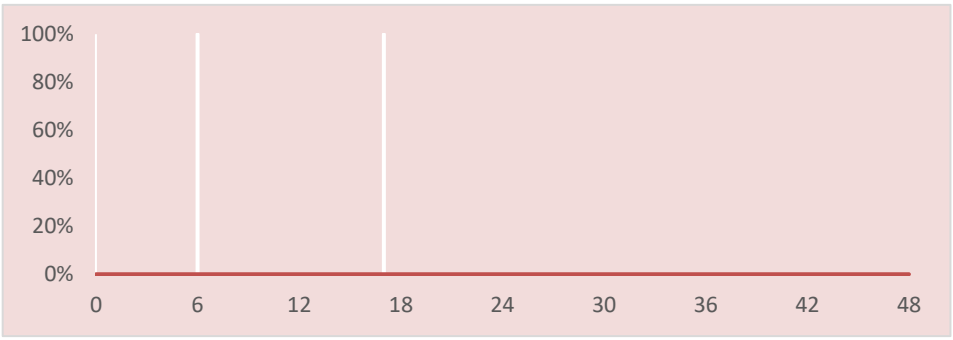
Name	Dolomite

Category

Mineral or Additives

Dry matter (DM)	97.0	% of DM	
Metabolisible energy (ME)	0.0	MJ/kg DM	

Protein

Crude protein (CP)	0.0	% of DM	
Protein degradability			
a	0.00		
b	0.00		
c	0.00		
ADIN	0.00	% of DM	

Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM	
eNDF	0	% of NDF	
Starch	0.0	% of DM	

Sugar	0.0		% of DM
Fat	0.0		% of DM
Ash	98.5	(98.0-99.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	21.50	0.01	10.66	0.13	0.00	0.08	0.00	12
Absorption %	60	0	30					

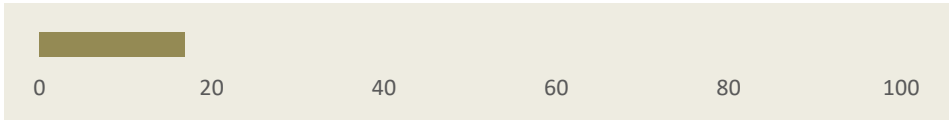
Comment

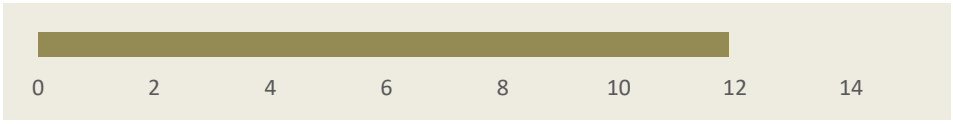
Name	Fodder beet (whole)

Category

Other grazed forages

Dry matter (DM)	16.8	% of DM
Metabolisible energy (ME)	11.9	MJ/kg DM





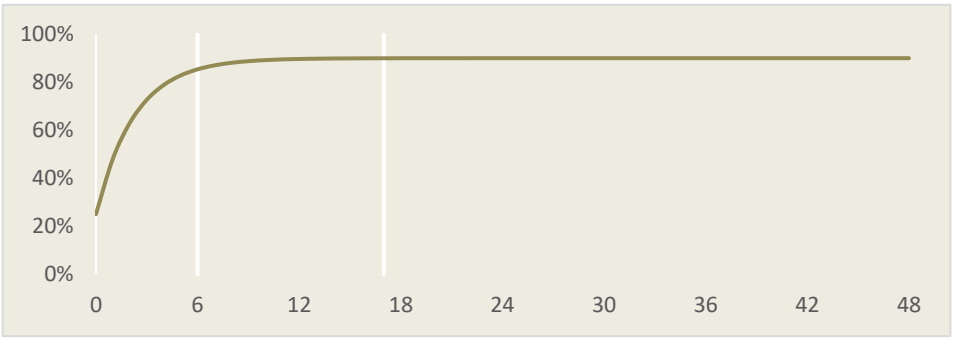
Protein

Crude protein (CP)	7.5	% of DM

Protein degradability

a	0.25
b	0.65
c	0.44

ADIN	0.02	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	16.6	% of DM
eNDF	69	% of NDF

Starch	2.0	% of DM

Sugar	65.4	% of DM
Fat	0.5	% of DM
Ash	7.1	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.30	0.25	0.15	1.50	0.30	0.40	0.58	40
Absorption %	60	70	16					

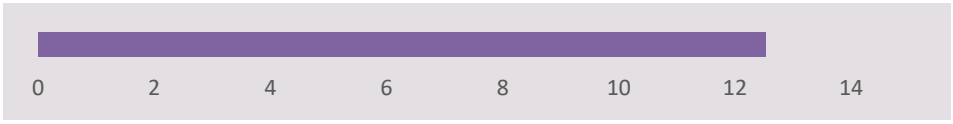
Comment

Name	Grain Mix

Category

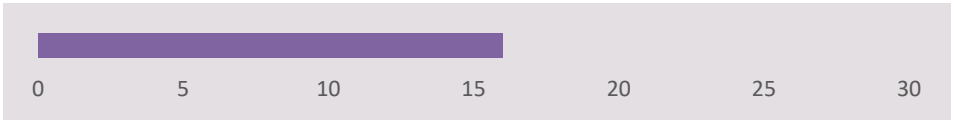
Grain or Concentrates

Dry matter (DM)	89.0	% of DM
Metabolisible energy (ME)	12.5	MJ/kg DM



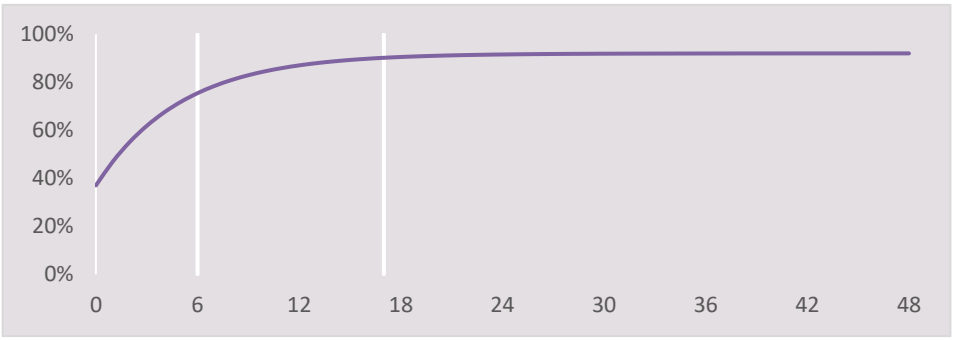
Protein

Crude protein (CP)	16.0	% of DM



Protein degradability

a	0.37	
b	0.55	
c	0.20	
ADIN	0.07	% of DM

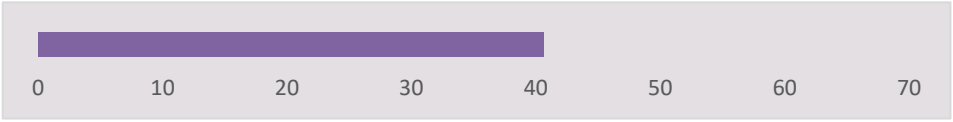


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	32.0	% of DM
eNDF	19	% of NDF

Starch	40.6	% of DM



Sugar	4.2	% of DM
Fat	3.8	% of DM
Ash	3.5	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

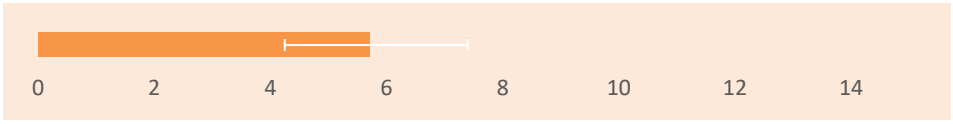
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.10	0.55	0.33	0.79	0.03	0.12	0.17	78
Absorption %	60	70	16					

Comment

Ruminal acidosis risk (risk level depends on many herd, feed and feeding management factors).
Typical values as used for lactation dairy cows.

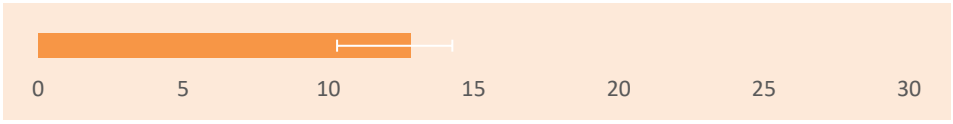
Name	Grape marc
Category	By-product (inc. straws)

Dry matter (DM)	42.7	% of DM
Metabolisible energy (ME)	5.7	MJ/kg DM

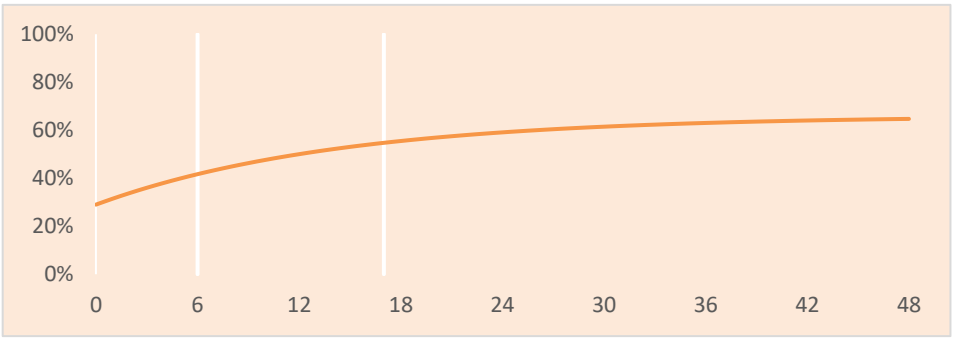


Protein

Crude protein (CP)	12.8	% of DM



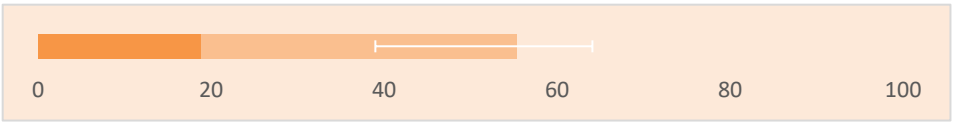
Protein degradability		
a	0.29	
b	0.37	
c	0.07	
ADIN	0.05	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	55.3	% of DM
eNDF	34	% of NDF



Starch	2.4	% of DM

Sugar	2.6	(1.0-4.3)	% of DM (Typical range)
Fat	5.8	(0.8-9.0)	% of DM (Typical range)
Ash	9.8	(7.7-14.3)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

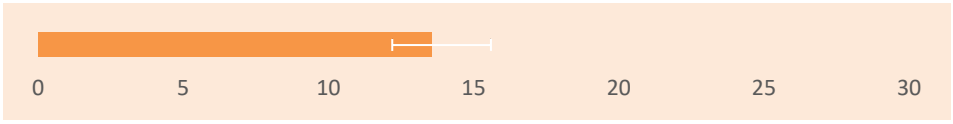
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.77	0.27	0.08	0.95	0.01	0.13	0.15	117
Absorption %	30	64	16					

Comment	Wide range of nutrient specs. Chemical residues risk (fungicides), also heavy metals. Whole seeds will be largely indigestible. Protein availability is low in overheated product.

Name	Hominy meal (corn)

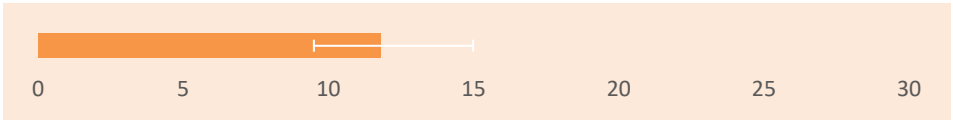
Category By-product (inc. straws)

Dry matter (DM)	88.6	% of DM
Metabolisible energy (ME)	13.6	MJ/kg DM



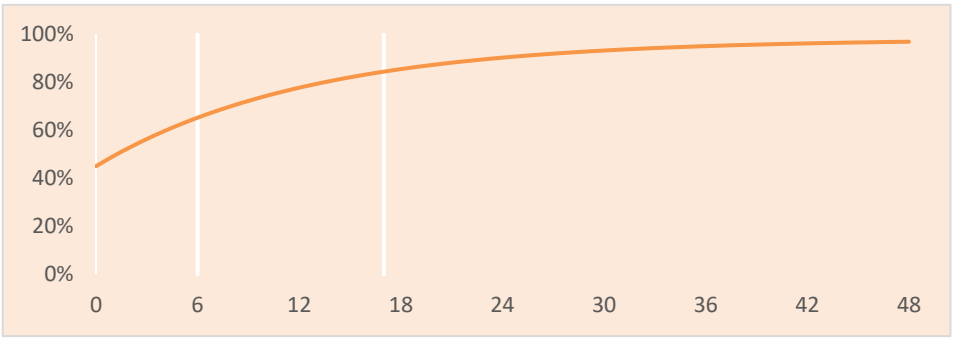
Protein

Crude protein (CP)	11.8	% of DM



Protein degradability

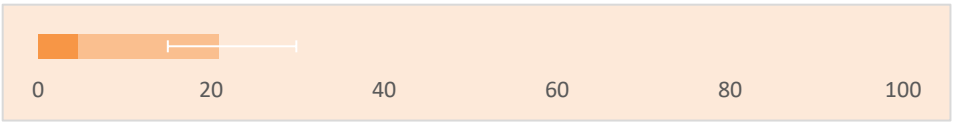
a	0.45
b	0.53
c	0.08
ADIN	0.08 % of DM



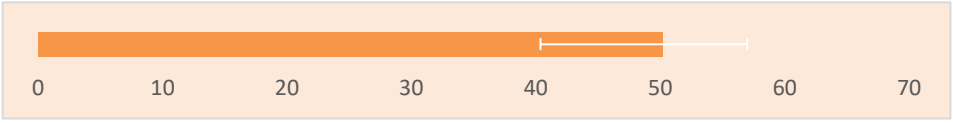
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	20.9	% of DM
eNDF	22	% of NDF



Starch	50.2	% of DM



Sugar	3.9	(2.6-5.5)	% of DM (Typical range)
Fat	6.7	(2.5-11.1)	% of DM (Typical range)
Ash	3.4	(2.7-5.3)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

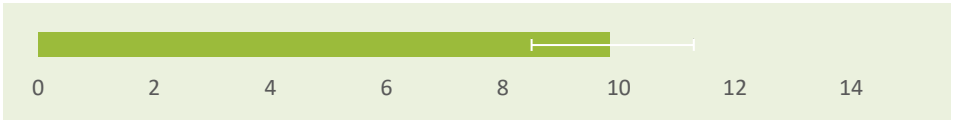
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.09	0.55	0.23	0.64	0.09	0.09	0.12	97
Absorption %	60	70	16					

Comment High fat content. Potential residue risk (insecticides, herbicides, fungicides)

Name Kikuyu - early vegetative

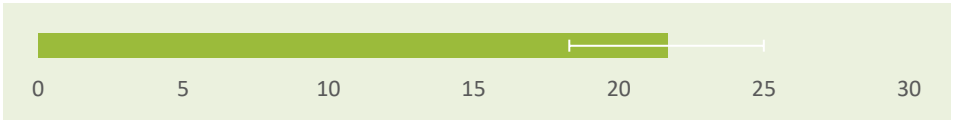
Category Grazed pastures

Dry matter (DM)	17.6	% of DM
Metabolisible energy (ME)	9.8	MJ/kg DM



Protein

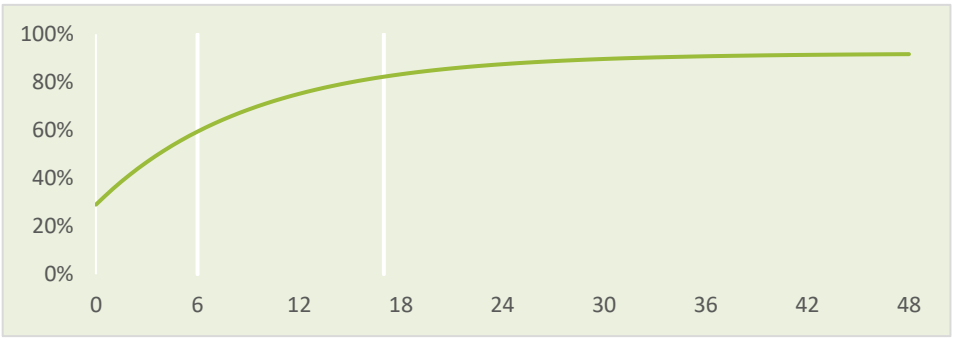
Crude protein (CP)	21.7	% of DM



Protein degradability

a	0.29
b	0.63
c	0.11

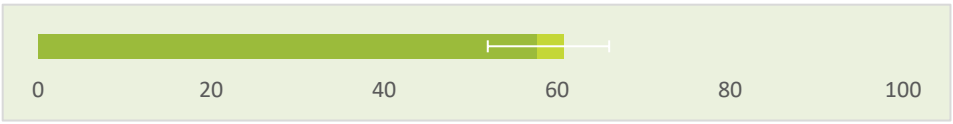
ADIN	0.24	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	60.7	% of DM
eNDF	95	% of NDF



Starch	2.7	% of DM

Sugar	5.3	(1.9-10.5)	% of DM (Typical range)
Fat	4.0		% of DM
Ash	10.7	(8.3-14.8)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

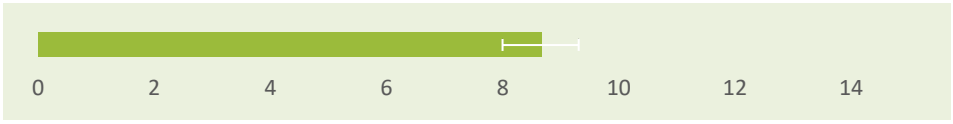
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.33	0.29	0.25	3.26	0.13	1.50	0.17	365
Absorption %	30	64	16					

Comment

Name	Kikuyu - late vegetative

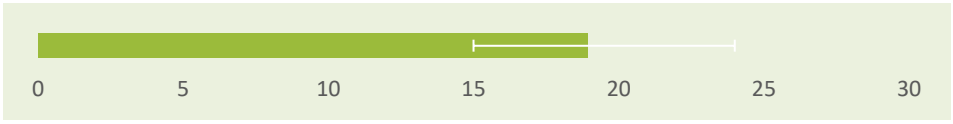
Category Grazed pastures

Dry matter (DM)	24.2	% of DM
Metabolisible energy (ME)	8.7	MJ/kg DM



Protein

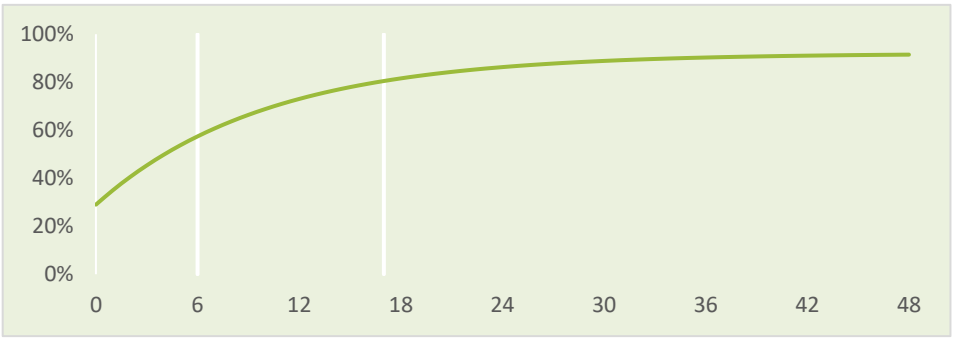
Crude protein (CP)	18.9	% of DM



Protein degradability

a	0.29
b	0.63
c	0.10

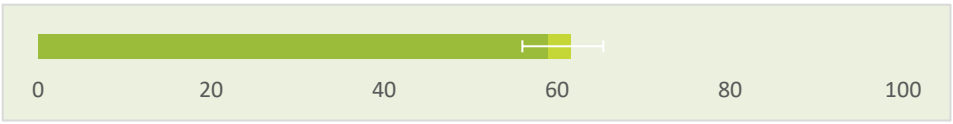
ADIN 0.19 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	61.6	% of DM
eNDF	96	% of NDF



Starch	2.6	% of DM

Sugar	7.9	(5.3-10.5)	% of DM (Typical range)
Fat	3.0		% of DM
Ash	8.6	(8.1-9.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.35	0.27	0.30	2.65	0.15	1.60	0.14	206
Absorption %	30	64	16					

Comment

Name Kikuyu hay

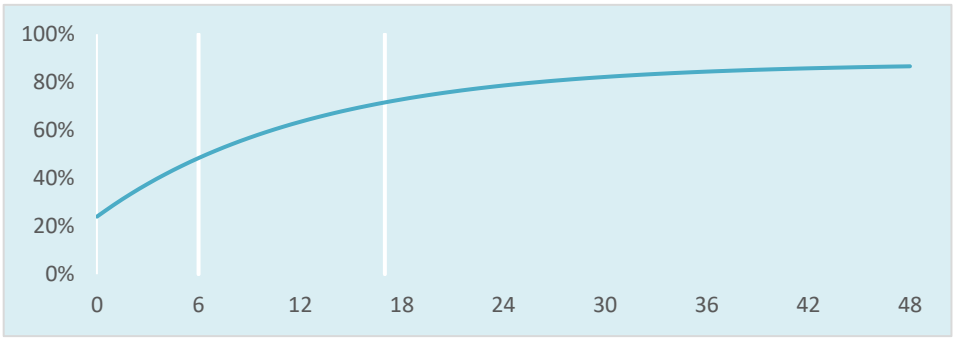
Category Hays

Dry matter (DM)	89.0	% of DM
Metabolisible energy (ME)	7.5	MJ/kg DM

Protein

Crude protein (CP)	8.0	% of DM

Protein degradability	
a	0.24
b	0.64
c	0.08
ADIN	0.09 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	68.9	% of DM
eNDF	99	% of NDF
Starch	2.5	% of DM
Sugar	9.0	% of DM
Fat	2.1	% of DM
Ash	10.5	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.29	0.28	0.37	2.70	0.05	1.60	0.28	86
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

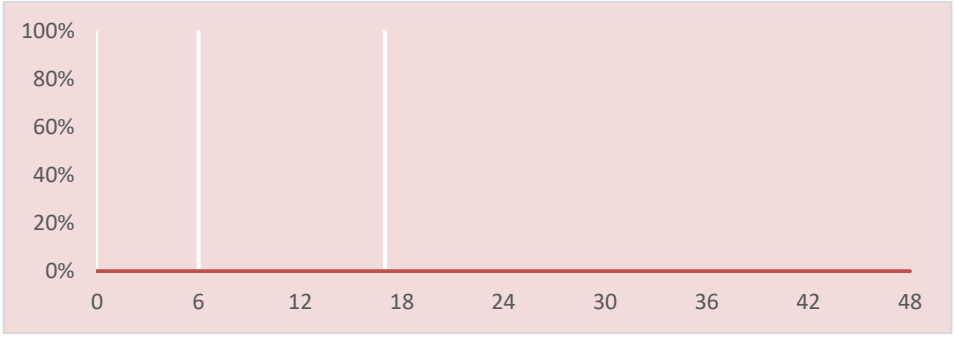
Name Limestone (CaC03)

Category Mineral or Additives

Dry matter (DM)	99.0	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM
Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM
Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	98.3 (97.0-100.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

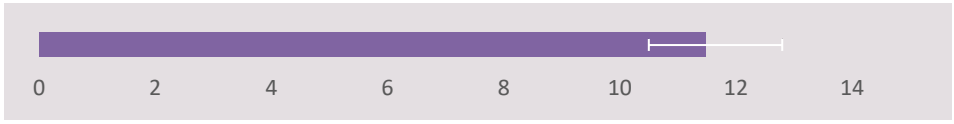
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	38.04	0.02	0.85	0.05	0.04	0.01	0.03	10
Absorption %	70	0	0					

Comment

Name Linseed meal

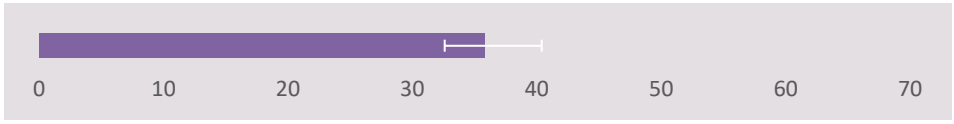
Category Grain or Concentrates

Dry matter (DM)	89.9	% of DM
Metabolisible energy (ME)	11.5	MJ/kg DM



Protein

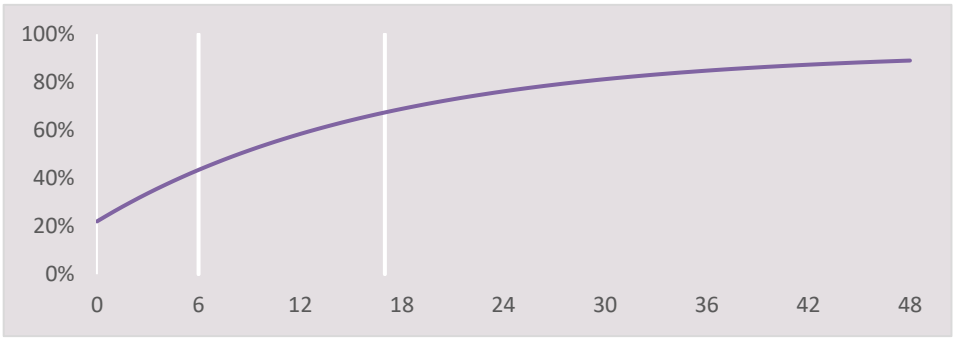
Crude protein (CP)	35.8	% of DM



Protein degradability

a	0.22
b	0.71
c	0.06

ADIN 0.19 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	27.3	% of DM
eNDF	33	% of NDF

Starch	6.2	% of DM

Sugar	6.3	(4.5-11.0)	% of DM (Typical range)
Fat	3.4	(1.1-8.7)	% of DM (Typical range)
Ash	6.7	(6.0-7.3)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

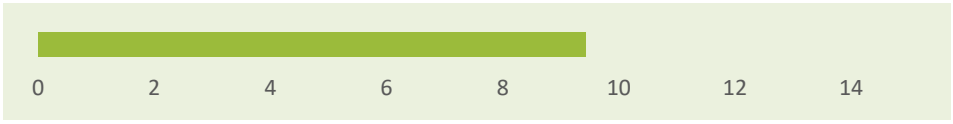
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.42	0.88	0.59	1.32	0.11	0.05	0.41	118
Absorption %	60	70	16					

Comment

Name Lucerne – grazed dryland

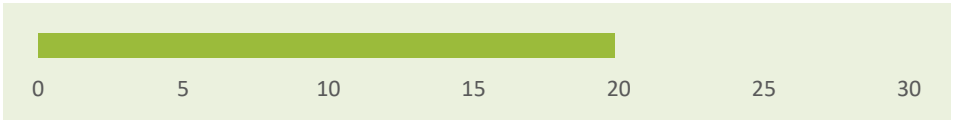
Category Grazed pastures

Dry matter (DM)	21.9	% of DM
Metabolisible energy (ME)	9.4	MJ/kg DM



Protein

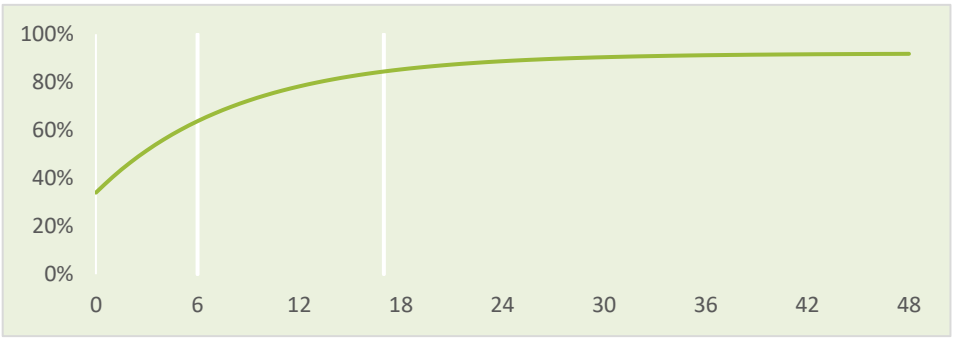
Crude protein (CP)	19.9	% of DM



Protein degradability

a	0.34
b	0.58
c	0.12

ADIN	0.13	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	40.6	% of DM
eNDF	70	% of NDF

Starch	4.8	% of DM

Sugar	9.2	% of DM
Fat	2.8	% of DM
Ash	9.7	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

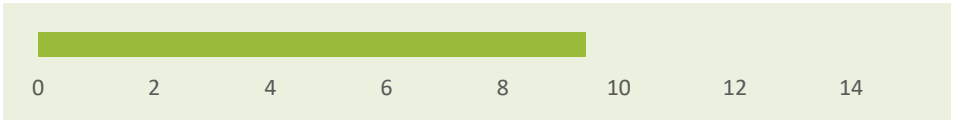
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.32	0.29	0.28	2.70	0.15	0.42	0.30	450
Absorption %	30	64	16					

Comment

Name Lucerne – grazed irrigated

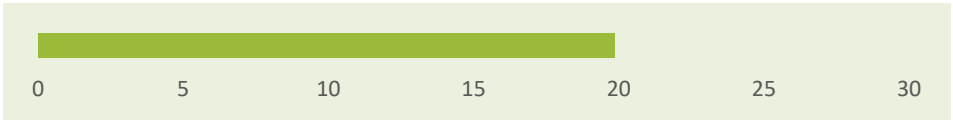
Category Grazed pastures

Dry matter (DM)	21.9	% of DM
Metabolisible energy (ME)	9.4	MJ/kg DM

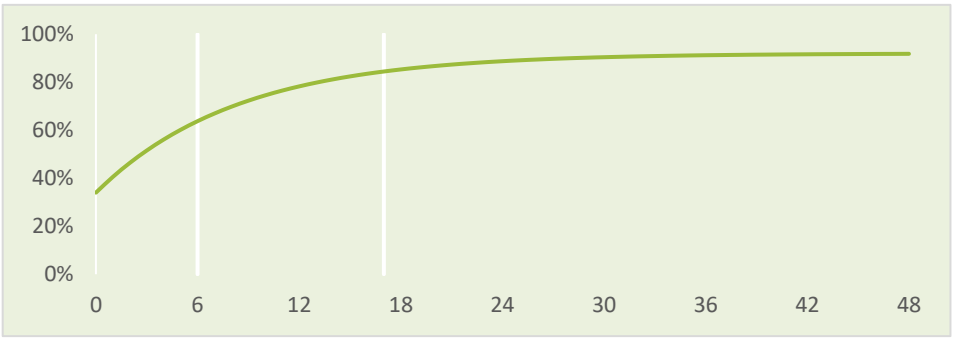


Protein

Crude protein (CP)	19.9	% of DM



Protein degradability		
a	0.34	
b	0.58	
c	0.12	
ADIN	0.13	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	40.6	% of DM
eNDF	70	% of NDF

Starch	4.8	% of DM

Sugar	9.2	% of DM
Fat	2.8	% of DM
Ash	9.7	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.32	0.29	0.28	2.70	0.15	0.42	0.30	450
Absorption %	30	64	16					

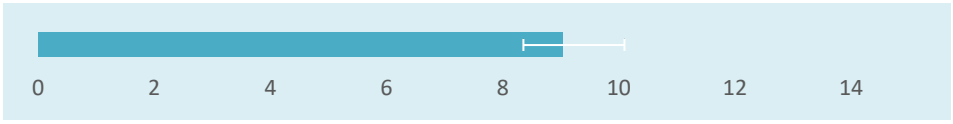
Comment

Name	Lucerne hay

Category

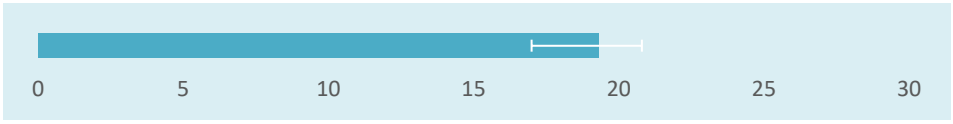
Hays

Dry matter (DM)	86.6	% of DM
Metabolisible energy (ME)	9.0	MJ/kg DM

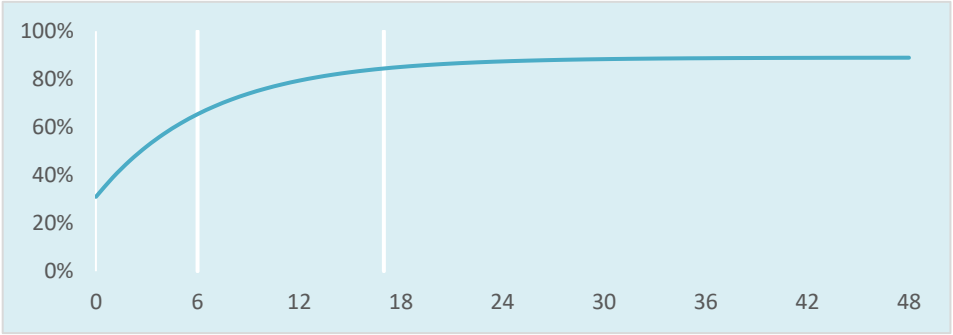


Protein

Crude protein (CP)	19.3	% of DM



Protein degradability	
a	0.31
b	0.58
c	0.15
ADIN	0.25 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	43.4	% of DM
eNDF	94	% of NDF

Starch	2.1	% of DM

Sugar	7.3	(5.0-9.7)	% of DM (Typical range)
Fat	2.4	(1.3-3.0)	% of DM (Typical range)
Ash	9.6	(8.0-11.4)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

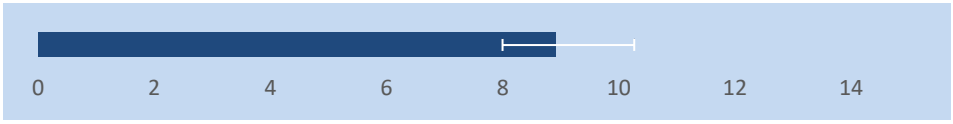
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.42	0.29	0.28	2.40	0.17	0.48	0.30	368
Absorption %	30	64	16					

Comment	Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name Lucerne silage - Pit

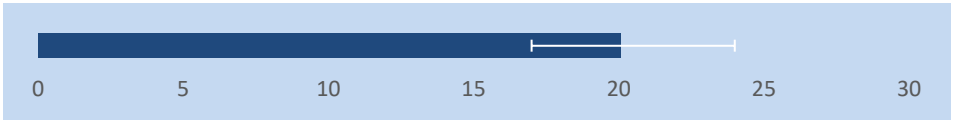
Category Silages

Dry matter (DM)	37.6	% of DM
Metabolisible energy (ME)	8.9	MJ/kg DM



Protein

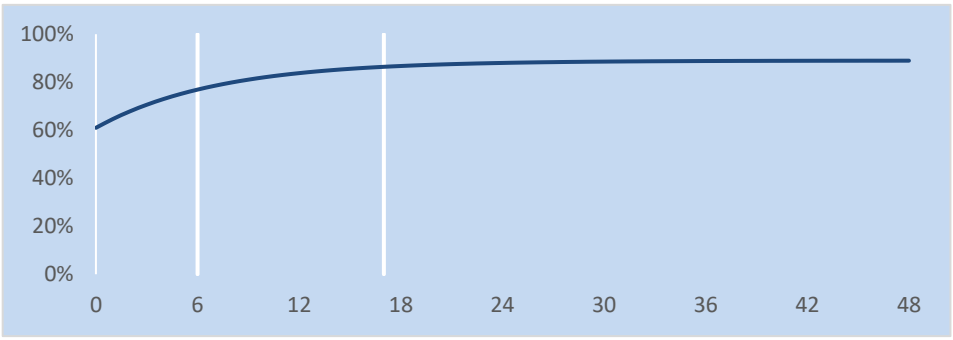
Crude protein (CP)	20.1	% of DM



Protein degradability

a	0.61
b	0.28
c	0.14

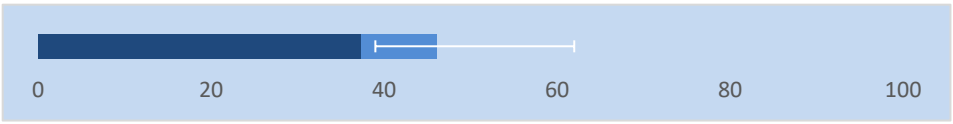
ADIN	0.27	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	46.1	% of DM
eNDF	81	% of NDF



Starch	1.5	% of DM

Sugar	2.6	(1.0-5.0)	% of DM (Typical range)
Fat	3.2	(2.0-7.0)	% of DM (Typical range)
Ash	9.9	(8.0-12.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

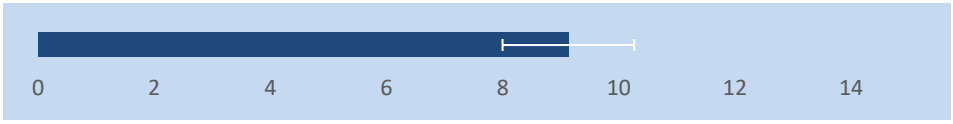
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.46	0.29	0.31	2.63	0.11	0.63	0.27	375
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides)

Name Lucerne silage - Round bales

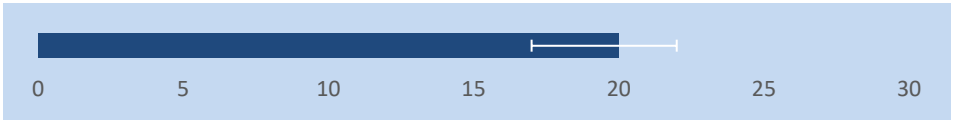
Category Silages

Dry matter (DM)	42.9	% of DM
Metabolisible energy (ME)	9.1	MJ/kg DM



Protein

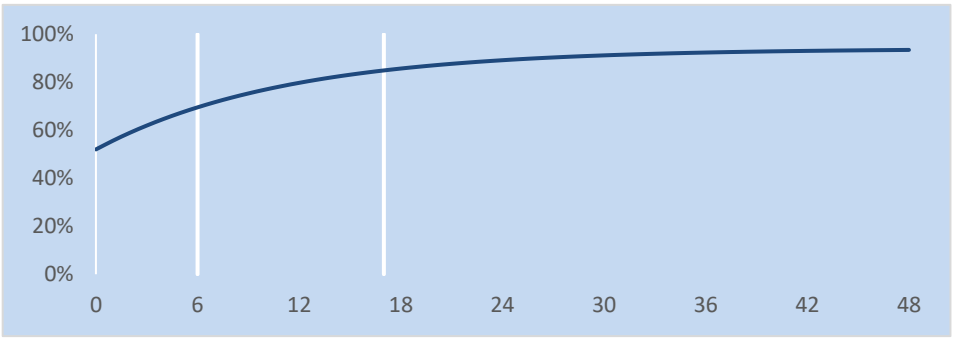
Crude protein (CP)	20.0	% of DM



Protein degradability

a	0.52
b	0.42
c	0.09

ADIN	0.24	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	41.7	% of DM
eNDF	82	% of NDF

Starch	2.0	% of DM

Sugar	3.8	(2.0-5.0)	% of DM (Typical range)
Fat	2.7	(2.0-3.3)	% of DM (Typical range)
Ash	10.5	(9.0-13.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.46	0.31	0.32	2.65	0.37	0.68	0.28	470
Absorption %	30	64	16					

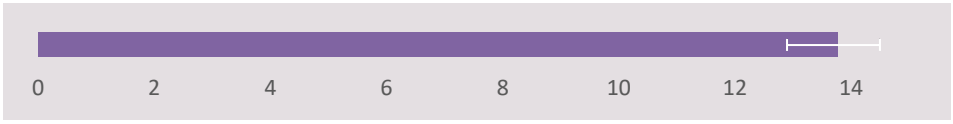
Comment Potential residue risk (insecticides, herbicides, fungicides)

Name	Lupins grain

Category

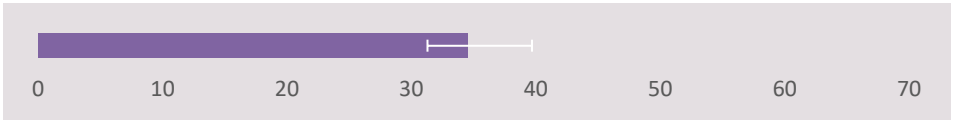
Grain or Concentrates

Dry matter (DM)	89.6	% of DM
Metabolisible energy (ME)	13.8	MJ/kg DM



Protein

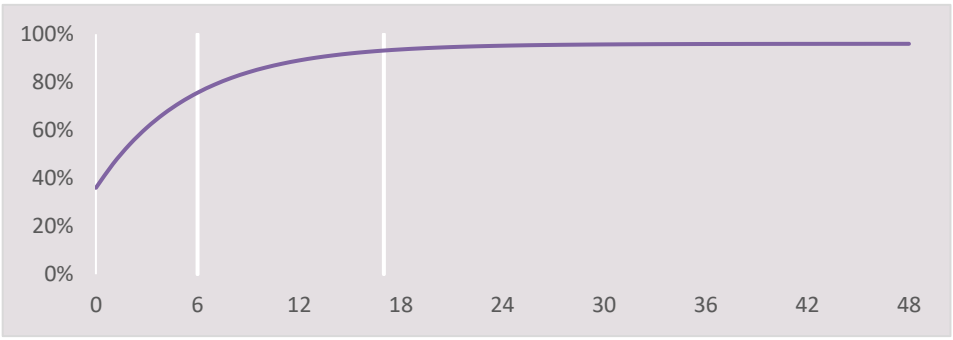
Crude protein (CP)	34.5	% of DM



Protein degradability

a	0.36
b	0.60
c	0.18

ADIN	0.13	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	25.9	% of DM
eNDF	27	% of NDF

Starch	3.1	% of DM

Sugar	7.7	(4.0-16.4)	% of DM (Typical range)
Fat	7.1	(5.3-10.4)	% of DM (Typical range)
Ash	3.4	(2.8-4.6)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.26	0.36	0.23	0.89	0.04	0.05	0.23	83
Absorption %	60	70	16					

Comment

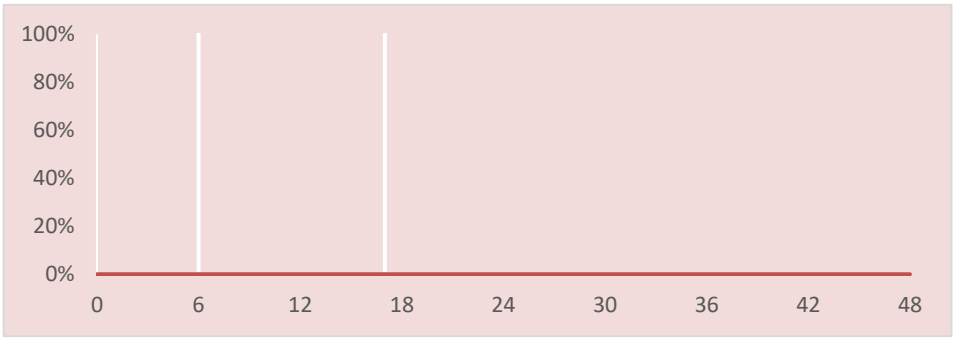
Name Magnesium carbonate

Category Mineral or Additives

Dry matter (DM)	98.0	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM
Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM
Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	98.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.02	0.00	30.81	0.00	0.00	0.00	0.00	0
Absorption %	0	0	35					

Comment

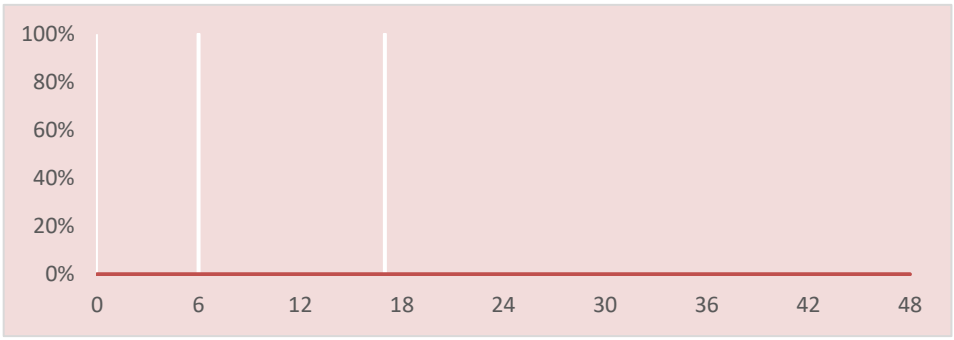
Name Magnesium chloride

Category Mineral or Additives

Dry matter (DM)	100.0	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM
Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM
Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	100.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	0.00	11.99	0.00	0.00	34.96	0.00	-9861
Absorption %	0	0	90					

Comment

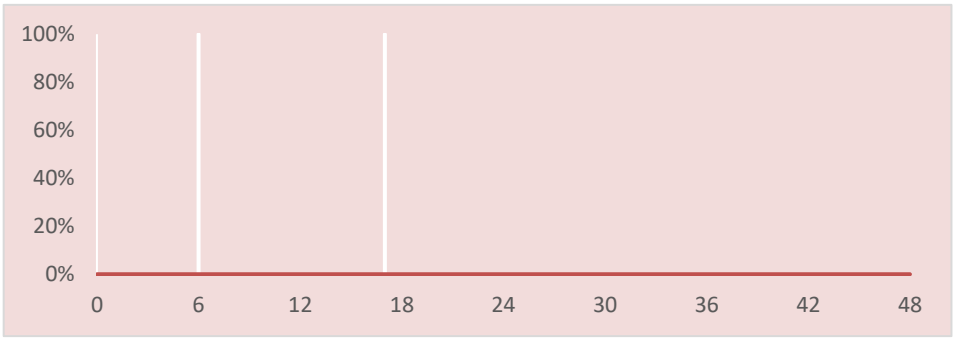
Name Magnesium oxide

Category Mineral or Additives

Dry matter (DM)	98.4	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM
Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM
Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	99.0 (98.0-100.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	3.07	0.00	54.90	0.00	0.00	0.00	0.00	0
Absorption %	0	0	70					

Comment

Name	Magnesium sulphate

Category

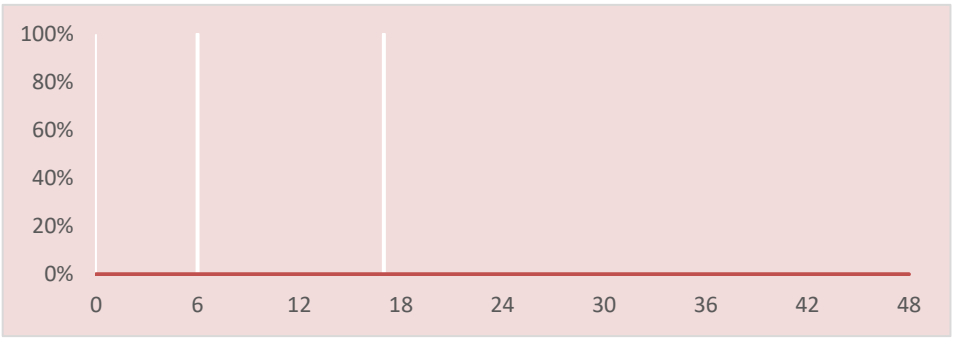
Mineral or Additives

Dry matter (DM)	97.3	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM

Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF

Starch	0.0	% of DM

Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	98.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	0.00	9.93	0.00	0.00	0.00	13.10	-8173
Absorption %	0	0	90					

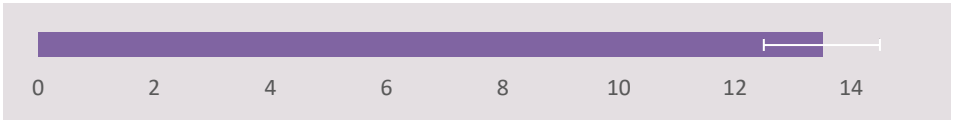
Comment

Name	Maize grain

Category

Grain or Concentrates

Dry matter (DM)	88.2	% of DM
Metabolisible energy (ME)	13.5	MJ/kg DM



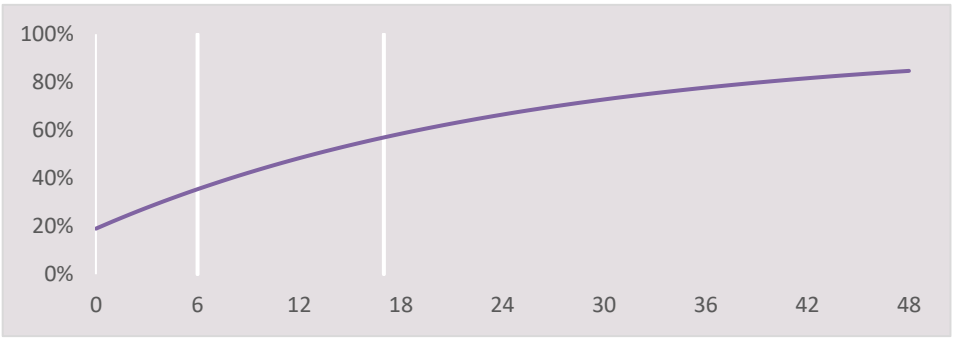
Protein

Crude protein (CP)	9.3	% of DM

Protein degradability

a	0.19
b	0.77
c	0.04

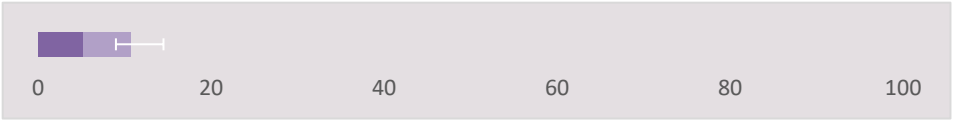
ADIN	0.04	% of DM



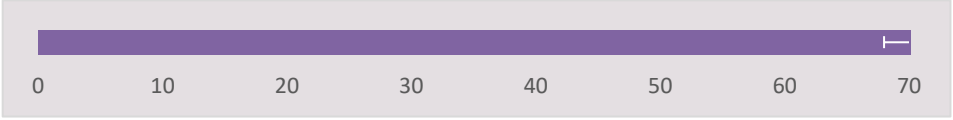
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	10.7	% of DM
eNDF	48	% of NDF



Starch	72.5	% of DM



Sugar	2.0	(0.8-3.3)	% of DM (Typical range)
Fat	4.2	(3.6-4.3)	% of DM (Typical range)
Ash	1.6	(1.4-2.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

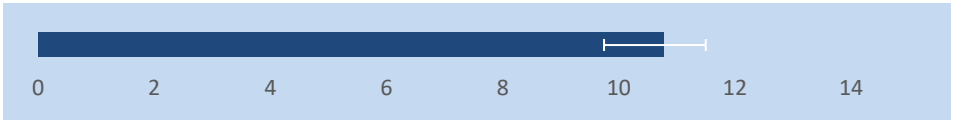
Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.04	0.31	0.12	0.42	0.04	0.06	0.20	-18
Absorption %	60	70	16					

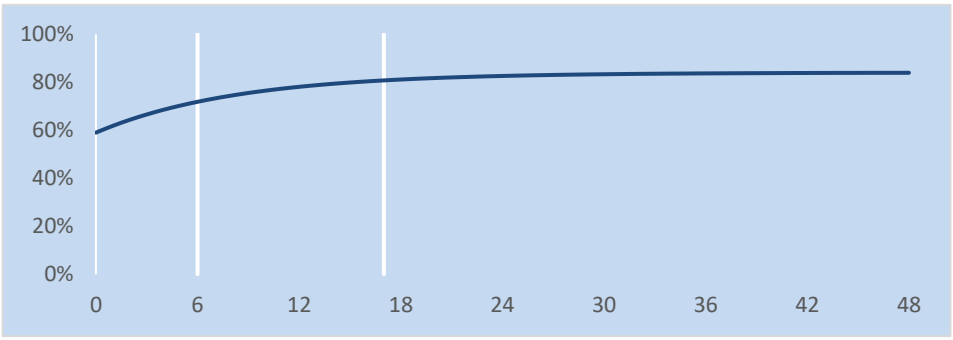
Comment: Ruminal acidosis risk (risk level depends on many herd, feed and feeding management factors)

Name Maize silage

Category Silages

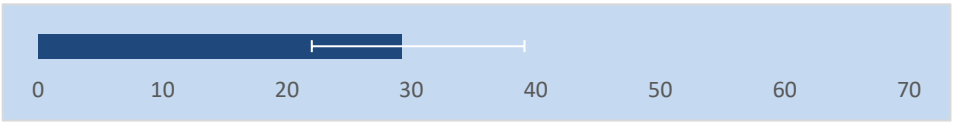
Dry matter (DM)	34.0	% of DM	
Metabolisible energy (ME)	10.8	MJ/kg DM	

Protein

Crude protein (CP)	8.5	% of DM	
Protein degradability			
a	0.59		
b	0.25		
c	0.12		
ADIN	0.11	% of DM	

Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	46.3	% of DM	
eNDF	80	% of NDF	
Starch	29.2	% of DM	

Sugar	2.9 (0.5-8.1)	% of DM (Typical range)	
Fat	3.3 (2.7-5.0)	% of DM (Typical range)	
Ash	4.6 (4.0-6.0)	% of DM (Typical range)	

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.28	0.26	0.20	1.20	0.06	0.27	0.12	180
Absorption %	30	64	16					

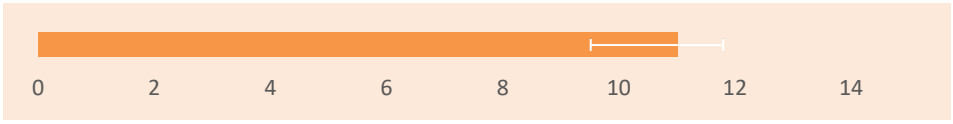
Comment Low protein and mineral content. Potential residue risk (insecticides, herbicides, fungicides)

Name	Malt combings

Category

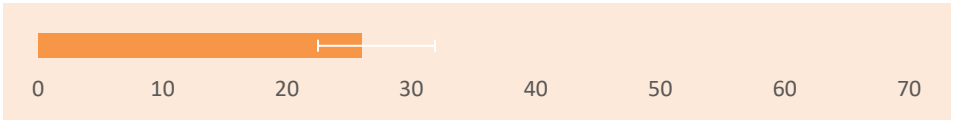
By-product (inc. straws)

Dry matter (DM)	91.9	% of DM
Metabolisible energy (ME)	11.0	MJ/kg DM



Protein

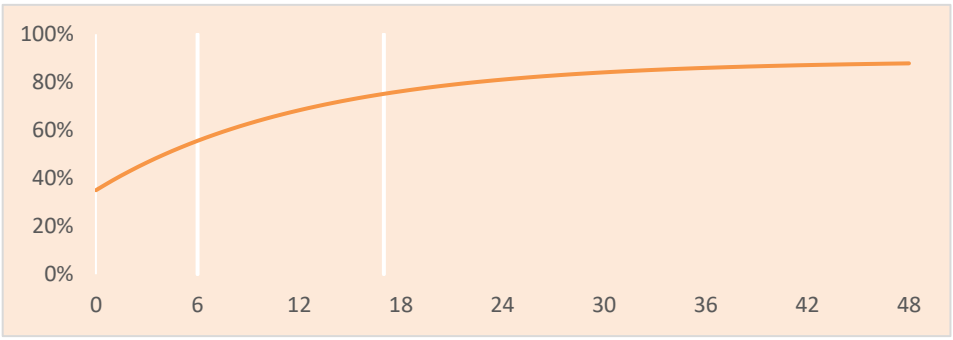
Crude protein (CP)	26.0	% of DM



Protein degradability

a	0.35
b	0.54
c	0.08

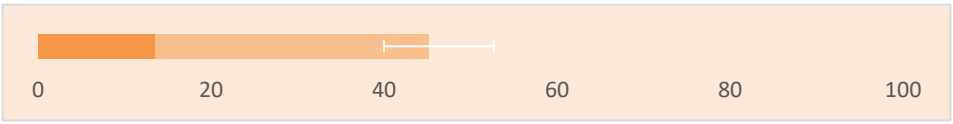
ADIN	0.12	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	45.1	% of DM
eNDF	30	% of NDF



Starch	9.6	% of DM

Sugar	7.6	(1.3-11.0)	% of DM (Typical range)
Fat	2.2	(1.7-2.6)	% of DM (Typical range)
Ash	6.0	(4.6-7.1)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

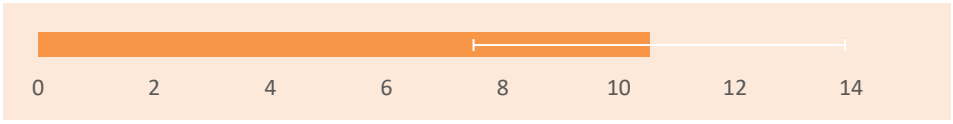
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.25	0.67	0.20	1.56	0.06	0.51	0.36	53
Absorption %	60	70	16					

Comment

Name	Malted barley screenings

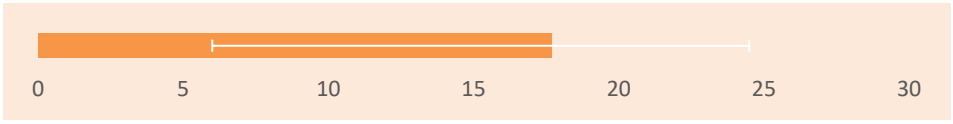
Category By-product (inc. straws)

Dry matter (DM)	90.8	% of DM
Metabolisible energy (ME)	10.5	MJ/kg DM



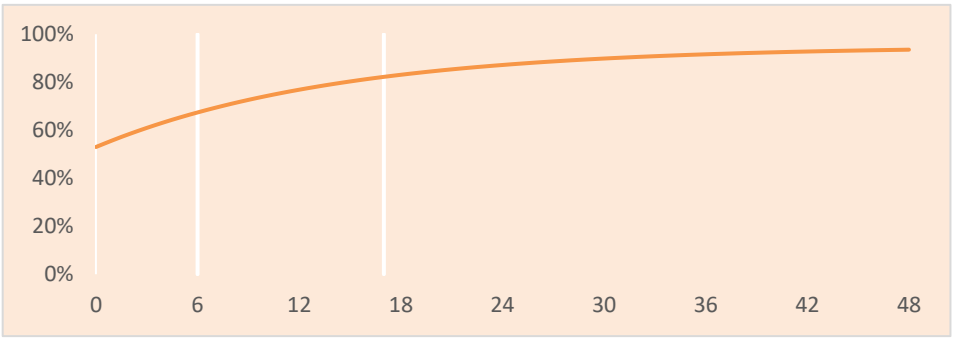
Protein

Crude protein (CP)	17.7	% of DM



Protein degradability

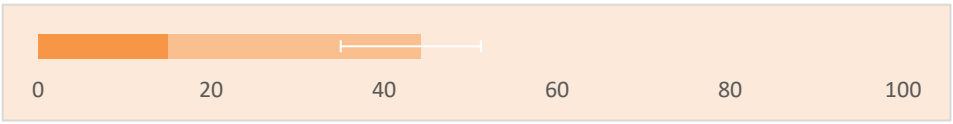
a	0.53	
b	0.42	
c	0.07	
ADIN	0.14	% of DM



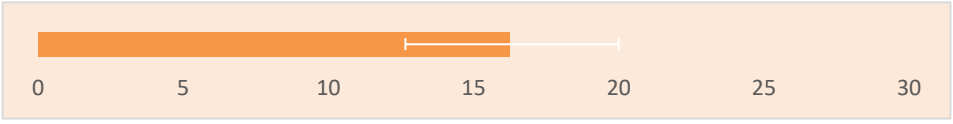
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	44.2	% of DM
eNDF	34	% of NDF



Starch	16.3	% of DM



Sugar	3.2	(0.4-7.4)	% of DM (Typical range)
Fat	1.8	(1.0-2.2)	% of DM (Typical range)
Ash	5.8	(5.3-6.3)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.22	0.55	0.16	0.88	0.14	0.45	0.37	-71
Absorption %	60	70	16					

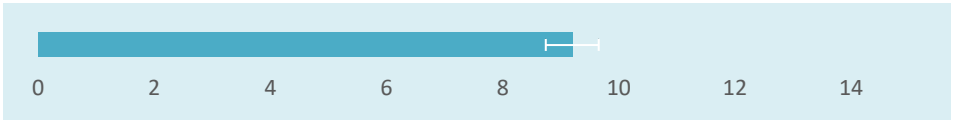
Comment

Name	Medic Hay

Category

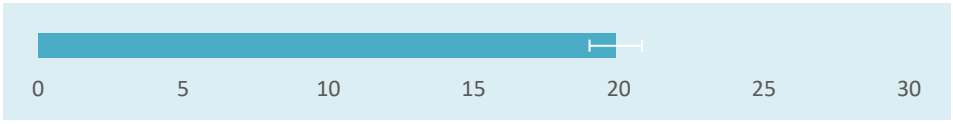
Hays

Dry matter (DM)	83.9	% of DM
Metabolisible energy (ME)	9.2	MJ/kg DM

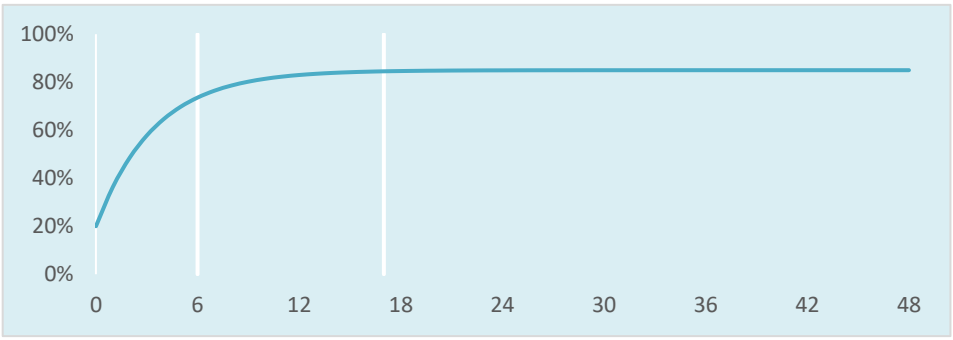


Protein

Crude protein (CP)	19.9	% of DM



Protein degradability	
a	0.20
b	0.65
c	0.29
ADIN	0.23 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	44.0	% of DM
eNDF	95	% of NDF

Starch	2.6	% of DM

Sugar	6.6	% of DM
Fat	2.0	% of DM
Ash	9.4	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

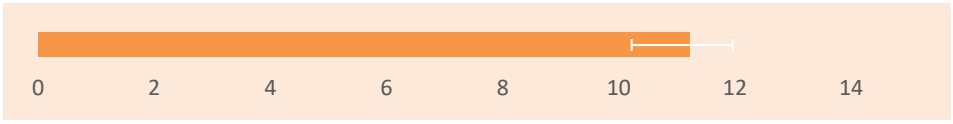
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.37	0.30	0.30	2.45	0.02	0.61	0.31	270
Absorption %	30	64	16					

Comment	Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name Mill Mix (Mill Run or Wheat Middlings)

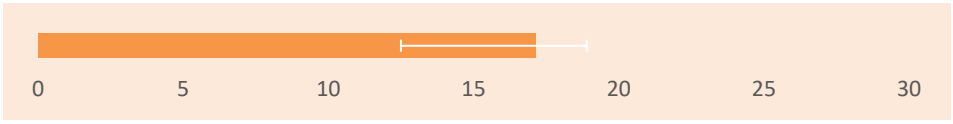
Category By-product (inc. straws)

Dry matter (DM)	88.3	% of DM
Metabolisible energy (ME)	11.2	MJ/kg DM



Protein

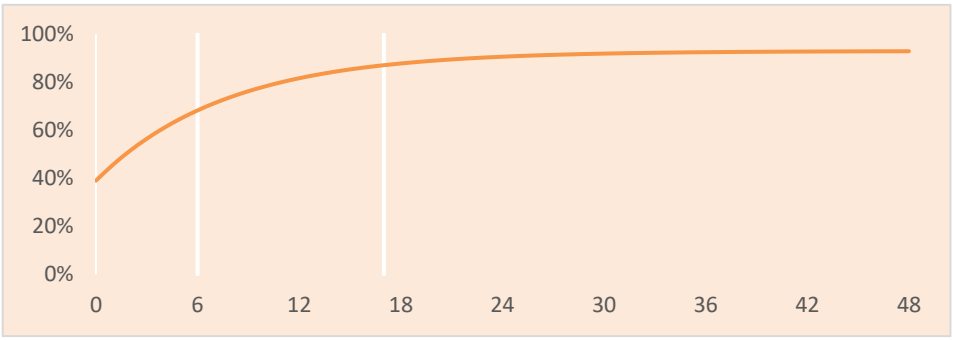
Crude protein (CP)	17.1	% of DM



Protein degradability

a	0.39
b	0.54
c	0.13

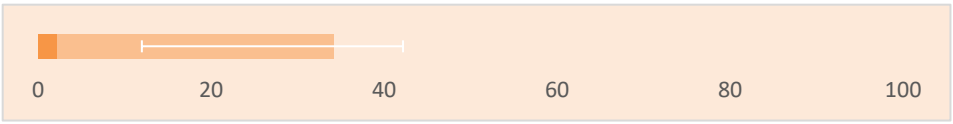
ADIN	0.08	% of DM



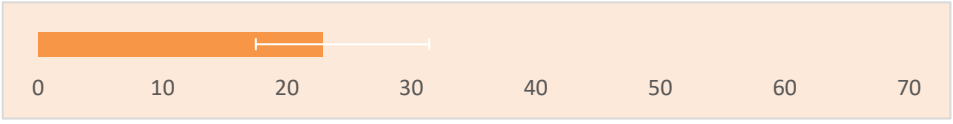
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	34.2	% of DM
eNDF	6	% of NDF



Starch	22.9	% of DM



Sugar	5.4	(2.2-7.9)	% of DM (Typical range)
Fat	4.4	(3.5-5.0)	% of DM (Typical range)
Ash	5.0	(4.1-6.5)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.15	1.03	0.43	1.37	0.03	0.08	0.20	216
Absorption %	60	70	16					

Comment

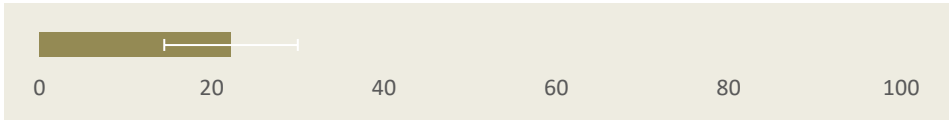
Consists of wheat bran, endosperm and screenings. Variable nutritive value according to the production plant. Useful source of digestible fibre, but low in effective fibre.

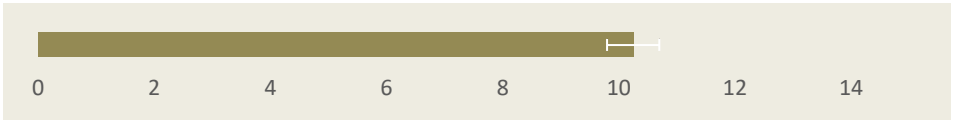
Name	Millet

Category

Other grazed forages

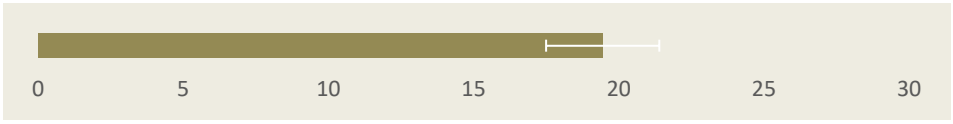
Dry matter (DM)	22.3	% of DM
Metabolisible energy (ME)	10.3	MJ/kg DM





Protein

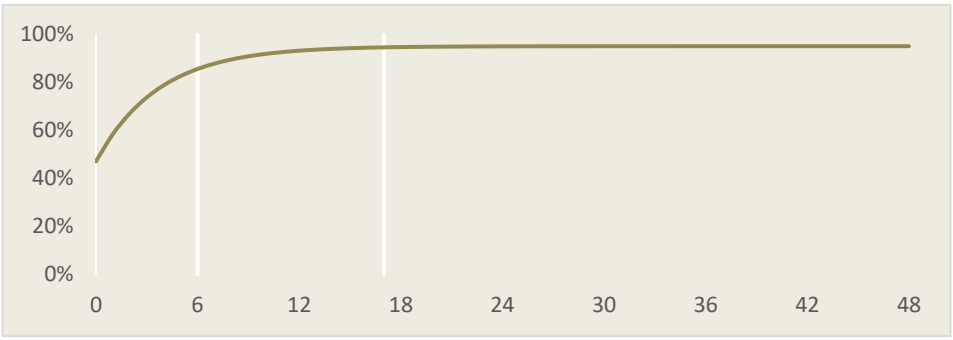
Crude protein (CP)	19.5	% of DM



Protein degradability

a	0.47
b	0.48
c	0.27

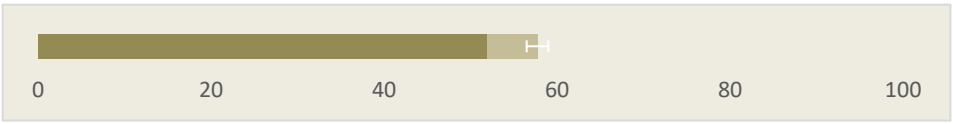
ADIN	0.09	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	57.8	% of DM
eNDF	90	% of NDF



Starch	2.4	% of DM

Sugar	9.7		% of DM
Fat	2.7		% of DM
Ash	10.5	(9.6-11.3)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.55	0.40	0.39	2.95	0.15	1.30	0.23	310
Absorption %	30	64	16					

Comment

Name Millet hay

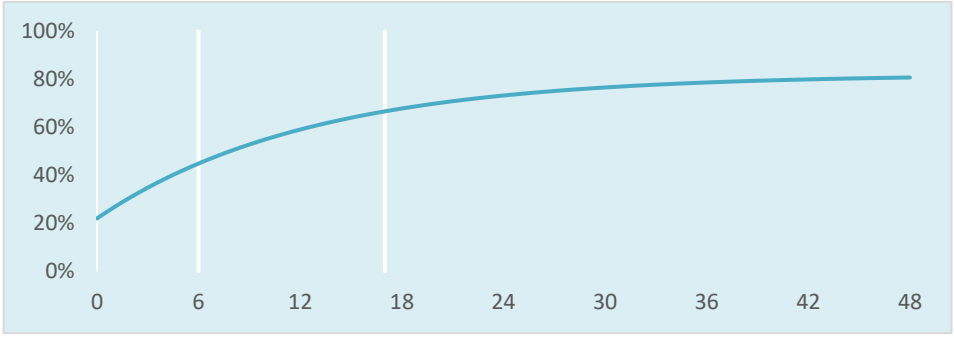
Category Hays

Dry matter (DM)	84.0	% of DM
Metabolisible energy (ME)	8.3	MJ/kg DM

Protein

Crude protein (CP)	9.6	% of DM

Protein degradability	
a	0.22
b	0.60
c	0.08
ADIN	0.13 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	65.5	% of DM
eNDF	100	% of NDF
Starch	2.6	% of DM
Sugar	7.4	% of DM
Fat	1.5	% of DM
Ash	11.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

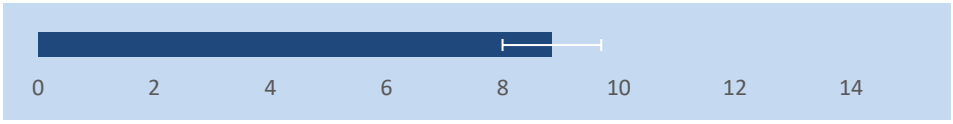
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.45	0.21	0.31	1.05	0.61	0.40	0.17	315
Absorption %	30	64	16					

Comment Nitrate poisoning in stressed plants. Potential residue risks. Risk of mould.

Name Millet silage

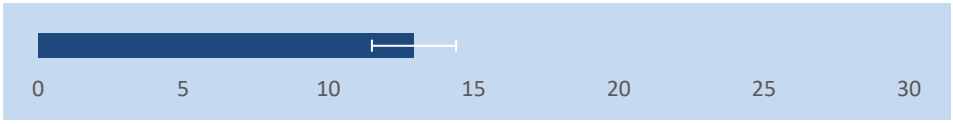
Category Silages

Dry matter (DM)	39.5	% of DM
Metabolisible energy (ME)	8.9	MJ/kg DM



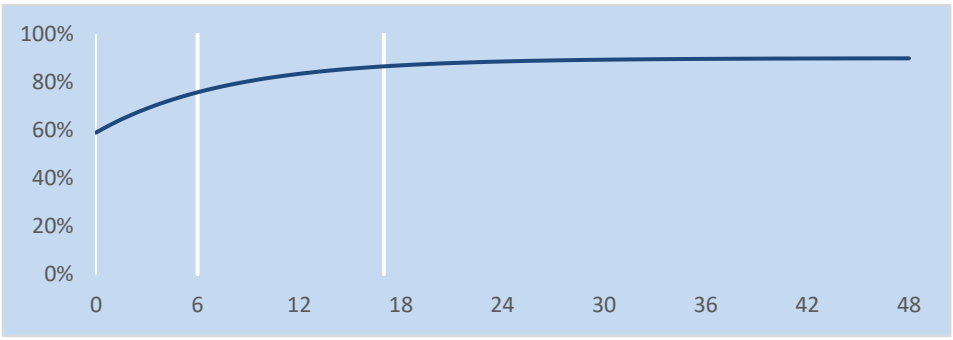
Protein

Crude protein (CP)	13.0	% of DM



Protein degradability

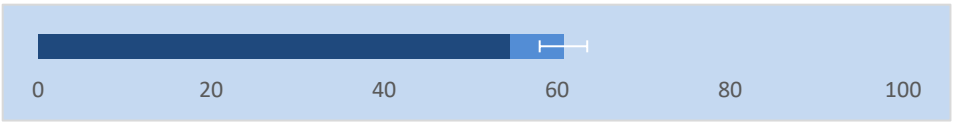
a	0.59
b	0.31
c	0.13
ADIN	0.16 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	60.8	% of DM
eNDF	90	% of NDF
Starch	2.6	% of DM



Sugar	4.3	% of DM
Fat	2.8	% of DM
Ash	11.6	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.60	0.34	0.40	2.80	0.07	1.20	0.20	283
Absorption %	30	64	16					

Comment Nitrate poisoning in stressed plants. Potential residue risk

Name	Minerals

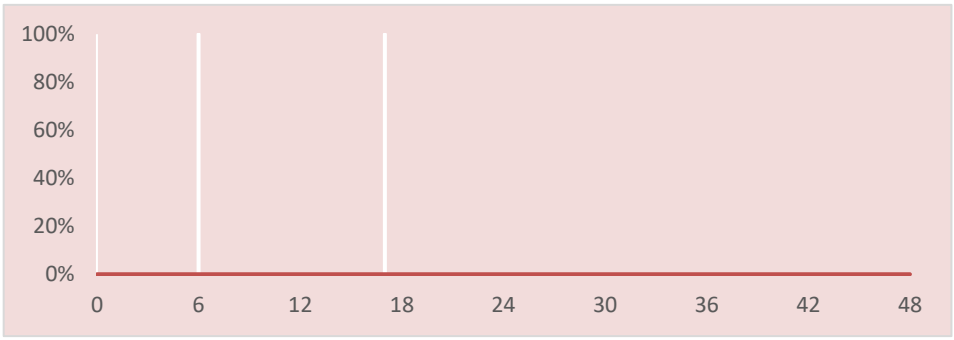
Category

Mineral or Additives

Dry matter (DM)	98.2	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM
Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM
Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	83.1 (68.2-98.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

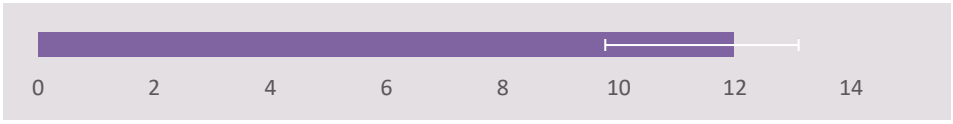
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	14.96	5.98	4.90	0.02	6.76	3.38	0.21	1863
Absorption %	81	75	67					

Comment: Typical values as used for lactation dairy cows.

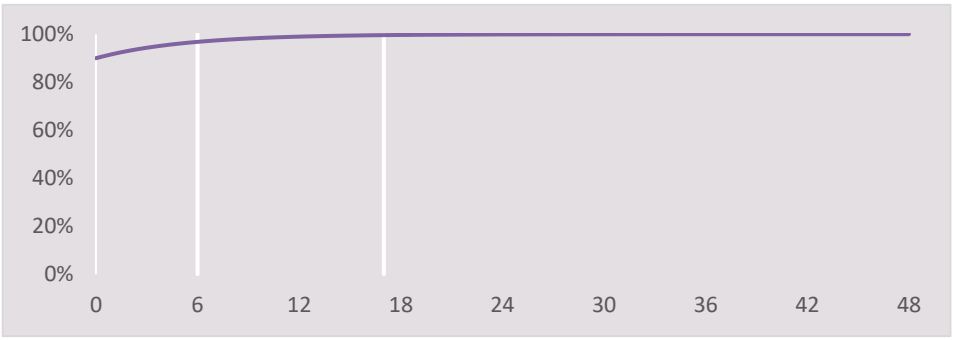
Name	Molasses (cane)

Category

Grain or Concentrates

Dry matter (DM)	74.7	% of DM	
Metabolisible energy (ME)	12.0	MJ/kg DM	

Protein

Crude protein (CP)	5.9	% of DM	
Protein degradability			
a	0.90		
b	0.10		
c	0.19		
ADIN	0.01	% of DM	

Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.1	% of DM	
eNDF	0	% of NDF	
Starch	0.2	% of DM	

Sugar	63.0	(55.0-70.0)	% of DM (Typical range)
Fat	0.6		% of DM
Ash	12.1	(9.0-14.5)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.90	0.10	0.45	4.04	0.25	1.93	0.59	230
Absorption %	60	70	16					

Comment: Ruminal acidosis risk (risk level depends on many herd, feed and feeding management factors)

Name	Monosodium phosphate

Category

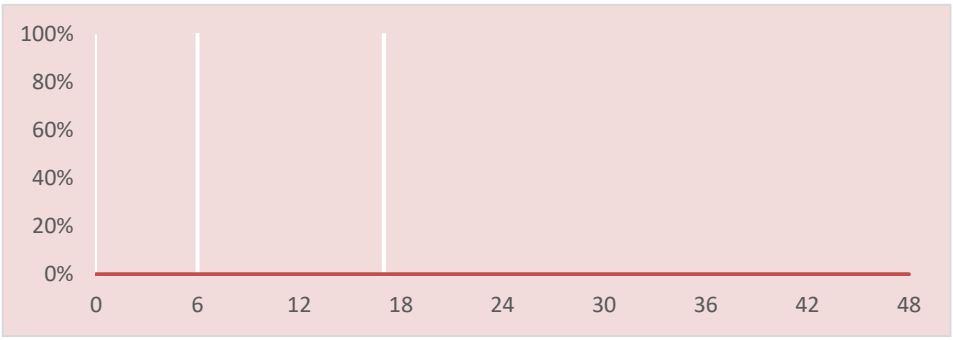
Mineral or Additives

Dry matter (DM)	90.3	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM

Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF

Starch	0.0	% of DM

Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	97.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

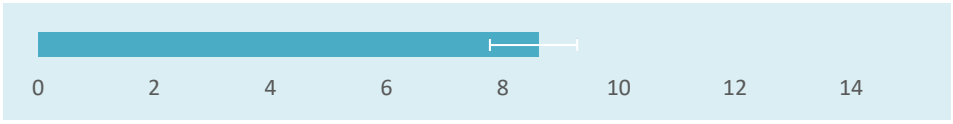
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	22.50	0.00	0.00	16.68	0.00	0.00	7255
Absorption %	0	90	0					

Comment

Name Oat & vetch hay

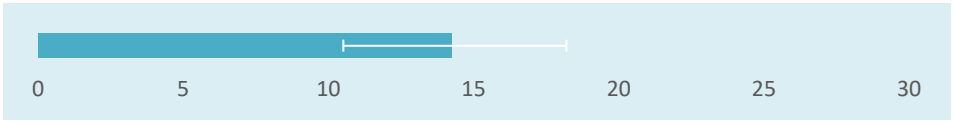
Category Hays

Dry matter (DM)	88.6	% of DM
Metabolisible energy (ME)	8.6	MJ/kg DM



Protein

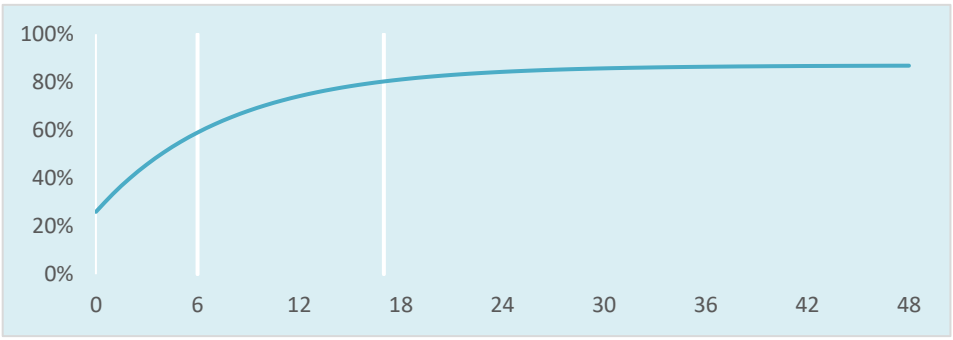
Crude protein (CP)	14.2	% of DM



Protein degradability

a	0.26
b	0.61
c	0.13

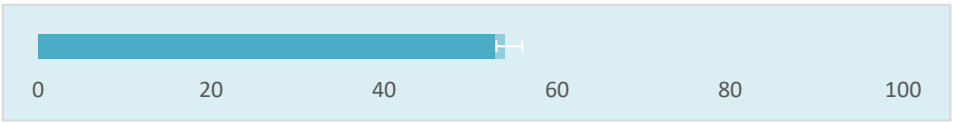
ADIN	0.22	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	53.9	% of DM
eNDF	98	% of NDF



Starch	5.2	% of DM

Sugar	17.2		% of DM
Fat	2.7	(2.0-3.0)	% of DM (Typical range)
Ash	8.8	(7.6-9.9)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

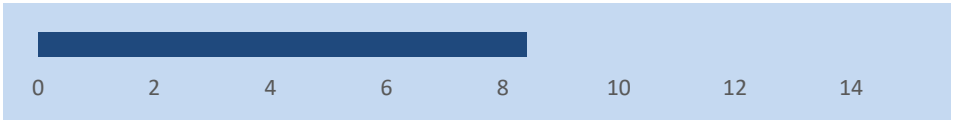
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.80	0.32	0.43	1.86	0.23	0.66	0.24	241
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name Oat & vetch silage

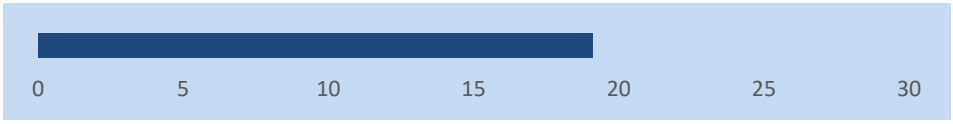
Category Silages

Dry matter (DM)	44.1	% of DM
Metabolisible energy (ME)	8.4	MJ/kg DM

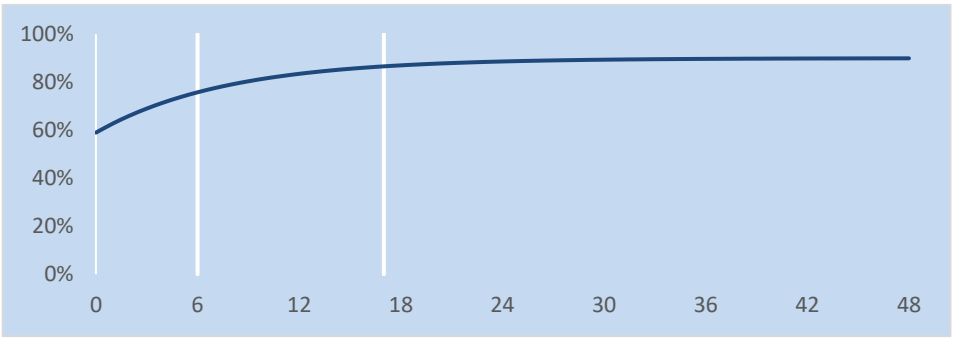


Protein

Crude protein (CP)	19.1	% of DM



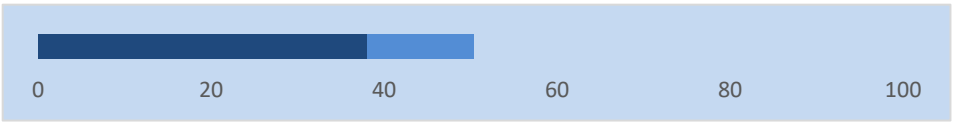
Protein degradability		
a	0.59	
b	0.31	
c	0.13	
ADIN	0.19	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	50.4	% of DM
eNDF	76	% of NDF



Starch	5.5	% of DM

Sugar	5.0	% of DM
Fat	2.5	% of DM
Ash	10.1	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.09	0.35	0.27	2.80	0.01	1.10	0.26	248
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides)

Name	Oat hulls

Category

By-product (inc. straws)

Dry matter (DM)	92.5	% of DM
Metabolisible energy (ME)	4.9	MJ/kg DM

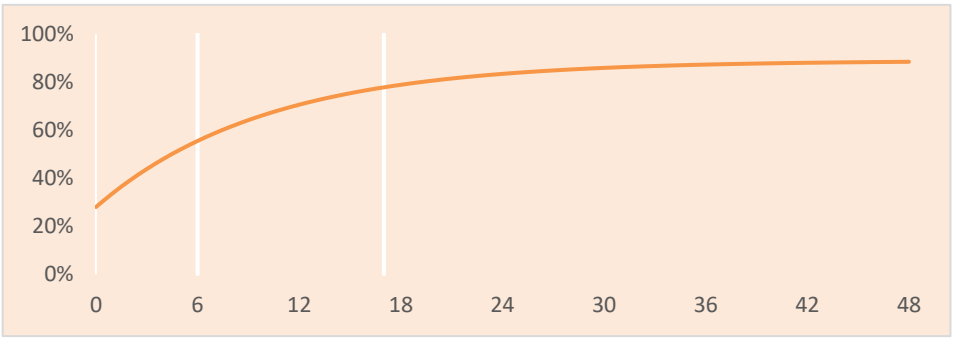
Protein

Crude protein (CP)	4.6	% of DM

Protein degradability

a	0.28
b	0.61
c	0.10

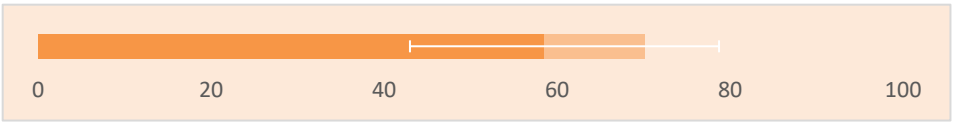
ADIN	0.08	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	70.1	% of DM
eNDF	83	% of NDF



Starch	9.3	% of DM

Sugar	2.7	(1.2-6.0)	% of DM (Typical range)
Fat	1.7	(1.2-2.2)	% of DM (Typical range)
Ash	5.2	(4.0-7.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

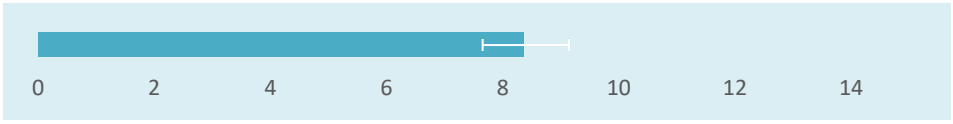
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.19	0.15	0.09	0.51	0.03	0.12	0.13	30
Absorption %	30	64	16					

Comment: Potential residue risk (insecticides, herbicides, fungicides)

Name Oaten hay

Category Hays

Dry matter (DM)	90.2	% of DM
Metabolisible energy (ME)	8.4	MJ/kg DM



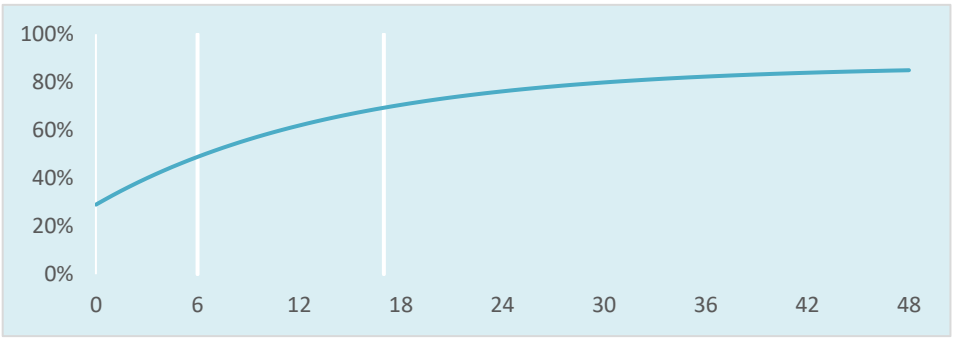
Protein

Crude protein (CP)	8.6	% of DM

Protein degradability

a	0.29
b	0.58
c	0.07

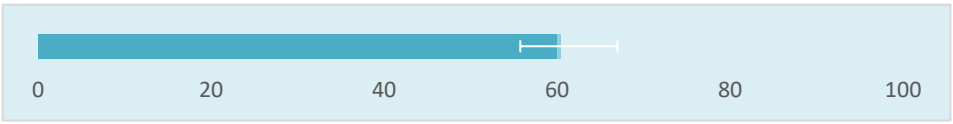
ADIN	0.11	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	60.5	% of DM
eNDF	99	% of NDF



Starch	6.9	% of DM

Sugar	14.2	(11.2-17.2)	% of DM (Typical range)
Fat	2.3	(2.2-2.6)	% of DM (Typical range)
Ash	7.1	(3.7-8.5)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.37	0.26	0.21	1.87	0.30	0.76	0.19	279
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name	Oaten silage

Category

Silages

Dry matter (DM)	34.9	% of DM
Metabolisible energy (ME)	8.8	MJ/kg DM

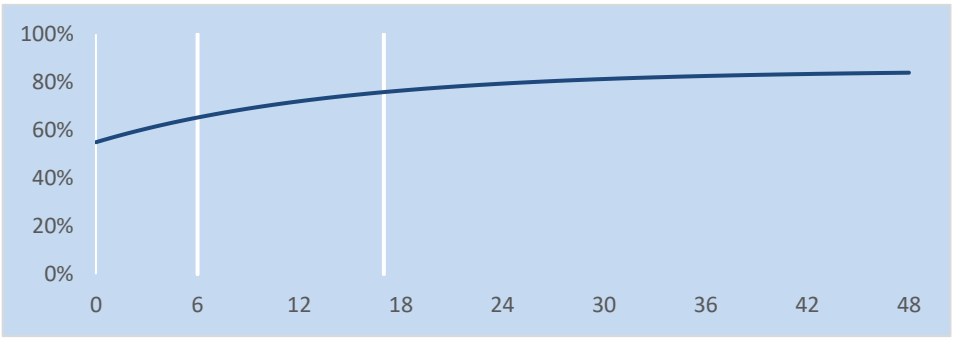
Protein

Crude protein (CP)	11.3	% of DM

Protein degradability

a	0.55
b	0.30
c	0.07

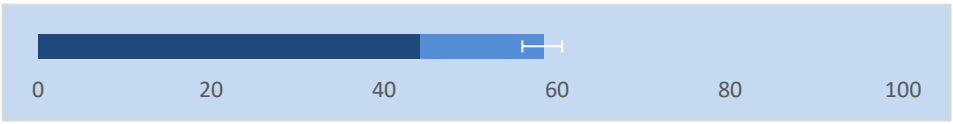
ADIN	0.19	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	58.6	% of DM
eNDF	76	% of NDF



Starch	2.9	% of DM

Sugar	6.7	(3.9-9.5)	% of DM (Typical range)
Fat	3.7	(3.2-4.0)	% of DM (Typical range)
Ash	9.2	(5.6-11.5)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.41	0.33	0.25	2.40	0.72	1.09	0.16	518
Absorption %	30	64	16					

Comment	Potential residue risk (insecticides, herbicides, fungicides)

Name	Oaten straw

Category

By-product (inc. straws)

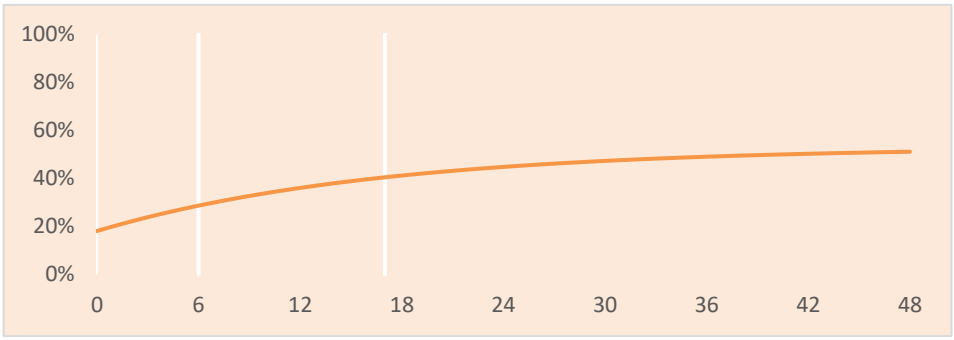
Dry matter (DM)	88.9	% of DM
Metabolisible energy (ME)	6.5	MJ/kg DM

Protein

Crude protein (CP)	3.8	% of DM

Protein degradability

a	0.18	
b	0.35	
c	0.06	
ADIN	0.23	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	73.6	% of DM
eNDF	99	% of NDF
Starch	1.4	% of DM

Sugar	2.6	(1.8-5.0)	% of DM (Typical range)
Fat	1.9	(1.4-2.3)	% of DM (Typical range)
Ash	7.7	(6.5-8.2)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.27	0.09	0.14	2.24	0.13	0.72	0.20	304
Absorption %	30	64	16					

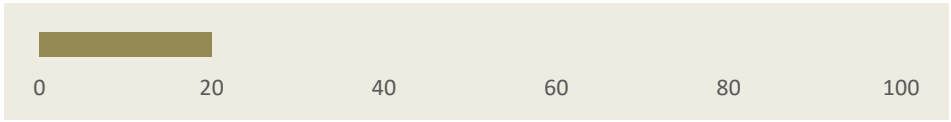
Comment: Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

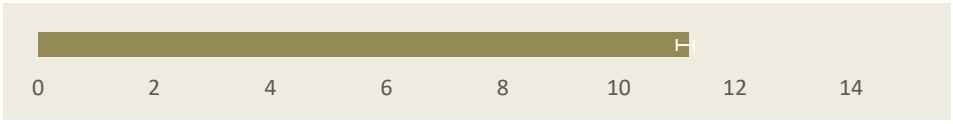
Name	Oats - early vegetative

Category

Other grazed forages

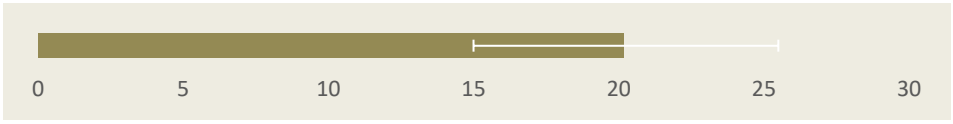
Dry matter (DM)	20.0	% of DM
Metabolisible energy (ME)	11.2	MJ/kg DM





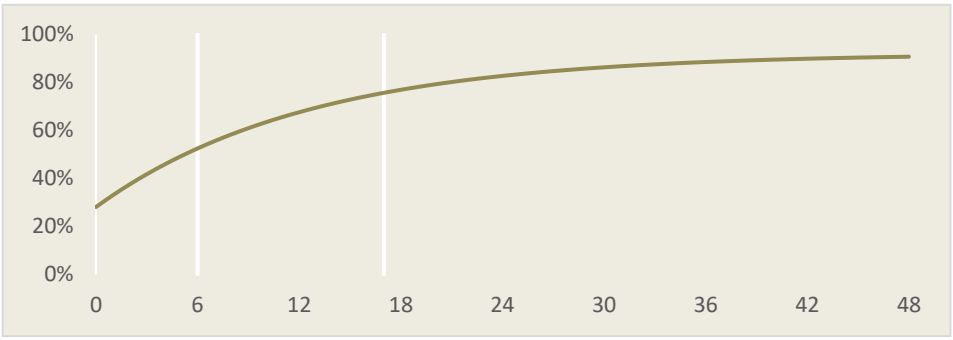
Protein

Crude protein (CP)	20.2	% of DM



Protein degradability

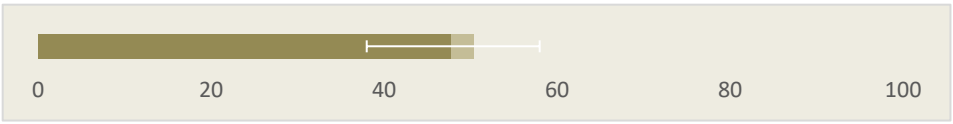
a	0.28
b	0.64
c	0.08
ADIN	0.08 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	50.3	% of DM
eNDF	95	% of NDF



Starch	6.1	% of DM

Sugar	13.1	(11.2-15.0)	% of DM (Typical range)
Fat	2.7	(2.6-3.0)	% of DM (Typical range)
Ash	9.5	(8.0-10.9)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.27	0.24	0.19	2.25	0.21	1.32	0.20	170
Absorption %	30	64	16					

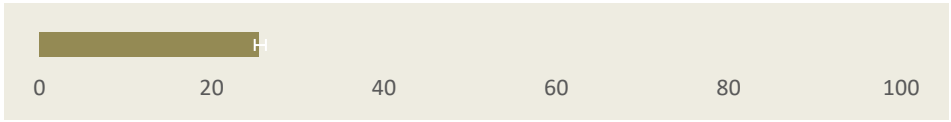
Comment

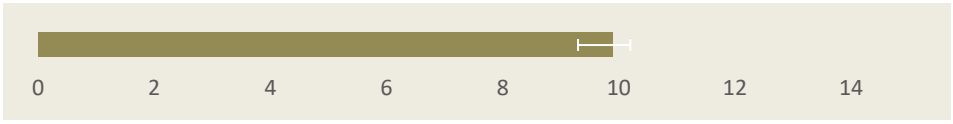
Name	Oats - late vegetative

Category

Other grazed forages

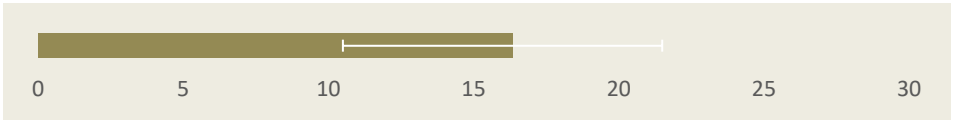
Dry matter (DM)	25.4	% of DM
Metabolisible energy (ME)	9.9	MJ/kg DM





Protein

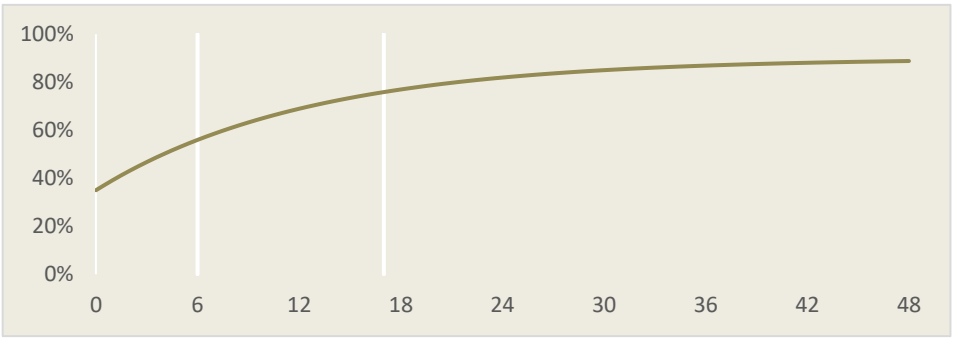
Crude protein (CP)	16.3	% of DM



Protein degradability

a	0.35
b	0.55
c	0.08

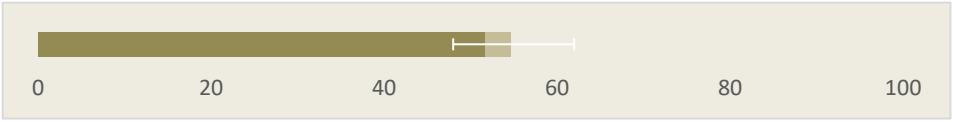
ADIN	0.10	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	54.7	% of DM
eNDF	95	% of NDF



Starch	5.3	% of DM

Sugar	9.8	(7.1-12.5)	% of DM (Typical range)
Fat	2.9	(2.7-3.4)	% of DM (Typical range)
Ash	10.3	(10.1-10.5)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.33	0.24	0.17	2.07	0.18	1.32	0.20	111
Absorption %	30	64	16					

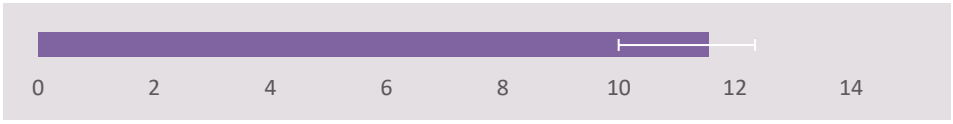
Comment

Name	Oats grain

Category

Grain or Concentrates

Dry matter (DM)	89.2	% of DM
Metabolisible energy (ME)	11.6	MJ/kg DM

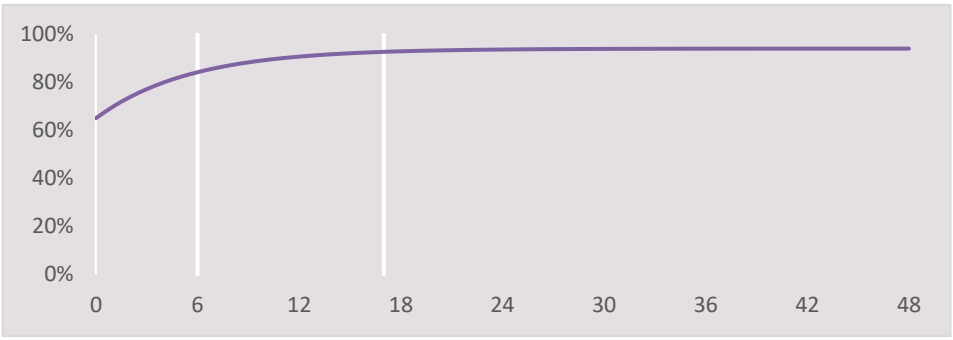


Protein

Crude protein (CP)	11.9	% of DM

Protein degradability

a	0.65
b	0.29
c	0.18
ADIN	0.08 % of DM

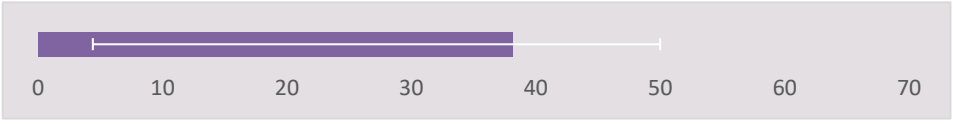


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	30.4	% of DM
eNDF	37	% of NDF

Starch	38.1	% of DM



Sugar	2.4	(1.0-4.8)	% of DM (Typical range)
Fat	5.0	(3.4-6.5)	% of DM (Typical range)
Ash	3.1	(2.0-4.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.10	0.40	0.15	0.48	0.05	0.11	0.20	-10
Absorption %	60	70	16					

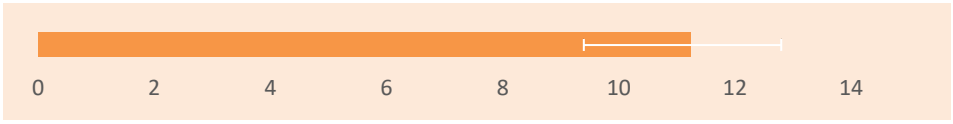
Comment

Name	Palm kernel meal (PKE)

Category

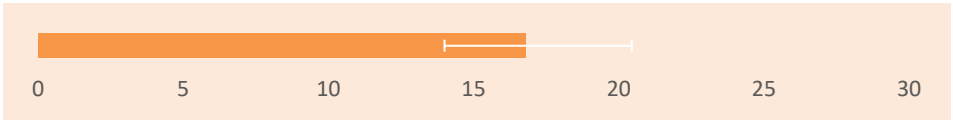
By-product (inc. straws)

Dry matter (DM)	90.9	% of DM
Metabolisible energy (ME)	11.2	MJ/kg DM



Protein

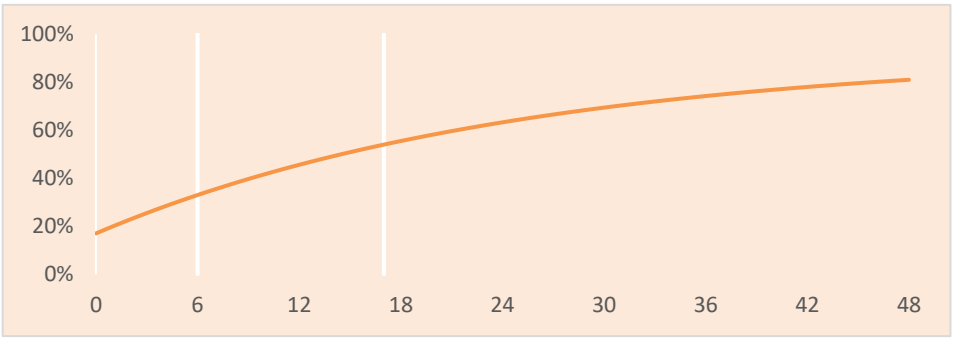
Crude protein (CP)	16.8	% of DM



Protein degradability

a	0.17
b	0.75
c	0.04

ADIN	0.34	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	68.5	% of DM
eNDF	34	% of NDF

Starch	2.0	% of DM

Sugar	2.9	(1.8-4.4)	% of DM (Typical range)
Fat	7.4	(1.0-9.7)	% of DM (Typical range)
Ash	4.5	(4.2-4.8)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.26	0.58	0.29	0.63	0.05	0.27	0.20	-22
Absorption %	60	70	16					

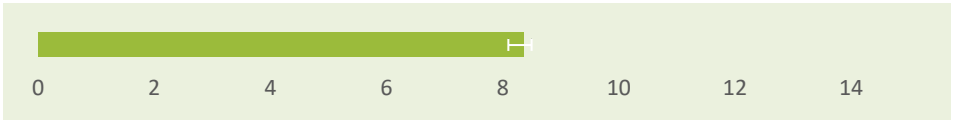
Comment	Small particle size = low effective fibre value. 6-10% oil. Standard laboratory analysis will not accurately assess nutritive value. Potential residue and aflatoxin risks.

Name	Paspalum - early vegetative

Category

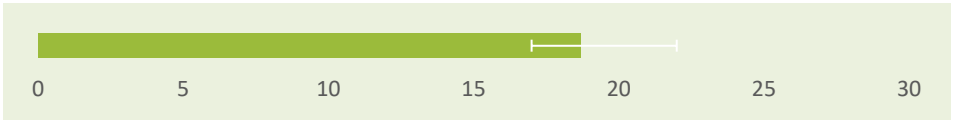
Grazed pastures

Dry matter (DM)	20.0	% of DM
Metabolisible energy (ME)	8.4	MJ/kg DM



Protein

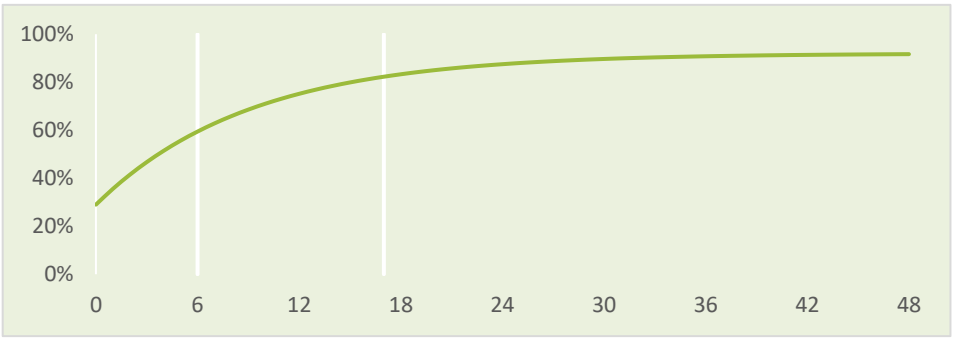
Crude protein (CP)	18.7	% of DM



Protein degradability

a	0.29
b	0.63
c	0.11

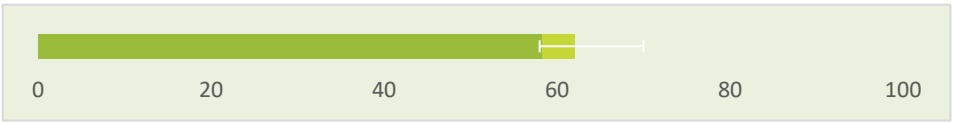
ADIN	0.20	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	62.0	% of DM
eNDF	94	% of NDF



Starch	2.0	% of DM

Sugar	6.8	(3.1-10.5)	% of DM (Typical range)
Fat	3.0	(2.0-4.0)	% of DM (Typical range)
Ash	9.0		% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.29	0.29	0.32	2.00	0.02	1.60	0.21	-59
Absorption %	30	64	16					

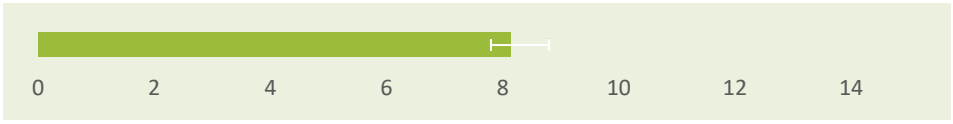
Comment

Name	Paspalum - late vegetative

Category

Grazed pastures

Dry matter (DM)	21.3	% of DM
Metabolisible energy (ME)	8.1	MJ/kg DM



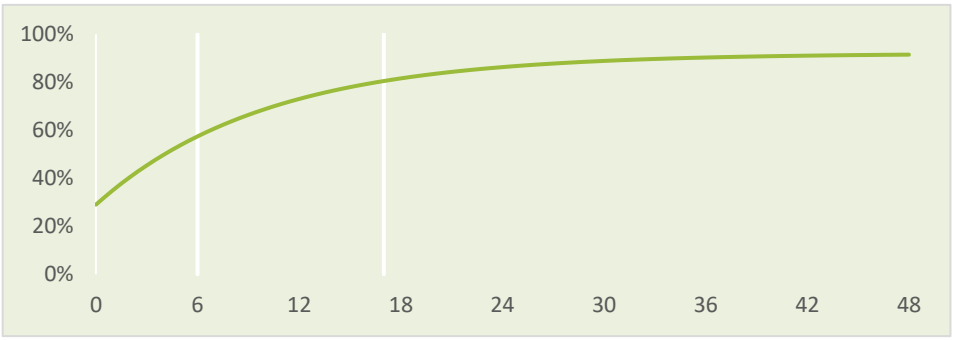
Protein

Crude protein (CP)	11.4	% of DM

Protein degradability

a	0.29
b	0.63
c	0.10

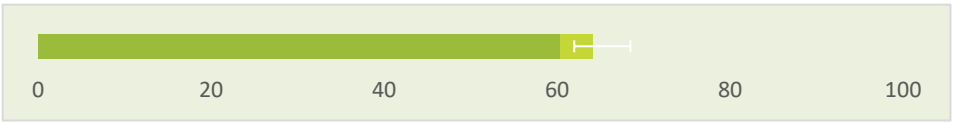
ADIN	0.15	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	64.2	% of DM
eNDF	94	% of NDF



Starch	2.6	% of DM

Sugar	10.5		% of DM
Fat	2.5	(2.0-3.0)	% of DM (Typical range)
Ash	8.8	(8.1-9.4)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

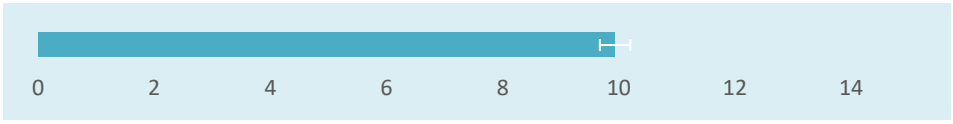
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.27	0.21	0.21	2.24	0.08	1.60	0.14	70
Absorption %	30	64	16					

Comment

Name Pea hay

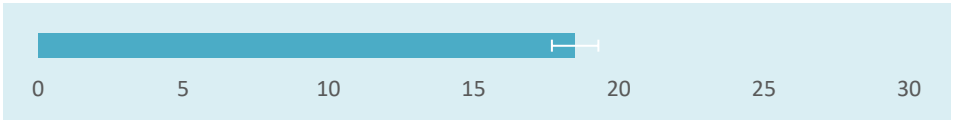
Category Hays

Dry matter (DM)	90.0	% of DM
Metabolisible energy (ME)	9.9	MJ/kg DM



Protein

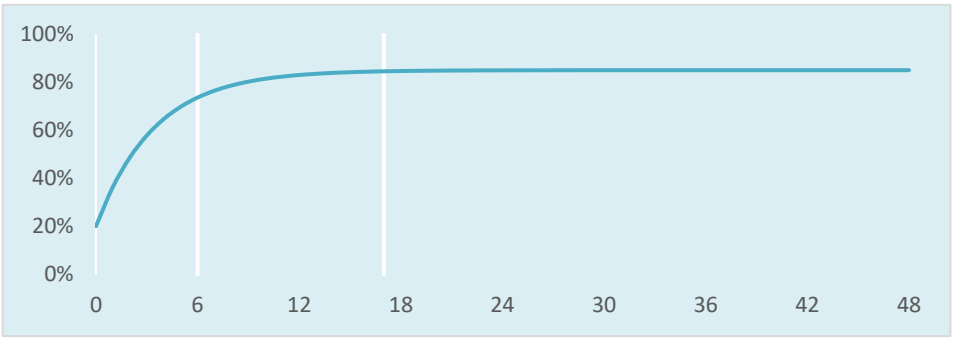
Crude protein (CP)	18.5	% of DM



Protein degradability

a	0.20
b	0.65
c	0.29

ADIN	0.20	% of DM

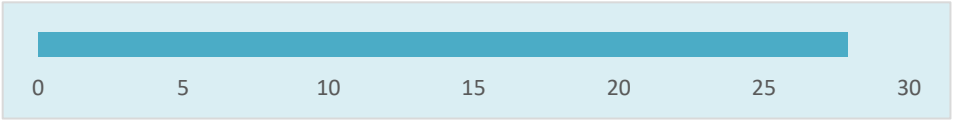


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	43.4	% of DM
eNDF	92	% of NDF

Starch	27.9	% of DM



Sugar	5.6		% of DM
Fat	2.6	(2.0-3.1)	% of DM (Typical range)
Ash	8.1	(7.0-9.1)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.56	0.32	0.27	1.30	0.12	0.58	0.20	96
Absorption %	30	64	16					

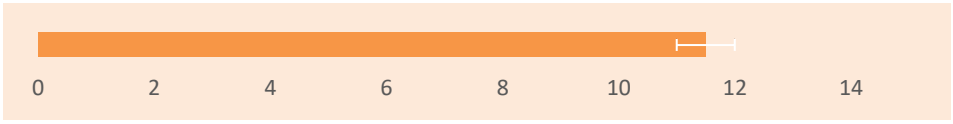
Comment Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name	Pea pollard

Category

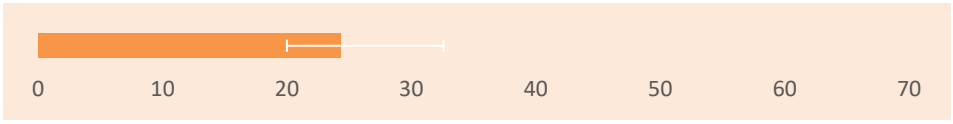
By-product (inc. straws)

Dry matter (DM)	90.0	% of DM
Metabolisible energy (ME)	11.5	MJ/kg DM



Protein

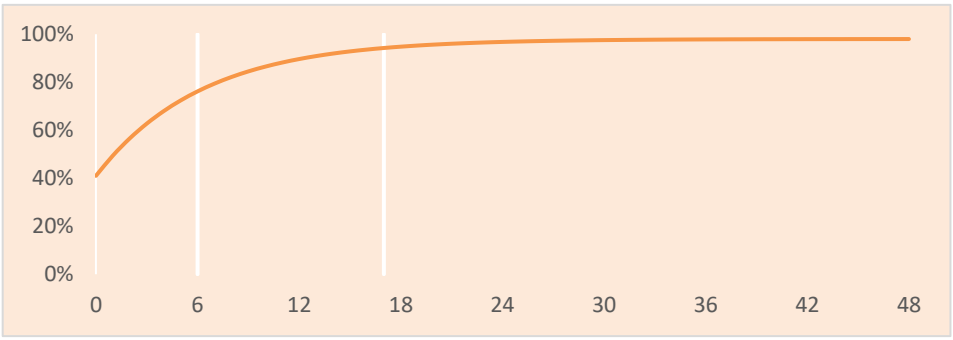
Crude protein (CP)	24.3	% of DM



Protein degradability

a	0.41
b	0.57
c	0.16

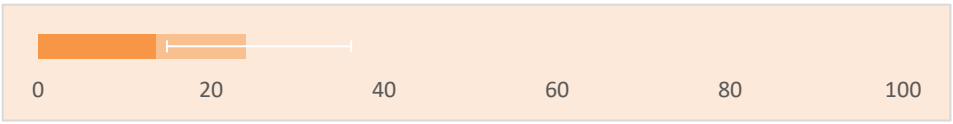
ADIN	0.10	% of DM



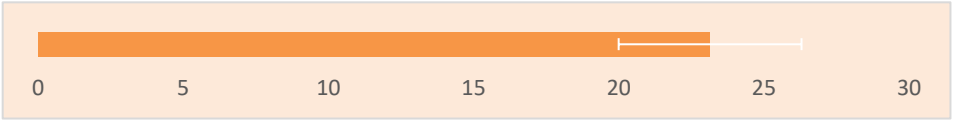
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	24.0	% of DM
eNDF	57	% of NDF



Starch	23.2	% of DM



Sugar	4.2	(2.5-5.8)	% of DM (Typical range)
Fat	1.7	(1.0-2.1)	% of DM (Typical range)
Ash	4.1	(4.0-4.2)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.41	0.18	0.20	0.95	0.02	0.13	0.16	113
Absorption %	60	70	16					

Comment

Name	Peanut shells

Category By-product (inc. straws)

Dry matter (DM)	90.5	% of DM
Metabolisible energy (ME)	2.2	MJ/kg DM

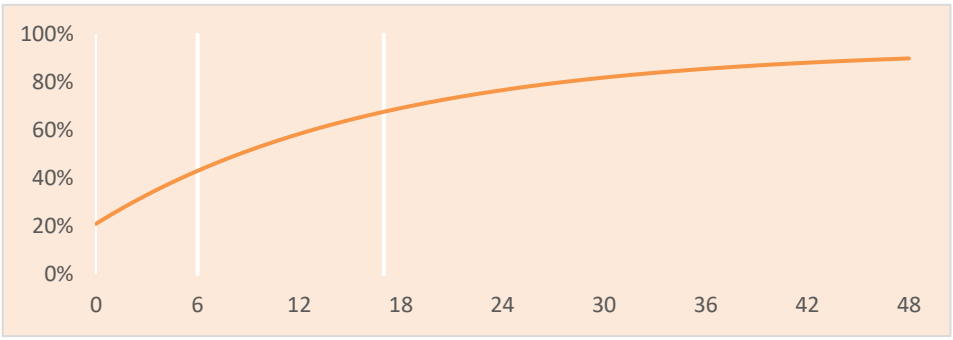
Protein

Crude protein (CP)	7.0	% of DM

Protein degradability

a	0.21
b	0.73
c	0.06

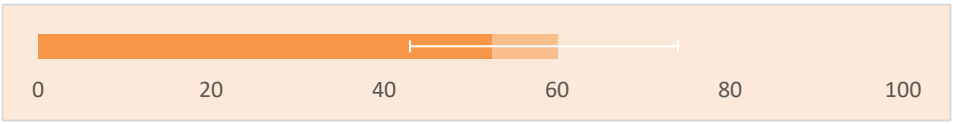
ADIN 0.17 % of DM



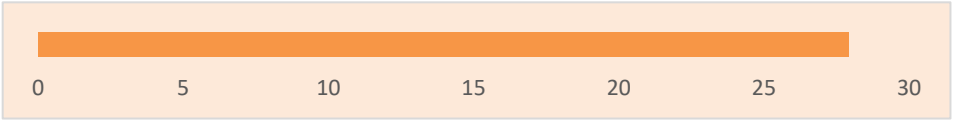
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	60.1	% of DM
eNDF	87	% of NDF



Starch	27.9	% of DM



Sugar	5.6		% of DM
Fat	1.9	(1.5-2.0)	% of DM (Typical range)
Ash	5.5	(5.0-6.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.24	0.07	0.14	0.81	0.05	0.01	0.10	164
Absorption %	30	64	16					

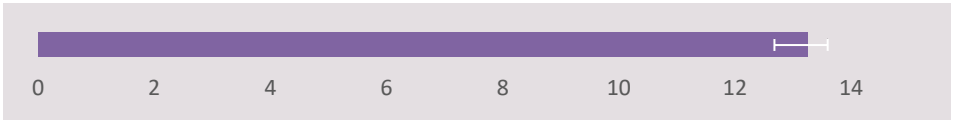
Comment Aflatoxin risk. Potential residue risks (insecticides, herbicides, fungicides)

Name	Peas

Category

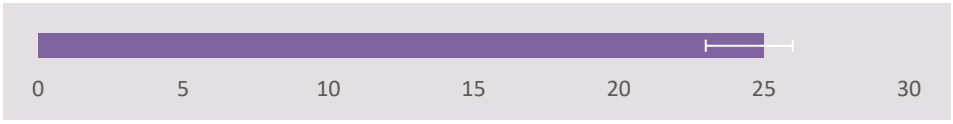
Grain or Concentrates

Dry matter (DM)	87.7	% of DM
Metabolisible energy (ME)	13.3	MJ/kg DM



Protein

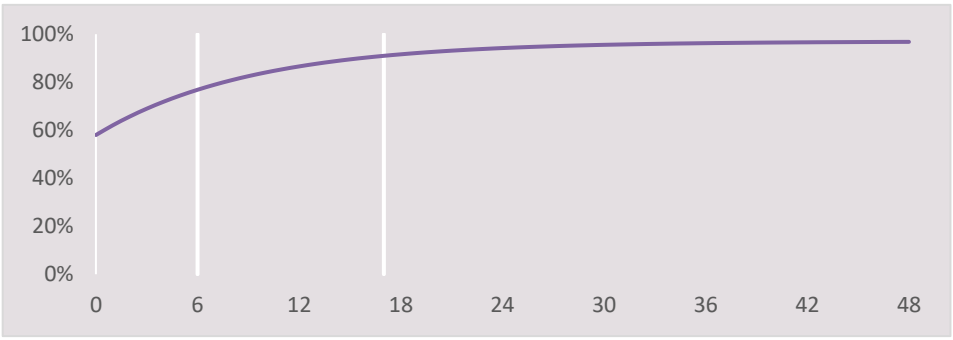
Crude protein (CP)	25.0	% of DM



Protein degradability

a	0.58
b	0.39
c	0.11

ADIN	0.05	% of DM

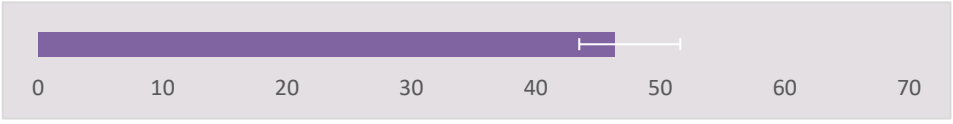


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	16.4	% of DM
eNDF	27	% of NDF

Starch	46.3	% of DM



Sugar	16.0	(4.5-46.0)	% of DM (Typical range)
Fat	1.5	(1.2-2.4)	% of DM (Typical range)
Ash	3.4	(2.8-4.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.11	0.48	0.15	1.07	0.03	0.07	0.24	121
Absorption %	60	70	16					

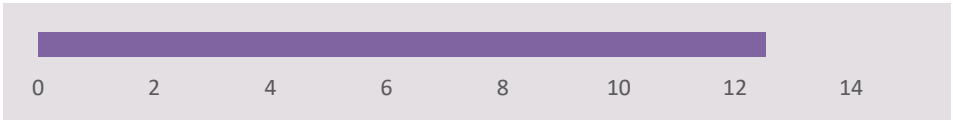
Comment	Potential residue risk (insecticides, herbicides, fungicides)

Name	Pellets

Category

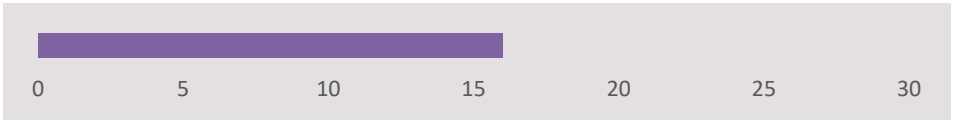
Grain or Concentrates

Dry matter (DM)	89.0	% of DM
Metabolisible energy (ME)	12.5	MJ/kg DM



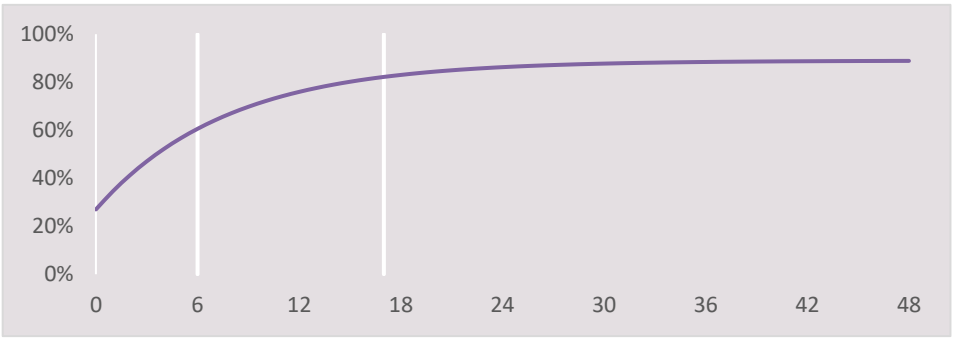
Protein

Crude protein (CP)	16.0	% of DM



Protein degradability

a	0.27	
b	0.62	
c	0.13	
ADIN	0.11	% of DM

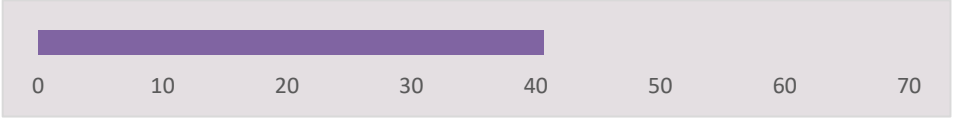


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	32.0	% of DM
eNDF	19	% of NDF

Starch	40.6	% of DM



Sugar	4.2	% of DM
Fat	3.8	% of DM
Ash	3.5	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.10	0.55	0.33	0.79	0.03	0.12	0.17	78
Absorption %	60	70	16					

Comment

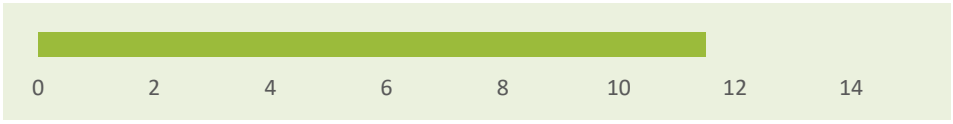
Ruminal acidosis risk (risk level depends on many herd, feed and feeding management factors).
Typical values as used for lactation dairy cows.

Name	Plantain

Category

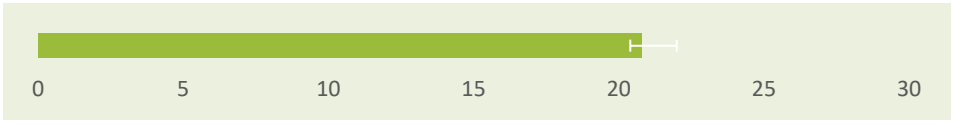
Grazed pastures

Dry matter (DM)	15.4	% of DM
Metabolisible energy (ME)	11.5	MJ/kg DM



Protein

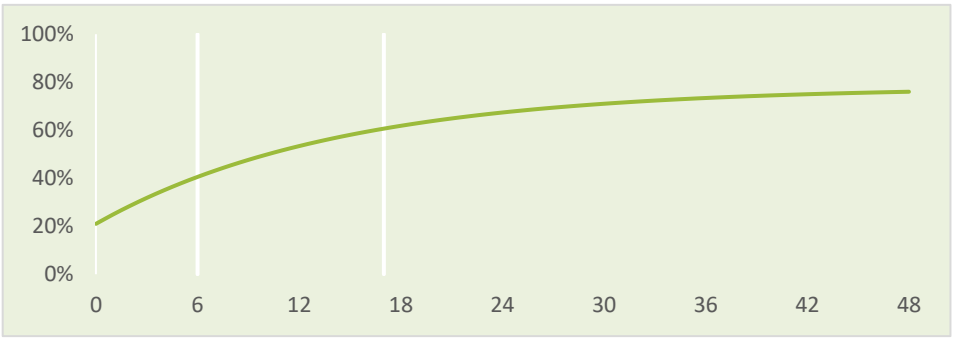
Crude protein (CP)	20.8	% of DM



Protein degradability

a	0.21
b	0.57
c	0.07

ADIN	0.12	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	38.3	% of DM
eNDF	70	% of NDF

Starch	3.0	% of DM

Sugar	10.0	(7.2-15.5)	% of DM (Typical range)
Fat	2.4	(2.4-2.4)	% of DM (Typical range)
Ash	12.4	(12.4-12.4)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

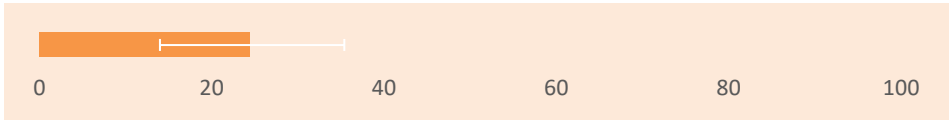
Minerals

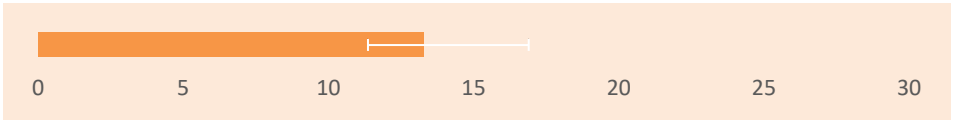
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.76	0.30	0.30	2.85	0.27	1.38	0.29	277
Absorption %	30	64	16					

Comment

Name	Potato by-products
Category	By-product (inc. straws)

Dry matter (DM)	24.4	% of DM
Metabolisible energy (ME)	13.3	MJ/kg DM

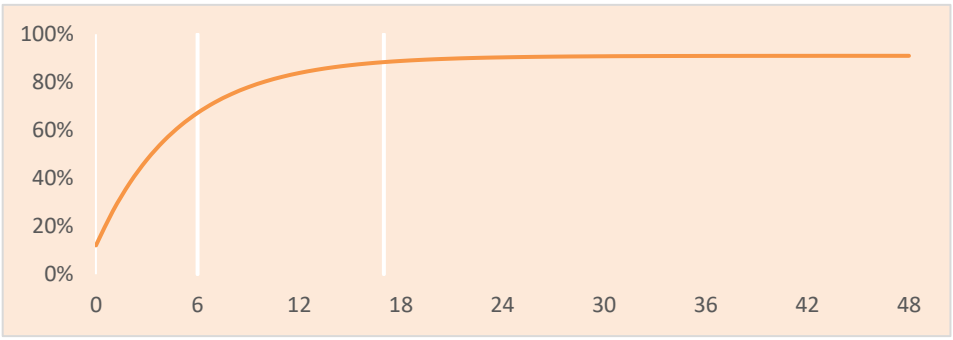




Protein

Crude protein (CP)	9.9	% of DM

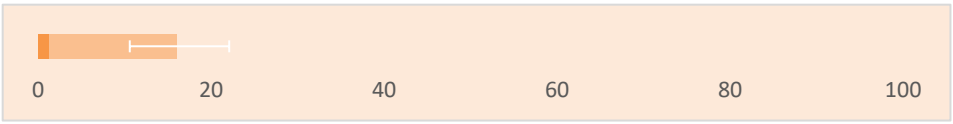
Protein degradability	
a	0.12
b	0.79
c	0.20
ADIN	0.21 % of DM



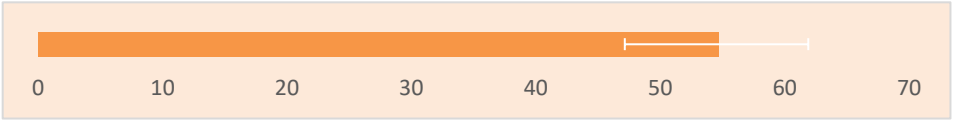
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	16.0	% of DM
eNDF	8	% of NDF



Starch	54.7	% of DM



Sugar	3.1	(2.1-4.7)	% of DM (Typical range)
Fat	6.7	(1.1-14.6)	% of DM (Typical range)
Ash	6.0	(3.0-12.8)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.27	0.25	0.11	1.54	0.20	0.26	0.11	340
Absorption %	60	70	16					

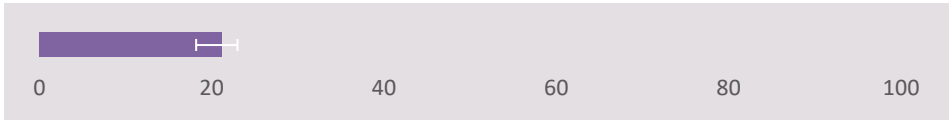
Comment	Starch and fat levels may be high. Potential mycotoxin risk

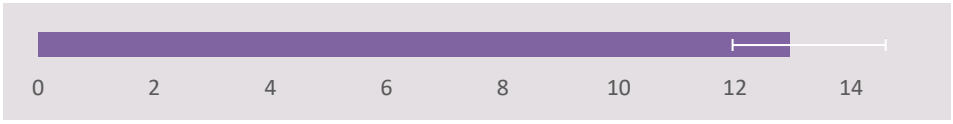
Name	Potatoes (fresh)

Category

Grain or Concentrates

Dry matter (DM)	21.2	% of DM
Metabolisible energy (ME)	12.9	MJ/kg DM

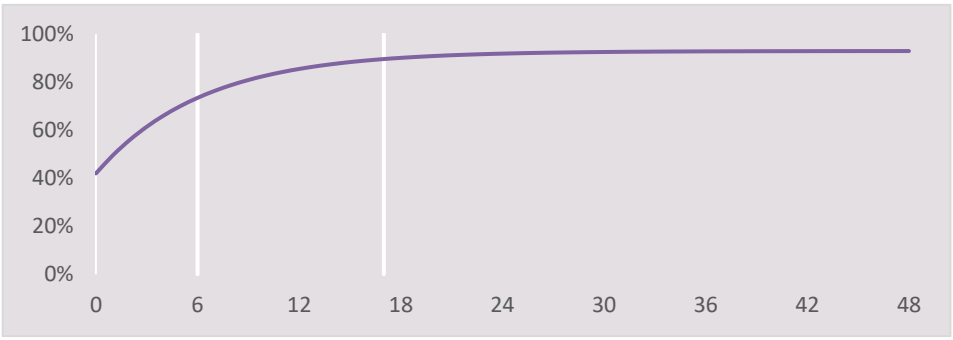




Protein

Crude protein (CP)	10.1	% of DM

Protein degradability		
a	0.42	
b	0.51	
c	0.16	
ADIN	0.23	% of DM

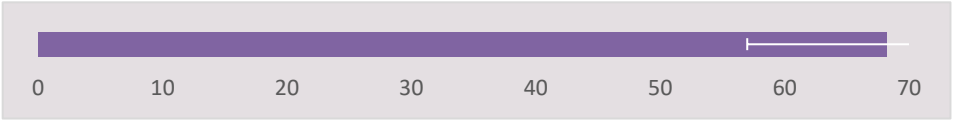


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	7.7	% of DM
eNDF	22	% of NDF

Starch	68.3	% of DM



Sugar	8.8	(2.1-22.2)	% of DM (Typical range)
Fat	0.3	(0.2-0.5)	% of DM (Typical range)
Ash	5.6	(4.8-7.6)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.05	0.24	0.12	2.22	0.07	0.23	0.09	478
Absorption %	60	70	16					

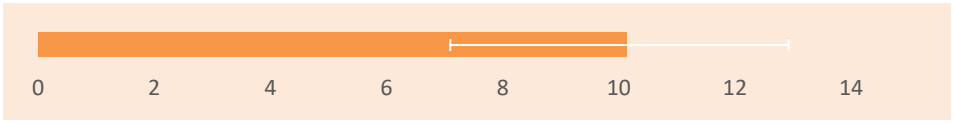
Comment	Starch and fat levels may be high. Potential residue risk (insecticides, herbicides, fungicides). Potential mycotoxin risk

Name	Rice bran

Category

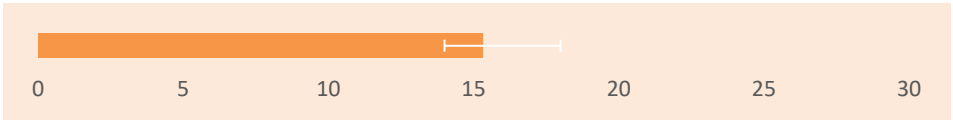
By-product (inc. straws)

Dry matter (DM)	90.2	% of DM
Metabolisible energy (ME)	10.1	MJ/kg DM



Protein

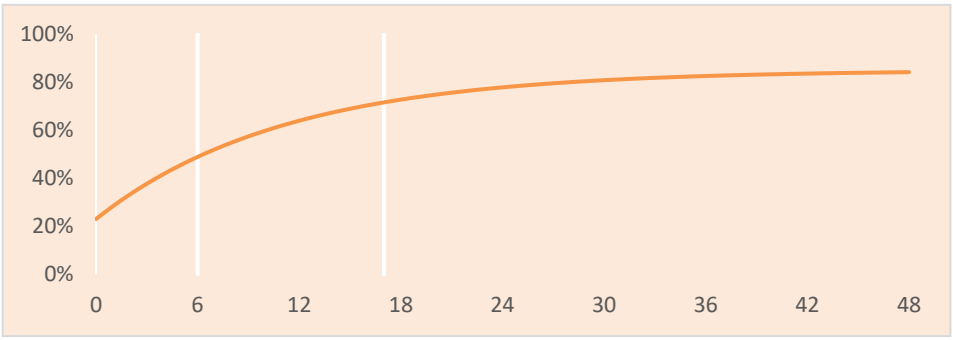
Crude protein (CP)	15.3	% of DM



Protein degradability

a	0.23
b	0.62
c	0.09

ADIN	0.16	% of DM

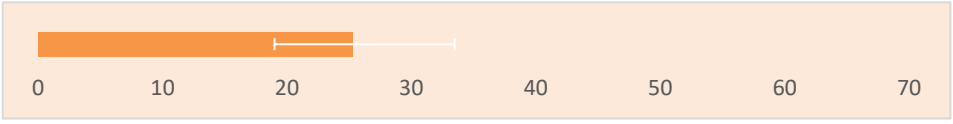


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	31.1	% of DM
eNDF	59	% of NDF

Starch	25.3	% of DM



Sugar	3.7	(0.6-7.3)	% of DM (Typical range)
Fat	9.1	(0.7-16.0)	% of DM (Typical range)
Ash	11.7	(10.4-13.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.14	1.79	0.84	1.54	0.03	0.10	0.19	264
Absorption %	60	70	16					

Comment

Name	Rice hulls

Category

By-product (inc. straws)

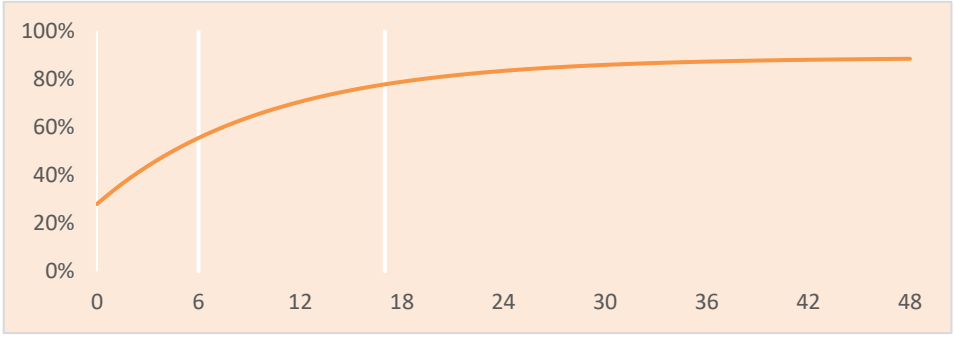
Dry matter (DM)	91.5	% of DM
Metabolisible energy (ME)	2.3	MJ/kg DM

Protein

Crude protein (CP)	3.3	% of DM

Protein degradability

a	0.28
b	0.61
c	0.10
ADIN	0.07 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	74.9	% of DM
eNDF	90	% of NDF
Starch	3.4	% of DM
Sugar	1.5	% of DM
Fat	1.1 (0.8-1.6)	% of DM (Typical range)
Ash	17.3 (14.2-20.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

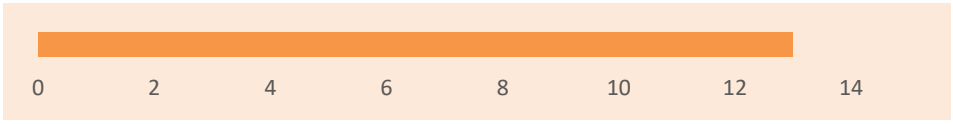
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.11	0.13	0.46	0.49	0.07	0.09	0.09	79
Absorption %	30	64	16					

Comment: Can be abrasive and cause impaction. Potential residue risks (insecticides, herbicides, fungicides)

Name Rice pollard

Category By-product (inc. straws)

Dry matter (DM)	90.5	% of DM
Metabolisible energy (ME)	13.0	MJ/kg DM

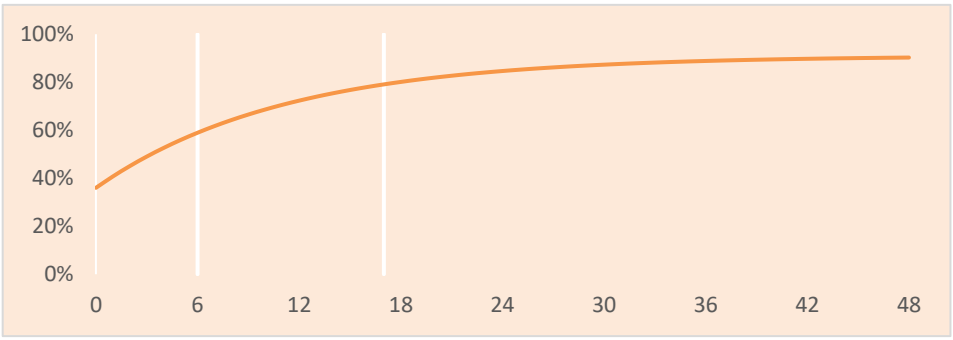


Protein

Crude protein (CP)	12.7	% of DM

Protein degradability

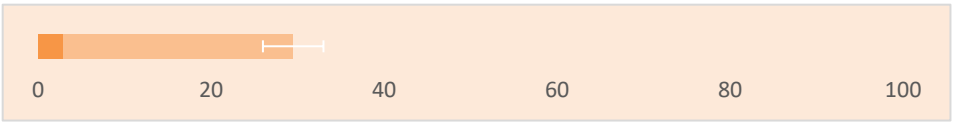
a	0.36	
b	0.55	
c	0.09	
ADIN	0.10	% of DM



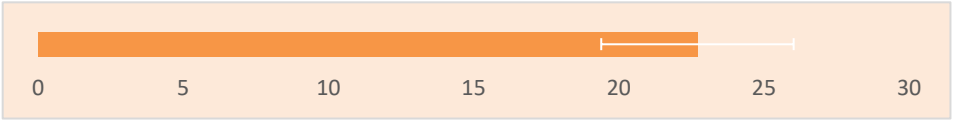
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	29.5	% of DM
eNDF	10	% of NDF



Starch	22.7	% of DM



Sugar	6.2	(2.9-9.5)	% of DM (Typical range)
Fat	17.0	(14.0-19.9)	% of DM (Typical range)
Ash	14.7	(12.7-18.5)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.10	2.83	1.30	3.86	0.27	0.10	0.20	952
Absorption %	60	70	16					

Comment High ME largely due to high oil content (15-20%). Low effective fibre

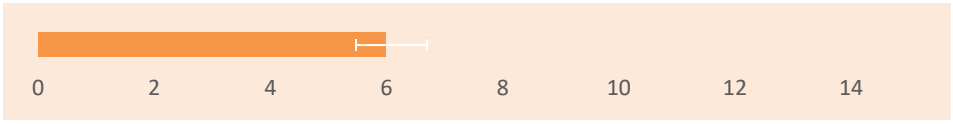
Name	Rice straw

Category

By-product (inc. straws)

Dry matter (DM)	89.6	% of DM

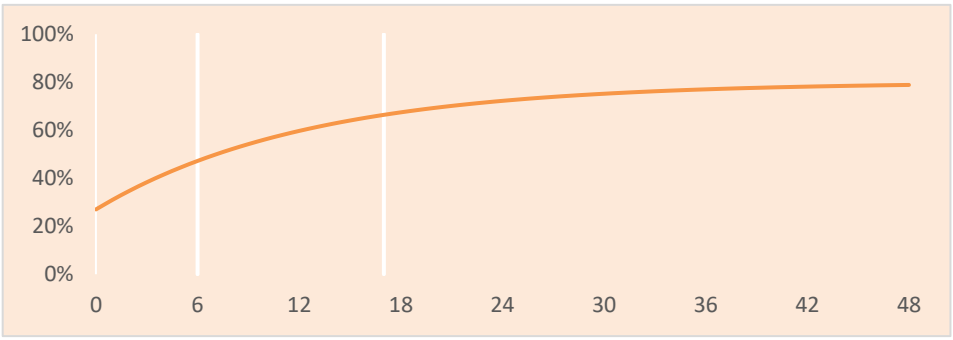
Metabolisible energy (ME)	6.0	MJ/kg DM



Protein

Crude protein (CP)	4.1	% of DM

Protein degradability		
a	0.27	
b	0.53	
c	0.08	
ADIN	0.10	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	68.0	% of DM
eNDF	100	% of NDF

Starch	1.0	% of DM

Sugar	2.0		% of DM
Fat	1.4		% of DM
Ash	15.6	(13.0-18.1)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

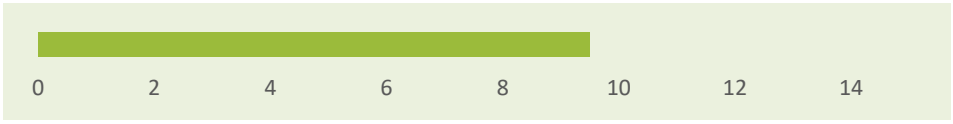
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.26	0.09	0.19	1.50	0.27	0.11	0.10	408
Absorption %	30	64	16					

Comment	Palatability and intake issues. Potential residue risks (insecticides, herbicides, fungicides). Risk of mould.

Name	Ryegrass perennial based - Irrigated - Autumn - Poor (Aust)

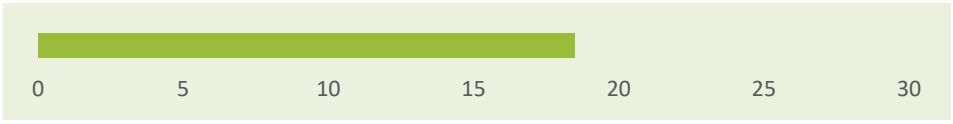
Category Grazed pastures

Dry matter (DM)	14.0	% of DM
Metabolisible energy (ME)	9.5	MJ/kg DM



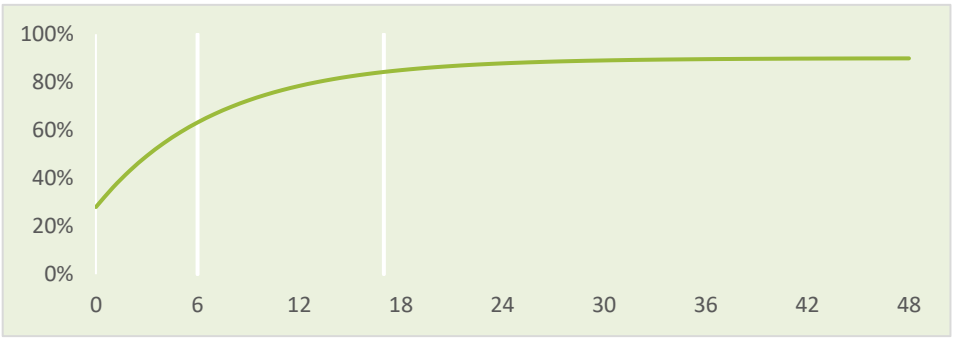
Protein

Crude protein (CP)	18.5	% of DM



Protein degradability

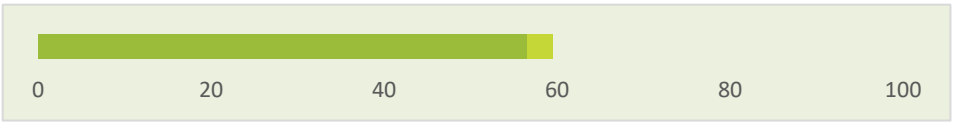
a	0.28
b	0.62
c	0.14
ADIN	0.11 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	59.6	% of DM
eNDF	95	% of NDF



Starch	2.6	% of DM

Sugar	6.7	% of DM
Fat	2.8	% of DM
Ash	9.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

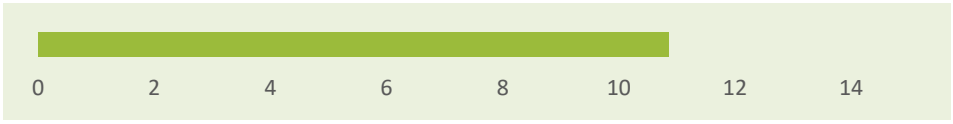
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.63	0.49	0.40	2.75	0.31	0.21	1.20	31
Absorption %	30	64	16					

Comment

Name	Ryegrass perennial based - Irrigated - Autumn - Average (Aust)

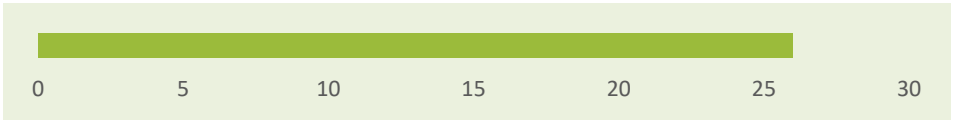
Category Grazed pastures

Dry matter (DM)	14.0	% of DM
Metabolisible energy (ME)	10.9	MJ/kg DM



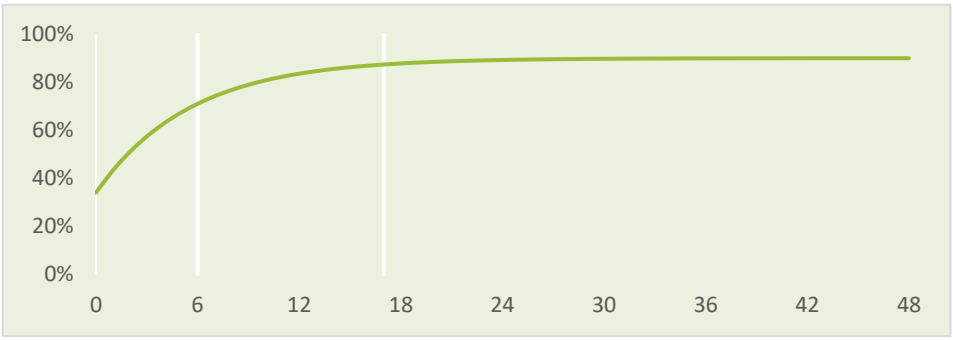
Protein

Crude protein (CP)	26.0	% of DM



Protein degradability

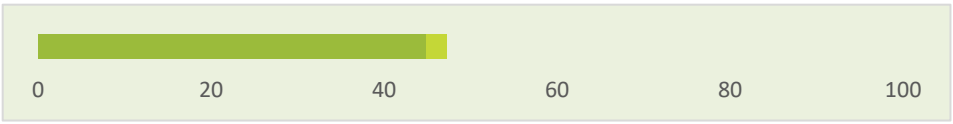
a	0.34
b	0.56
c	0.18
ADIN	0.13 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	47.2	% of DM
eNDF	95	% of NDF
Starch	3.1	% of DM



Sugar	9.7	% of DM
Fat	4.1	% of DM
Ash	11.1	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

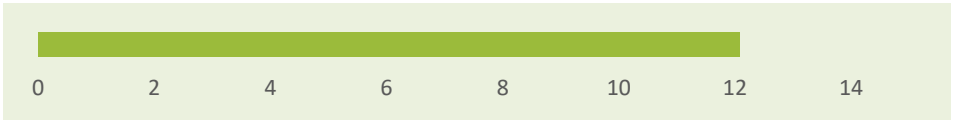
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.55	0.49	0.31	3.06	0.35	0.35	1.58	-149
Absorption %	30	64	16					

Comment

Name	Ryegrass perennial based - Irrigated - Autumn - Good (Aust)

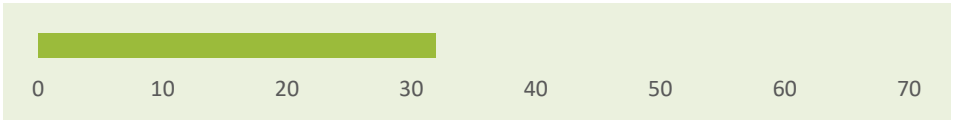
Category Grazed pastures

Dry matter (DM)	14.0	% of DM
Metabolisible energy (ME)	12.1	MJ/kg DM

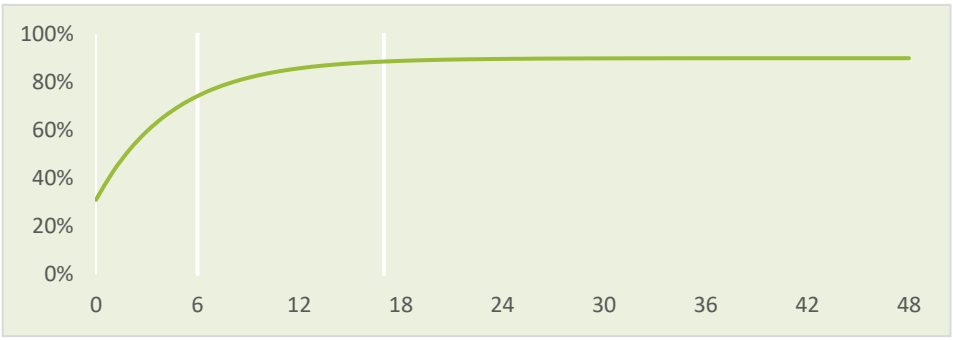


Protein

Crude protein (CP)	32.0	% of DM



Protein degradability	
a	0.31
b	0.59
c	0.22
ADIN	0.14 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	37.2	% of DM
eNDF	95	% of NDF

Starch	3.4	% of DM

Sugar	9.9	% of DM
Fat	4.0	% of DM
Ash	11.2	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.59	0.52	0.37	2.95	0.40	0.64	1.20	-5
Absorption %	30	64	16					

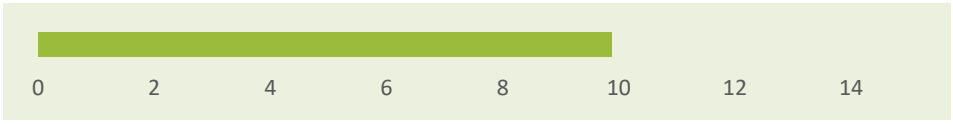
Comment

Name	Ryegrass perennial based - Irrigated - Winter - Poor (Aust)

Category

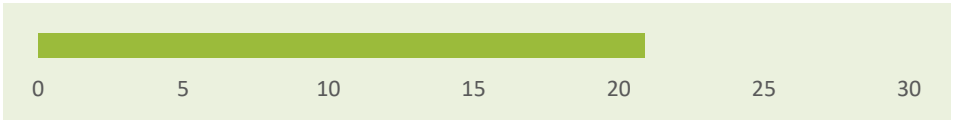
Grazed pastures

Dry matter (DM)	14.0	% of DM
Metabolisible energy (ME)	9.9	MJ/kg DM



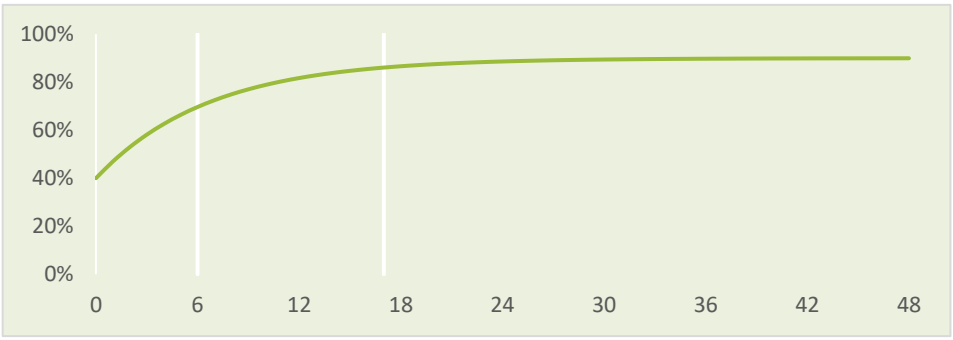
Protein

Crude protein (CP)	20.9	% of DM



Protein degradability

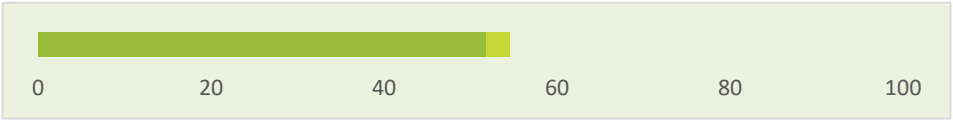
a	0.40	
b	0.50	
c	0.15	
ADIN	0.19	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	54.5	% of DM
eNDF	95	% of NDF



Starch	2.3	% of DM

Sugar	10.7	% of DM
Fat	3.4	% of DM
Ash	10.9	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

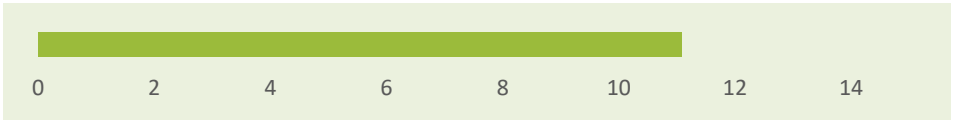
Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.62	0.57	0.36	2.02	0.34	0.83	1.87	-737
Absorption %	30	64	16					

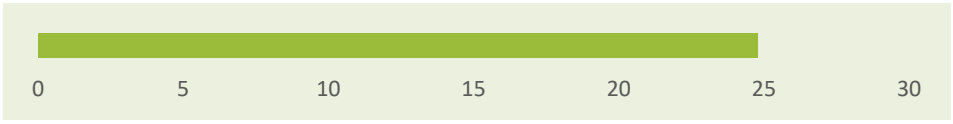
Comment

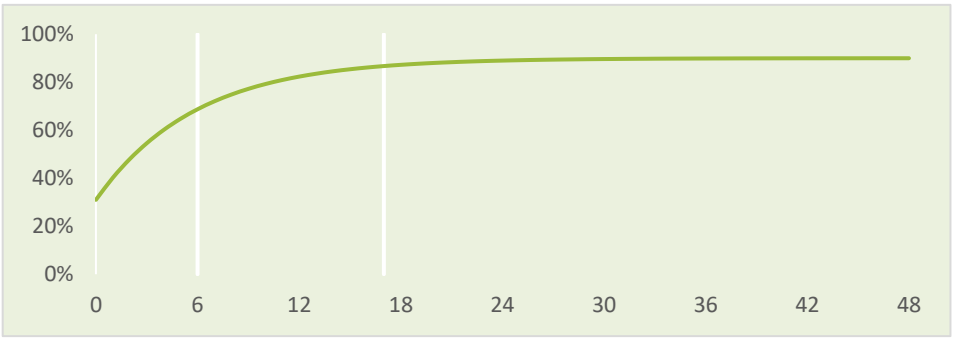
Name	Ryegrass perennial based - Irrigated - Winter - Average (Aust)

Category Grazed pastures

Dry matter (DM)	14.0	% of DM	
Metabolisible energy (ME)	11.1	MJ/kg DM	

Protein

Crude protein (CP)	24.8	% of DM	

Protein degradability			
a	0.31		
b	0.59		
c	0.17		
ADIN	0.11	% of DM	

Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	44.7	% of DM	
eNDF	95	% of NDF	
Starch	4.2	% of DM	

Sugar	14.5	% of DM
Fat	4.5	% of DM
Ash	10.6	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

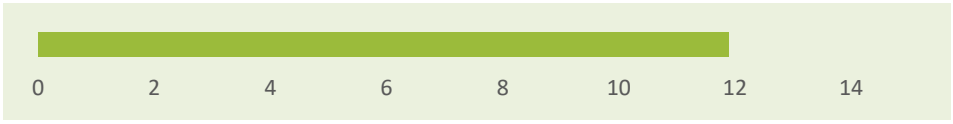
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.62	0.54	0.28	2.97	0.33	0.65	1.75	-370
Absorption %	30	64	16					

Comment

Name	Ryegrass perennial based - Irrigated - Winter - Good (Aust)

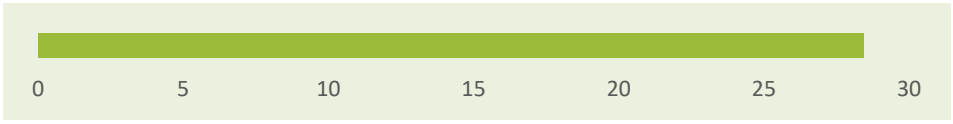
Category Grazed pastures

Dry matter (DM)	14.0	% of DM
Metabolisible energy (ME)	11.9	MJ/kg DM



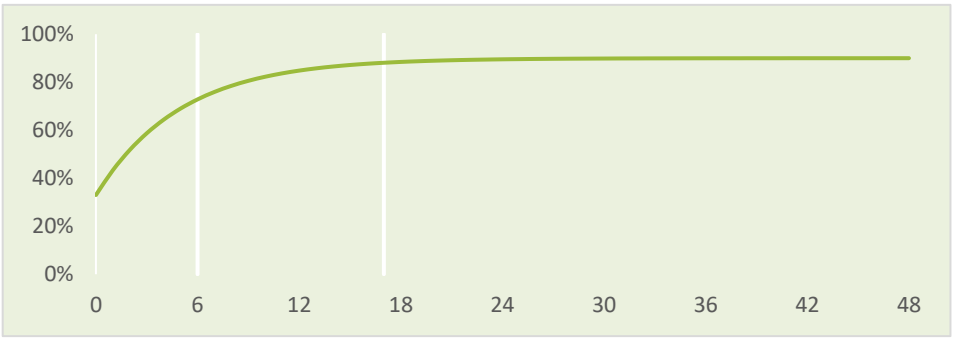
Protein

Crude protein (CP)	28.4	% of DM



Protein degradability

a	0.33
b	0.57
c	0.20
ADIN	0.10 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	39.4	% of DM
eNDF	95	% of NDF

Starch	3.7	% of DM

Sugar	15.2	% of DM
Fat	4.9	% of DM
Ash	10.7	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

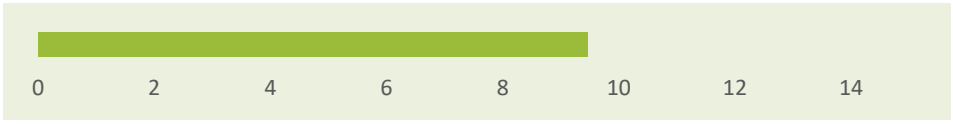
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.51	0.56	0.22	3.36	0.37	0.53	1.24	98
Absorption %	30	64	16					

Comment

Name	Ryegrass perennial based - Irrigated - Spring - Poor (Aust)

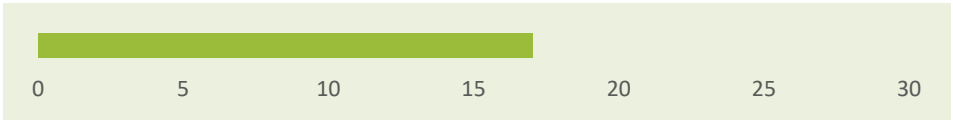
Category Grazed pastures

Dry matter (DM)	18.0	% of DM
Metabolisible energy (ME)	9.5	MJ/kg DM



Protein

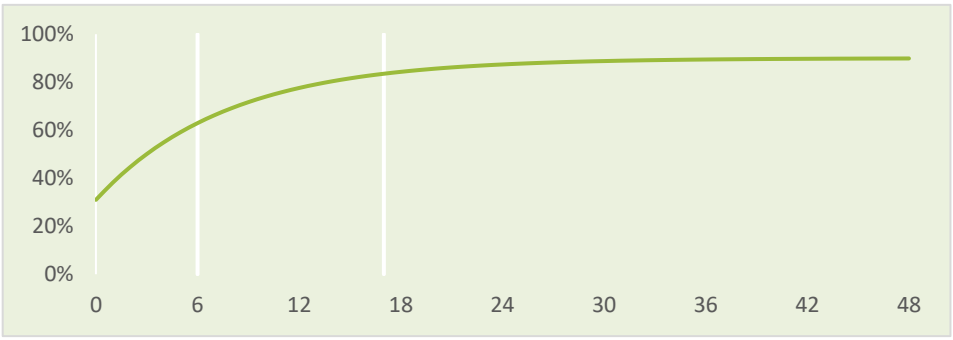
Crude protein (CP)	17.0	% of DM



Protein degradability

a	0.31
b	0.59
c	0.13

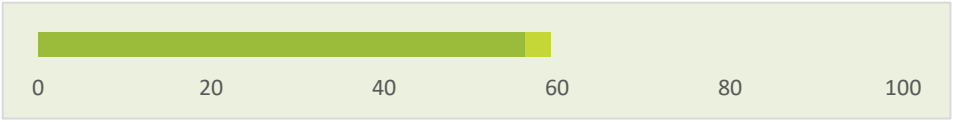
ADIN 0.11 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	59.2	% of DM
eNDF	95	% of NDF



Starch	3.0	% of DM

Sugar	9.6	% of DM
Fat	2.9	% of DM
Ash	9.4	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

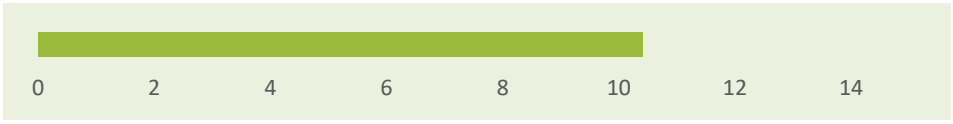
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.54	0.42	0.30	2.52	0.31	0.39	1.62	-345
Absorption %	30	64	16					

Comment

Name	Ryegrass perennial based - Irrigated - Spring - Average (Aust)

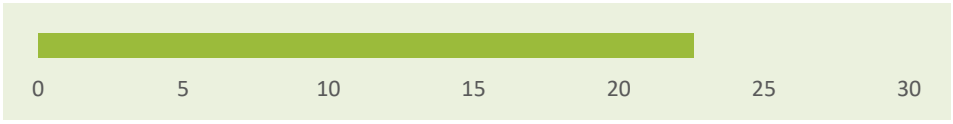
Category Grazed pastures

Dry matter (DM)	18.0	% of DM
Metabolisible energy (ME)	10.4	MJ/kg DM



Protein

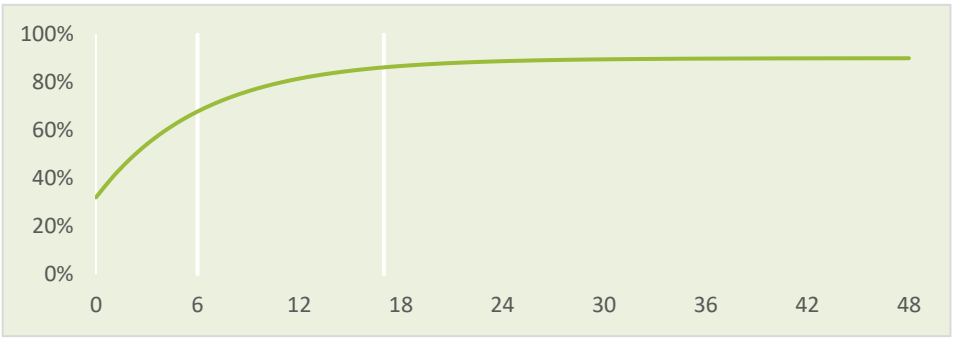
Crude protein (CP)	22.6	% of DM



Protein degradability

a	0.32
b	0.58
c	0.16

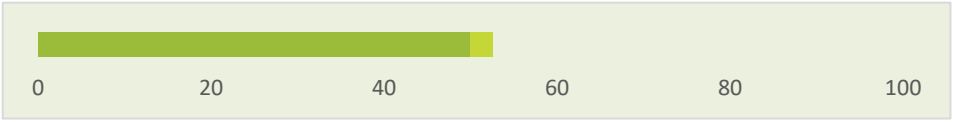
ADIN	0.12	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	52.6	% of DM
eNDF	95	% of NDF



Starch	3.0	% of DM

Sugar	10.0	% of DM
Fat	4.0	% of DM
Ash	10.7	% of DM

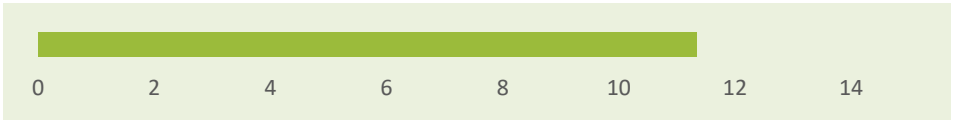
Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

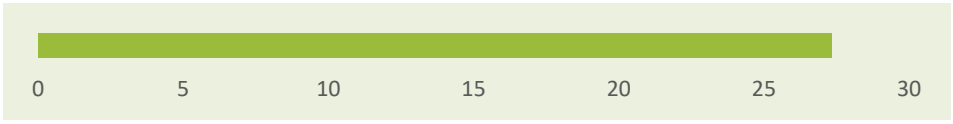
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.58	0.44	0.27	2.60	0.34	0.55	1.53	-294
Absorption %	30	64	16					

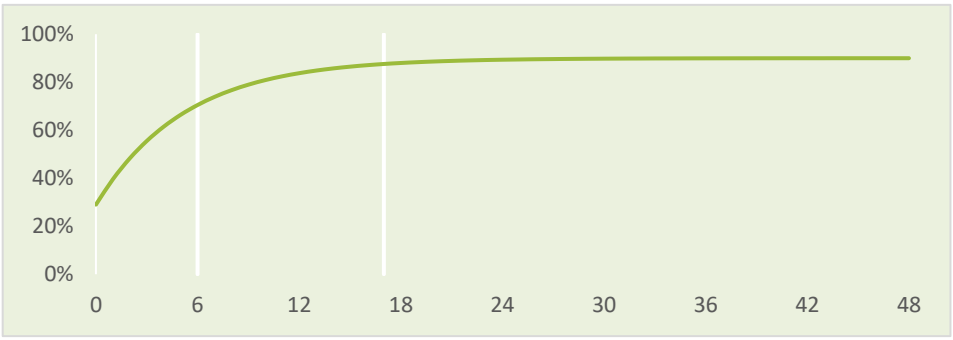
Comment

Name	Ryegrass perennial based - Irrigated - Spring - Good (Aust)
Category	**Grazed pastures**

Dry matter (DM)	18.0	% of DM	
Metabolisible energy (ME)	11.3	MJ/kg DM	

Protein

Crude protein (CP)	27.3	% of DM	

Protein degradability			
a	0.29		
b	0.61		
c	0.19		
ADIN	0.14	% of DM	

Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	41.2	% of DM	
eNDF	95	% of NDF	
Starch	3.9	% of DM	
Sugar	10.6	% of DM	
Fat	3.8	% of DM	
Ash	10.8	% of DM	

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

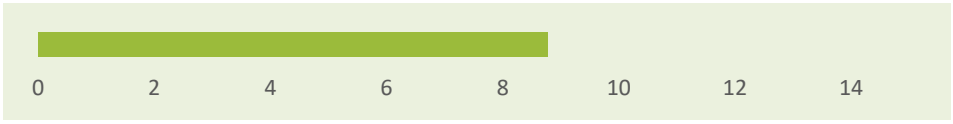
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.76	0.53	0.35	2.90	0.39	0.47	1.60	-219
Absorption %	30	64	16					

Comment

Name	Ryegrass perennial based - Irrigated - Summer Poor (Aust)

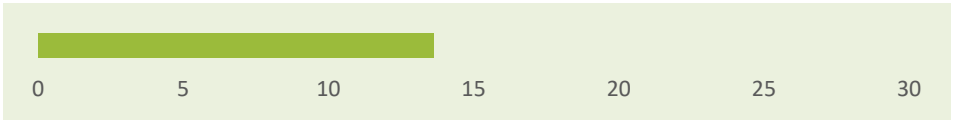
Category Grazed pastures

Dry matter (DM)	20.0	% of DM
Metabolisible energy (ME)	8.8	MJ/kg DM



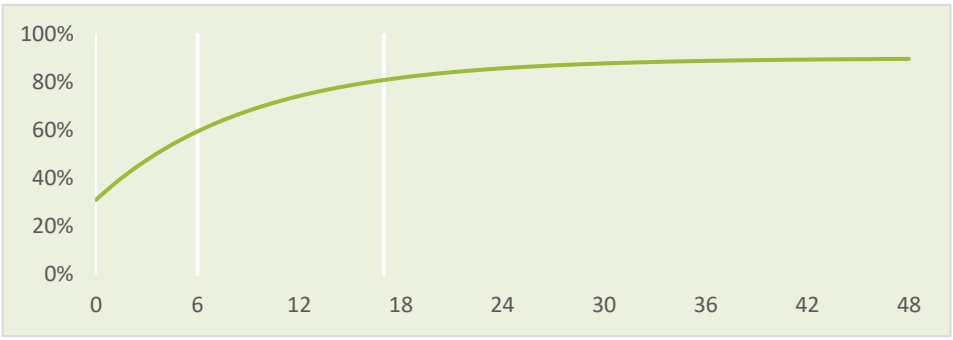
Protein

Crude protein (CP)	13.6	% of DM



Protein degradability

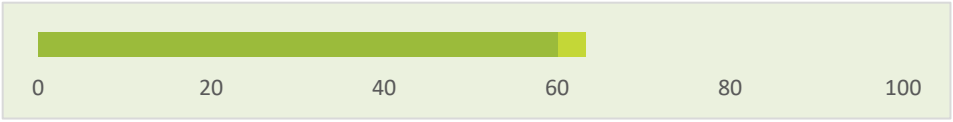
a	0.31
b	0.59
c	0.11
ADIN	0.11 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	63.3	% of DM
eNDF	95	% of NDF



Starch	3.1	% of DM

Sugar	7.7	% of DM
Fat	2.7	% of DM
Ash	8.3	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

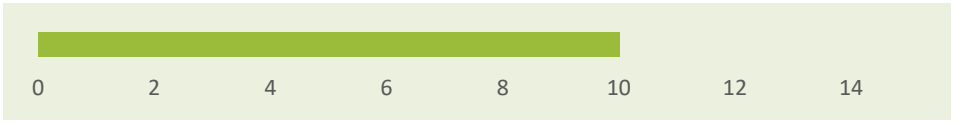
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.55	0.37	0.29	2.08	0.30	0.28	1.22	-183
Absorption %	30	64	16					

Comment

Name	Ryegrass perennial based - Irrigated - Summer Average (Aust)

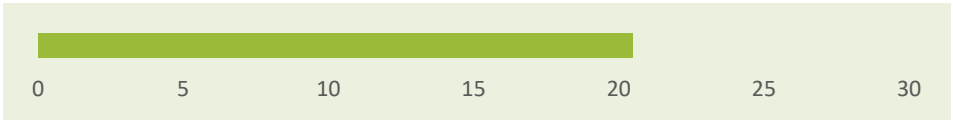
Category Grazed pastures

Dry matter (DM)	20.0	% of DM
Metabolisible energy (ME)	10.0	MJ/kg DM



Protein

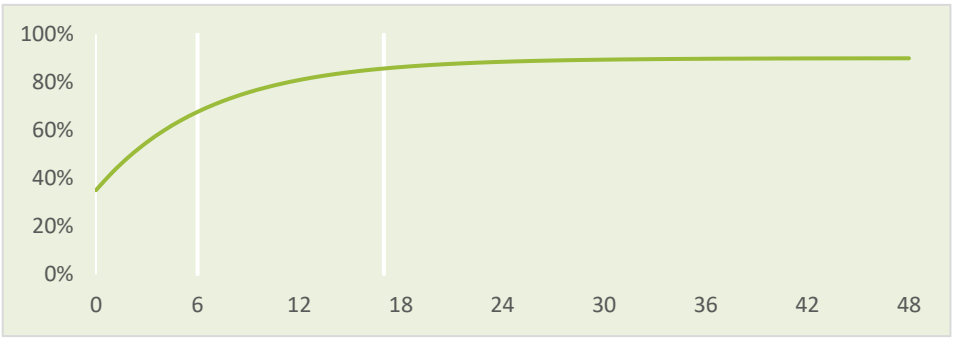
Crude protein (CP)	20.5	% of DM



Protein degradability

a	0.35
b	0.55
c	0.15

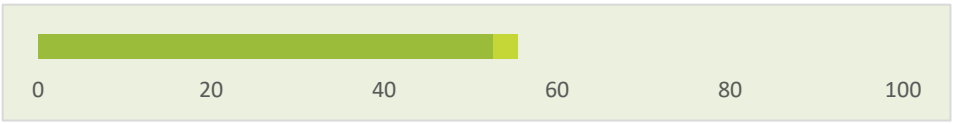
ADIN	0.12	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	55.4	% of DM
eNDF	95	% of NDF



Starch	2.8	% of DM

Sugar	9.2	% of DM
Fat	3.6	% of DM
Ash	10.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

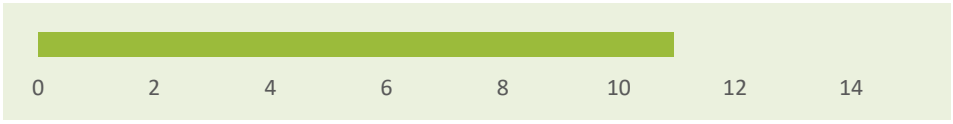
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.58	0.36	0.33	2.56	0.35	0.42	1.55	-278
Absorption %	30	64	16					

Comment

Name	Ryegrass perennial based - Irrigated - Summer Good (Aust)

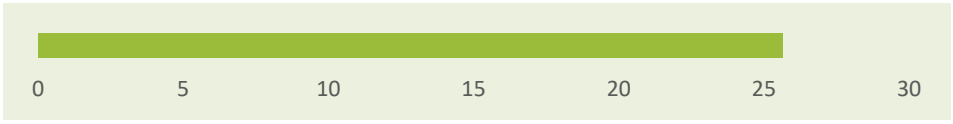
Category Grazed pastures

Dry matter (DM)	20.0	% of DM
Metabolisible energy (ME)	10.9	MJ/kg DM

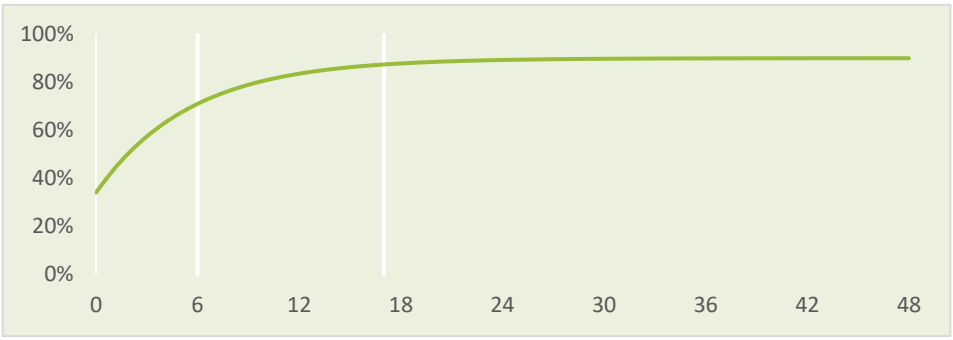


Protein

Crude protein (CP)	25.6	% of DM



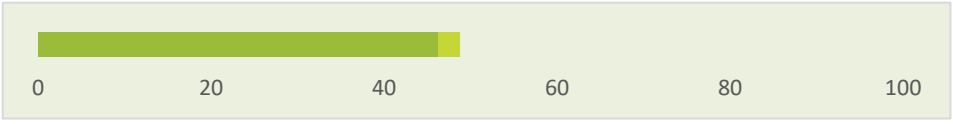
Protein degradability	
a	0.34
b	0.56
c	0.18
ADIN	0.09 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	48.7	% of DM
eNDF	95	% of NDF



Starch	3.0	% of DM

Sugar	9.1	% of DM
Fat	4.1	% of DM
Ash	10.9	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.54	0.42	0.33	3.15	0.38	0.38	1.70	-197
Absorption %	30	64	16					

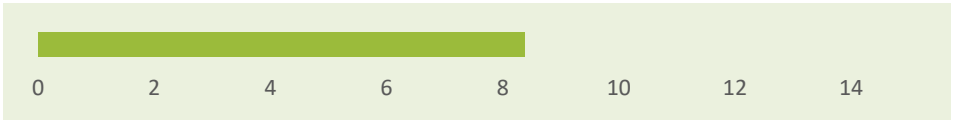
Comment

Name	Ryegrass annual based - Dryland - Autumn - Poor (Aust)

Category

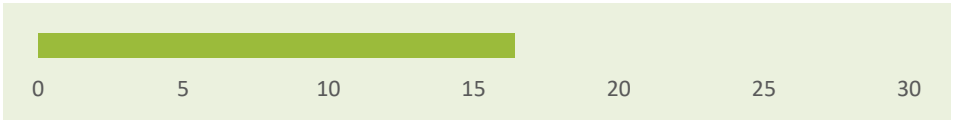
Grazed pastures

Dry matter (DM)	14.0	% of DM
Metabolisible energy (ME)	8.4	MJ/kg DM



Protein

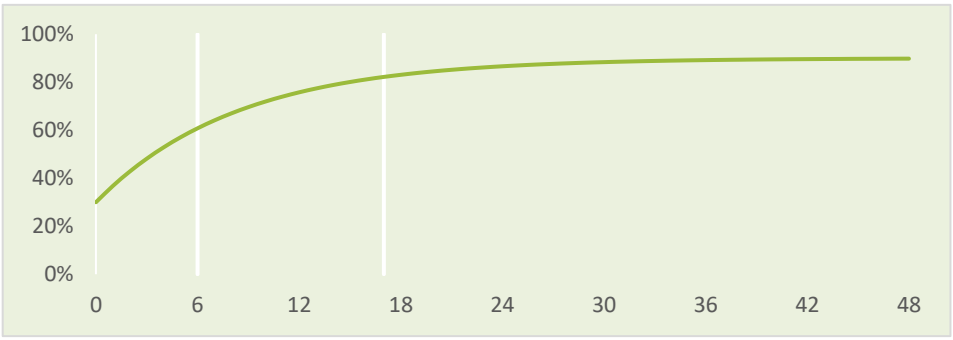
Crude protein (CP)	16.4	% of DM



Protein degradability

a	0.30
b	0.60
c	0.12

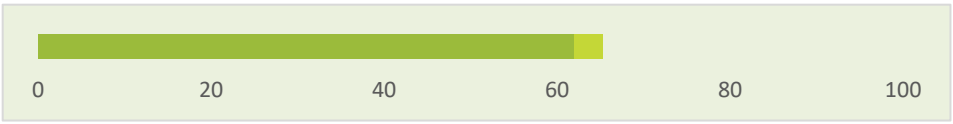
ADIN	0.18	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	65.3	% of DM
eNDF	95	% of NDF



Starch	3.1	% of DM

Sugar	8.4	% of DM
Fat	2.7	% of DM
Ash	8.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

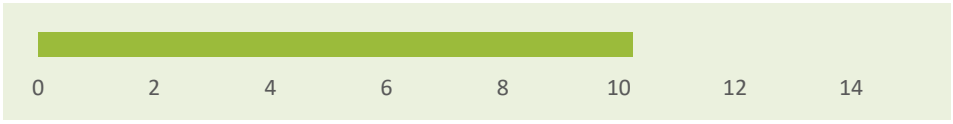
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.52	0.18	0.23	1.20	0.23	0.84	0.21	39
Absorption %	30	64	16					

Comment

Name	Ryegrass annual based - Dryland - Autumn - Average (Aust)

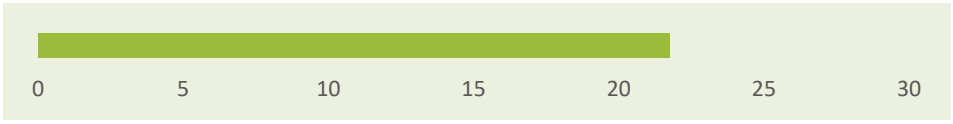
Category Grazed pastures

Dry matter (DM)	14.0	% of DM
Metabolisible energy (ME)	10.2	MJ/kg DM

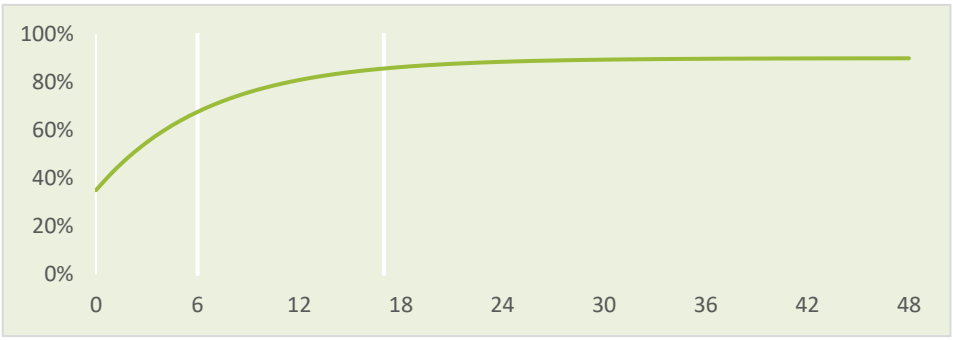


Protein

Crude protein (CP)	21.7	% of DM



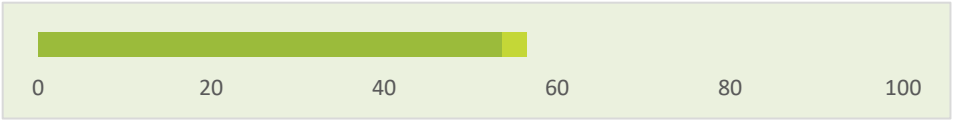
Protein degradability		
a	0.35	
b	0.55	
c	0.15	
ADIN	0.08	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	56.6	% of DM
eNDF	95	% of NDF



Starch	2.2	% of DM

Sugar	7.4	% of DM
Fat	4.1	% of DM
Ash	11.3	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

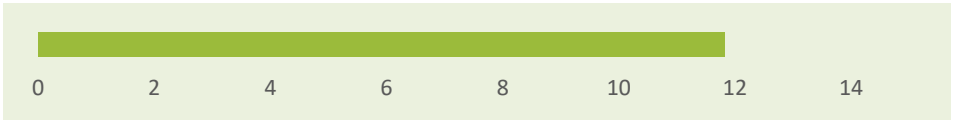
Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.60	0.42	0.26	2.69	0.26	1.33	0.30	240
Absorption %	30	64	16					

Comment

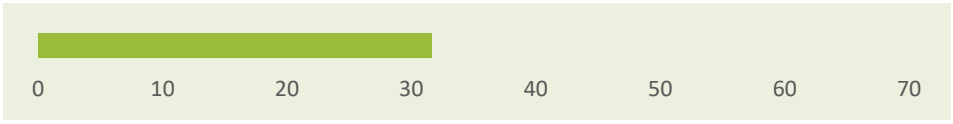
Name	Ryegrass annual based - Dryland - Autumn - Good (Aust)
Category	**Grazed pastures**

Dry matter (DM)	14.0	% of DM
Metabolisible energy (ME)	11.8	MJ/kg DM

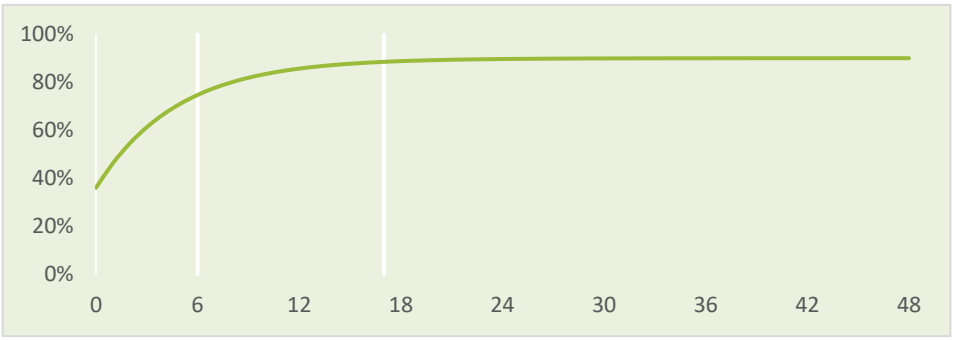


Protein

Crude protein (CP)	31.7	% of DM



Protein degradability		
a	0.36	
b	0.54	
c	0.21	
ADIN	0.10	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	42.9	% of DM
eNDF	95	% of NDF

Starch	2.7	% of DM

Sugar	9.3	% of DM
Fat	5.0	% of DM
Ash	12.3	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

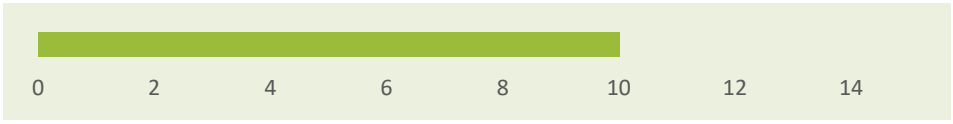
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.49	0.55	0.33	4.01	0.41	1.88	0.37	447
Absorption %	30	64	16					

Comment

Name	Ryegrass annual based - Dryland - Winter - Poor (Aust)

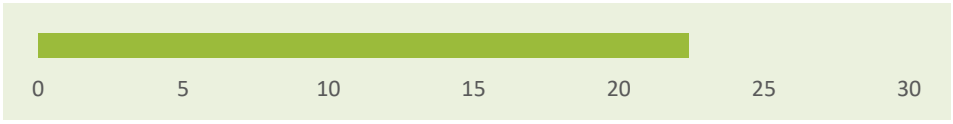
Category Grazed pastures

Dry matter (DM)	14.0	% of DM
Metabolisible energy (ME)	10.0	MJ/kg DM

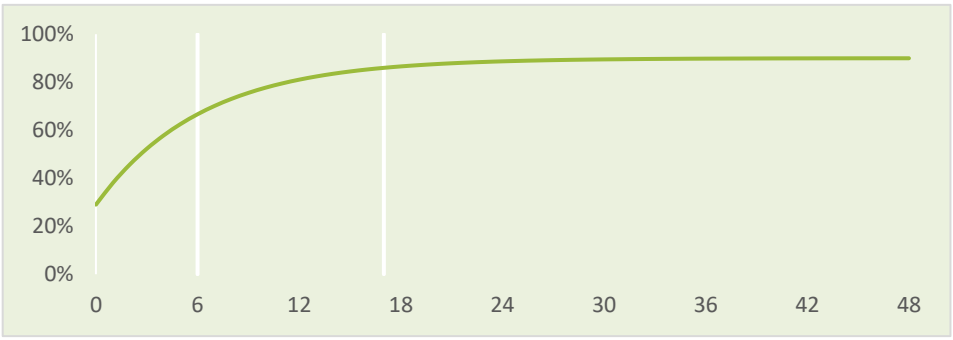


Protein

Crude protein (CP)	22.4	% of DM



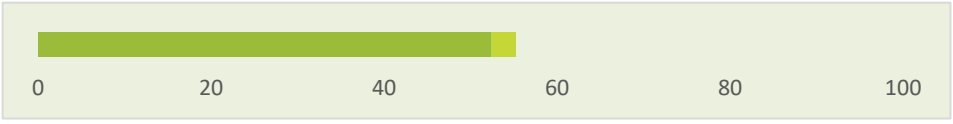
Protein degradability		
a	0.29	
b	0.61	
c	0.16	
ADIN	0.15	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	55.2	% of DM
eNDF	95	% of NDF



Starch	2.1	% of DM

Sugar	7.0	% of DM
Fat	4.0	% of DM
Ash	11.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.54	0.61	0.28	3.32	0.47	1.61	0.24	452
Absorption %	30	64	16					

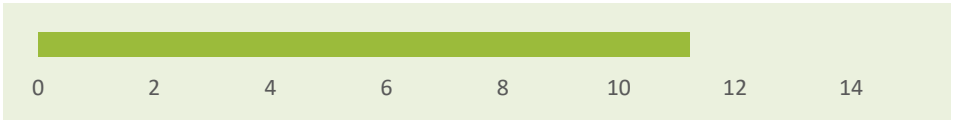
Comment

Name	Ryegrass annual based - Dryland - Winter - Average (Aust)

Category

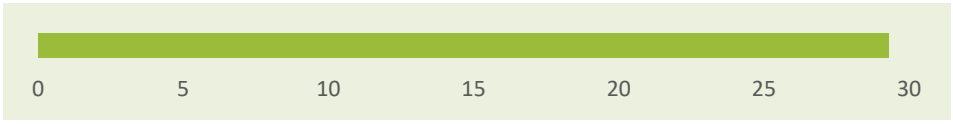
Grazed pastures

Dry matter (DM)	14.0	% of DM
Metabolisible energy (ME)	11.2	MJ/kg DM



Protein

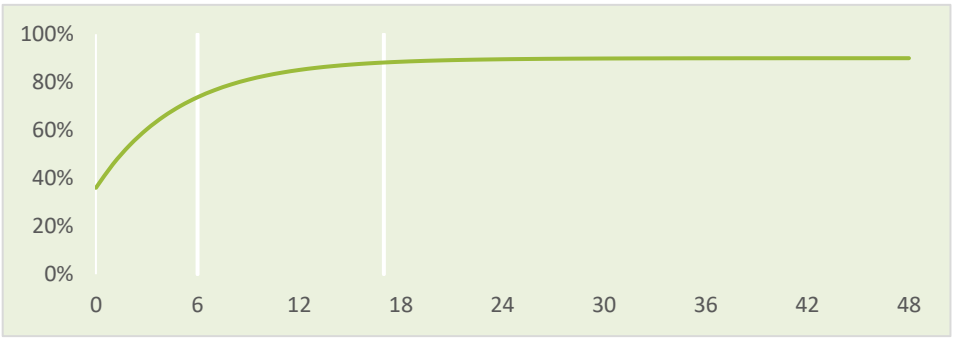
Crude protein (CP)	29.3	% of DM



Protein degradability

a	0.36
b	0.54
c	0.20

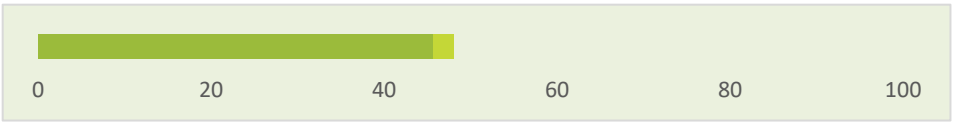
ADIN	0.14	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	48.1	% of DM
eNDF	95	% of NDF



Starch	2.3	% of DM

Sugar	7.3	% of DM
Fat	4.7	% of DM
Ash	11.6	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.41	0.57	0.76	3.89	0.38	1.85	0.43	374
Absorption %	30	64	16					

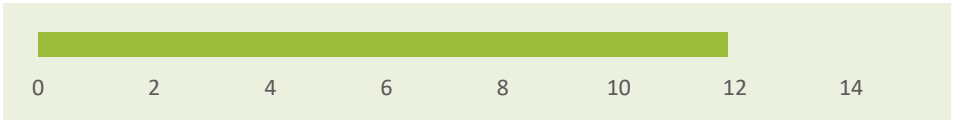
Comment

Name	Ryegrass annual based - Dryland - Winter - Good (Aust)

Category

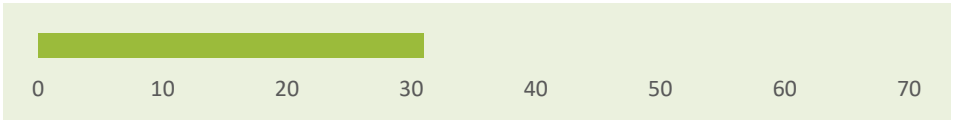
Grazed pastures

Dry matter (DM)	14.0	% of DM
Metabolisible energy (ME)	11.9	MJ/kg DM



Protein

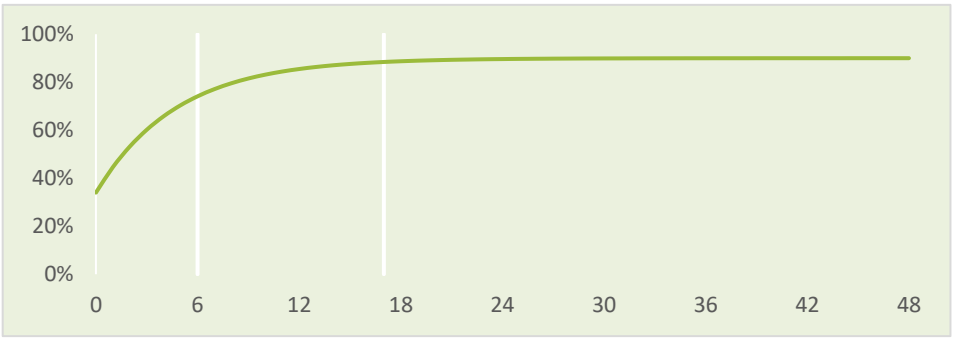
Crude protein (CP)	30.9	% of DM



Protein degradability

a	0.34
b	0.56
c	0.21

ADIN	0.12	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	43.2	% of DM
eNDF	95	% of NDF

Starch	3.0	% of DM

Sugar	10.0	% of DM
Fat	4.7	% of DM
Ash	11.1	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

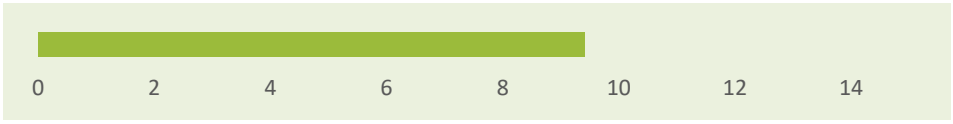
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.55	0.53	0.25	3.49	0.55	1.64	0.46	386
Absorption %	30	64	16					

Comment

Name	Ryegrass annual based - Dryland - Spring - Poor (Aust)

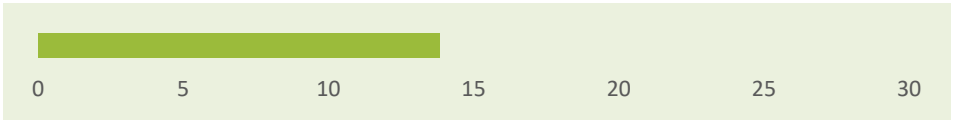
Category Grazed pastures

Dry matter (DM)	18.0	% of DM
Metabolisible energy (ME)	9.4	MJ/kg DM

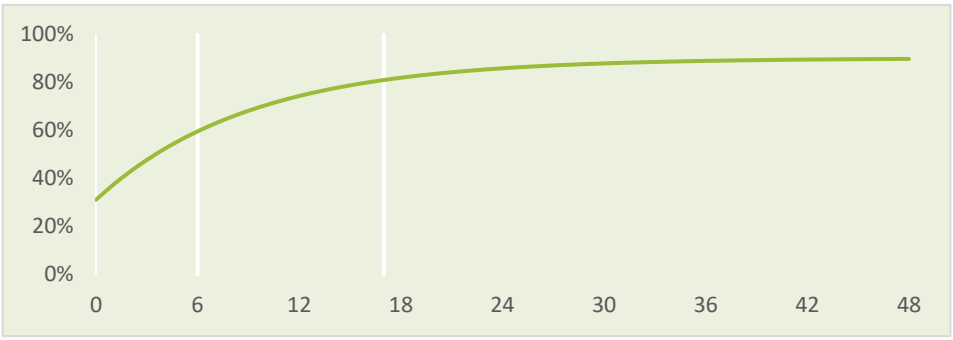


Protein

Crude protein (CP)	13.8	% of DM



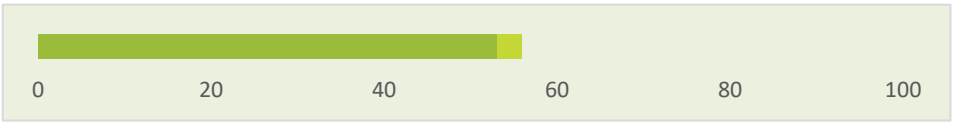
Protein degradability	
a	0.31
b	0.59
c	0.11
ADIN	0.12 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	55.9	% of DM
eNDF	95	% of NDF



Starch	5.0	% of DM

Sugar	12.0	% of DM
Fat	2.9	% of DM
Ash	7.2	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

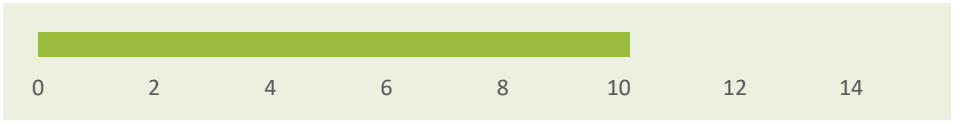
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.71	0.46	0.22	1.70	0.61	1.38	0.24	164
Absorption %	30	64	16					

Comment

Name	Ryegrass annual based - Dryland - Spring - Average (Aust)

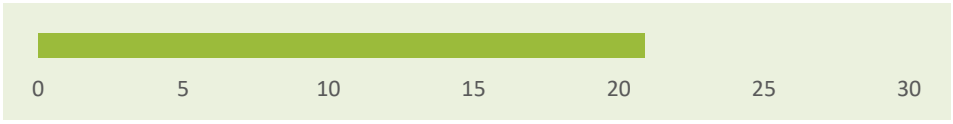
Category Grazed pastures

Dry matter (DM)	18.0	% of DM
Metabolisible energy (ME)	10.2	MJ/kg DM

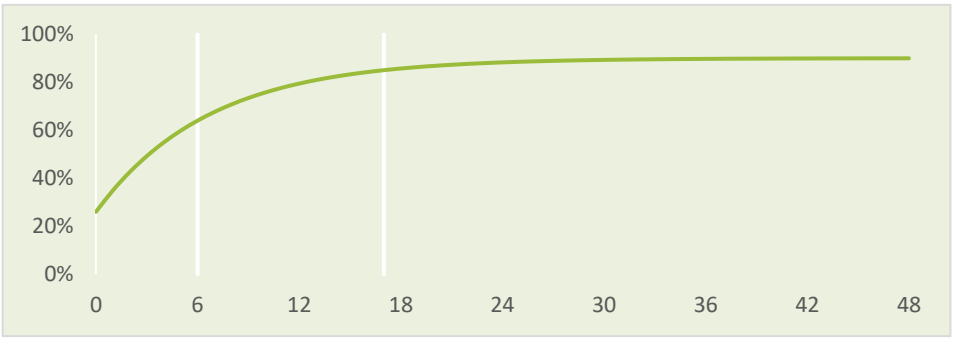


Protein

Crude protein (CP)	20.9	% of DM



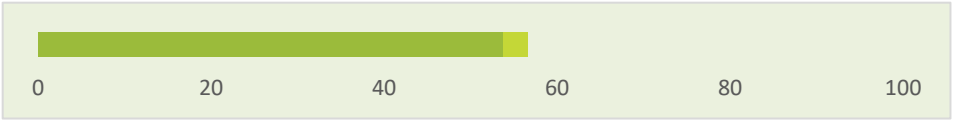
Protein degradability		
a	0.26	
b	0.64	
c	0.15	
ADIN	0.09	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	56.6	% of DM
eNDF	95	% of NDF



Starch	2.8	% of DM

Sugar	8.4	% of DM
Fat	3.7	% of DM
Ash	9.9	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

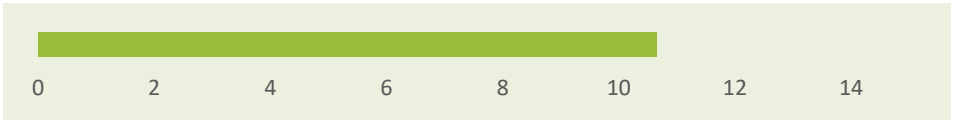
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.55	0.51	0.26	2.51	0.25	1.35	0.27	200
Absorption %	30	64	16					

Comment

Name	Ryegrass annual based - Dryland - Spring - Good (Aust)

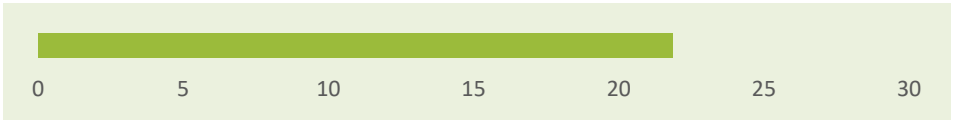
Category Grazed pastures

Dry matter (DM)	18.0	% of DM
Metabolisible energy (ME)	10.6	MJ/kg DM

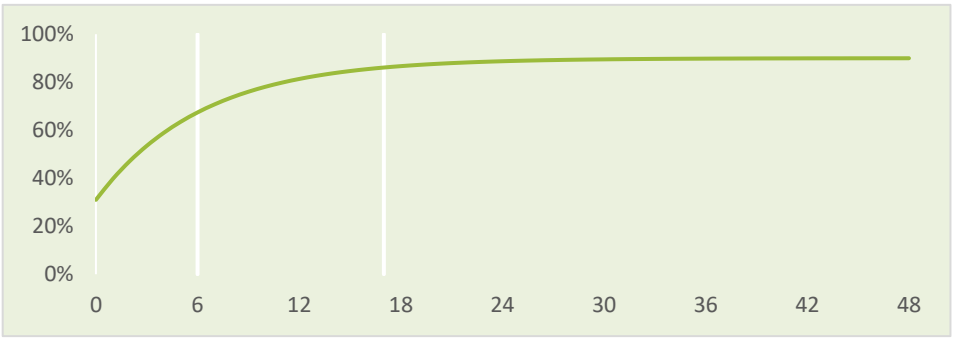


Protein

Crude protein (CP)	21.9	% of DM



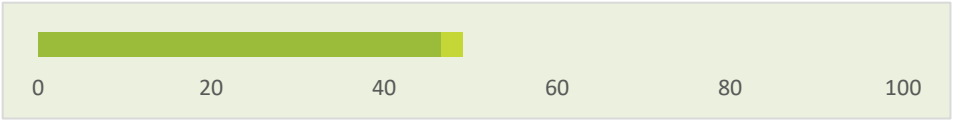
Protein degradability		
a	0.31	
b	0.59	
c	0.16	
ADIN	0.10	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	49.1	% of DM
eNDF	95	% of NDF



Starch	3.9	% of DM

Sugar	13.0	% of DM
Fat	4.1	% of DM
Ash	10.7	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.48	0.44	0.27	2.90	0.60	2.04	0.35	205
Absorption %	30	64	16					

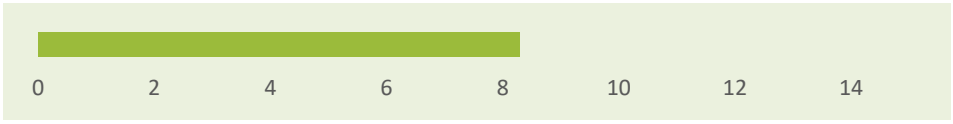
Comment

Name	Ryegrass annual based - Dryland - Summer - Poor (Aust)

Category

Grazed pastures

Dry matter (DM)	20.0	% of DM
Metabolisible energy (ME)	8.3	MJ/kg DM



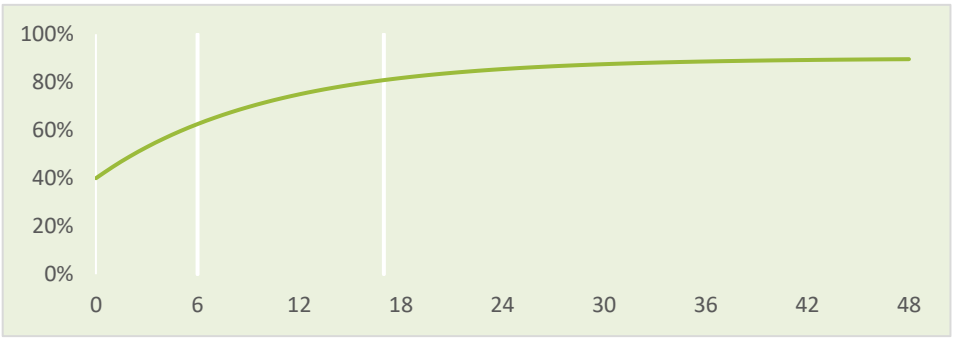
Protein

Crude protein (CP)	12.5	% of DM

Protein degradability

a	0.40
b	0.50
c	0.10

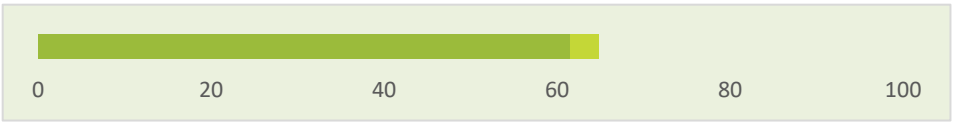
ADIN	0.15	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	64.9	% of DM
eNDF	95	% of NDF



Starch	3.4	% of DM

Sugar	8.2	% of DM
Fat	2.5	% of DM
Ash	6.7	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

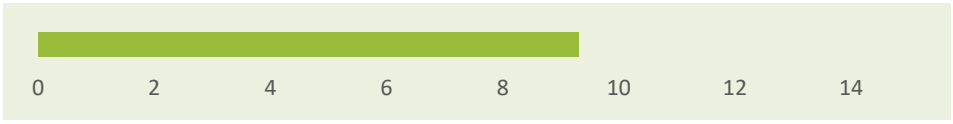
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.53	0.23	0.23	1.09	0.28	0.84	0.22	22
Absorption %	30	64	16					

Comment

Name	Ryegrass annual based - Dryland - Summer - Average (Aust)

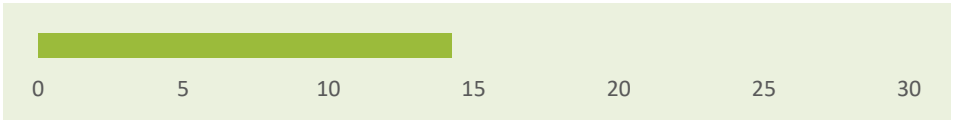
Category Grazed pastures

Dry matter (DM)	20.0	% of DM
Metabolisible energy (ME)	9.3	MJ/kg DM

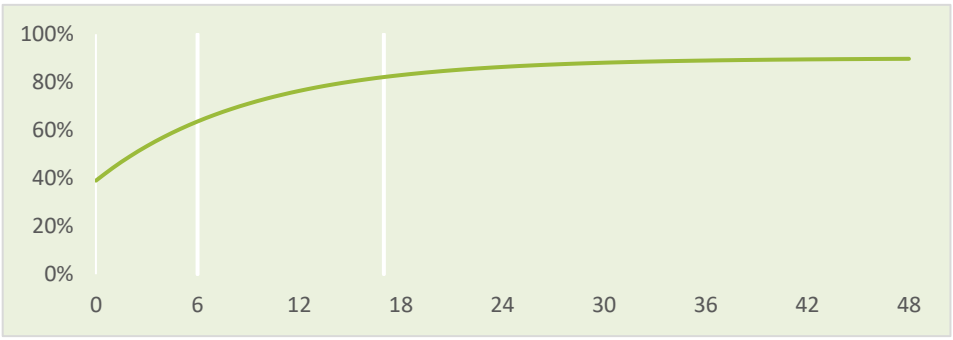


Protein

Crude protein (CP)	14.3	% of DM



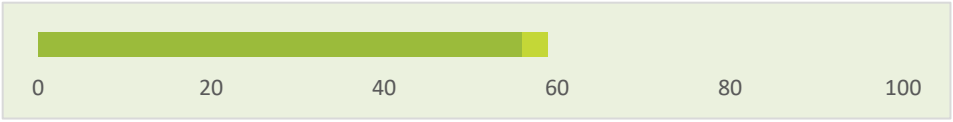
Protein degradability		
a	0.39	
b	0.51	
c	0.11	
ADIN	0.10	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	58.9	% of DM
eNDF	95	% of NDF



Starch	3.8	% of DM

Sugar	10.3	% of DM
Fat	3.2	% of DM
Ash	8.2	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.45	0.31	0.24	2.51	0.30	1.40	0.27	207
Absorption %	30	64	16					

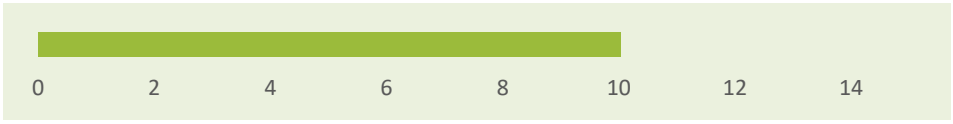
Comment

Name	Ryegrass annual based - Dryland - Summer - Good (Aust)

Category

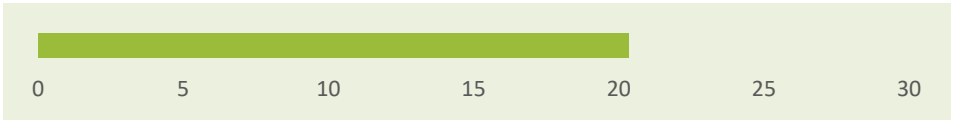
Grazed pastures

Dry matter (DM)	20.0	% of DM
Metabolisible energy (ME)	10.0	MJ/kg DM



Protein

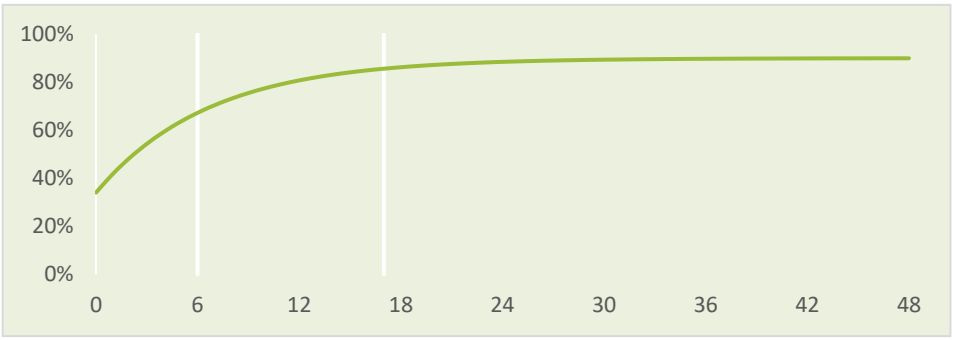
Crude protein (CP)	20.3	% of DM



Protein degradability

a	0.34
b	0.56
c	0.15

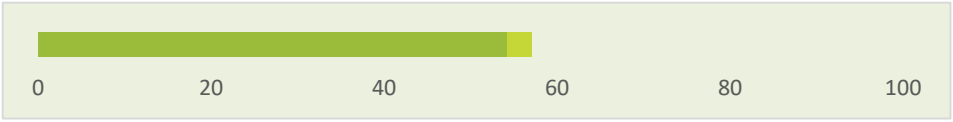
ADIN	0.09	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	57.1	% of DM
eNDF	95	% of NDF



Starch	3.5	% of DM

Sugar	7.8	% of DM
Fat	4.2	% of DM
Ash	10.6	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

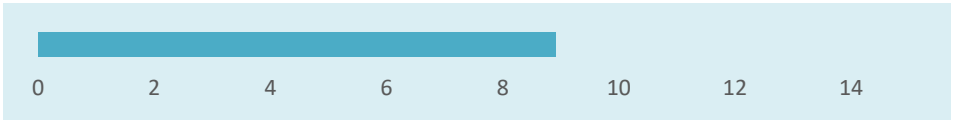
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.44	0.34	0.29	3.16	0.32	1.63	0.44	215
Absorption %	30	64	16					

Comment

Name	Ryegrass/clover hay - Average

Category Hays

Dry matter (DM)	86.2	% of DM
Metabolisible energy (ME)	8.9	MJ/kg DM

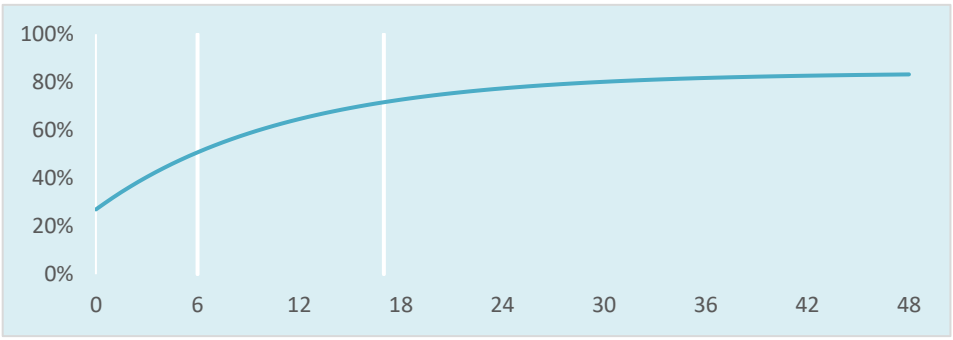


Protein

Crude protein (CP)	11.3	% of DM

Protein degradability

a	0.27
b	0.57
c	0.09
ADIN	0.16 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	60.3	% of DM
eNDF	99	% of NDF

Starch	1.6	% of DM

Sugar	8.4	% of DM
Fat	2.2	% of DM
Ash	8.1	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

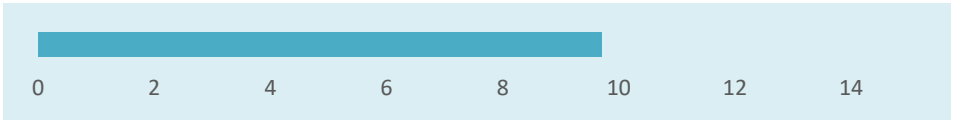
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.63	0.29	0.29	2.13	0.19	0.78	0.22	271
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name	Ryegrass/clover hay - Good

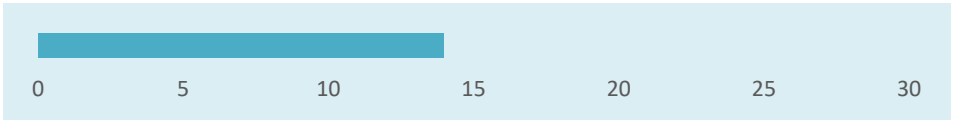
Category Hays

Dry matter (DM)	85.3	% of DM
Metabolisible energy (ME)	9.7	MJ/kg DM

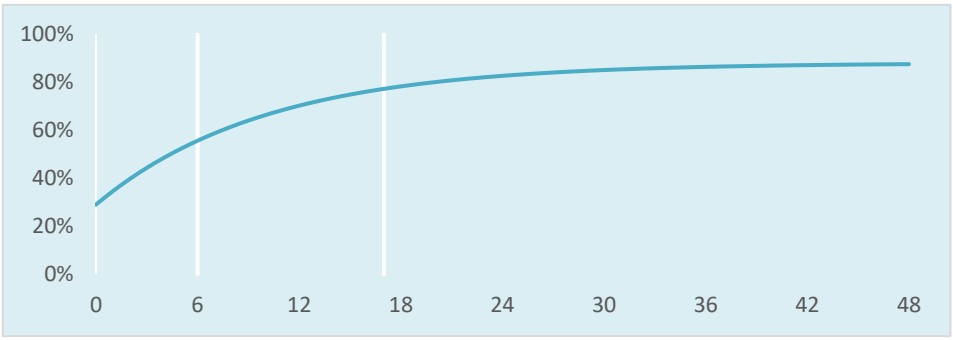


Protein

Crude protein (CP)	14.0	% of DM



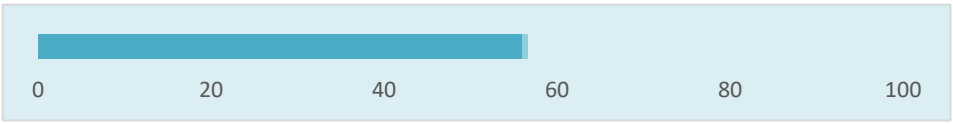
Protein degradability	
a	0.29
b	0.59
c	0.10
ADIN	0.14 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	56.6	% of DM
eNDF	99	% of NDF



Starch	2.0	% of DM

Sugar	11.4	% of DM
Fat	2.4	% of DM
Ash	7.5	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.61	0.34	0.26	2.25	0.09	0.61	0.23	298
Absorption %	30	64	16					

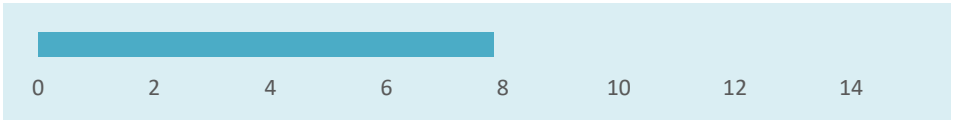
Comment Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name	Ryegrass/clover hay - Poor

Category

Hays

Dry matter (DM)	85.2	% of DM
Metabolisible energy (ME)	7.8	MJ/kg DM



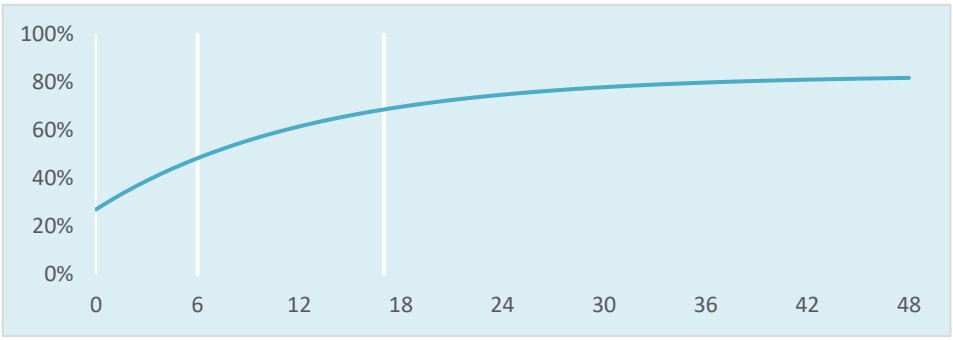
Protein

Crude protein (CP)	8.0	% of DM

Protein degradability

a	0.27
b	0.56
c	0.08

ADIN	0.14	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	68.3	% of DM
eNDF	99	% of NDF

Starch	1.2	% of DM

Sugar	5.5	% of DM
Fat	2.2	% of DM
Ash	7.2	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.51	0.27	0.22	1.99	0.10	0.71	0.18	239
Absorption %	30	64	16					

Comment	Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

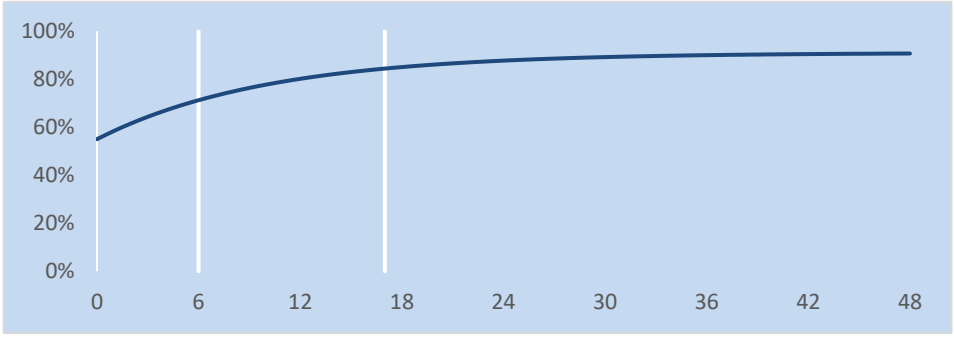
Name Ryegrass/clover silage - Average - Pit

Category Silages

Dry matter (DM)	32.1	% of DM
Metabolisible energy (ME)	10.2	MJ/kg DM

Protein

Crude protein (CP)	15.1	% of DM
Protein degradability		
a	0.55	
b	0.36	
c	0.10	
ADIN	0.15	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	51.2	% of DM
eNDF	80	% of NDF
Starch	1.3	% of DM

Sugar	3.9	(2.0-7.3)	% of DM (Typical range)
Fat	3.7	(2.6-5.4)	% of DM (Typical range)
Ash	9.5	(7.8-11.4)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

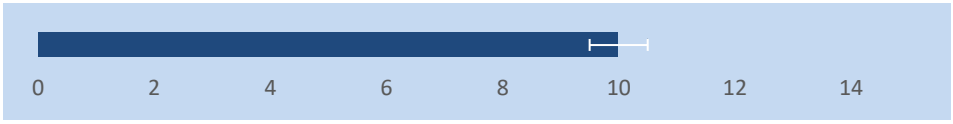
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.58	0.34	0.25	2.68	0.18	0.73	0.20	434
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides)

Name Ryegrass/clover silage - Average - Round bales

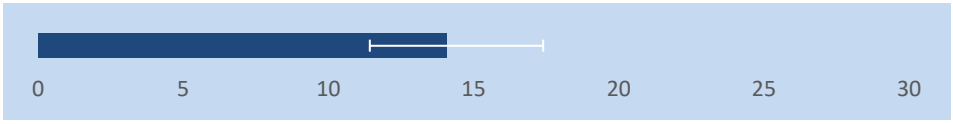
Category Silages

Dry matter (DM)	37.6	% of DM
Metabolisible energy (ME)	10.0	MJ/kg DM



Protein

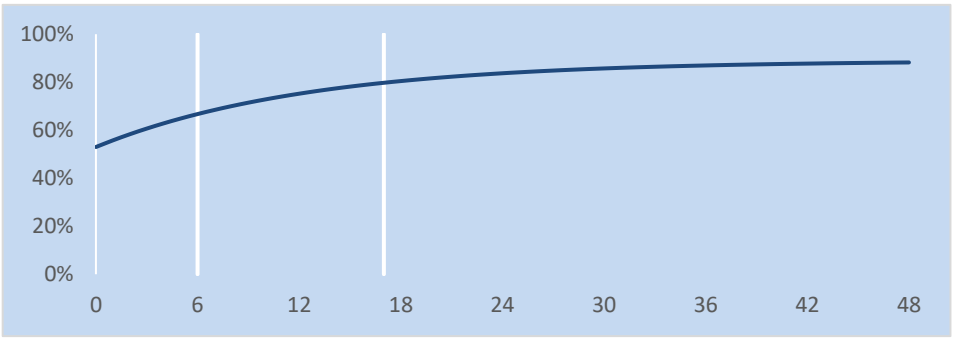
Crude protein (CP)	14.1	% of DM



Protein degradability

a	0.53
b	0.36
c	0.08

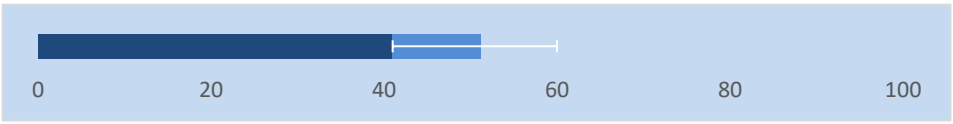
ADIN	0.16	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	51.1	% of DM
eNDF	80	% of NDF



Starch	1.5	% of DM

Sugar	6.8	(4.2-11.0)	% of DM (Typical range)
Fat	3.1	(2.0-4.0)	% of DM (Typical range)
Ash	8.8	(6.3-12.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

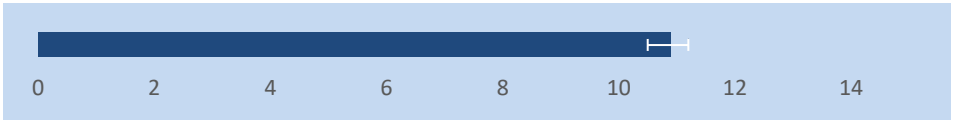
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.67	0.32	0.29	2.42	0.21	0.74	0.20	378
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides)

Name Ryegrass/clover silage - Good - Pit

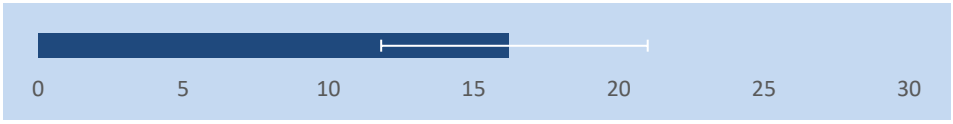
Category Silages

Dry matter (DM)	31.8	% of DM
Metabolisible energy (ME)	10.9	MJ/kg DM



Protein

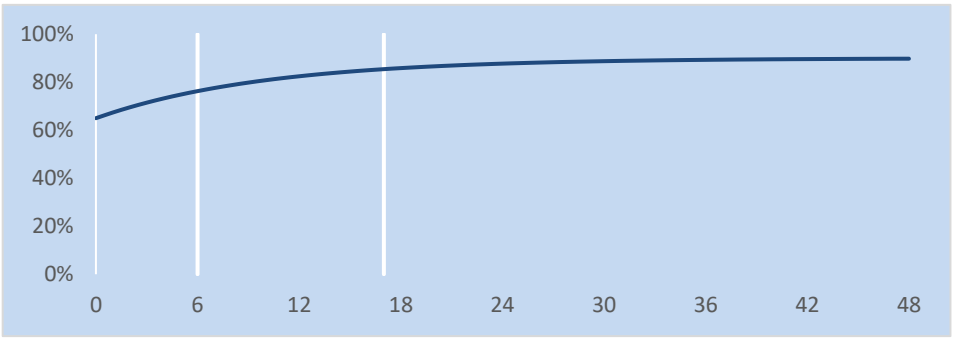
Crude protein (CP)	16.2	% of DM



Protein degradability

a	0.65
b	0.25
c	0.10

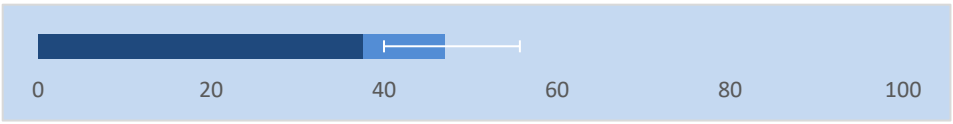
ADIN	0.11	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	47.0	% of DM
eNDF	80	% of NDF



Starch	2.3	% of DM

Sugar	4.9	(3.7-6.0)	% of DM (Typical range)
Fat	4.3	(3.0-6.0)	% of DM (Typical range)
Ash	7.9	(7.4-8.4)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

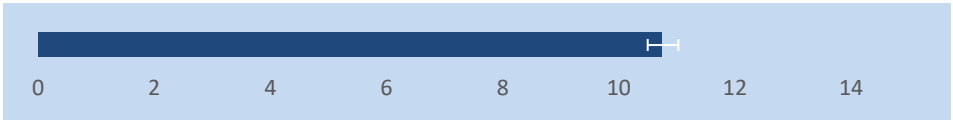
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.72	0.36	0.36	2.87	0.20	0.95	0.20	428
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides)

Name Ryegrass/clover silage - Good - Round bales

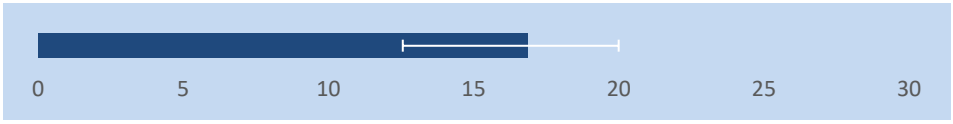
Category Silages

Dry matter (DM)	36.5	% of DM
Metabolisible energy (ME)	10.7	MJ/kg DM



Protein

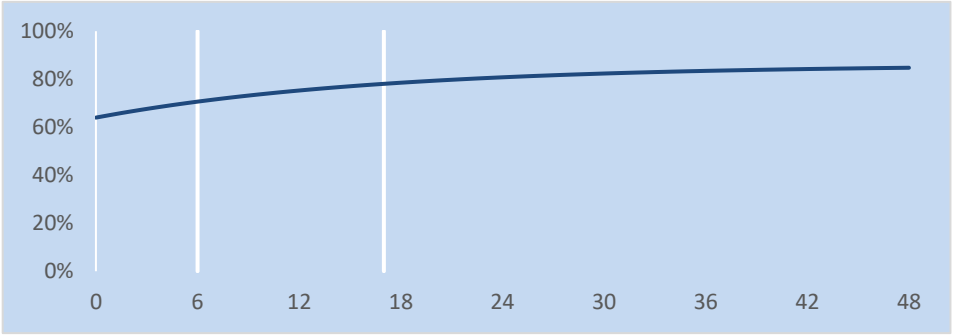
Crude protein (CP)	16.8	% of DM



Protein degradability

a	0.64
b	0.22
c	0.06

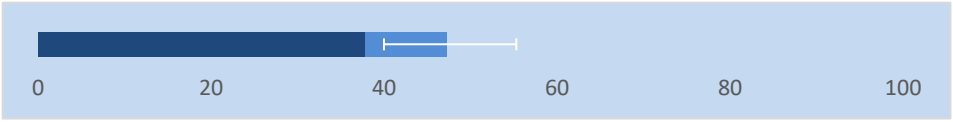
ADIN 0.11 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	47.3	% of DM
eNDF	80	% of NDF



Starch	1.4	% of DM

Sugar	4.6	(3.7-5.5)	% of DM (Typical range)
Fat	3.3	(3.0-4.0)	% of DM (Typical range)
Ash	6.9	(6.0-7.9)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

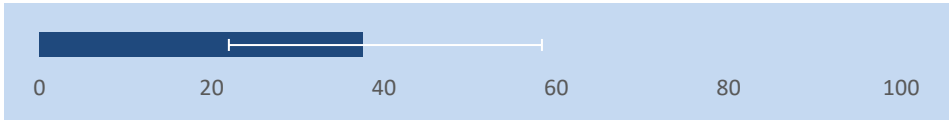
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.79	0.33	0.39	2.76	0.20	0.84	0.20	431
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides)

Name Ryegrass/clover silage - Poor - Pit

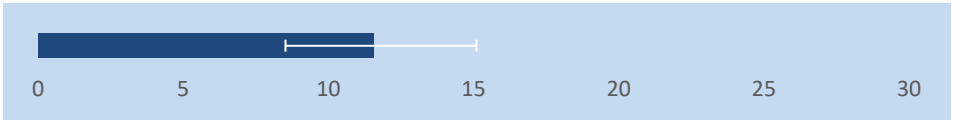
Category Silages

Dry matter (DM)	37.6	% of DM
Metabolisible energy (ME)	9.1	MJ/kg DM



Protein

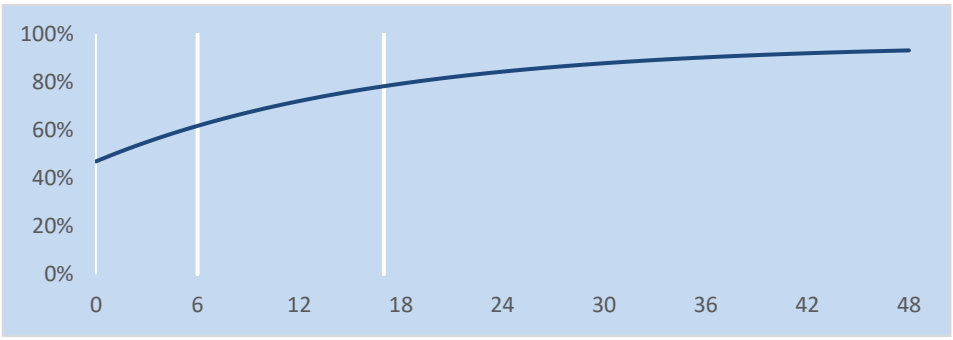
Crude protein (CP)	11.5	% of DM



Protein degradability

a	0.47
b	0.49
c	0.06

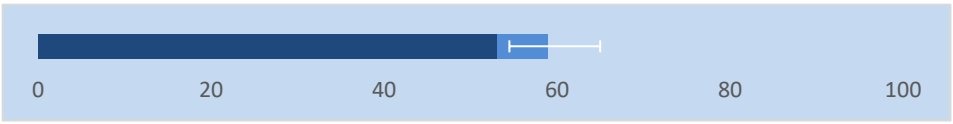
ADIN	0.10	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	58.9	% of DM
eNDF	90	% of NDF



Starch	1.1	% of DM

Sugar	2.3	(1.0-3.7)	% of DM (Typical range)
Fat	3.0	(2.2-4.0)	% of DM (Typical range)
Ash	10.4	(8.1-14.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

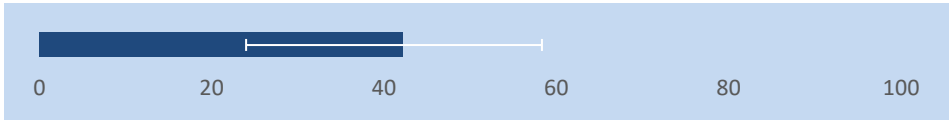
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.52	0.31	0.21	2.67	0.15	0.85	0.20	384
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides)

Name Ryegrass/clover silage - Poor - Round bales

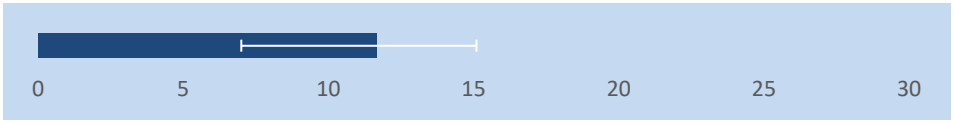
Category Silages

Dry matter (DM)	42.1	% of DM
Metabolisible energy (ME)	8.9	MJ/kg DM



Protein

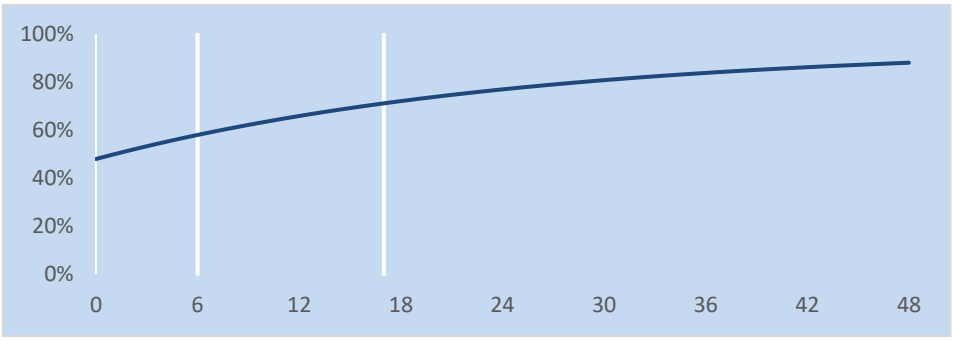
Crude protein (CP)	11.7	% of DM



Protein degradability

a	0.48
b	0.47
c	0.04

ADIN	0.12	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	60.9	% of DM
eNDF	90	% of NDF

Starch	0.5	% of DM

Sugar	3.0	(2.2-3.7)	% of DM (Typical range)
Fat	3.0	(2.2-4.0)	% of DM (Typical range)
Ash	7.5	(7.5-7.5)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.59	0.28	0.24	2.21	0.15	0.85	0.20	267
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides)

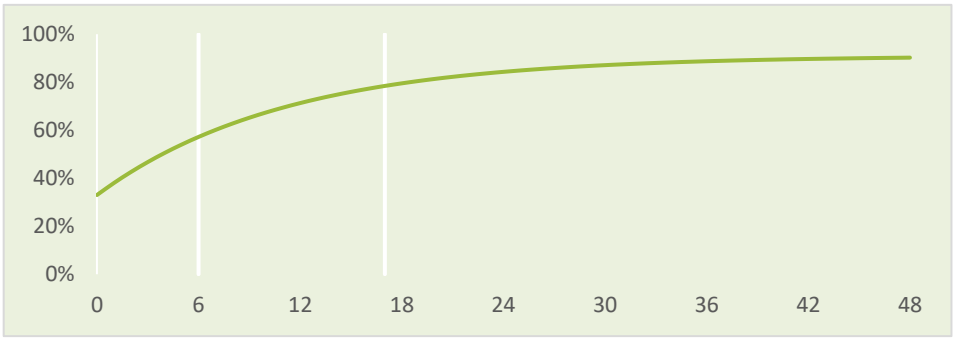
Name Setaria

Category Grazed pastures

Dry matter (DM)	19.4	% of DM
Metabolisible energy (ME)	8.9	MJ/kg DM

Protein

Crude protein (CP)	15.0	% of DM
Protein degradability		
a	0.33	
b	0.58	
c	0.09	
ADIN	0.22	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	60.5	% of DM
eNDF	94	% of NDF
Starch	2.0	% of DM
Sugar	9.9	% of DM
Fat	2.8 (2.0-4.0)	% of DM (Typical range)
Ash	10.4 (9.7-11.1)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.22	0.19	0.18	2.63	0.21	1.03	0.17	365
Absorption %	30	64	16					

Comment

Name Sod tripolyphosphate

Category Mineral or Additives

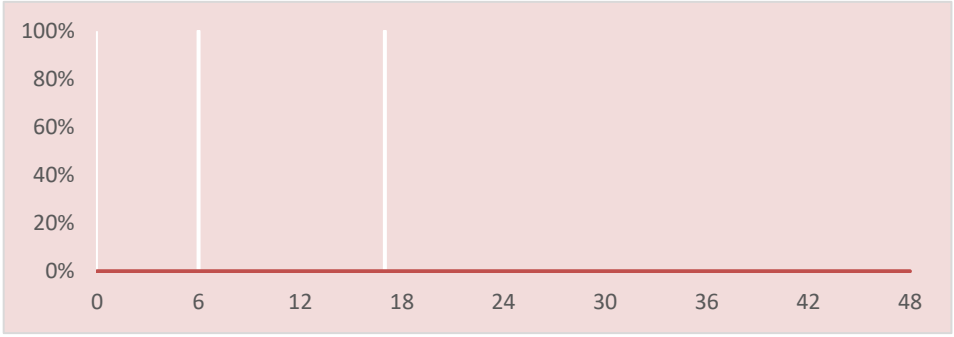
Dry matter (DM)	96.0	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM

Protein degradability

a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM

Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	96.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	25.00	0.00	0.00	20.67	0.00	0.00	8990
Absorption %	0	75	0					

Comment

Name	Sodium bicarbonate

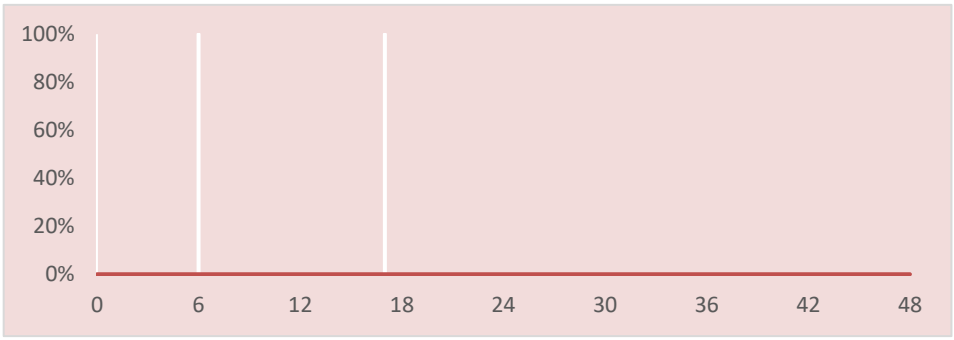
Category

Mineral or Additives

Dry matter (DM)	100.0	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM
Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM
Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	100.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	0.00	0.00	0.00	27.00	0.00	0.00	11744
Absorption %	0	0	0					

Comment

Name	Sodium chloride

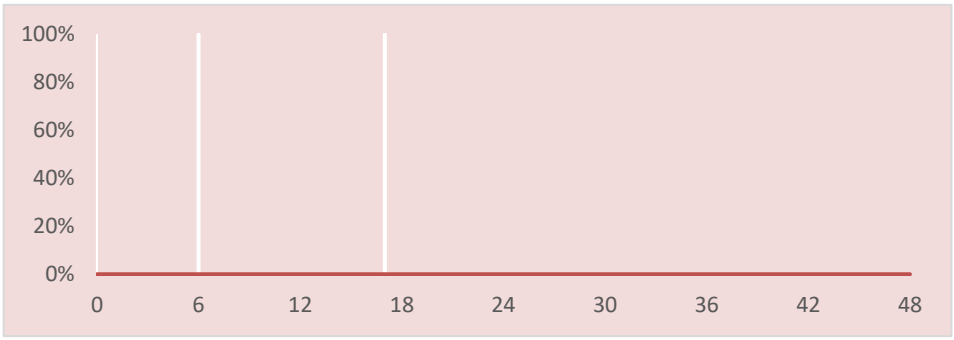
Category

Mineral or Additives

Dry matter (DM)	100.0	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM
Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM
Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	100.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	0.00	0.00	0.00	39.34	60.66	0.00	2
Absorption %	0	0	0					

Comment

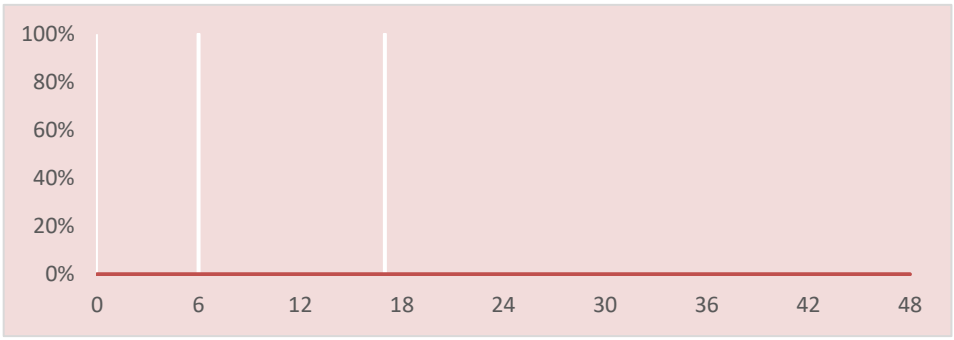
Name Sodium sulphate

Category Mineral or Additives

Dry matter (DM)	97.0	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	0.0	% of DM
Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM
Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	97.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	0.00	0.00	0.00	14.27	0.00	9.95	1
Absorption %	0	0	0					

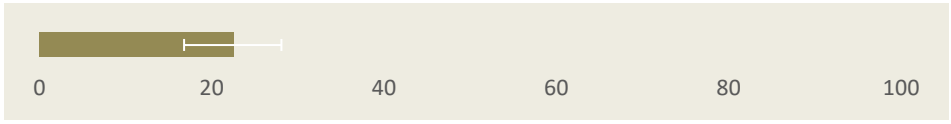
Comment

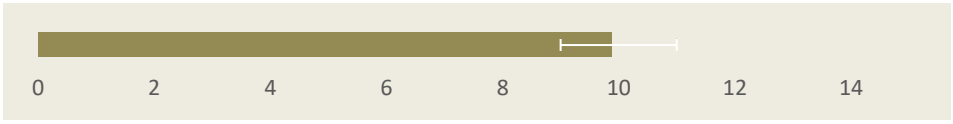
Name	Sorghum

Category

Other grazed forages

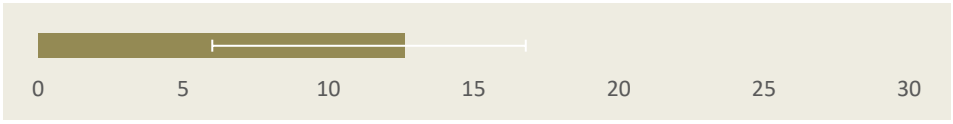
Dry matter (DM)	22.6	% of DM
Metabolisible energy (ME)	9.9	MJ/kg DM





Protein

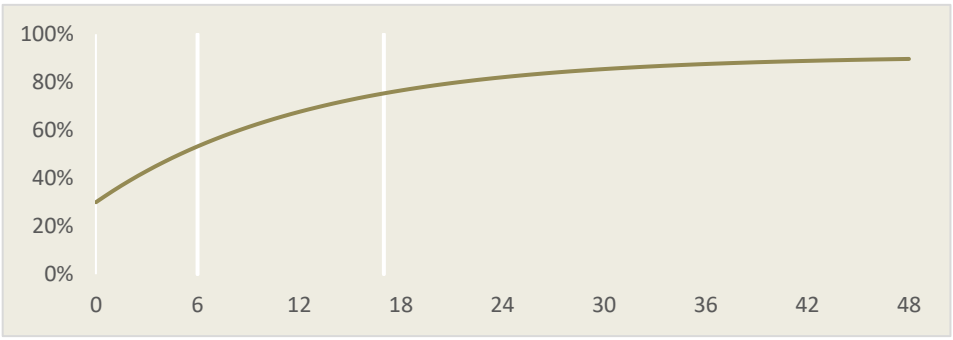
Crude protein (CP)	12.6	% of DM



Protein degradability

a	0.30
b	0.61
c	0.08

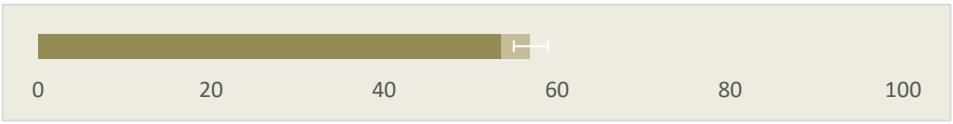
ADIN	0.11	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	56.8	% of DM
eNDF	94	% of NDF



Starch	2.6	% of DM

Sugar	12.8	(11.8-13.8)	% of DM (Typical range)
Fat	2.8	(1.9-3.2)	% of DM (Typical range)
Ash	8.3	(6.5-9.2)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

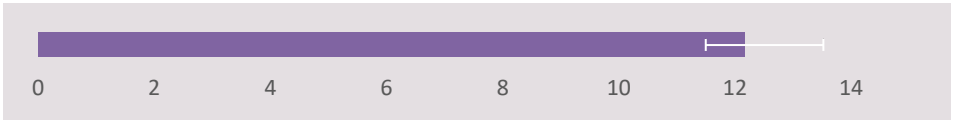
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.35	0.22	0.29	1.79	0.08	0.70	0.04	266
Absorption %	30	64	16					

Comment

Name Sorghum (grain)

Category Grain or Concentrates

Dry matter (DM)	88.7	% of DM
Metabolisible energy (ME)	12.2	MJ/kg DM



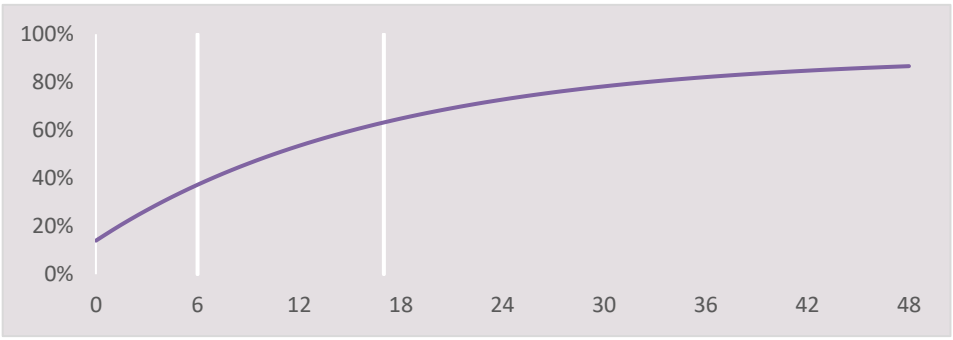
Protein

Crude protein (CP)	10.8	% of DM

Protein degradability

a	0.14
b	0.77
c	0.06

ADIN 0.13 % of DM

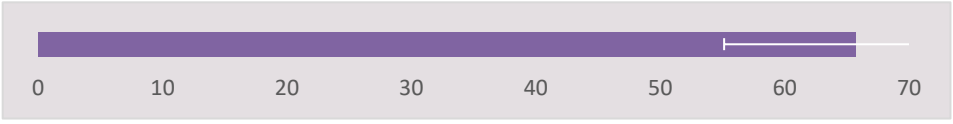


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	14.8	% of DM
eNDF	27	% of NDF

Starch	65.7	% of DM



Sugar	3.6	(1.3-6.1)	% of DM (Typical range)
Fat	3.3	(3.1-3.8)	% of DM (Typical range)
Ash	1.9	(1.6-2.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

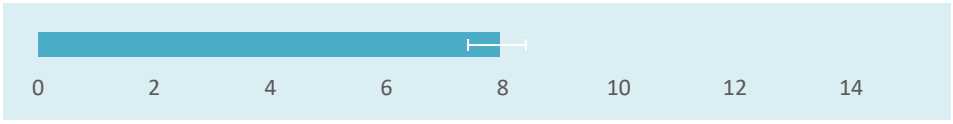
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.04	0.32	0.15	0.40	0.02	0.08	0.14	1
Absorption %	60	70	16					

Comment

Name Sorghum hay

Category Hays

Dry matter (DM)	89.7	% of DM
Metabolisible energy (ME)	8.0	MJ/kg DM



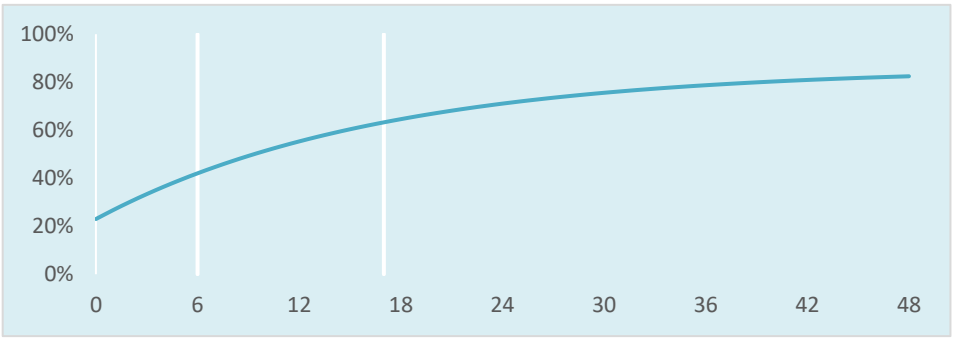
Protein

Crude protein (CP)	9.0	% of DM

Protein degradability

a	0.23
b	0.63
c	0.06

ADIN	0.13	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	65.8	% of DM
eNDF	99	% of NDF

Starch	3.0	% of DM

Sugar	8.7	(7.9-9.5)	% of DM (Typical range)
Fat	2.0	(1.4-2.3)	% of DM (Typical range)
Ash	9.1	(8.7-10.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.43	0.26	0.39	2.02	0.02	1.01	0.10	181
Absorption %	30	64	16					

Comment Cyanide poisoning. Potential residue risks (insecticides, herbicides, fungicides). Risk of mould.

Name Sorghum silage

Category Silages

Dry matter (DM)	32.3	% of DM
Metabolisible energy (ME)	8.5	MJ/kg DM

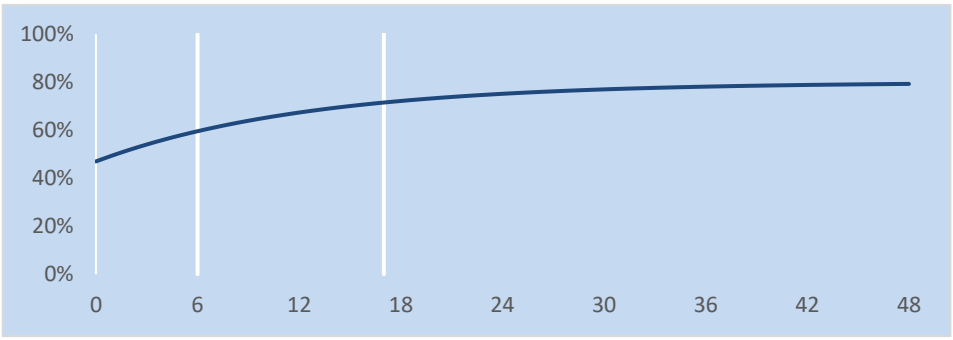
Protein

Crude protein (CP)	9.1	% of DM

Protein degradability

a	0.47
b	0.33
c	0.08

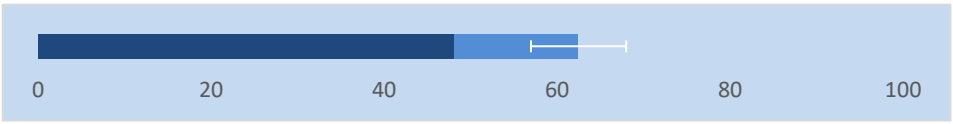
ADIN	0.20	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	62.3	% of DM
eNDF	77	% of NDF



Starch	11.3	% of DM

Sugar	3.7	(1.9-5.6)	% of DM (Typical range)
Fat	3.0	(2.4-3.6)	% of DM (Typical range)
Ash	8.4	(6.0-10.9)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.44	0.23	0.28	1.85	0.02	0.80	0.12	185
Absorption %	30	64	16					

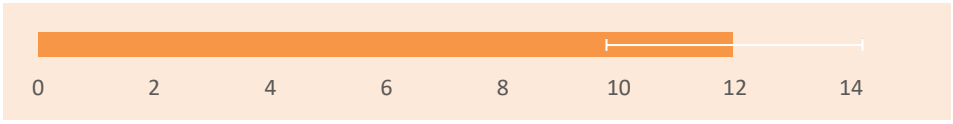
Comment Cyanide poisoning. Potential residue risk (insecticides, herbicides, fungicides)

Name	Soyabean hulls

Category

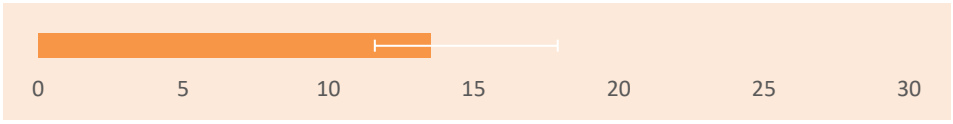
By-product (inc. straws)

Dry matter (DM)	90.2	% of DM
Metabolisible energy (ME)	12.0	MJ/kg DM



Protein

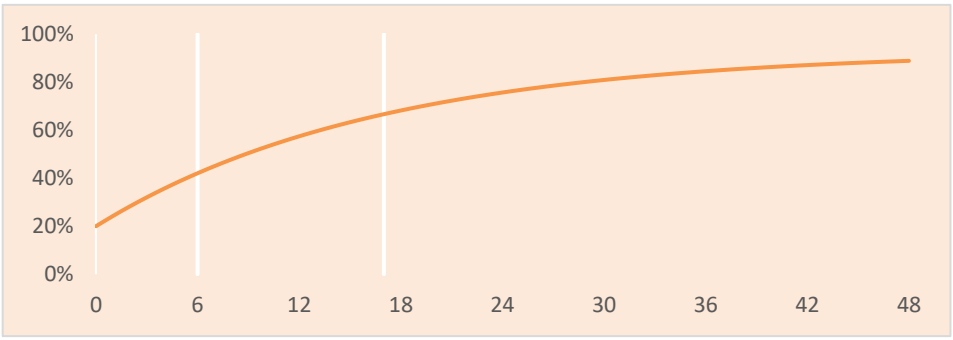
Crude protein (CP)	13.5	% of DM



Protein degradability

a	0.20
b	0.73
c	0.06

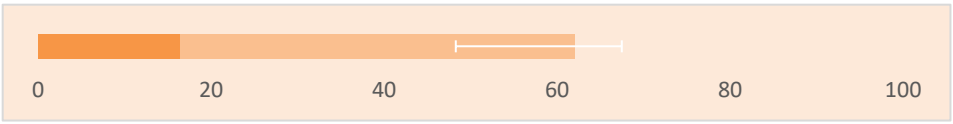
ADIN	0.17	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	62.1	% of DM
eNDF	26	% of NDF



Starch	2.3	% of DM

Sugar	4.0	(0.7-9.0)	% of DM (Typical range)
Fat	2.8	(1.8-7.0)	% of DM (Typical range)
Ash	4.9	(4.5-5.3)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

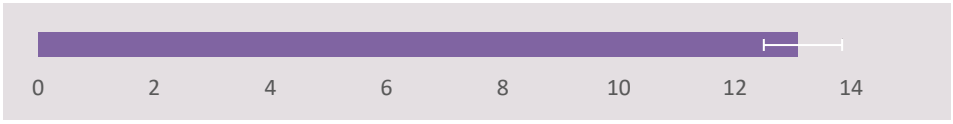
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.58	0.18	0.25	1.29	0.01	0.03	0.12	252
Absorption %	30	64	16					

Comment	Potential residue risk (insecticides, herbicides, fungicides)

Name Soyabean meal

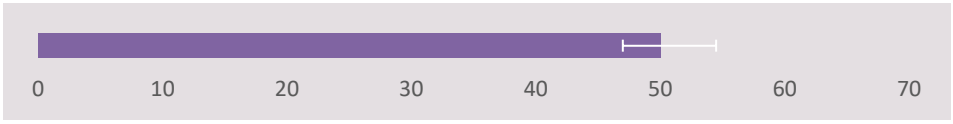
Category Grain or Concentrates

Dry matter (DM)	89.4	% of DM
Metabolisible energy (ME)	13.1	MJ/kg DM



Protein

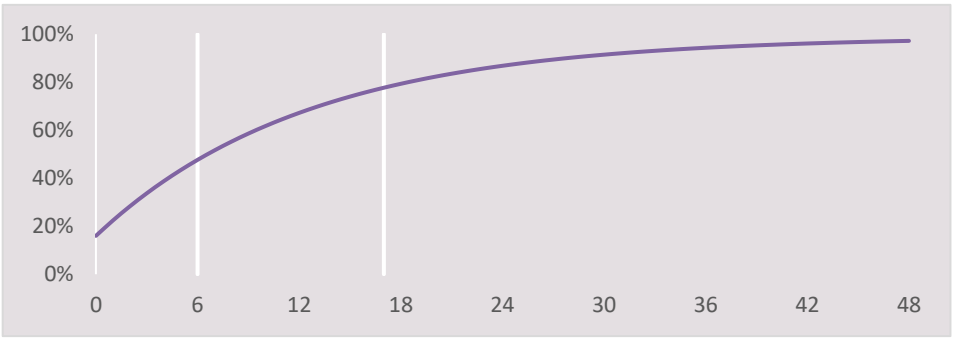
Crude protein (CP)	50.0	% of DM



Protein degradability

a	0.16
b	0.83
c	0.08

ADIN	0.16	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	13.4	% of DM
eNDF	32	% of NDF

Starch	2.7	% of DM

Sugar	9.8	(2.7-13.2)	% of DM (Typical range)
Fat	2.0	(1.1-3.6)	% of DM (Typical range)
Ash	7.3	(6.6-8.3)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

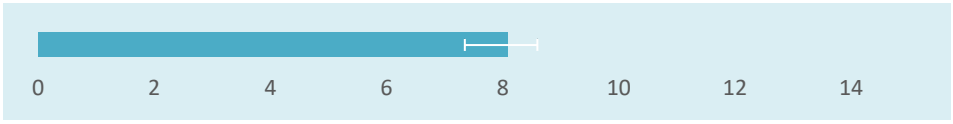
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.35	0.73	0.30	2.14	0.06	0.08	0.44	276
Absorption %	60	70	16					

Comment

Name Soybean hay

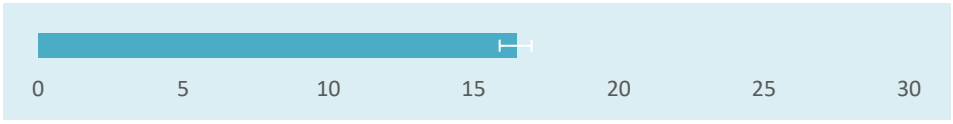
Category Hays

Dry matter (DM)	90.1	% of DM
Metabolisible energy (ME)	8.1	MJ/kg DM



Protein

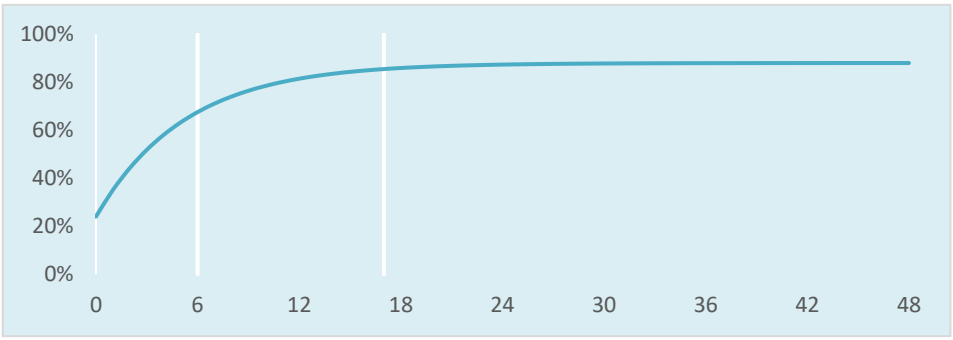
Crude protein (CP)	16.5	% of DM



Protein degradability

a	0.24
b	0.64
c	0.19

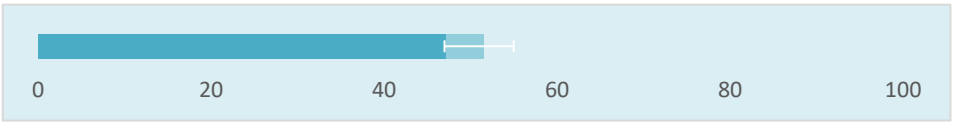
ADIN	0.21	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	51.5	% of DM
eNDF	92	% of NDF



Starch	4.2	% of DM

Sugar	5.3		% of DM
Fat	4.0	(2.5-5.4)	% of DM (Typical range)
Ash	8.9	(7.6-11.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

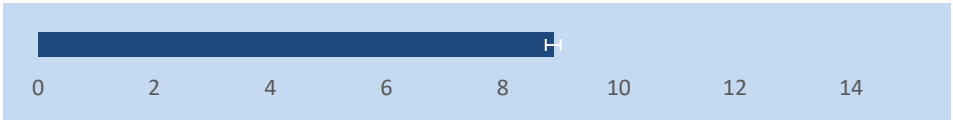
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.09	0.26	0.08	1.07	0.12	0.92	0.25	-92
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name Soybean silage

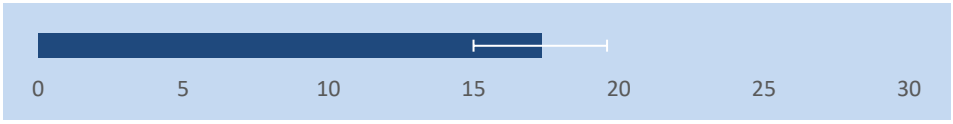
Category Silages

Dry matter (DM)	37.6	% of DM
Metabolisible energy (ME)	8.9	MJ/kg DM

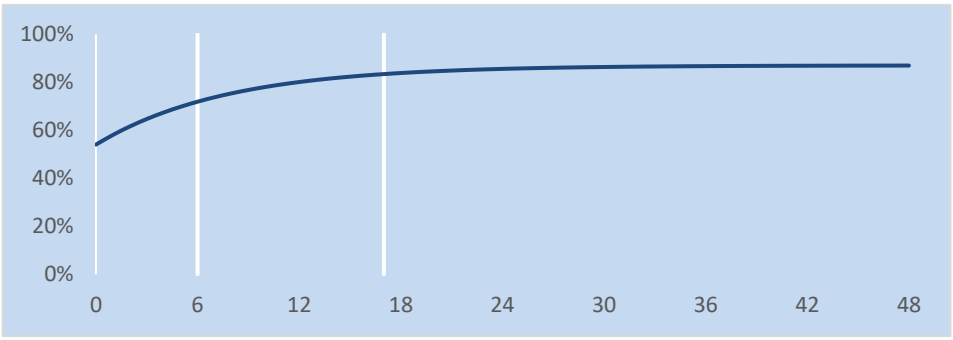


Protein

Crude protein (CP)	17.3	% of DM



Protein degradability		
a	0.54	
b	0.33	
c	0.13	
ADIN	0.17	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	49.4	% of DM
eNDF	85	% of NDF

Starch	1.8	% of DM

Sugar	4.4		% of DM
Fat	5.0	(4.4-5.7)	% of DM (Typical range)
Ash	10.7	(9.3-12.2)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

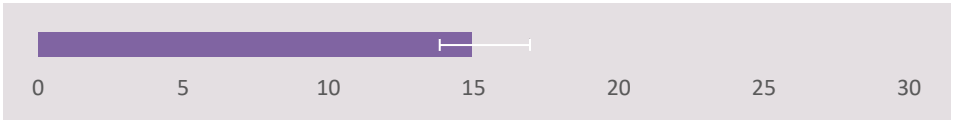
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.32	0.34	0.46	2.31	0.01	0.17	0.25	390
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides)

Name Soybeans (full fat)

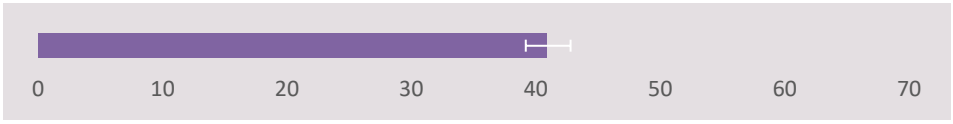
Category Grain or Concentrates

Dry matter (DM)	90.1	% of DM
Metabolisible energy (ME)	14.9	MJ/kg DM

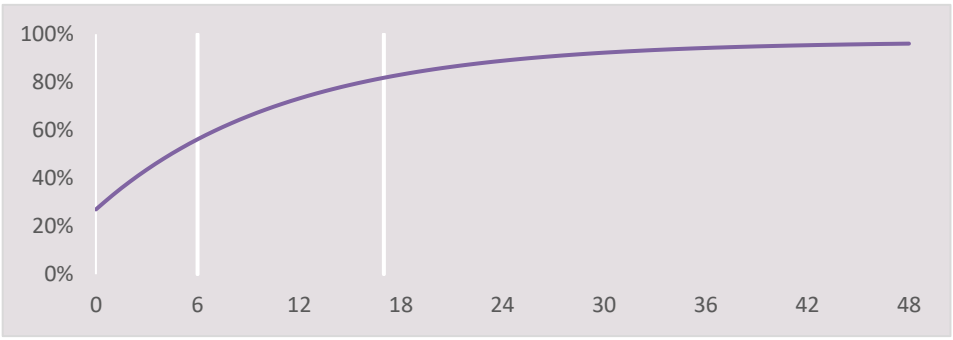


Protein

Crude protein (CP)	40.9	% of DM



Protein degradability		
a	0.27	
b	0.70	
c	0.09	
ADIN	0.16	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	14.2	% of DM
eNDF	75	% of NDF

Starch	3.5	% of DM

Sugar	9.8	(7.6-12.3)	% of DM (Typical range)
Fat	20.0	(18.0-22.8)	% of DM (Typical range)
Ash	5.6	(5.0-6.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.29	0.60	0.24	1.87	0.04	0.05	0.30	293
Absorption %	60	70	16					

Comment High fat content

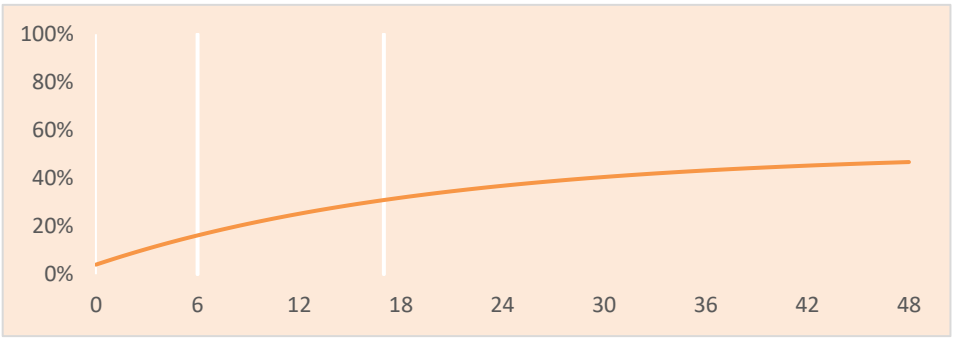
Name	Sugar cane bagasse (dry)
Category	By-product (inc. straws)

Dry matter (DM)	92.2	% of DM
Metabolisible energy (ME)	5.6	MJ/kg DM

Protein

Crude protein (CP)	2.6	% of DM

Protein degradability		
a	0.04	
b	0.47	
c	0.05	
ADIN	0.10	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	81.2	% of DM
eNDF	100	% of NDF

Starch	0.1	% of DM

Sugar	3.0		% of DM
Fat	1.0	(0.6-1.3)	% of DM (Typical range)
Ash	5.2	(4.0-6.2)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.42	0.15	0.05	0.31	0.01	0.10	0.04	31
Absorption %	30	64	16					

Comment	Potential residue risk (insecticides, herbicides, fungicides)

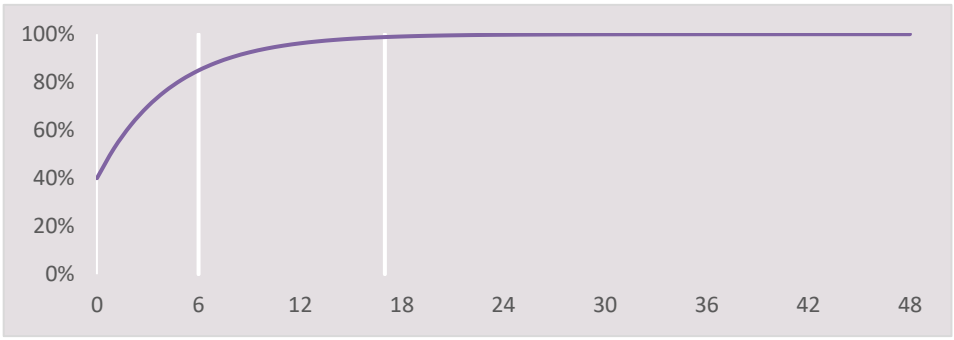
Name Sunflower meal

Category Grain or Concentrates

Dry matter (DM)	90.9	% of DM
Metabolisible energy (ME)	9.8	MJ/kg DM

Protein

Crude protein (CP)	36.6	% of DM
Protein degradability		
a	0.40	
b	0.60	
c	0.23	
ADIN	0.23	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	37.2	% of DM
eNDF	36	% of NDF
Starch	3.8	% of DM

Sugar	6.4	(3.5-9.4)	% of DM (Typical range)
Fat	2.9	(1.2-7.6)	% of DM (Typical range)
Ash	7.6	(6.5-9.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

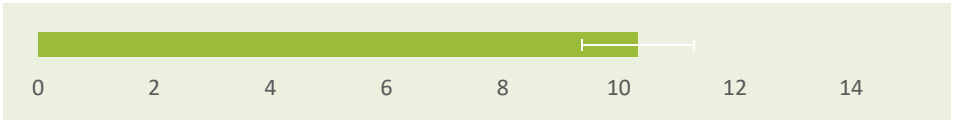
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.42	1.03	0.70	1.25	0.21	0.13	0.28	202
Absorption %	60	70	16					

Comment

Name Tall Fescue - Dryland

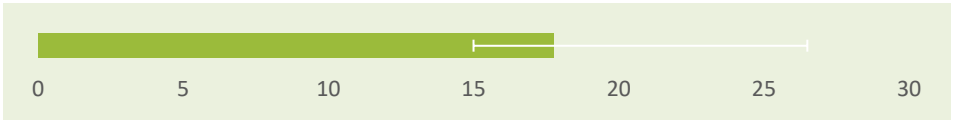
Category Grazed pastures

Dry matter (DM)	22.9	% of DM
Metabolisible energy (ME)	10.3	MJ/kg DM

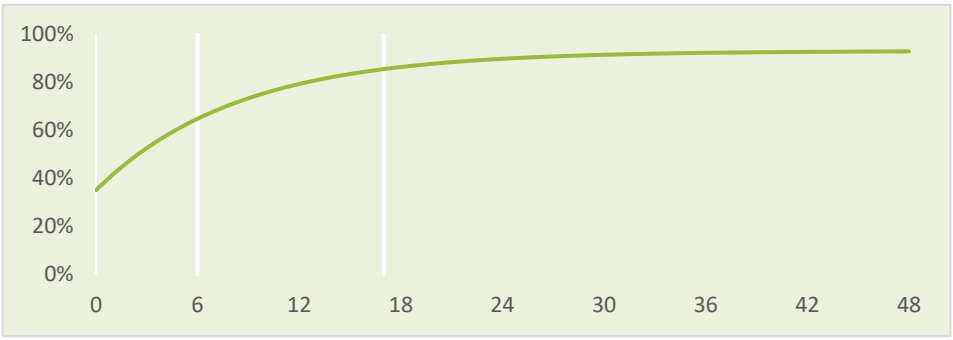


Protein

Crude protein (CP)	17.8	% of DM



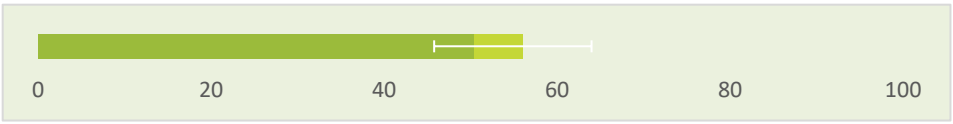
Protein degradability	
a	0.35
b	0.58
c	0.12
ADIN	0.09 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	56.0	% of DM
eNDF	90	% of NDF



Starch	1.9	% of DM

Sugar	10.3	(9.0-12.0)	% of DM (Typical range)
Fat	3.0	(2.0-5.5)	% of DM (Typical range)
Ash	8.9	(7.5-9.8)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

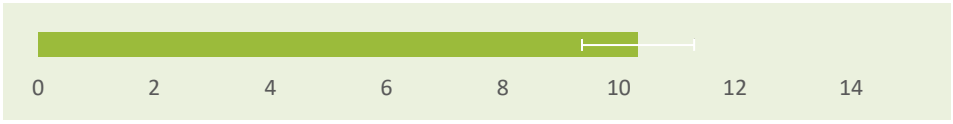
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.55	0.39	0.28	2.95	0.17	0.77	0.17	508
Absorption %	30	64	16					

Comment

Name Tall Fescue - Irrigated

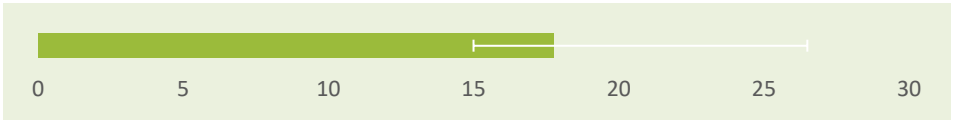
Category Grazed pastures

Dry matter (DM)	22.9	% of DM
Metabolisible energy (ME)	10.3	MJ/kg DM



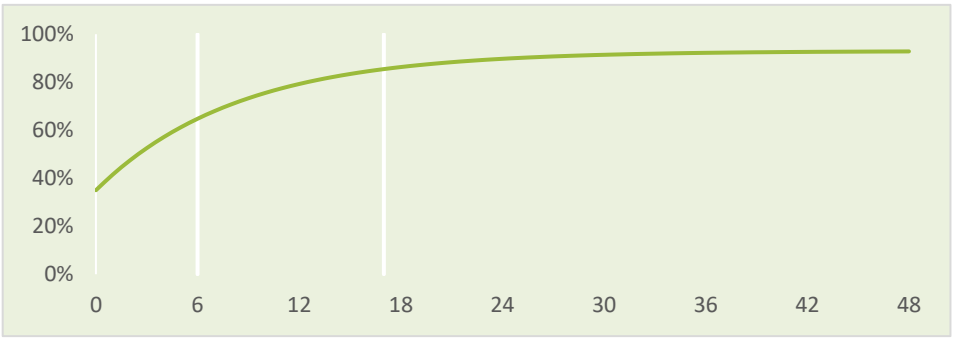
Protein

Crude protein (CP)	17.8	% of DM



Protein degradability

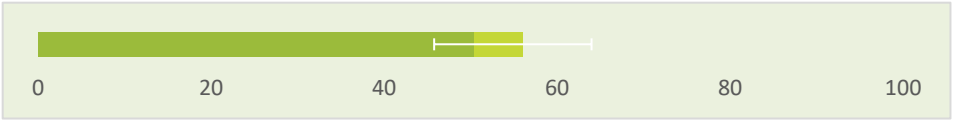
a	0.35
b	0.58
c	0.12
ADIN	0.09 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	56.0	% of DM
eNDF	90	% of NDF



Starch	1.9	% of DM

Sugar	10.3	(9.0-12.0)	% of DM (Typical range)
Fat	3.0	(2.0-5.5)	% of DM (Typical range)
Ash	8.9	(7.5-9.8)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.55	0.39	0.28	2.95	0.17	0.77	0.17	508
Absorption %	30	64	16					

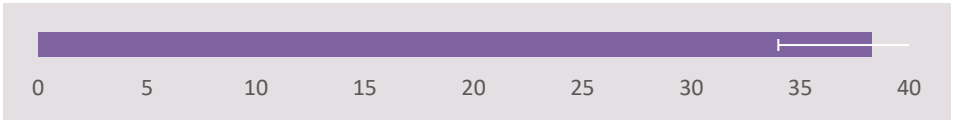
Comment

Name	Tallow

Category

Grain or Concentrates

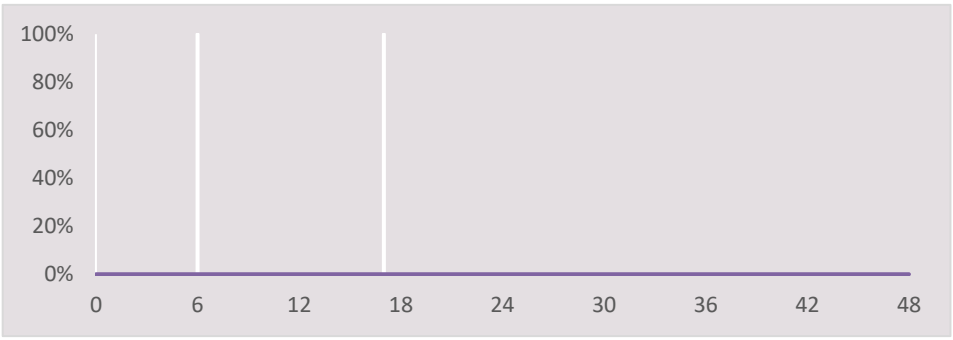
Dry matter (DM)	99.1	% of DM
Metabolisible energy (ME)	38.3	MJ/kg DM



Protein

Crude protein (CP)	0.0	% of DM

Protein degradability		
a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF

Starch	0.0	% of DM

Sugar	0.0		% of DM
Fat	99.4	(98.5-100.0)	% of DM (Typical range)
Ash	0.2		% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

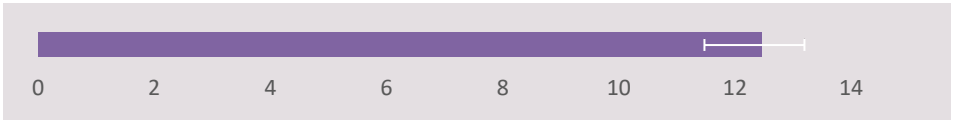
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Absorption %	60	70	16					

Comment: Ensure total dietary fat level does not exceed 6-7%DM

Name Tapioca

Category Grain or Concentrates

Dry matter (DM)	88.4	% of DM
Metabolisible energy (ME)	12.5	MJ/kg DM



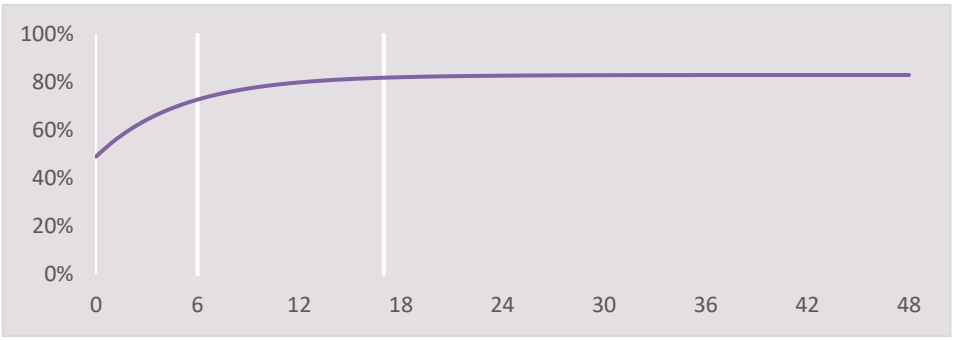
Protein

Crude protein (CP)	2.8	% of DM

Protein degradability

a	0.49
b	0.34
c	0.20

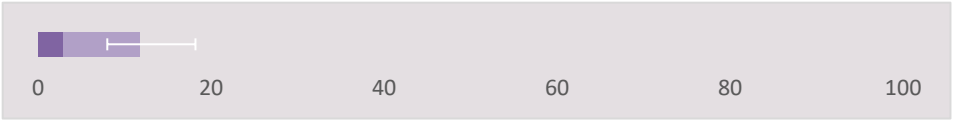
ADIN	0.07	% of DM



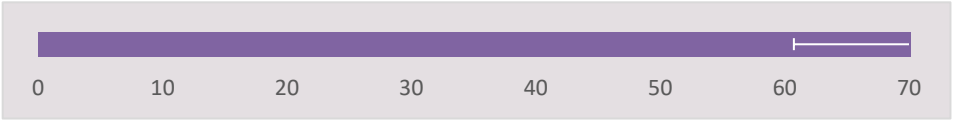
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	11.8	% of DM
eNDF	25	% of NDF



Starch	73.1	% of DM



Sugar	3.4	(0.8-6.8)	% of DM (Typical range)
Fat	0.8	(0.6-1.0)	% of DM (Typical range)
Ash	4.2	(2.5-6.3)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

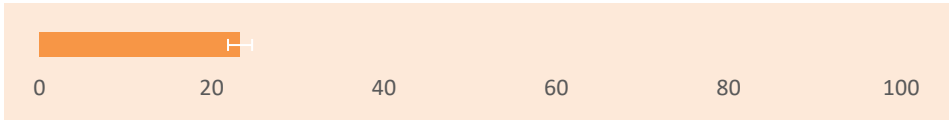
Minerals

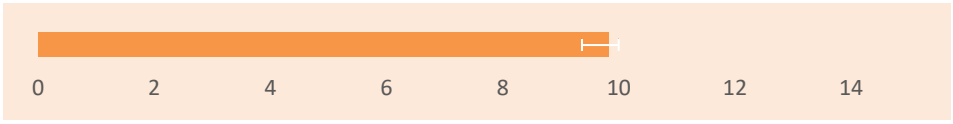
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.16	0.16	0.10	0.80	0.03	0.09	0.31	2
Absorption %	60	70	16					

Comment Ruminal acidosis risk (risk level depends on many herd, feed and feeding management factors)

Name	Tomato pulp
Category	By-product (inc. straws)

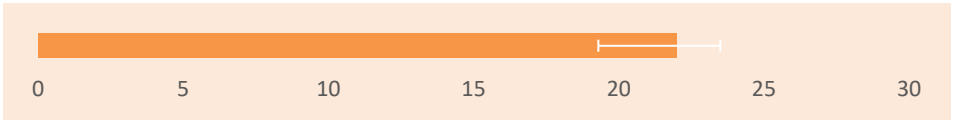
Dry matter (DM)	23.3	% of DM
Metabolisible energy (ME)	9.8	MJ/kg DM



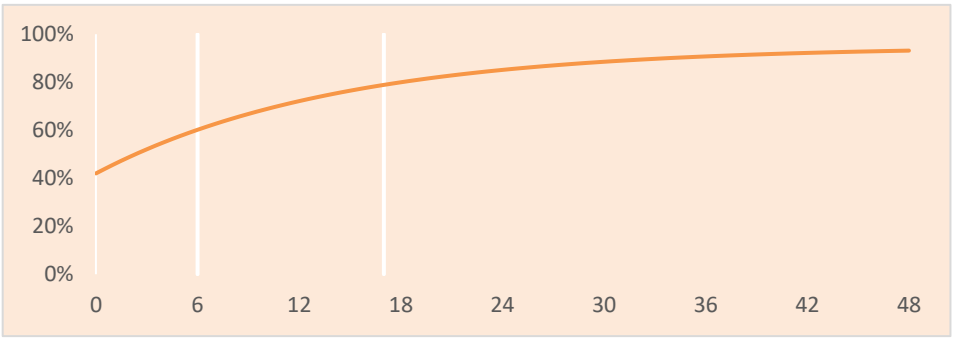


Protein

Crude protein (CP)	22.0	% of DM



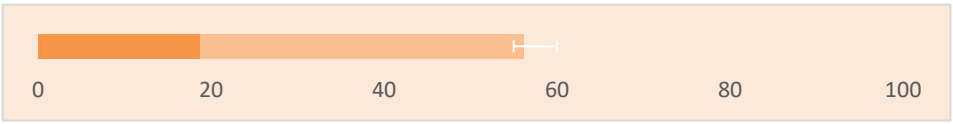
Protein degradability	
a	0.42
b	0.53
c	0.07
ADIN	0.41 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	56.2	% of DM
eNDF	33	% of NDF



Starch	2.7	% of DM

Sugar	0.6		% of DM
Fat	11.1	(10.3-13.3)	% of DM (Typical range)
Ash	5.4	(5.0-6.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.42	0.54	0.23	2.62	0.09	0.08	0.15	595
Absorption %	60	70	16					

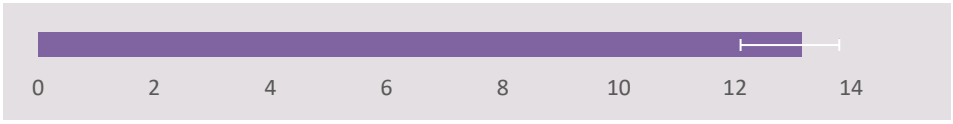
Comment	Potential residue risk (insecticides, herbicides, fungicides)

Name	Triticale grain

Category

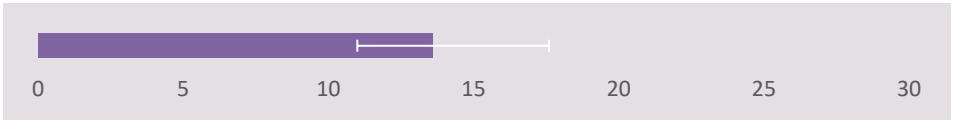
Grain or Concentrates

Dry matter (DM)	88.8	% of DM
Metabolisible energy (ME)	13.2	MJ/kg DM

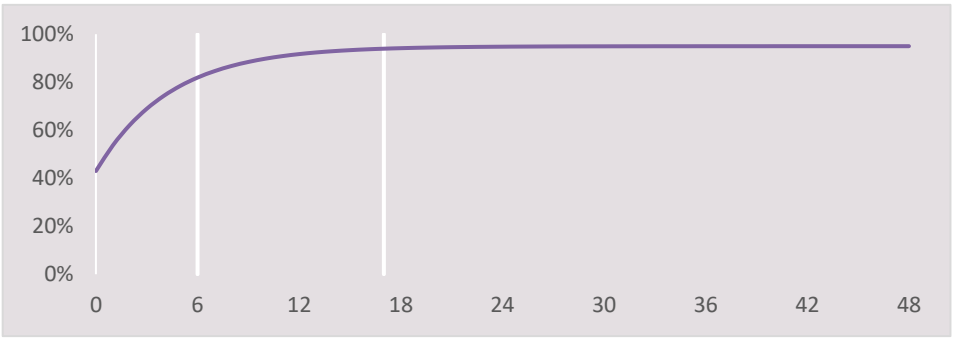


Protein

Crude protein (CP)	13.6	% of DM



Protein degradability		
a	0.43	
b	0.52	
c	0.23	
ADIN	0.06	% of DM

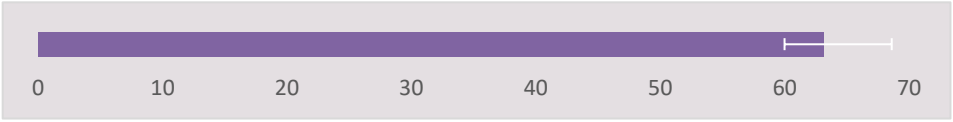


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	15.4	% of DM
eNDF	42	% of NDF

Starch	63.2	% of DM



Sugar	6.0	(3.1-8.2)	% of DM (Typical range)
Fat	1.9	(1.5-2.4)	% of DM (Typical range)
Ash	2.1	(1.7-2.5)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.07	0.42	0.17	0.54	0.09	0.09	0.20	24
Absorption %	60	70	16					

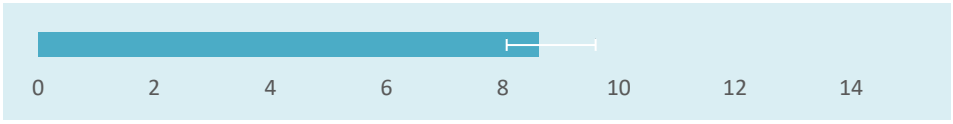
Comment: Ruminal acidosis risk (risk level depends on many herd, feed and feeding management factors)

Name	Triticale hay

Category

Hays

Dry matter (DM)	90.5	% of DM
Metabolisible energy (ME)	8.6	MJ/kg DM



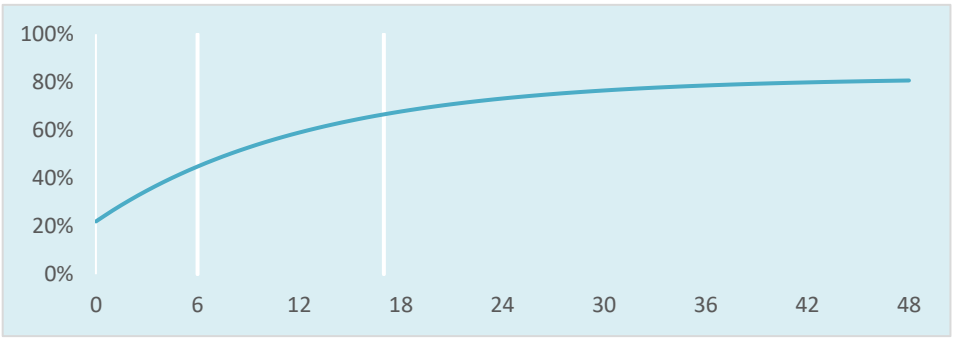
Protein

Crude protein (CP)	10.5	% of DM

Protein degradability

a	0.22
b	0.60
c	0.08

ADIN	0.10	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	59.4	% of DM
eNDF	99	% of NDF

Starch	2.9	% of DM

Sugar	19.8	% of DM
Fat	2.3	% of DM
Ash	7.5	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.33	0.27	0.15	2.30	0.03	0.56	0.15	350
Absorption %	30	64	16					

Comment	Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name Triticale silage

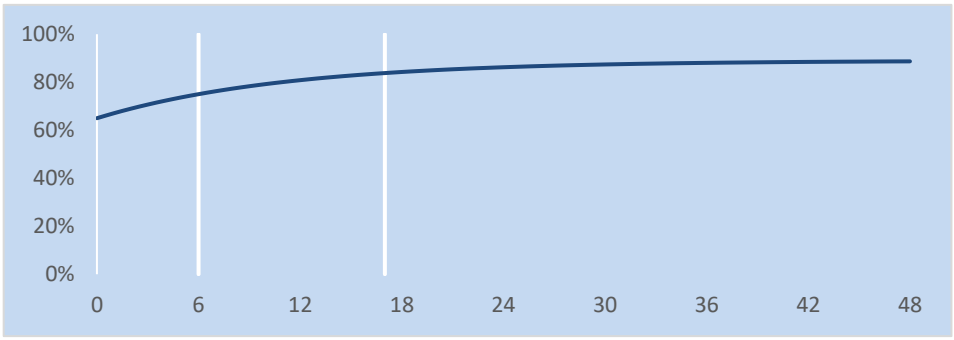
Category Silages

Dry matter (DM)	35.8	% of DM
Metabolisible energy (ME)	8.9	MJ/kg DM

Protein

Crude protein (CP)	12.4	% of DM

Protein degradability	
a	0.65
b	0.24
c	0.09
ADIN	0.19 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	56.5	% of DM
eNDF	80	% of NDF
Starch	3.7	% of DM

Sugar	3.8	(1.3-6.2)	% of DM (Typical range)
Fat	3.9	(2.7-5.6)	% of DM (Typical range)
Ash	9.2	(6.6-10.5)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.56	0.34	0.18	2.90	0.06	0.93	0.22	370
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides)

Name	Triticale straw

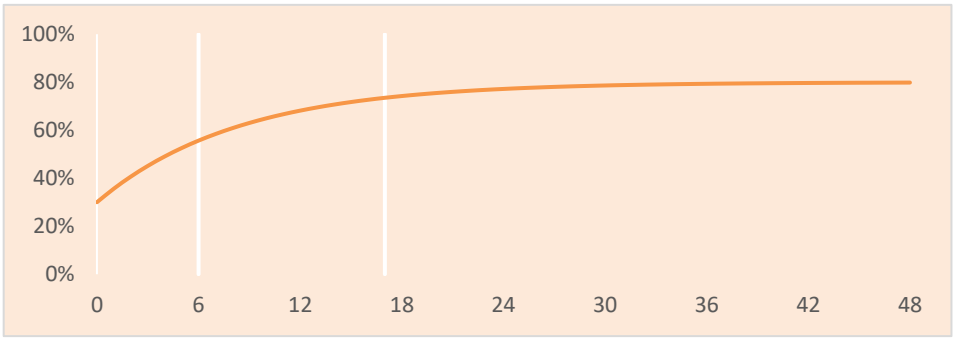
Category By-product (inc. straws)

Dry matter (DM)	91.3	% of DM
Metabolisible energy (ME)	6.7	MJ/kg DM

Protein

Crude protein (CP)	3.0	% of DM

Protein degradability		
a	0.30	
b	0.50	
c	0.12	
ADIN	0.10	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	71.1	% of DM
eNDF	99	% of NDF
Starch	2.1	% of DM
Sugar	1.4	% of DM
Fat	2.2	% of DM
Ash	5.4	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.27	0.03	0.07	1.20	0.01	0.61	0.18	24
Absorption %	30	64	16					

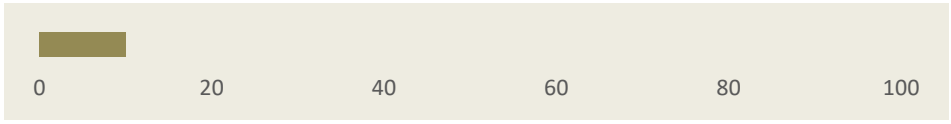
Comment Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

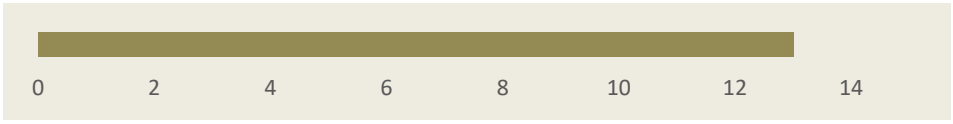
Name	Turnip (whole)

Category

Other grazed forages

Dry matter (DM)	10.0	% of DM
Metabolisible energy (ME)	13.0	MJ/kg DM

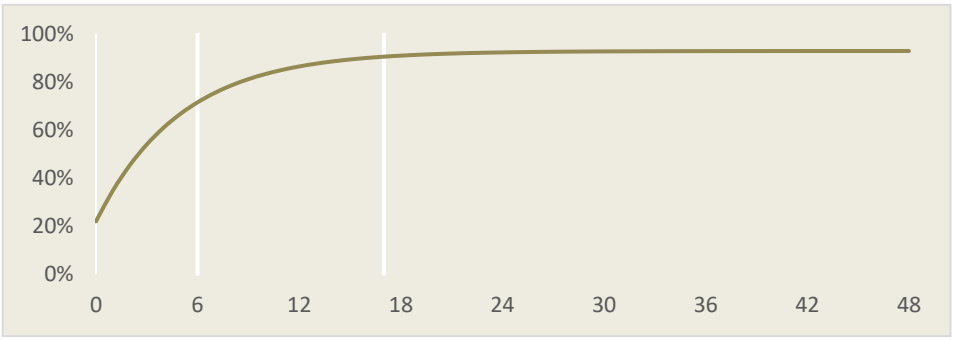




Protein

Crude protein (CP)	11.4	% of DM

Protein degradability	
a	0.22
b	0.71
c	0.20
ADIN	0.34 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	22.2	% of DM
eNDF	59	% of NDF

Starch	6.8	% of DM

Sugar	31.1	% of DM
Fat	1.5	% of DM
Ash	10.1	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.39	0.35	0.16	2.02	0.54	0.73	0.35	329
Absorption %	30	64	16					

Comment

Name	Urea

Category

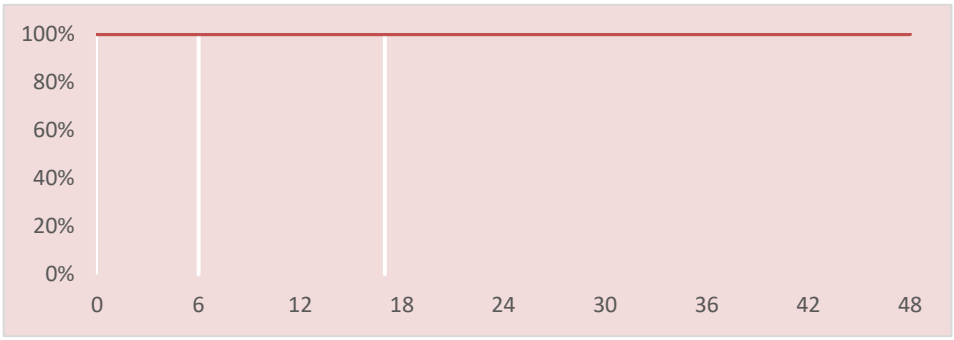
Mineral or Additives

Dry matter (DM)	95.9	% of DM
Metabolisible energy (ME)	0.0	MJ/kg DM

Protein

Crude protein (CP)	275.8	% of DM

Protein degradability	
a	1.00
b	0.00
c	0.00
ADIN	0.00 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF
Starch	0.0	% of DM

Sugar	0.0	% of DM
Fat	0.0	% of DM
Ash	0.2	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Absorption %	60	70	16					

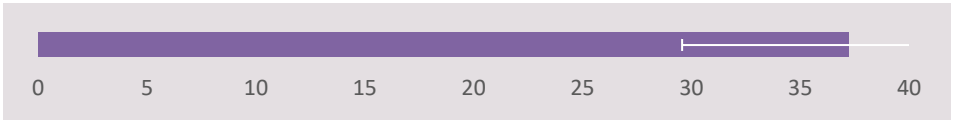
Comment

Name	Vegetable oil

Category

Grain or Concentrates

Dry matter (DM)	99.1	% of DM
Metabolisible energy (ME)	37.2	MJ/kg DM

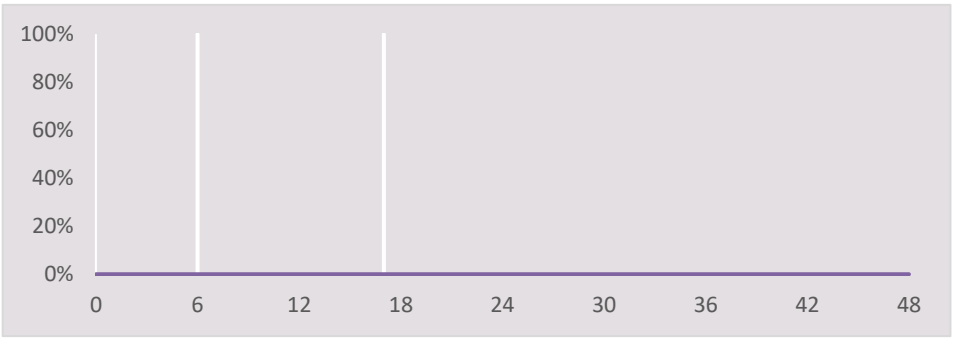


Protein

Crude protein (CP)	0.0	% of DM

Protein degradability

a	0.00	
b	0.00	
c	0.00	
ADIN	0.00	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	0.0	% of DM
eNDF	0	% of NDF

Starch	0.0	% of DM

Sugar	0.0		% of DM
Fat	99.4	(98.5-100.0)	% of DM (Typical range)
Ash	0.3		% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Absorption %	60	70	16					

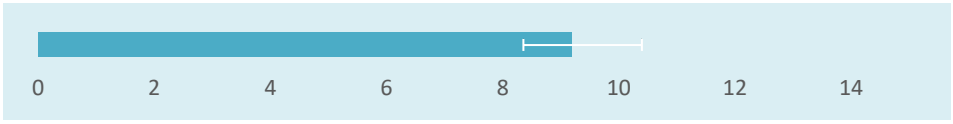
Comment: Ensure total dietary fat level does not exceed 6-7%DM

Name	Vetch hay

Category

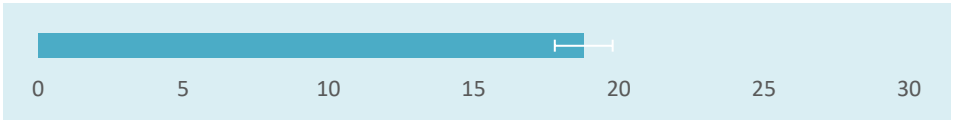
Hays

Dry matter (DM)	89.7	% of DM
Metabolisible energy (ME)	9.2	MJ/kg DM



Protein

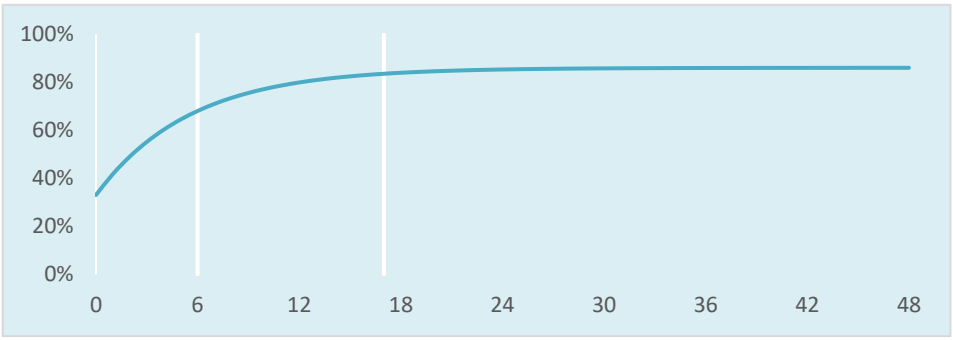
Crude protein (CP)	18.8	% of DM



Protein degradability

a	0.33
b	0.53
c	0.18

ADIN	0.20	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	43.4	% of DM
eNDF	92	% of NDF

Starch	2.6	% of DM

Sugar	6.6		% of DM
Fat	1.8		% of DM
Ash	9.4	(8.0-10.7)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	1.35	0.32	0.23	2.51	0.12	0.58	0.13	447
Absorption %	30	64	16					

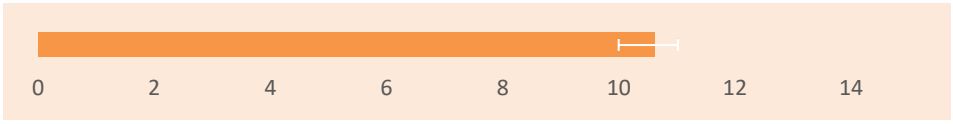
Comment	Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.

Name	Wheat bran

Category

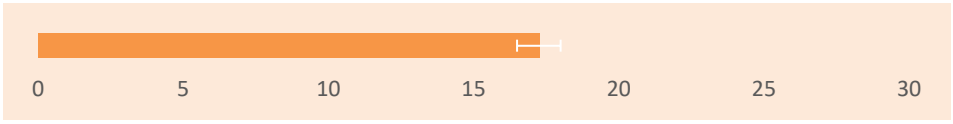
By-product (inc. straws)

Dry matter (DM)	88.5	% of DM
Metabolisible energy (ME)	10.6	MJ/kg DM

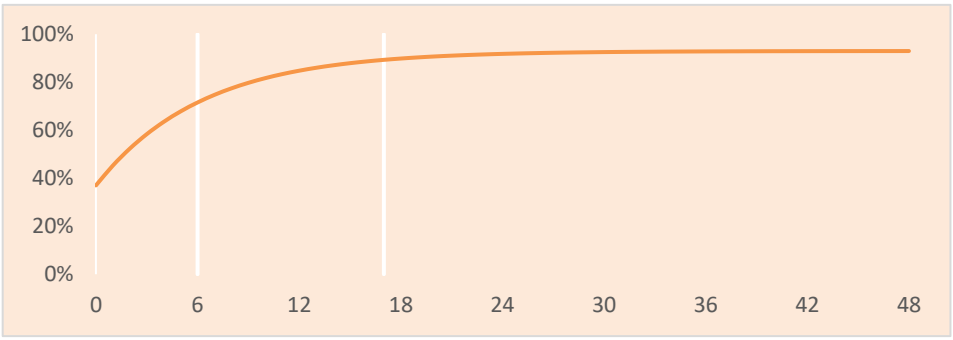


Protein

Crude protein (CP)	17.3	% of DM



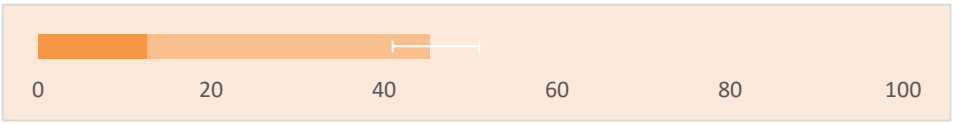
Protein degradability		
a	0.37	
b	0.56	
c	0.16	
ADIN	0.17	% of DM



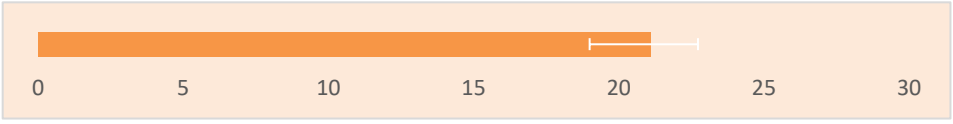
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	45.3	% of DM
eNDF	28	% of NDF



Starch	21.1	% of DM



Sugar	6.1	(1.0-8.3)	% of DM (Typical range)
Fat	4.4	(3.9-5.0)	% of DM (Typical range)
Ash	6.0	(4.5-7.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.14	1.25	0.56	1.44	0.04	0.11	0.24	208
Absorption %	60	70	16					

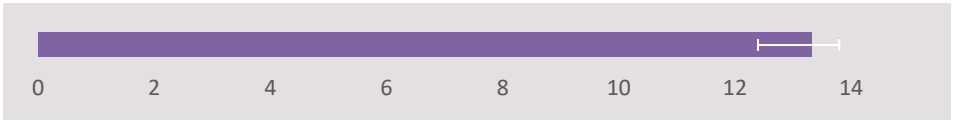
Comment	Potential residue risk (insecticides, herbicides, fungicides)

Name	Wheat grain

Category

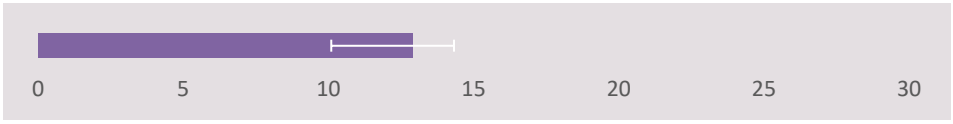
Grain or Concentrates

Dry matter (DM)	88.5	% of DM
Metabolisible energy (ME)	13.3	MJ/kg DM



Protein

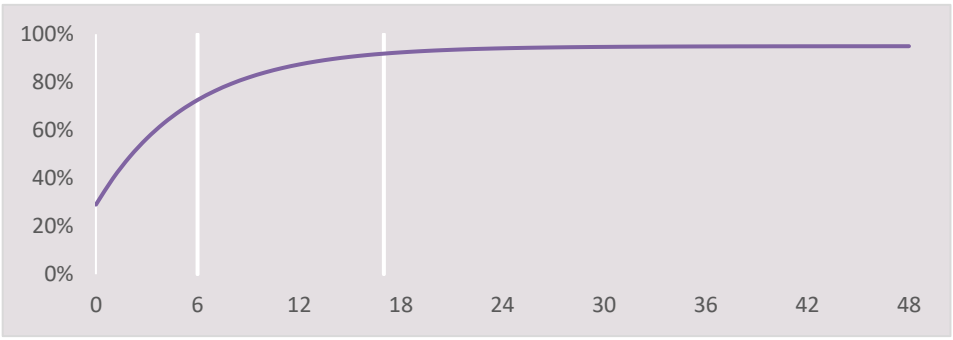
Crude protein (CP)	12.9	% of DM



Protein degradability

a	0.29
b	0.66
c	0.18

ADIN	0.05	% of DM

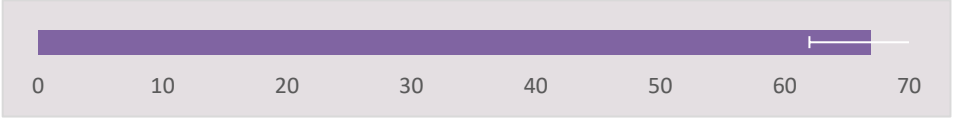


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	13.1	% of DM
eNDF	25	% of NDF

Starch	66.9	% of DM



Sugar	3.7	(1.8-7.0)	% of DM (Typical range)
Fat	1.9	(1.1-2.3)	% of DM (Typical range)
Ash	2.1	(1.7-2.6)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

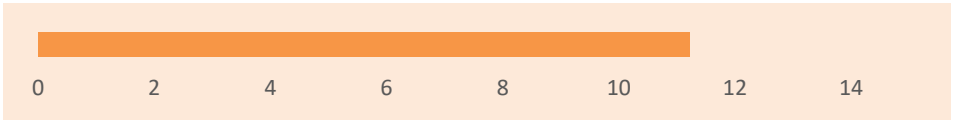
	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.06	0.38	0.13	0.47	0.02	0.07	0.15	18
Absorption %	60	70	16					

Comment: Ruminal acidosis risk (risk level depends on many herd, feed and feeding management factors)

Name — Wheat Middlings (Mill Mix or Mill Run)

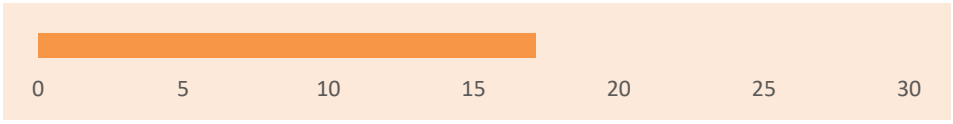
Category — By-product (inc. straws)

Dry matter (DM)	88.3	% of DM
Metabolisible energy (ME)	11.2	MJ/kg DM



Protein

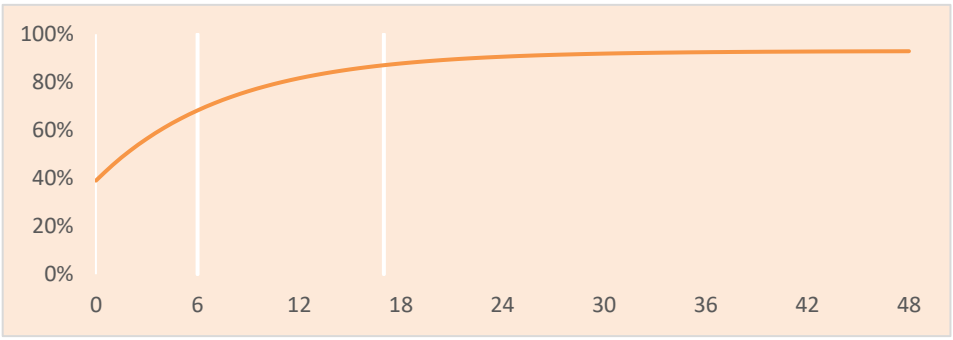
Crude protein (CP)	17.1	% of DM



Protein degradability

a	0.39
b	0.54
c	0.13

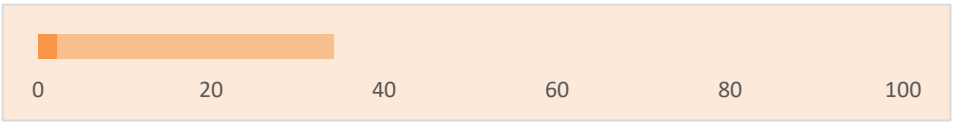
ADIN	0.08	% of DM



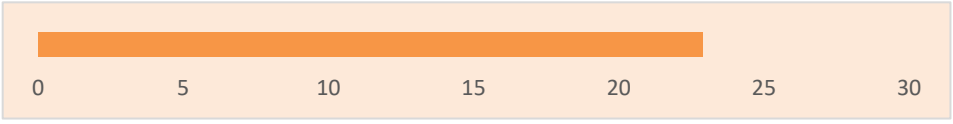
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	34.2	% of DM
eNDF	6	% of NDF



Starch	22.9	% of DM



Sugar	5.4	% of DM
Fat	4.4	% of DM
Ash	5.0	% of DM

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.15	1.03	0.43	1.37	0.03	0.08	0.20	216
Absorption %	60	70	16					

Comment: Consists of wheat bran, endosperm and screenings. Variable nutritive value according to the production plant. Useful source of digestible fibre, but low in effective fibre.

Name	Wheat silage

Category

Silages

Dry matter (DM)	37.8	% of DM
Metabolisible energy (ME)	9.4	MJ/kg DM

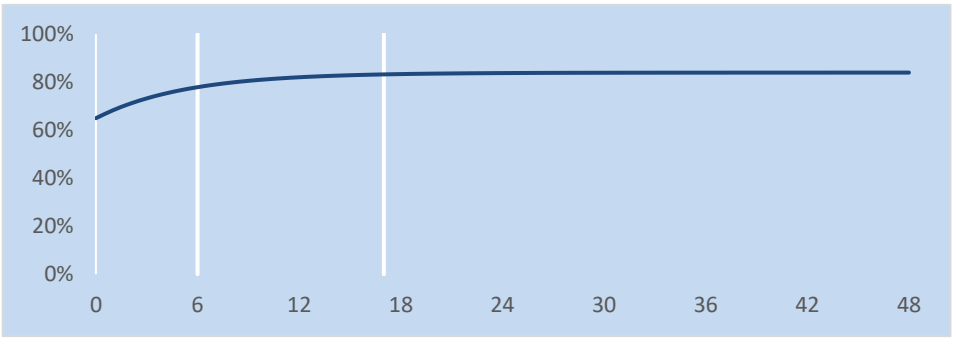
Protein

Crude protein (CP)	10.8	% of DM

Protein degradability

a	0.65
b	0.19
c	0.19

ADIN	0.15	% of DM

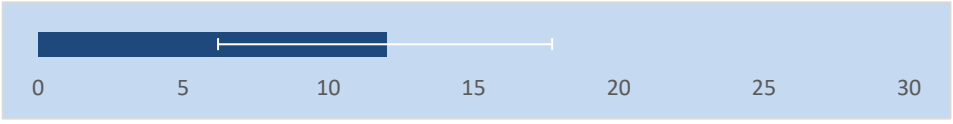


Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	57.4	% of DM
eNDF	80	% of NDF

Starch	12.0	% of DM



Sugar	4.8	(1.7-7.5)	% of DM (Typical range)
Fat	3.3	(2.0-4.5)	% of DM (Typical range)
Ash	7.3	(2.6-10.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.41	0.31	0.16	2.27	0.08	0.82	0.18	275
Absorption %	30	64	16					

Comment	Potential residue risk (insecticides, herbicides, fungicides)

Name	Wheat straw

Category By-product (inc. straws)

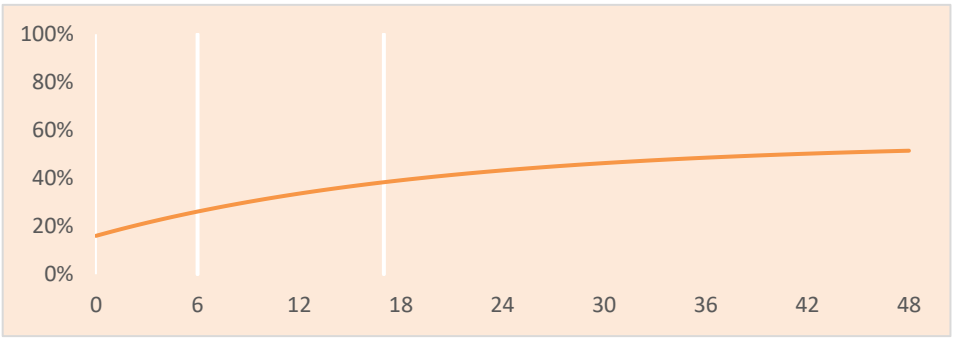
Dry matter (DM)	90.1	% of DM
Metabolisible energy (ME)	6.1	MJ/kg DM

Protein

Crude protein (CP)	3.7	% of DM

Protein degradability

a	0.16
b	0.39
c	0.05
ADIN	0.19 % of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	79.4	% of DM
eNDF	99	% of NDF

Starch	3.0	% of DM

Sugar	1.4	(0.7-1.8)	% of DM (Typical range)
Fat	1.6	(1.2-1.8)	% of DM (Typical range)
Ash	7.4	(6.5-8.0)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.27	0.07	0.12	1.34	0.11	0.46	0.15	169
Absorption %	30	64	16					

Comment Potential residue risk (insecticides, herbicides, fungicides)

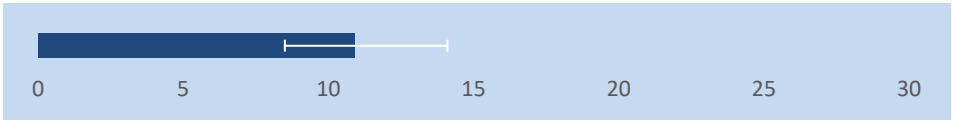
Name Wheat whole crop silage

Category Silages

Dry matter (DM)	38.9	% of DM
Metabolisible energy (ME)	9.6	MJ/kg DM

Protein

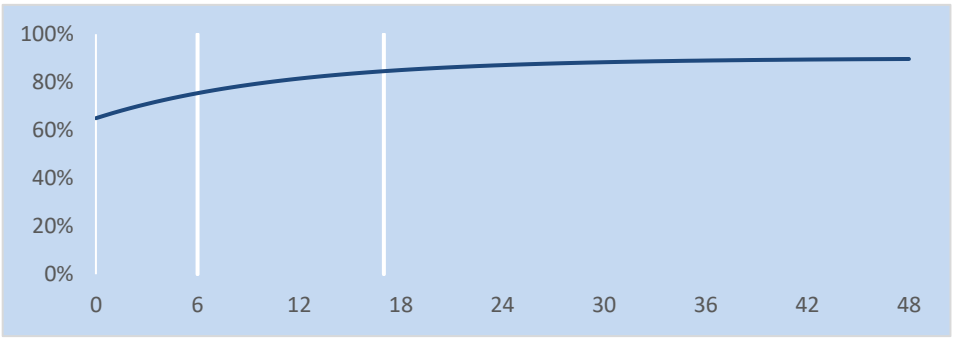
Crude protein (CP)	10.9	% of DM



Protein degradability

a	0.65
b	0.25
c	0.09

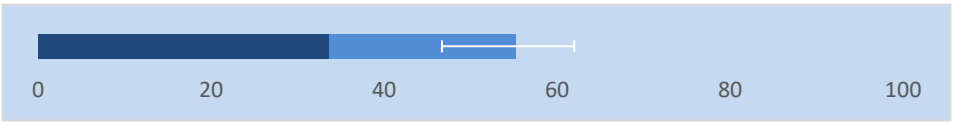
ADIN	0.16	% of DM



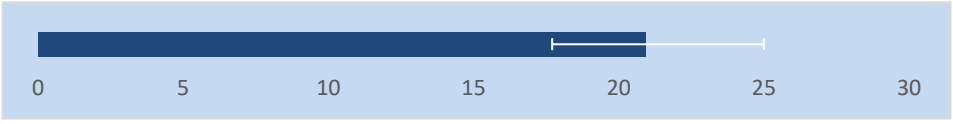
Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	55.3	% of DM
eNDF	61	% of NDF



Starch	20.9	% of DM



Sugar	3.8	(1.0-5.3)	% of DM (Typical range)
Fat	3.3	(2.5-4.5)	% of DM (Typical range)
Ash	6.7	(2.6-8.6)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.33	0.27	0.13	1.96	0.05	0.67	0.19	215
Absorption %	30	64	16					

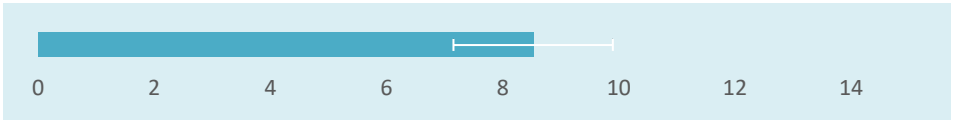
Comment Potential residue risk (insecticides, herbicides, fungicides)

Name	Wheaten hay

Category

Hays

Dry matter (DM)	88.1	% of DM
Metabolisible energy (ME)	8.5	MJ/kg DM



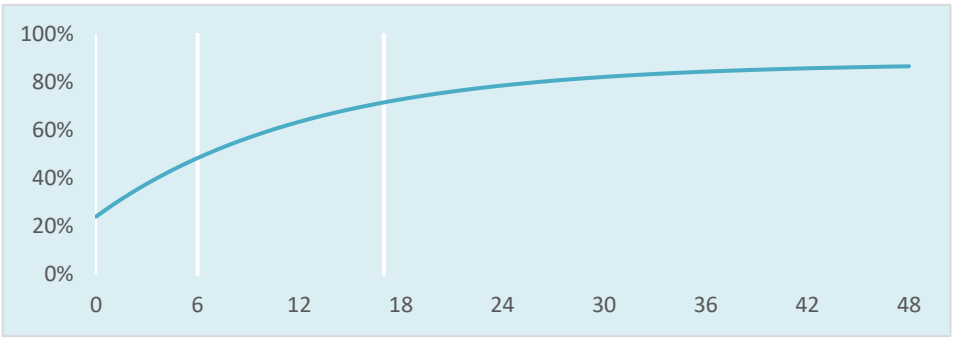
Protein

Crude protein (CP)	9.3	% of DM

Protein degradability

a	0.24
b	0.64
c	0.08

ADIN	0.11	% of DM



Values at 6 and 18 hours show approximate rumen degradation for high and low yielding cows

Fibre

NDF	63.4	% of DM
eNDF	99	% of NDF

Starch	4.6	% of DM

Sugar	13.0		% of DM
Fat	2.1	(1.7-2.6)	% of DM (Typical range)
Ash	6.6	(3.4-8.4)	% of DM (Typical range)

Note: The white bar on the charts show the typical range of the value if multiple sources were available.

Minerals

	Calcium	Phosphorus	Magnesium	Potassium	Sodium	Chloride	Sulphur	DCAD
% of DM	0.23	0.26	0.08	1.48	0.09	0.61	0.13	165
Absorption %	30	64	16					

Comment: Potential residue risk (insecticides, herbicides, fungicides). Risk of mould.