

## Pigs and Poultry Feed

ProtiGrain® is an effective and cost-effective component for the feeding of pigs and poultry. ProtiGrain® mainly substitutes extracted soybeanmeal.

### Use in Feeding

Animal	Ration up to
Sow, gestating	4%
Sow, lactating	8%
Growing-finishing pig	10–15%
Laying hen	15%
Chicken layers (extensive)	20%

### Nutritional Values Swine (per kg Dry Matter)

Metabolizable energy (pig), MJ	12.7
Cystine, %	0.62
Lysine, %	0.70
Threonine, %	1.05
Methionine, %	0.52
Tryptophan, %	0.33

## Interested?

More information about ProtiGrain® can be found on the internet at:

[www.cropenergies.com](http://www.cropenergies.com)

There, you will find regularly updated results of examinations on the possible applications as well as contact persons for further questions.



## ProtiGrain®

Rich in protein



**crop. energies**  
*mobility – sustainable. renewable.*

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CropEnergies AG  
Maximilianstraße 10 · 68165 Mannheim  
Phone: +49 (0)621/71 41 90-81 · Fax +49 (0)621/71 41 90-89

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## ProtiGrain® is

- a dried and pelletised mash for the bioethanol production in Zeitz (Saxony-Anhalt)
- an excellent animal feed for cattle, pigs and poultry with brilliant tastiness
- a controlled feed material which is GMP+B1 certified (5.05.01 on the German positive List for feed materials)
- a valuable protein and energy source
- a safe quality product made from high-quality, certified and locally produced raw material
- a home-grown protein source to be counted on!



### Composition

Per kg of Dry Matter (DM)	
Dry Matter, %	90
Crude Ash, g	59
Crude Fibre, g	88
Crude Protein, g	315
Crude Fat, g	83
Starch & Sugar, g	76

## Ruminants

The particular benefit of ProtiGrain® is the high energy and UDP (Rumen Undegradable Protein) content. Thus, ProtiGrain® is a valuable component in rations for high yielding dairy cows where it substitutes other protein sources. Due to the low content of sugar and starch, ProtiGrain® can significantly reduce the danger of acidosis.

### Nutritional Values Ruminants (per kg of Dry Matter)

NEL, MJ	7.4
ME (Cattle), MJ	12.2
UDP 5*, %	40
Utilizable Crude Protein nXP, g	241
Ruminal N-balance, g	11.3

\* Rumen Undegradable Protein, 5% rumen passage rate per hour



## Ruminants

### Use in Feeding

Animal	Ration up to
Dairy cow	20%
Growing cattle	15%
Beef cattle	20%

In the feeding of beef cattle, ProtiGrain® is an excellent exclusive protein source.

### Examples for Rations of Dairy Cows

(650 kg body weight, 4% milkfat, 3,6% milkprotein)

Animal feed	in kg of fresh matter per cow & day		
ProtiGrain®	3.5	2.5	2.0
Cornsilage	31	28	25
Grassilage	7.0	9.0	12.0
Soybeanmeal, extr.	1.3	0.6	2.5
Rapeseedmeal, extr.	2.0	2.2	–
Wheat	1.3	1.5	2.5
Corn	–	0.5	0.5
Protected fat	0.5	–	–
Minerals	0.3	0.3	0.3
kg Dry Matter-intake	21.3	19.7	19.8
MJ NEL / kg TM	7.0	6.7	6.8
sufficient for			
... kg Milk	35	30	30