

PREPARATIONS OF THE HUMAC® NATUR AFM LINE IN BOVINE BREEDING

A healthy calf = foundation of bovine breeding economy and of future quality lactation

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 **simpler application into milk or water for calves** we designed **HUMAC® Natur AFM Liquid**.

HUMAC® Natur AFM Pufer with added magnesium oxide - a significant buffer substance, was developed for **dairy cows highly productive** during the entire lactation period. When the feed ration is balanced, it maintains an optimal physiological pH in an organism **without the need for additional buffering agents**.

Optimization of breeding economy

In bovines, 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 bovine breeding has the following positive effects on the breeding economy:

- Improves production and breeding profitability (milk production increased by 1 - 1,5 l/day)
- Favourably affects the utilization of nutrients from feed ration and therefore improves feed conversion (4 - 8%)
- Significantly reduces the consumption of antibiotics and medicines (30 - 40%)
- Optimizes reproductive indicators (drop of insemination index, shortening of ad interim and of service period), more pronounced oestrus
- Improves the balance in herds
- Reduces morbidity and mortality of animals (by up to 40%)

Use and dosage



HUMAC® Natur AFM is admixed into feed or granules.

Adult animals: 100 - 150 g/day/pc or 3 - 5 kg/t of feed

Calves: 20 - 40 g/day/piece, in the milk/feed

HUMAC® Natur AFM Liquid is admixed into milk, water or liquid feed. Designed mainly for calves.

Calves: 10 - 50 ml/day/piece in the milk/water



HUMAC® Natur AFM Pufer is admixed into feed. Designed for dairy cows productive during entire lactation period.

Productive dairy cows: 150 - 200 g/day/piece

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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The effects of using HUMAC® Natur AFM feed materials on dairy cows, calves and heifers

The dry period 4-6 weeks before calving

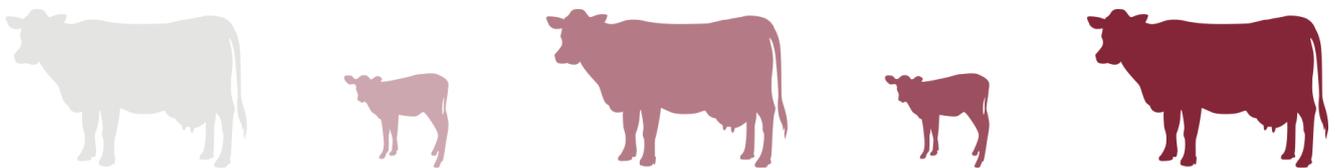
- enhanced quality of preparation for birth
- significant decrease in subclinical and clinical acidosis, ketosis and mastitis
- higher level of zoo hygiene - significant reduction of methane, NH₃ and H₂S levels in the stable - affects the airways and has a physiological effect on nitrogen management - reduced impact of NH₃ on the internal organs, especially the liver
- detoxication of the organism (mycotoxins, bacterial toxins, heavy metals, etc.) - toxins tend to browse the fetus, resp. the colostrum and milk
- physiologically balanced pH of the organism
- optimal nutrient management, macro and micro elements
- higher level of immunoglobulins in colostrum - higher immunity of calves

From calving to conception

- fewer birth complications
- high quality colostrum - an essential prerequisite to a highly profitable calf breeding
- optimal utilization of nutrients from feed - a rapid onset of lactation curve and the assumption of high milk production
- significant decrease of mastitis and of post-natal complications and inflammation
- pronounced oestrus
- optimal preparation for future gravidity - by reducing the insemination index value, shortening the service period and optimisation of other indicators of reproductivity, aiming to achieve 1 calf from one cow per year
- detoxifying effects, optimal utilization of nutrients from the feed ration and improved indicators of reproductivity are prerequisites for an increased number of lactations and significantly improved breeding profitability

From conception to the dry period

- optimised utilization of nutrients from feed ration and proper functioning of the digestive system and of internal organs
- significant effect on the rumen metabolism - higher milk production of a constant composition, degradation of endotoxins and exotoxins
- beneficial effect on fermentation of carbohydrates (and some amino acids) by rumen microorganisms
- markedly reduces the production of histamine and thus also the inflammatory processes of limbs, which prevents decreased milk production
- greatly affects the reproduction and regeneration of bacteria and viruses in the digestive tract of animals, detoxifies the digestive system from microbial and fungal toxins
- keeps the animal in a good reproductive condition and after righteous drying the animal is ready for another gravidity and quality lactation



Calves (served in milk immediately after birth)

- positively affects the development of useful microorganisms in the first days and hinders the development of pathogens
- eliminates almost all diarrhea diseases from breeding
- better health condition of calves with minimal cost of medicines
- increase of increments by a min. of 10% can be achieved at a min. of 10% better conversion of nutrients from feed
- mortalities are absent (subject to exceptions)

Heifers in preparation for conception and birth

- like with dairy cows, by regularly administering **HUMAC® Natur AFM** we're effectively preparing the animal for the state of optimal productive health, birth and following lactation with a high production of qualitatively balanced milk

