



**NEW GENERATION OF PREPARATIONS IN ANIMAL BREEDING**



**Good health  
Better stall environment  
Improved breeding economy**

**High content of humic acids  
100% NATURAL**



# HUMIC ACIDS IN ANIMAL BREEDING

Natural humic substances are a natural component of animal nutrition - they are the basic organic structure of the soil, commonly found in drinking water, rivers, lakes. Humic acids in a natural form belong amongst natural antibiotics, searched for by animals in case of health problems or injuries.

Humic acids are complex organic molecules with high biological activity. They act detoxically and antiseptically. They support antibacterial, antiviral and fungicidal protection of the organism. They are used to prevent and support the treatment of diarrhea, dyspepsia and various intoxications. They stimulate the digestive process in intensive nutrition for high yield. They support animal reproduction and animal product production without residues of foreign substances. They have a high adsorption capacity that binds toxic substances and viruses in the digestive system that are then excreted from the organism. They provide detoxification of the body, support the immune system and activate metabolism. Stabilizing the pH throughout the digestive system of animals and optimizing the digestive processes.

Humic acid based preparations improve feed conversion, reduce mortality, and provide a good and productive animal health.



## RESULTS IN ANIMAL BREEDING

- increased daily increments (by cca 8%) and better feed conversion (by cca 7%)
- reduced mortality in young and adult subjects (approximately by 40%)
- increased milk production in cows (by 1-1.5 liters), higher fat and protein values in milk
- stabilization of physiological pH of rumen in ruminants
- improved fertility, shorter service period (in cows by about 11 days)
- increased production in laying hens (about 4%), significant decrease of cavities
- significant reduction of faecal and slurry odor (NH<sub>3</sub> emissions up to 64%)
- reduced breathing difficulties
- significant reduction of diarrhea in both young and adult animals
- better condition and stability of the herd (breeding), reduction of braking
- stress management - reduced production of stress hormones, limiting cannibalism
- stimulation of the immune system - especially in young animals
- Reduce costs for antibiotics and other medicines

**CONVERSION -9.0 %**

**MORTALITY -50.0 %**

**PROFIT IN CARCASS +14.2 %**

### Pig fattening in 110 days - HUMAC® Natur AFM ZEAS Moravské Budějovice, Czechia, 2016

	Control group	HUMAC	Difference
Feed conversion	3.03 %	2.75 %	- 9.9 %
Meatiness	60.3 % LM	61.7 % LM	+ 2.3 %
Mortality	8.33 %	4.17 %	- 50.0 %
Average weight at slaughter	110.47 kg/pc	115.54 kg/pc	+ 4.6 %
Average weight of meat	85.97 kg/pc	89.91 kg/pc	+ 4.6 %
Average weight of carcass	83.30 kg/pc	87.08 kg/pc	+ 4.5 %
Profit in living	€ 2 713	€ 2 941	+ 8.4 %
Profit in carcass	€ 2 814	€ 3 213	+ 14.2 %

# ORGANIC-MINERAL FEED MATERIALS WITH HIGH CONTENT OF HUMIC ACIDS



## FOR ALL ANIMAL SPECIES

Feed material with over 65% of humic acids

- Increases immunity and improves health
- Balances mycotoxins and other toxic substances
- Acts as a prevention of diarrhea and metabolic diseases
- Optimizes digestion and nutrient utilization
- Improves feed conversion
- Reduces mortality and improves reproductive indicators
- Reduces the production of ammonia, hydrogen sulphide and other emission gases

**HUMAC® Natur AFM** is supplied in form of a fine gray-black powder. **It is intended for all animal species.**

**HUMAC® Natur AFM Liquid** is a black-brownish suspension. **It's mainly intended for calves and other animals fed with liquid feed.**



## FOR MONOGASTRIC ANIMALS

Feed material with over 40% of humic acids, treated with calcium formate

- Replaces the use of acidifiers
- Replaces mycotoxin balancers
- It works against anemia (especially in pigs)
- Acts as a prevention of MMA syndrome in sows



## FOR HIGHLY PRODUCTIVE DAIRY COWS

Feed material with over 40% of humic acids, with added buffering agents

- Stabilizes the physiological pH of the rumen
- Acts as a prevention of acidosis and ketosis
- Stabilizes milk components
- Maintains optimal pH of the rumen environment and of other parts of the digestive system without the need for additional buffers
- Reduces braking and mortality of dairy cows

**PREVENTION  
IS THE BEST CURE**

HUMAC® preparations are admixed into feed in range of 0.3 - 1.0%, which can then be directly fed. In case of diarrhea we recommend to increase the preventive dosage by 2 - 3x for a period of min. 5 days.

## PREPARATION FOR ANIMAL BEDDING WITH DISINFECTING AND ADSORPTIVE ACTION FOR BETTER STALL ENVIRONMENT



### FOR ALL ANIMAL SPECIES

Natural bedding preparation with over 45% of humic acids

A product primarily developed to reduce methane and ammonia emissions in animal landfills with a secondary effect to improve animal housing conditions and the tertiary effect of obtaining quality organic fertilizers from animal production.

- Holds and binds emission gases
- Significantly increases the use of ammoniacal nitrogen in fertilizer urease
- Supports the productive health and well-being of bred animals
- Reduces the incidence of respiratory and locomotive organ issues

### REDUCES THE PRODUCTION OF STALL GASES BY 40 - 60 %

It contributes to meeting the environmental protection requirements of the 2010/75 EU Industrial Emissions Directive.

## PREPARATIONS HUMAC®

WITH HIGH CONTENT OF HUMIC ACIDS

+

ORIGINAL NATURAL FORM

## HIGH EFFICIENCY

Trace amounts of humic acids are present all around us. Larger concentrations are found in healing muds, manure, topsoil and mostly in peat, lignite and brown coal. However the most abundant natural source of humic acids is leonardite (Oxihumolit), with 50-80% contents.

Most leonardite bearings contain a large number of heavy metals - humic acids can not be used in their original form and must be chemically treated to humic salts, thereby changing the structure of humic acids and their effectiveness.

Humic acids in HUMAC® are used in their original natural form because they come from a unique source of leonardite in Europe that has not been contaminated with heavy metals.