PREPARATIONS OF THE HUMAC® NATUR AFM LINE IN PIG BREEDING

Quality feed + Welfare = Basis of breeding economy

Quality and the feed dosage composition are the most important components in order to achieve positive economic results. **High quality and nutritionally balanced feed in optimal zoohygienic conditions ensures not only a good health condition of the animals**, but mainly an economically prosperous breeding with return on investment and achieving long-term positive economic result.

Despite the efforts of farmers to provide quality feed containing all the important nutritious components, there are more negative factors that eventually bring regular and rather large financial loss. The most severe issue with pig breeding in recent years results from **toxins in the feed (mainly mycotoxins and heavy metals), bacterial toxins and harmful gases (mainly ammonia)**, that influence long-term production and reproduction problems of young as well as older individuals including the reproductive material. **Ensuring the economy of pig breeding means:**

- Achieving a good health condition of mothers capable of giving birth to multiple healthy and balanced offspring
- Eliminating prenatal, natal and postnatal issues
- Ensuring an adequate amount of quality colostrum with a high content of antibodies for piglets
- Minimising deaths throughout the entire breeding period
- Ensuring conditions necessary to achieve swell arrivals and an optimal conversion rate of nutrition intake
- Not exceeding (shortening) the feeding period
- Eliminating costs on medication and veterinary treatments of the animals
- Ensuring optimal conditions for stabling (Welfare) and thus minimising respiratory and digestive problem

HUMAC® Natur AFM preparations - an optimal solution

HUMAC® Natur AFM is an organic-mineral feed material with a high content of humic acids (min. 65%). It is a 100% natural substance with a high biological effectiveness - a natural growth stimulator. By applying the HUMAC Natur AFM feed material, the animals are provided with minerals and trace elements in a chelated form, which is easily applicable in animal organisms.
Another preparation we may opt for is **HUMAC® Natur AFM Monogastric** with addition of calcium formate, which in correct doses **can replace the use of acidifiers, mycotoxin derivers, preparations against anaemia and those to improve the welfare**.

Preparations from the **HUMAC® Natur AFM** line:

- Have a protective effect against intestinal mucosa - a good health condition of intestines ensures a good health condition of animals
- They have anti-inflammatory, absorptive, antitoxic and antibacterial effects
- They improve breeding production and rentability
- Positively affect the use of nutritions from feed dosage, and thus improve feed conversion rates
- Improve the serenity of the herd and reduce death rates
- Minimise costs on medication, improve animal immune system
- They bind and derive microbial (mycotoxins, bacterial toxins, etc.) and other toxins (heavy metals, pesticides, herbicides, PCBs, dioxins, remains of chemical preparations and of foreign substances)
- They improve reproductivity indicators
- Beneficially affect the welfare of stalled animals

The application of **HUMAC® Natur AFM** preparations throughout the entire breeding and feeding period had been proven in practice - positively affecting the breeding economy:

- Improves the health condition and serenity of the offsprings born
- Decreases the occurrence of diarrhoea diseases not only at offsprings but also at adult animals
- Improves reproductivity and nutrition conversion rate (6-8%)
- Reduces the feed usage rate (4-7%)
- Ensures that no stop of growth or development of pigs occurs
- Lowers the death rate (by up to 40%)
- Ensures the serenity of the herd and better nutrition conversion, thus abbreviates the feeding period by 4-6 days - which is significant mainly by the end of the feeding period when conversion rates are worst and the costs of pig breeding are highest
- Reduces costs on antibiotics and other medications (by up to 40%)

Use and dosage

HUMAC® Natur AFM is admixed into feed or granules.

Dosage **0.5 %** into feed.

HUMAC® Natur AFM Monogastric is admixed into feed. **It can replace the use of acidifiers and mycotoxin derivers**.

Dosage **0.5 – 1.0 %** into feed.

In case of diarrhoea diseases it is recommended to increase the preventive dosage by 2-3x for at least 5 days. Feed materials are without a protection period, the prepared fodder can be fed immediately. *For further information see the product leaflets or visit our website: www.humac.bio.*

PREPARATIONS OF THE HUMAC® NATUR AFM LINE IN PIG BREEDING

Application of HUMAC® Natur AFM preparations = efficient solution in every phase of breeding

1. Healthy mother - sow - healthy and balanced offspring - basis of breeding economy

- Significant and regular estrus.
- Lower embryonal mortality and level of urea, stabilisation of protein transformation, promotion the function of corpus luteum for progesterone production and reduction of PGF 2α occurrence.
- Ability to keep the fetus and proceed with gravidity until a standard parturition.
- Low ratio of infectious and metabolic diseases (inflammatory processes, lower feed intake, etc.).
- Optimal physical condition - significant for milkiness and following reproduction.
- Better use of nutrients for nutrition of the mother as well as the fetus.
- High quality and on antibodies rich colostrum.
- Minimising natal and postnatal complications (digestive problems, MMA syndrome, other inflammatory problems, fast regeneration after giving birth, etc.).
- A sufficient range and content of lactoflora within the digestive tract, on mammary gland of genitalia and mucose membrane.
- A serene nutrient inflow for the young ones - enough milk. *An insufficient milkiness of sow is caused by the hunger fever (at first non-infectious, then infectious E. coli and clostritides - diarrhoea - high death rates). Up to 90% of diarrhoea in the postnatal period is caused by the hunger fever.*
- Healthy, numerous and serene offspring - the correct balance of nutrient during gravidity. *The result of an erratic offspring are weaker individuals pushed out by stronger ones when breastfeeding.*

2. From breastfeeding till weaning - a quality start prior to effective feeding

- A preventive effect against diarrhoea, dyspepsia and acute intoxications, increased appetite.
- Fast development and growth of piglets, minimal death cases.
- Stabilised pH in digestive tract and thus the organism and the blood.
- Change in composition of intestinal and rumen microflora in favour of symbiotic microorganisms.
- Increase of daily additions.
- Reduced feed consumption per kg on addition.
- Reduced mortality.
- Reduced costs on antibiotics and other medicine.
- Significant reduction of stall odor.
- Stimulation of pancreatic and intestinal enzymes production.
- Stimulation of immune system receptors in intestinal villi when defending against pathogens.
- Limited reproduction of pathogenic bacteria - the preparations interfere with protein metabolisms and carbohydrates at microbes through catalytic processes, that leads to inhibition of pathogenic bacteria production.
- Support of the natural ability of the organism to prevent the replication and spread of viruses.

3. From weaning till the end of the feeding period - an efficient fattening

- **HUMAC® Natur AFM Monogastric** (or **HUMAC Natur AFM** with acidifiers) together with lactobacilli lowers the pH and keeps it on a physiological level. It ensures resorption of nutrients from the intestinal tract and keeps the required structure of symbiotic, health-promoting microorganisms and concurrently prevents the growth and reproduction of pathogenic microflora.
- Maintains a stable pH with support of lactobacilli reproduction - bacteria of natural microflora, that protects mucous membrane of the entire small intestine from adherence - the attachment of pathogenic microorganisms and their following multiplication.
- Creates a natural intestinal structure, that is the most significant immunology organ.
- Has an anti-inflammatory effect - dampens the excretion of pro-inflammatory cytokines. Concurrently supports the excretion of anti-inflammatory cytokines, and thus supports the defence capability of the organism.
- Supplies macro and micro elements, that are necessary for creation of various enzymes and substances present during metabolisation of nutrients and during detoxifying reactions.
- Has a high capability to bind free radicals, that are created when detoxifying various foreign substances, inflammations and infections.
- Its absorptive abilities eliminate toxins that produce enterotoxin E. coli.
- Is a very effective puffer and keeps the pH on required levels. This explains their positive affect on diarrhoea caused by putrid bacteria (ex. E. coli, clostritides, etc.), that shows at increased intestinal pH levels.
- Binds stall (intestinal) gases, thus improves the microclimate (stall odor) and subsequently airways are less burdened, what results in lower occurrence of respiratory diseases.
- Binds viruses - prevents their penetration to the organism and their reproduction.
- Suppresses post-weaning diarhea without the use of antibiotics during weaning. *This way of prevention stops the source diarrhoea without losing natural beneficial microflora. After some time, when antibiotics stop working, the pathogenic bacteria multiplies again in an intestine with an insufficient amount of lactobacilli as well as diarrhoea might presume. The real cause of the weaning diarrhoea is not treated by the preventive antibiotics. The consequently appearing resistance towards antibiotics and their replacement by more and more expensive preparations is a problem as well.*
- Effectively replaces zinc preparations. *Addition of zinc on one side kills pathogenic microorganisms (gets an animal through the period of sickness), but at the same time damages the intestinal walls, which results in increased sensitivity towards various pathogenic microorganisms. Damage on intestinal walls concurrently lowers nutrient absorption.*

HUMAC® Natur AFM lowers the level of contaminants in the animal organism and thus improves their reproductive indicators. Effects of contaminants on fertility and reproduction:

- With females it's weak and irregular estrus, an inability to keep the fetus and to deliver the process of gravidity to a standard parturition. Regular parturitions with multiple healthy piglets are the basis of a healthy pig breeding economy.
- With males it's a decrease of mobility and sperm vitality and thus of the ability of natural fertilisation of a female, of natural transition of genetic material on the future offspring.