

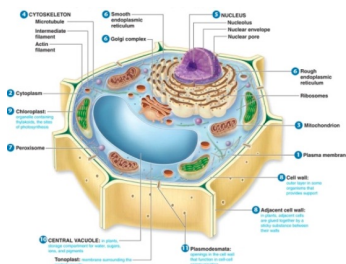
EUROSORB XP

BROAD SPECTRUM MYCOTOXIN BINDER



4-in-1

1. MYCOTOXIN BINDER
2. IMMUNO-STIMULANT
3. PREBIOTIC
4. PERFORMANCE ENHANCER



Eurosorb XP has the following components:

4 types of mycotoxin binders:

yeast cell walls, beta-d-glucans, dipolar phylosilicates and nanocomposites

2 types of immuno-stimulants:

immuno-saccharides and micro-catalyst (inulin)

WHAT ARE MYCOTOXINS:

The worldwide contamination of foods and feeds with mycotoxins is a significant problem. Mycotoxins are secondary metabolites of molds that have adverse effects on humans, animals, and crops that result in illnesses and economic losses. Aflatoxins, ochratoxins, trichothecenes, zearalenone, fumonisins, tremorgenic toxins, and ergot alkaloids are the mycotoxins of greatest agro-economic importance. Some molds are capable of producing more than one mycotoxin and some mycotoxins are produced by more than one fungal species. Often more than one mycotoxin is found on a contaminated substrate. Factors influencing the presence of mycotoxins in foods or feeds include environmental conditions related to storage that can be controlled. Other extrinsic factors such as climate or intrinsic factors such as fungal strain specificity, strain variation, and instability of toxigenic properties are more difficult to control. Mycotoxins have various acute and chronic effects on humans and animals (especially monogastrics) depending on species and susceptibility of an animal within a species. Ruminants have, however, generally been more resistant to the adverse effects of mycotoxins. This is because the rumen microbiota is capable of degrading mycotoxins. The economic impact of mycotoxins include loss of human life and economic losses in animals such as increased health care and veterinary care costs, reduced livestock production, disposal of contaminated foods and feeds.

Technology that Works for You!

Complex Components that Prevents Mycotoxicosis

Eurosorb XP is a broad substrate binding capacity binder which ensures that high fraction of all the mycotoxins will be rendered non-bioavailable and the bioavailable mycotoxins will be below the threshold of biological activity. Broad substrate binding capacity of Eurosorb XP will also minimize the potential for toxicological synergy between mycotoxins.

Eurosorb XP inhibits the uptake of mycotoxins in animals in vivo by acting like a "organic/inorganic sponge" and adsorb complex mycotoxins in the gastro-intestinal tract, thus preventing the uptake, distribution and toxic effects to different target organs in poultry and livestock. It's components which help prevent mycotoxicosis are as follows:



Yeast cell walls - help eliminate mycotoxins in the gastro-intestinal tract of animals by their numerous networks of "surface pores" and binding sites in their "glucomannan components." Yeast cell wall used in Eurosorb XP is highly porous in nature. It has an elaborate surface which has greater surface to pore ratio than inorganic binders. It's pores trap numerous minute mycotoxins in its lattices.

Beta-D-Glucans – Glucomannan is a high molecular weight polysaccharide which is the hemicellulose component in the cell walls of some specialized plant species. It contains beta-d-glucans which has spatial conformation and molecular sites of interaction for Zearalenone. Beta-d-glucans exhibit both hydrogen bonds and van der Waal's stacking interactions against numerous types of mycotoxins.



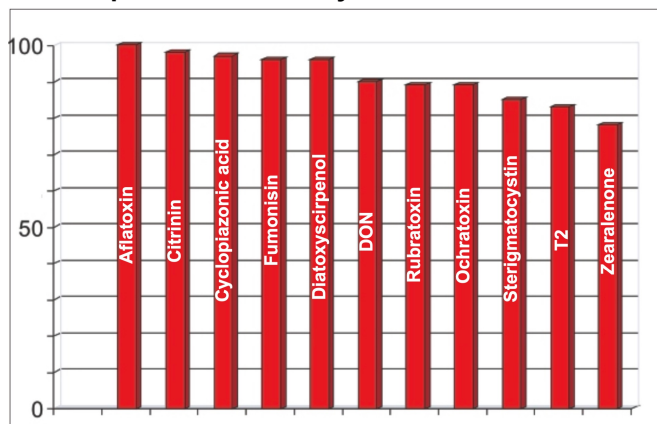
Polarized Phylosilicates - Polarized phylosilicates are dipolar (with positive and negative charges) and binds mycotoxins through magnetic attraction. Since most mycotoxins have positive and negative charges (dipolar) they have high affinity to bind positive and negative charges of phylosilicates forming an insoluble complex which cannot be absorbed in the GIT. It also traps mycotoxins in its pores (interstitial lattices) - phylosilicates contains pores which measures 5-20 Å° (angstrom units). These pores sequester minute myco-toxins and spare vitamin particles which have an average size of 1,000 Å°.

Nanocomposites - These are chemically modified aluminosilicates. High molecular quaternary amines alter the surface properties of aluminosilicates by exchange of structural charge-balance cations, thereby increasing its hydrophobicity and improves its efficacy against zearalenone and ochratoxin A.

Immuno-saccharides - It is a gluco-mannoprotein complex derived by enzymatic hydrolysis of the inner cell wall of the fungal organism and function as a potent immuno-activator. It contains mannose and can affect the immune system by stimulation of the liver to secrete mannose binding protein. This protein binds to the capsule of bacteria and triggers the complement “cascade” of immune response.

Micro-catalyst (Inulin) – Is a complex carbohydrate polymer that catalyzes the growth of beneficial microflora of the host animals. When added to animal feed, is not digested by intestinal enzymes, but in fact is a substrate for the growth of beneficial bacteria. When Micro-catalyst is introduced into the GI tract, they selectively enhance the growth of beneficial bacteria like Bifidobacteria, Lactobacillus spp etc. The beneficial bacteria out-compete and suppress the proliferation of Gram-negative bacteria such as Escherichia coli, Salmonella spp., and Clostridium perfringens. Pathogens cannot utilize Micro-catalyst, cannot multiply and are starved to death. Increase in number of beneficial bacteria leads to increase production of lactic acid and synthesis of amino-acids and vitamins that alleviate toxic effects of mycotoxins in animals.

Broad Spectrum of Activity



Some Farm Level Strategies that can help prevent Mycotoxicosis

Feed bins: Probably one of the most troublesome areas with regards to build-up of mycotoxins. Bins should be checked periodically to make certain feed is not building up in auger troughs or on bin walls. Bins should have good ventilation to minimize heat build-up and “sweating” of the side walls. Moisture build-up is conducive to fungal growth that will produce mycotoxins.



Bagged feeds: Storage of finished feeds or raw material in bags poses problems especially in humid, temperate climates. Condensation and mold growth can occur easily in solid walled and lined bags as temperature change. Jute and plastic mesh bags are particularly troublesome if recycled and used more than once for feed. Furthermore, the open nature of these bags allow humidity and mold spores to penetrate to the feed within.

Feeders: Generally, conditions are ideal for mold growth and contamination in and around feeders (damp due to feed, water and saliva of animals). This area should be routinely checked for excess build-up and moisture.

“Old Feed” feed procedures: A standardized procedure should be followed regarding the use of old feed after the flock has been removed. Bringing back left-over feed to the feed mill for re-processing can be a significant source of contamination.

Dosage:

- 0.5 to 1.0 kg per ton - As preventive dosage. For up to 13% moisture content.
Mycotoxin contamination of up to 100 ppb.
- 1.0 to 2.0 kg per ton - As assurance for moderate contamination.
For more than 13% moisture content.
Mycotoxin contamination of greater than 100 ppb.
- 2.0 to 2.5 kg per ton - For rampant seasonality of T2 and Zearalenone.
For more than 13% moisture content.
Mycotoxin contamination of up to 5000 ppb.

Packaging: 25-kg multi-wall kraft bag



Made in Belgium

