

# **PROTIGRAIN®**

Rich in protein and energy ProtiGrain® is rich in proteins and important nutrients. We always pay attention to the highest quality – in raw materials, processing and composition.



#### Consistent quality – since 2005

Produced from European wheat, maize and barley, with extensive quality assurance measures and highest quality standards.



## High digestibility due to gentle drying procedure

Optimal protein utilisation due to gentle, homogeneous drying with tube bundle dryers at approx. 100 °C.



#### More than protein

Contains valuable ingredients from yeast cells, a high proportion of neutral detergent fibre (NDF) and important amino acids and minerals.



#### Good feed intake

Daily feeding practice and numerous feeding trials show excellent acceptance in feed intake.



#### High-quality grain protein

ProtiGrain<sup>®</sup> contains cereal protein with a high proportion of 60% of rumen undegradable protein (UDP). Method from Licitra et al. 1996



## Constant energy release reduces risk of acidosis

Protein and carbohydrate supplier in the ration calculation. The higher proportion of long-chain carbohydrates compared to cereals is energetically very well available, especially in cattle feeding, with simultaneously less risk of acidosis.



#### GMO free!

Pelletized (6 mm) feed material with no labelling provisions, in "VLOG-tested" quality with good transport and storage suitability.



# Comparison of the nutrient matrices of ProtiGrain<sup>®</sup> and rapeseed extraction meal

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		Proti	Grain® *	Rapeseed extraction meal **	
	Unit	FM	DM	FM	DM
Dry matter (DM)	%	91	100	88.9	100
Crude nutrients					
Crude ash (XA)	g/kg	51	56	67	75
Crude protein (XP)	g/kg	288	316	344	387
Crude fibre (XF)	g/kg	69	76	121	136
Crude fat (XL)	g/kg	78	86	32	36
Sugar (XZ)	g/kg	48	52	80	90
Starch (XS)	g/kg	24	26	30	34
Feed value					
Metabolisable energy (ME) Pig	MJ/kg	11.6	12.8	10.0	11.3
Metabolisable energy (ME) Cattle	MJ/kg	11.4	12.5	10.6	11.9
Net energy of lactation (NEL)	MJ/kg	6.9	7.6	6.4	7.2
Feed unit milk (FUM)	per kg	976	1072	879	989
Usable crude protein (nXP) Cattle	g/kg	223	245	227	255
Ruminal nitrogen balance (RNB)	g/kg	10.3	11.4	19.8	22.3
In the rumen undegradable dietary protein (UDP 5) ***	%	60	60	35	35
Acid detergent fibre, ash-free (ADF <sub>om</sub> )	g/kg	148	162	187	210
Neutral detergent fibre, ash-free (NDF $_{\rm OM}$ )	g/kg	381	419	254	286
Acid detergent lignin (ADL)	g/kg	68	74	74	83
Gas formation	ml/200 mg	43	47	-	-
Enzyme-soluble org. matter (ESOM)	g/kg	731	803	-	-
Amino acids					
Lysine	%	0.66	0.73	1.89	2.13
Methionine	%	0.47	0.52	0.69	0.78
Cystine	%	0.56	0.62	0.86	0.97
Threonine	%	0.96	1.05	1.51	1.70
Tryptophan	%	0.29	0.32	0.45	0.51
Minerals					
Calcium	g/kg	0.8	0.9	7.8	8.8
Phosphorus	g/kg	7.3	8.1	10.5	11.8
Magnesium	g/kg	2.8	3.1	4.1	4.6
Potassium	g/kg	12.7	14.0	12.8	14.4
Sodium	g/kg	4.0	4.4	0.4	0.45
Chlorine	g/kg	2.1	2.3	0.4	0.45

\* Mean value from CropEnergies Monitoring. The given values are non-binding guidance values and are subject to natural fluctuations in the raw material.

\*\* Source: CVB, UFOP

\*\*\* in % of the total crude protein at 5% ruminal passage rate per hour (method according to Licitra et al., 1996)

DM = Dry matter, FM = Fresh matter

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