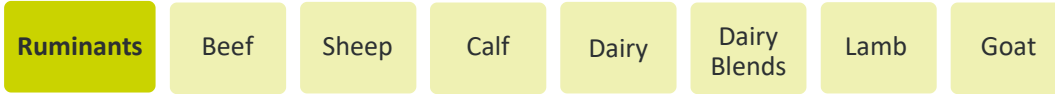




# Model Performance Ruminants

Finished Feed for following ruminants:



Measurable Parameters	
Parameter	Range
Moisture [%]	3 - 17
Crude Protein [%]	3 - 50
Fat (Ether Extract) [%]	0 - 16
Starch [%]	0 - 56
Sugar [%]	0 - 7
Crude Fibre [%]	0 - 19
Fat (Acid Hydrolysis) [%]	1 - 16
NDF [%]	0 - 31
ADF [%]	0 - 16
Ash [%]	0 - 25
DE [MJ/kg]	14 - 17
ME [MJ/kg]	13 - 15
NEL for Dairy [MJ/kg]	8 - 10

All values are given on „as fed“ basis. We use equations from the *National Research Council* to predict energies.

### Sample preparation:

1. Take a representative sample of the feed you want to measure.
2. Grind it for a total of 30 seconds (3 x 10 seconds) with an electric grinder.
3. Finely ground samples are extremely important. The more homogenous the sample is, the less deviations you will have between measurements!

### Sample presentation:

1. Place your ground sample in a container.
2. Scan the sample 5 times at different spots. Slowly move the spectrometer over the sample during each scan.



# Model Performance Swine

Finished Feed for following swine types:

**Swine**Finisher  
PigGestation  
SowGrower  
Pig

Piglet

Measurable Parameters	
Parameter	Range
Moisture [%]	3 - 18
Crude Protein [%]	7 - 48
Fat (Ether Extract) [%]	0 - 17
Starch [%]	5 - 53
Sugar [%]	2 - 8
Crude Fibre [%]	0 - 14
Fat (Acid Hydrolysis) [%]	1 - 17
NDF [%]	7 - 26
ADF [%]	2 - 14
Ash [%]	0 - 23
GE [MJ/kg]	15 - 18
DE [MJ/kg]	12 - 16
ME [MJ/kg]	12 - 15
NE [MJ/kg]	9 - 12

All values are given on „as fed“ basis. We use equations from the *National Research Council* to predict energies.

### Sample preparation:

1. Take a representative sample of the feed you want to measure.
2. Grind it for a total of 30 seconds (3 x 10 seconds) with an electric grinder.
3. Finely ground samples are extremely important. The more homogenous the sample is, the less deviations you will have between measurements!

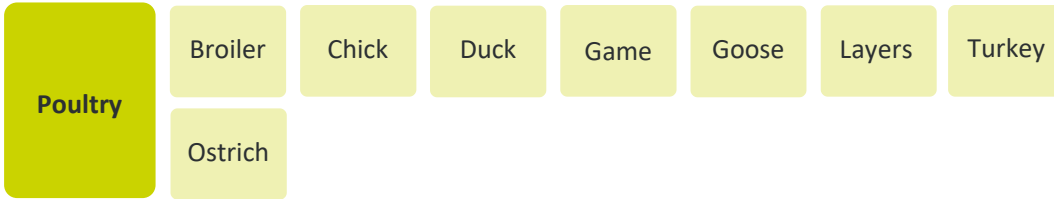
### Sample presentation:

1. Place your ground sample in a container.
2. Scan the sample 5 times at different spots. Slowly move the spectrometer over the sample during each scan.



# Model Performance Poultry

Finished Feed for following poultry types:



Measurable Parameters	
Parameter	Range
Moisture [%]	4 - 17
Crude Protein [%]	7 - 46
Fat (Ether Extract) [%]	0 - 15
Starch [%]	2 - 64
Sugar [%]	0 - 9
Crude Fibre [%]	0 - 15
Fat (Acid Hydrolysis) [%]	1 - 16
NDF [%]	3 - 27
ADF [%]	2 - 12
Ash [%]	0 - 35
AMEn [MJ/kg]	9 - 14

All values are given on „as fed“ basis. We use equations from the *European Community* to predict energies.

### Sample preparation:

1. Take a representative sample of the feed you want to measure.
2. Grind it for a total of 30 seconds (3 x 10 seconds) with an electric grinder.
3. Finely ground samples are extremely important. The more homogenous the sample is, the less deviations you will have between measurements!

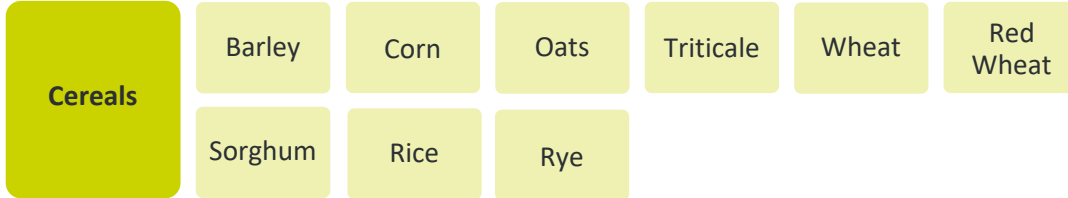
### Sample presentation:

1. Place your ground sample in a container.
2. Scan the sample 5 times at different spots. Slowly move the spectrometer over the sample during each scan.



# Model Performance Cereals

For following cereal types:



Measurable Parameters	
Parameter	Range
Moisture [%]	5 - 21
Crude Protein [%]	4 - 22
Fat (Ether Extract) [%]	0 - 14
Starch [%]	26 - 82
Sugar [%]	0 - 9
Crude Fibre [%]	0 - 12
Fat (Acid Hydrolysis) [%]	1 - 14
NDF [%]	2 - 26
ADF [%]	1 - 11
Ash [%]	0 - 5
AMEn [MJ/kg]	10 - 16

All values are given on „as fed“ basis. We use equations from the *European Community* to predict energies.

### Sample preparation:

1. Take a representative sample of the feed you want to measure.
2. Grind it for a total of 30 seconds (3 x 10 seconds) with an electric grinder.
3. Finely ground samples are extremely important. The more homogenous the sample is, the less deviations you will have between measurements!

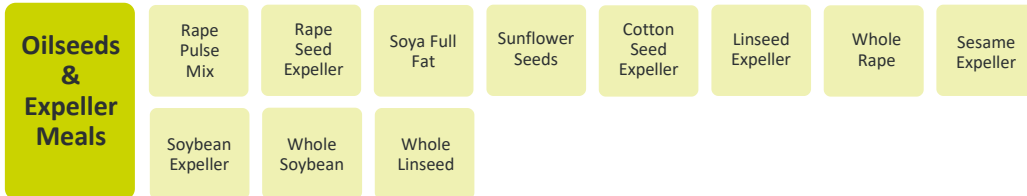
### Sample presentation:

1. Place your ground sample in a container.
2. Scan the sample 5 times at different spots. Slowly move the spectrometer over the sample during each scan.



## Model Performance Oilseeds & Expeller Meals

For following oilseed and expeller meal types:



Measurable Parameters	
Parameter	Range
Moisture [%]	1 - 18
Crude Protein [%]	6 - 51
Fat (Ether Extract) [%]	0 - 62
Starch [%]	0 - 30
Sugar [%]	0 - 18
Crude Fibre [%]	0 - 34
Fat (Acid Hydrolysis) [%]	3 - 63
NDF [%]	1 - 33
ADF [%]	3 - 24
Ash [%]	6 - 20

All values are given on „as fed“ basis.

### Sample preparation:

1. Take a representative sample of the feed you want to measure.
2. Grind it for a total of 30 seconds (3 x 10 seconds) with an electric grinder.
3. Finely ground samples are extremely important. The more homogenous the sample is, the less deviations you will have between measurements!

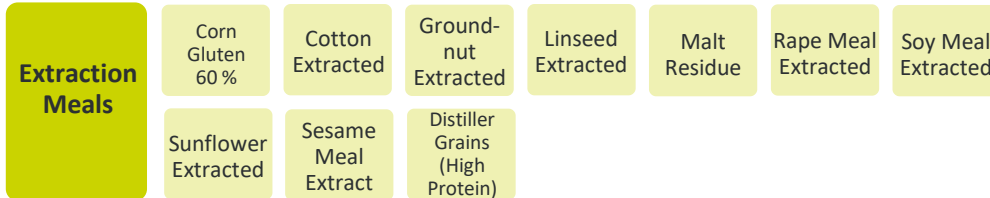
### Sample presentation:

1. Place your ground sample in a container.
2. Scan the sample 5 times at different spots. Slowly move the spectrometer over the sample during each scan.



## Model Performance Extraction Meals

For following extraction meal types:



Measurable Parameters	
Parameter	Range
Moisture [%]	2 - 18
Crude Protein [%]	16 - 73
Fat (Ether Extract) [%]	0 - 17
Starch [%]	0 - 31
Sugar [%]	0 - 29
Crude Fibre [%]	0 - 36
Fat (Acid Hydrolysis) [%]	0 - 19
NDF [%]	0 - 46
ADF [%]	0 - 28
Ash [%]	0 - 28

All values are given on „as fed“ basis.

### Sample preparation:

1. Take a representative sample of the feed you want to measure.
2. Grind it for a total of 30 seconds (3 x 10 seconds) with an electric grinder.
3. Finely ground samples are extremely important. The more homogenous the sample is, the less deviations you will have between measurements!

### Sample presentation:

1. Place your ground sample in a container.
2. Scan the sample 5 times at different spots. Slowly move the spectrometer over the sample during each scan.



## Model Performance Byproducts

For following extraction meal types:

<b>Byproducts</b>	Barley Bran	Biscuit Meal	Cassava	Citrus	Cocoa	Copra	Copra Extract	Corn Bran	Corn Germ Meal
	Corn Gluten 20%	Corn Gluten Feed	De-Oiled Rice Bran Extracted	Distillers Grain (low Protein)	Grass Meal	Hominy Chop	Hominy Feed	Locust Bean	Oat Feed
	Oat Flour	Palm Kernel Low Oil	Potato Products	Shea Nut Meal	Sugar Beet	Wheat middlings			

<b>Measurable Parameters</b>	
<b>Parameter</b>	<b>Range</b>
Moisture [%]	2 - 18
Crude Protein [%]	0 - 38
Fat (Ether Extract) [%]	0 - 12
Starch [%]	0 - 85
Sugar [%]	0 - 18
Crude Fibre [%]	0 - 36
Fat (Acid Hydrolysis) [%]	0 - 16
NDF [%]	5 - 43
ADF [%]	0 - 17
Ash [%]	0 - 16

All values are given on „as fed“ basis.

### *Sample preparation:*

1. Take a representative sample of the feed you want to measure.
2. Grind it for a total of 30 seconds (3 x 10 seconds) with an electric grinder.
3. Finely ground samples are extremely important. The more homogenous the sample is, the less deviations you will have between measurements!

### *Sample presentation:*

1. Place your ground sample in a container.
2. Scan the sample 5 times at different spots. Slowly move the spectrometer over the sample during each scan.



# Model Performance Grain Silage

Grain Silage

Whole  
Crop  
Silage

Maize/  
Corn  
Silage

Measurable Parameters	
Parameter	Range
Dry Matter [%]	7 - 74
Crude Protein [%]	3 - 27
D-Value [%]	31 - 89
NDF [%]	26 - 87
ADF [%]	16 - 52
Fat [%]	1 - 6
Ash [%]	1 - 13
DE [MJ/kg]	11 - 13
ME [MJ/kg]	9 - 12
NEL for Dairy [MJ/kg]	6 - 7

All values are given on dry matter basis. We use equations from the *National Research Council* to predict energies.

### *Sample preparation:*

1. No preparation is necessary! The samples must be measured as is, without drying and grinding.

### *Sample presentation:*

1. Place the sample in a container.
2. Scan the sample 5 times at different spots. Slowly move the spectrometer over the sample during each scan.





# Model Performance Grass Silage

**Grass Silage**Grass  
Silage

Measurable Parameters	
Parameter	Range
Dry Matter [%]	7 - 81
Crude Protein [%]	2 - 25
D-Value [%]	33 - 87
NDF [%]	23 - 89
ADF [%]	17 - 53
Fat [%]	0 - 6
Ash [%]	2 - 13
DE [MJ/kg]	9 - 12
ME [MJ/kg]	7 - 10
NEL for Dairy [MJ/kg]	4 - 6

All values are given on dry matter basis. We use equations from the *National Research Council* to predict energies.

*Sample preparation:*

1. No preparation is necessary! The samples must be measured as is, without drying and grinding.

*Sample presentation:*

1. Place the sample in a container.
2. Scan the sample 5 times at different spots. Slowly move the spectrometer over the sample during each scan.



# Model Performance Hay

Hay

Hay

Measurable Parameters	
Parameter	Range
Dry Matter [%]	55 - 98
Crude Protein [%]	0 - 26
WSC [%]	0 - 23

All values are given on dry matter basis.

### *Sample preparation:*

1. No preparation is necessary! The samples must be measured as is, without drying and grinding.

### *Sample presentation:*

1. Place the sample in a container.
2. Scan the sample 5 times at different spots. Slowly move the spectrometer over the sample during each scan.



# Model Performance Fresh Grass

Fresh Grass

Fresh  
Grass

Measurable Parameters	
Parameter	Range
Dry Matter [%]	14 - 68
Crude Protein [%]	8 - 23
Sugar [%]	0 - 9

All values are given on dry matter basis.

### *Sample preparation:*

1. No preparation is necessary! The samples must be measured as is, without drying and grinding.

### *Sample presentation:*

1. Place the sample in a container.
2. Scan the sample 5 times at different spots. Slowly move the spectrometer over the sample during each scan.