

TOXIFIX

New, scientifically and practically tested approach to control of mycotoxins in bad animal feed

BAD ANIMAL FEED

Economic loss; health hazard as well for people as for animals

High perishableness of forage has always presented one of the major problems in agriculture.

Problems of high perishableness of forage can be detected in:

1. Loss of nutritious value and reduction of animal feed value in the biological sense; aggravated digestibility and reduced usefulness, as well as in annihilation and decimation of nutritious ingredients
2. Forming of the bacteria and mycosis; potential health hazard for people as well as animals.

The results of the research have shown that already in low perishable animal feed the toxic ingredients are being formed. This fact has raised the interest of veterinary and general medicine in this issue.

Although the decimation of nutritious ingredients, itself, would be enough to capture full attention of medical practice, only the discovery of serious quantities of toxic ingredients in relatively low perishable feed has resulted in considerable changes in “agricultural thinking” and veterinary medicine.

Animal feed that contains toxic macrobiotic substance presents a high risk for any consumer of animal based products (meat, eggs, milk...). Therefore, such food should not find itself on the market. Moreover, such ideas are not acceptable taking into account 7 billion of people inhabiting our planet in 10 to 15 years.

This is the reason why science has taken the challenge to find the solution to this problem, and it has found it!

The solution provided by scientific research: TOXIFIX
With TOXIFIX science attacks/kicks back!

CAUSE OF PERISHABLE ANIMAL FEED

Perishableness of food and animal feed is caused by a great number of micro-organisms. The influence of moistness on the grain plays an important role in the whole process (although some micro-organisms can exist in relatively dry environment as well). Insects and bugs assist the development of micro-organisms by destroying or damaging what is in normal conditions a pretty stable outer layer of different crops.

The development of different grain hybrids (especially corn or wheat) enabled the cultivation of areas which we could not use for cultivation of wheat in the past due to climatic reasons or unfavorable soil. New types of wheat first have to be reaped, this causes grains that are still soft and humid to be easily damaged during the harvest, farm treshing, transport and storage, which greatly adds to contamination of wheat with micro-organisms. Under certain conditions mold could appear already during inflorescence.

MYCOTOXINS –HAZARDOUS PRODUCT OF MOLD FUNGUS

Mold fungus is a simple and primitive form of mushroom. It is not demanding and it can live and grow on any form of organism. Unfavorable environmental conditions: drought, heat or cold cannot harm them. They are the problem of unripe or damaged fruits, wheat, crops and all animal feed produced out of these products.

Similar types of fungus could attack the humid surface of wheat and in this way reach starch, especially if the wheat has been damaged beforehand. This explains the presence of mycotoxins in the animal organism, although the animal feed did not contain mold (example: after withering and cleaning of animal feed attacked by the mold).

ORGAN DAMAGES CAUSED BY MYCOTOXINS

Negative impact of mycotoxins manifests itself through:

- Repression and inhibition of micro-organisms which are normally in our stomach and intestines, and during rumination in the third stomach.
- Annihilation of cells belonging to digestive mucous membrane and annihilation of its life important functions
- Obstructing functioning of liver in which toxins arrive through blood
- Depending on the type and number of mycotoxins as well as individual sensitivity of an organism, one or more organs could be attacked

According to the degree of digestion block and absorption, usability of animal feed is being worsen: bigger pieces of food could reach the last part of digestive tract not being digested, at that very point starts a massive reproduction of mainly benign micro-organism; bacteria fermentation results in products of chemical change of substance which are damaging to our health: in our intestines osmotic pressure is being raised and the surrounding tissue dehydrates. This results in diarrhea, extensive loss of bodily fluids, and continual intestines related problems.

MYCOTOXINS and BACTERIOTOXINS POISONING

The intensity of poisoning depends on physical shape of harmful bacteria and mold fungus which are present in the feed, intestines. Free and melted toxins could be absorbed. If they are, which is the case in certain bacterotoxins, connected to the food, digestive particles or they are found in micro-organisms, then the absorption comes right after the tearing of the structures. While it happens, significant quantities could escape the process because they are being repressed in the large intestine to be discharged with faeces. In this case the animal health has not been endangered. If it should come to the tearing of the structures (due to activity of mucous membrane in the large intestine), all existent toxins are being freed and they are starting at that moment with their damaging activity.

This kind of poisoning could affect all living beings. The most frequently attacks are mucous membrane and liver. Apart from health hazard we should take into consideration the agricultural damage as well: greater consumption of animal feed, bad use of food, lower rate of growth and general lower quality of products. Toxic substances accumulated in animal products affect men as well, which are found at the end of the food chain.

CONTROLE OF MICROBIOTIC TOXINS IN FOOD

Numerous toxins, which the animal feed contains, show unusual resilience towards standard methods of treatment. Mycotoxins resist freezing, gas-poisoning, grinding, as well as defense mechanism of our digestive system. Therefore, it was necessary to develop a new concept how to fight toxins.

We can find toxins in our food in different chemically changeable mixtures and substances. We can find them in: pretty small and chemically simple compounds for example, ammoniac, in compounds medium sized example.

Previously described scientific efforts have led to the discovery of undissolvable, nontoxic, completely natural ion-flour which are suitable for fixing of toxins and its sources. Suitable substance has to control enough of stability so that it stays intact until the disposal of faeces; has to be benign – should not affect the intestinal flora and mucous membrane and it should not be absorbed into organism.

The experiments that were carried out have shown that the combination of minerals with a particular power of absorption whose structure and size of grain, outer and inner surface and specific physical and chemical characteristic respond to wanted criteria.

TOXIFIX CONCEPT

Mixture of different, carefully selected ion-flour under the name of TOXIFIX responds to the conditions set for the ballast-material of animal feed and secure normal functioning of organs in charge of digestion. The organic part of fiber is mainly digestible, which quickens the release of toxic ingredients, mineral part of fiber stays stable. While it passes the digestive tract, TOXIFIX does not change either chemically nor physically. Poisoning and remains are out of the question because TOXIFIX is active only physically (absorption). This is the reason why there could be no injury to mucous membrane or contamination of organism.

TOXIFIX PERFORMANCE

TOXI FIX ties toxins to itself already in oral cavity, or if the liquid feed is in question, already in the stage of preparation. This effect continues in the stomach and culminates in small and large intestine. TOXI FIX ties firmly to itself fungus, mold and bacteria which in this way turn inactive. Intestinal flora and mucous membrane are not damaged, there is no absorption into the blood stream and that is the reason for no damage of organs, that is, system of organs. TOXIFIX fixes itself until it is disposed with the faeces. It does not depend on the acid strength or other chemical, physical or physiological conditions which rule in different parts of our digestive tract.

Once again on natural soil, the bacteria and mycotoxins release, there is a deactivation of micro-organism (bacteria and fungus) so, there is no threat for the following harvest.

RECOMMENDATION FOR TOXIFIX USAGE

Spoiled and toxic animal feed (food) is mixed with 2-4 kg of TOXIFIX per tone dependant on the quantity of contamination and size of expected remains of toxins.

It is of secondary importance to which type and group the bacteria belong to for deciding on the additional quantity of TOXIFIX.

As soon as you start giving animal feed mixed with TOXIFIX the better. If the animals during the first taking of the animal feed with TOXIFIX took less, the additional quantity of TOXIFIX should be adapted to the usual quantity of feed. When the appetite of the animal stabilizes again (4-6 days) you can start using the above mentioned quantities of additional TOXIFIX.

If you do not see the expected results in the following six days (maximum) then the animal feed has been spoiled to a greater extent than expected. In this case you should raise the quantity of TOXIFIX in the following 4-6 days according to the above mentioned instructions.

TOXIFIX

TOXI FIX is a natural mixture of minerals which has a great ability to selectively tie ions of ammoniac and other harmful substances from intestines and take them out of the body.

Minerals of specific crystal structure which make tying of the smallest molecules (ammoniac, carbon dioxide, heavy metals, mycotoxins, bacterial toxins) possible are actually permitting TOXIFIX to be so efficient. Just mentioned harming substances are present in stock-cattle feed and residing place. Ammoniac and carbon dioxide are gases heavier than air so their concentration is greater near the ground. Due to this fact, young and small animals are more likely to be exposed to the harmful effects of these gasses than other animals.

According to research, TOXIFIX ties to itself more than 80 % of aflatoxins, T-2 toxins, vimitoxins, zearalenon and oosporeina.

Usage of this product greatly decreases harmful effects of mycotoxins on health and production results of animals.

The product is indigestible, passes through digestive tract, ties mentioned structures and leaves our body with faeces. There are no residues in milk, meat or eggs.

TOXIFIX is a mixture of natural minerals, that is the reason there are no impacts similar to medications where the mixture enters the processes of metabolism, on the contrary, it works as a "mechanic remover" of harmful materials out of the body.

Analyse of TOXI FIX :

SiO ₂	67,85%
Al ₂ O ₃	11,95%
Fe ₂ O ₃	4,39%
CaO	3,41
MgO	3,84
SO ₃	1,00%
K ₂ O	0,82%
Na ₂ O	1,30%
TiO ₂	0,05%

LOI (1050 C) 5,38%

	% absorption								
	pH2			pH 7			pH 9		
	6 h	12 h	24 h	6h	12h	24h	6h	12h	24h
okratoksin – A	93	95	93	30	40	40	40	40	40
aflatoksin - B1	99	93	97	96	93	100	96	93	96
aflatoksin – B2	96	94	97	96	95	98	96	93	96
aflatoksin – G1	95	92	100	100	100	100	96	90	96
aflatoksin – G2	96	95	97	95	97	97	96	90	95
zearalenone	58	89	91	18	32	39	0	20	58

Since we are dealing with natural material, some minimal aberration is possible.

While we measured growth, it has been concluded that an average growth is bigger cca 3% (while using the product) which means the product pays itself out and leaves a small profit but, animals are in much better health and their meat contains no poisonous components.

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