

PREPARATIONS OF THE HUMAC® NATUR AFM LINE IN POULTRY FARMING

Good health and productive condition of poultry = the necessary farming production and rentability

HUMAC® Natur AFM is an organic-mineral animal feedstock with a **high content of humic acids**. It is a 100% natural substance with high biological effectiveness - **a natural growth stimulator**. By applying **HUMAC® Natur AFM** feed material we provide animals with minerals and trace elements in chelated form which are beneficial for their organisms.



By adding **HUMAC® Natur AFM** feed material into the feed, intestinal microflora is regulated - it slows down the reproduction of noxious microflora and encourages the growth of useful microflora vice versa. It reduces the creation of inflammations and supports immunity. Favourably affects the pH of the digestive system. Prevents the absorption of toxic metals, xenobiotics, fungal toxins and of other toxic compounds from the digestive system, excreted by animals. It benefits the use of feed and its nutritional components, which improves the conversion of feed.

Improves the microclimate in the stable, mainly by absorbing nitrogenous and other substances in a gaseous form, which results in decreased emissions of harmful (greenhouse) gases.

For poultry as monogastric animals we developed **HUMAC® Natur AFM Monogastric** with addition of calcium formate. Its application in recommended doses can replace the use of acidifiers and exporters of mycotoxins.

Optimization of poultry farming economy

With poultry, just as with other animal species, humic acids accelerate the metabolism of cells, promote cell respiration and energy creation, and thereby stimulate the organism to increased nutrient intake, excretion of more digestive juices, support of immunity and of the overall health condition. This results in accelerated growth, higher production and improved disease resistance.

The usage of **HUMAC® Natur AFM** product line in poultry farming has the following positive effects on the breeding economy:

- increase of daily additions (by 6-8%)
- reduced use of feed per addition's kg (by 4-7%)
- reduced mortality of brood and grown ups (by 40-50%)
- increased productivity of laying hen (by app. 4%) is a result of extended laying curve, which reflects their improved health
- higher carcass yield
- higher share of breast and tight muscle
- significantly better sensory properties of carcass meat
- increased serenity of the herd
- improved feathering
- reduced costs for antibiotics and other medicine
- elimination of the possibility of creating microbial resistancy and the presence of residues of foreign substances in livestock products
- besides higher egg production and better hatchability of laying hen, the weight of eggs slightly increases, while the thickness of eggshell remains unchanged, but its firmness increases

Usage and dosage



HUMAC® Natur AFM is admixed into feed or granules.

Dosage: **0.5 – 0.7 %** in the feed.



HUMAC® Natur AFM Monogastric is admixed into feed. Can replace the use of acidifiers and exporters of mycotoxins.

Dosage: **0.7 – 1.0 %** in the feed.

We recommend application throughout the entire fattening/breeding period. 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.



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Effect of HUMAC® Natur AFM feed materials product line on productive health of poultry

By addition of **HUMAC® Natur AFM** feed materials product line with high content of humic acids into the poultry feed, we may observe the following effects of humic acids and other components:

Detoxification abilities

Neutralize of endogenic and exogenic origin toxins. They bind:

- toxically acting metals into insoluble complexes, that are excreted from the organism
- microbial toxins
- Mycotoxins
- foreign chemical substances
- toxins formed through metabolic processes

Effects on the digestive system

- stabilizes the digestive tract pH and thus of the organism, blood
- affects the function and composition of the intestinal microflora in favour of symbiotic microorganisms
- promotes hormonal activity and creation of pancreatic enzymes and thus the decomposition of nutrients into simple substances (monosaccharides, amino acids, fatty acids)
- positively affects all digestive system functions - digestion and resorption of nutrients - improved use of proteins and other nutritional components
- increases animal appetite
- prevents digestive disorders - diarrhea, constipation, and thus significantly impacts the air and litter quality and humidity (respiratory problems and feet inflammation)
- maintains the C:P ratio, which is important for bones development, feet length and the immune system. By optimization of the Na:Cl:K ratio it affects the intake and conversion of feed, pH, acid-base balance, bone strength, eggshell quality etc.
- the supply of trace elements in a chelated form and their optimal use from the feed material impacts almost all hormonal, enzyme and metabolic functions

Effects on liver

- affects the regenerative capacity of liver tissue
- actively participates in liver metabolism
- impacts liver functions and partially protects it from diseases and disorders

Increases the biological availability of basic nutrients and trace elements

- improves transport of nutrients and minerals into cells, improves the utilization of nutritional feed components
- actively affects the transport mechanisms of macro and microelements and trace elements transmission from the intestine to the animal organism

Antibacterial, antimycotic and antiviral effects

- interferes with protein metabolism and microbe saccharides through catalyzation processes, which leads to inhibition of pathogenic bacteria reproduction
- promotes the organism's natural ability to prevent replication and spread of viruses

Effects on the immune system

- when protecting against pathogens, stimulates immune system receptors in the intestinal villi
- by activation of immunocompetent cells supports and regulates the activity of the immune system and increases the defense capability of the organism
- by optimization of the metabolic environment improves the quality of immunological response of animals following their vaccination
- reduces the production of stress hormones and helps to eliminate the thermal and transport stress. Sufficient use of minerals such as creation of vitamins helps the animals to deal with thermal load (stress) through insufficient thermal regulation of the hall environment

Reduces odor in halls

- lowers the amount of volatile ammonia and CO₂. Ammonia content from 10 ppm damages the lungs' surface, but over 50 ppm can significantly affect the breeding economy - the speed of poultry growth. Excess of CO₂ besides respiratory issues can also cause serious threats to animal immunity. Lower demands on air ventilation are also negligible.

Anti-inflammatory, analgetic and antireumatic properties

- humic acids apply at musculoskeletal system disabilities treatment (muscle, joints, ligaments, tendons and bone damage and inflammation, muscle spasms), vein inflammation, hematomas, sprains and skin diseases of various origin
- significantly affects the creation and inhibition of anti-inflammatory cytokines

