

■ MAXFERM/PRO

DRIED ASPERGILLUS SSP. FERMENTATION PRODUCT FOR MONOGASTRICS

MAXFERM/PRO is a fungal fermentation product for monogastric animals to improve protein release from protein-rich feedstuffs. It is produced through an innovative solid-state fermentation process using selected fungi strains with impact on nutrient utilization and feed efficiency.

AIMS TO OPTIMIZE THE PROTEIN UTILIZATION OF FEEDSTUFFS

MAXFERM/PRO solutes the protein-containing cells of protein-rich feedstuffs very efficient and releases proteins from the colloidal system of cytoplasm and cell wall structures. As a result, more protein is generally available for the utilization in the digestive tract.

Simultaneously **MAXFERM/PRO** removes branched sugar-protein complexes and stimulates the degradation of non-starch polysaccharides (NSP).

The multifactorial impact of **MAXFERM/PRO** elevates total tract digestibility, improves protein utilization and enables a more efficient feed conversion. **MAXFERM/PRO** allows to

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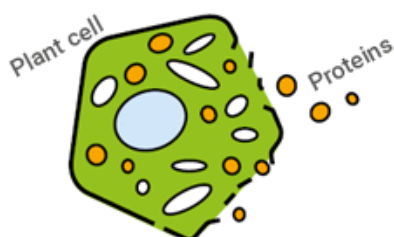


- Disintegration of plant cells and cell wall structures
➔ Increased protein-release in protein-rich feed
- Breakdown of polysaccharide—protein complexes
➔ Improved protein solubility in feedstuffs
- Degradation of complex sugar-protein chains
➔ Higher protein utilization in monogastric diets

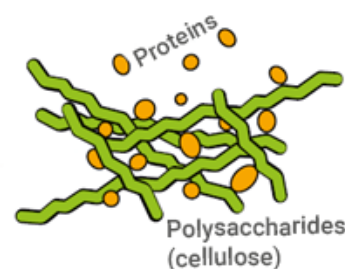
reduce the crude protein content in the diet and helps to decrease nitrogen excretion.

MAXFERM/PRO IMPROVES PROTEIN-RELEASE AND DIGESTIBILITY

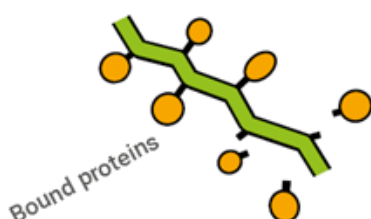
Desintegration of the plant cell wall
Protein from the cytoplasm is released



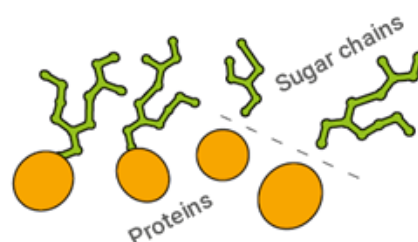
Break down of fiber structures
Proteins are released from the structure



Cleavage of protein bonds formed during processing
Proteins become available



Separation of sugar chains from the protein surface
Proteins become even more available



PERFECT COMPONENTS. MAXIMUM RESULTS.

IMPROVED NUTRIENT UTILIZATION IN FEED

MAXFERM/PRO - IMPROVES PROTEIN UTILIZATION OF FATTENING PIGS

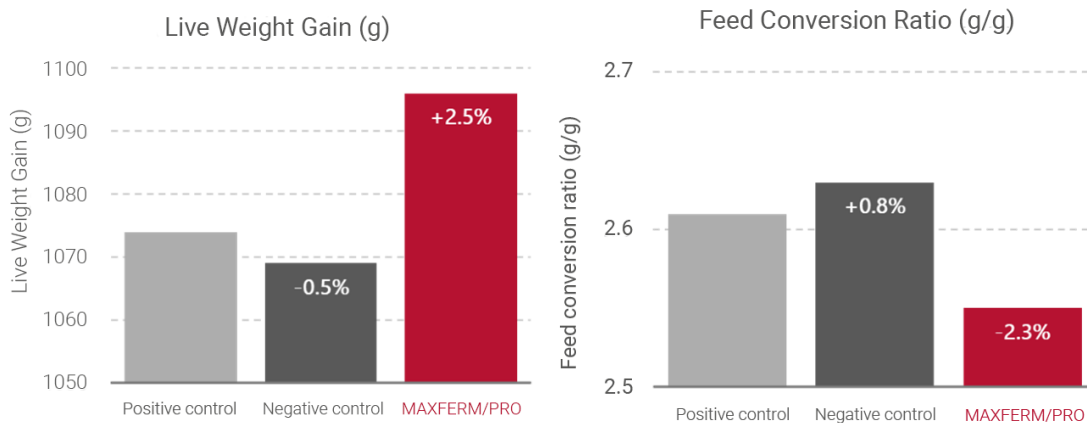
The effect of the **MAXFERM/PRO** technology on raised protein release was applied in diets for fattening pigs. Based on the assumed improvement on the apparent ileal protein digestibility, the addition of **MAXFERM/PRO** was evaluated. A treatment group of animals with a 1.0%p reduction in dietary crude protein content (16.0%) and simultaneous supplement of 500 ppm **MAXFERM/PRO** (treatment) has

been compared to a positive control (17% CP) and negative control group (16.0% CP) Up to the finishing period (after 77 days) the effects of protein reduction compared to the positive control could be compensated with **MAXFERM/PRO** by +2.5% in daily weight gain and -2.3% in feed conversion.



Benefit of improved protein utilization in growing-finishing pigs

Trial Setup: n = 300 (DanAvl x Duroc), 11 weeks of age, 500 ppm MAXFERM/PRO



MAXFERM/PRO - REDUCES THE AVERAGE AMMONIA CONCENTRATION

In the course of a another pig fattening feeding trial the ammonia concentration in two separate barn compartments was evaluated as a consequence of adapted dietary protein contents. **MAXFERM/PRO** in combination with a reduced protein content (~3%p soy bean meal in diet and -1%p CP respectively) was able to significantly reduce the average ammonia concentration in the ambient air in the barn. For the control group, the average ammonia concentration was 11.1 ppm, the treatment group (**MAXFERM/PRO**)

had an average of 9.42 ppm which represents a reduction by app. 15%.

In the same trial, the beneficial effect of **MAXFERM/PRO** on protein utilization was confirmed by the results of carcass evaluations. Despite the 1%p CP reduction in the diets, no differences in the characteristics were observed between the treatments, with both the control and the **MAXFERM/PRO** group having an average lean meat content of 59.3%.



Simultaneous improvement of environmental parameters and protein utilization in fattening pigs

Trial Setup: n = 400; (DanAvl x Duroc), 35—110 kg; 500 ppm MAXFERM/PRO (-1%p CP in diet)

