Novus Provides Preventative Options for Mycotoxin Management

Because it can be hard to determine mycotoxin levels in feed materials in a timely manner, feeding supportive ingredients can help optimize performance. TOXIBAN® products have been shown to help manage the effects of mycotoxins in feed and the performance of the animal.

The TOXIBAN product family has shown improved growth performance, reproductive performance, feed conversion and improved appearance in livestock consuming feeds with elevated levels of mycotoxins.

TOXIBAN is an anti-caking agent, with the addition of a Lecithin and ammonium propionate for added control, that can provide low-cost management of mycotoxins, especially Aflatoxins and Zearalenon. When fed continuously, TOXIBAN can help reduce the economic losses producers experience when faced with mycotoxicosis. The unique clay particles of TOXIBAN have the ability to effectively bind to mycotoxins and keep them from becoming harmful to the animal.

TOXIBAN MAX offers the ability to protect animal feed from mold and mycotoxins while maintaining high quality feed that producers demand. It has been formulated with montmorillonite and yeast components to provide multiple functions while targeting five main mycotoxins. TOXIBAN MAX is unique in that it is able to boost immune system function, which in turn leads to a healthier animal.

The Novus Commitment

Novus is a leading developer of animal health and nutrition programs for the dairy, poultry, pork, beef, aquaculture and companion animal industries. Novus feed quality programs protect the value of high quality feed ingredients and finished feed to ensure optimal animal performance, improved feed conversion and protection of the producer's investment.

At Novus, our vision is to help feed the world affordable, wholesome food. To do that, we focus on the areas of performance, food safety, animal welfare and environment. With our world-class research facilities and headquarters in St. Charles, Missouri, USA, we create animal health and nutrition solutions based on science.

Novus International's roots trace back more than five decades with basic and applied research and development and manufacturing expertise. Since becoming an independent company in 1991, we have built upon our understanding of animal nutrition to develop multiple lines of products and services to the livestock, pet and industrial markets.

Ordering Information

Novus has dedicated sales and technical services professionals ready to assist you. Please contact your Novus Sales Representative or contact Novus Customer Service at 800.568.0088

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Not all products available in all countries.

PROTECT FARMS FROM **HIDDEN THREATS**

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SOLUTIONS SERVICE SUSTAINABILITY℠

Hidden Threats Can Hurt Production

Disease challenges, heat stress, cold weather and poor management can cause reductions in animal performance. However, not all causes of reduced performance are easily identified. Mycotoxins can be a hidden thief of livestock performance.

What are mycotoxins?

Mycotoxins are secondary metabolites produced by molds that can impair animal health and cause serious economic consequences - even at low levels. When animals are fed grain, a constant risk exists to the exposure of mycotoxin-producing molds. Most toxins are formed on the grain, seed and forage in the fields, but they may also occur during harvesting, processing, transportation and storage. Some growing seasons may be more severe than others because field and growing conditions affect the activity of molds on crops. Stressful conditions, such as drought, excessive moisture and insect damage, stimulate mold activity and potentially increase mycotoxin production.

Aflatoxins, Zearalenone, Ochratoxin A, Fumonisin, T-2 and DON are common mycotoxin types that producers have issues with worldwide as they decrease productivity and impair reproductive efficiency.

- Aflatoxins often occur in grain grown in tropical or subtropical conditions. Drought, insect infestation and poor storage conditions can increase their occurence. Aflatoxins can leave residues in meat and milk, causing rejection of the product if levels exceed the legally allowed limit.
- Zearalenone is commonly found in corn, small grains and forages. The primary effects of Zearalenone are on reproductive performance.
- Ochratoxin is found in corn, oats, barley and rice. Ochratoxin has been reported to affect cattle but is rapidly degraded in the rumen and thus thought to be of lesser consequence. It is more of an issue in monogastrics.
- Fumonisin occurs mainly in corn and corn byproducts and has been shown to affect dry matter intake and impact liver health.
- DON, also referred to as Vomitoxin, occurs in cereal grains and grain silage. DON has been associated with reduced feed intake and lower production.

Finding Mycotoxins

Mycotoxins may be present even in the absence of visually or actively moldy feed. Properly ensiling and storing feed material will prevent further production of mycotoxins because the molds are in check. However, proper storage of grains does not affect the toxins already present prior to harvest.

Toxins are rarely distributed evenly within a storage structure or field; therefore, testing may not give an accurate measurement of toxin levels. “Hot spots” are commonly identified in silos containing elevated toxin levels that correlate to specific problem areas of a field. Current testing is commonly done for only six to ten of the several hundred known toxins. Even if a toxin is identified confirmation is difficult, as false negative readings are common.

Why are mycotoxins a concern?

Mycotoxins negatively affect animal performance by potentially changing nutrient quality, absorption and metabolism, decreasing dry matter intake, reducing feed conversion, depressing immune function and causing an “unthrifty” appearance. In addition, producers see higher rates of abortion, irregular heat cycles and low conception rates when mycotoxins are present in the feed.

Mycotoxin ingestion can also lead to a marked decrease in milk production, decreased body condition, diarrhea, increased disease incidence, poor reproductive performance and digestive upset.

Even detection of low-levels of mycotoxins is a potential problem. Low-level exposure over an extended period of time can be as damaging as acute exposure. Clinical signs in animals vary from toxin to toxin and from animal to animal. Many clinical signs of mycotoxicosis mirror other metabolic problems making diagnosis difficult. Poor performance and/or production are the most common effects. Other problems include foot lesions that do not heal, reproductive issues, inconsistent feed intake and variable manure consistency. Many mycotoxins can cause damage to liver and kidney tissue as well. Depending on the severity and length of the challenge, some animals may not recover resulting in early culling or death.

Signs of Mycotoxins:

Decreased Productive Capacity	Mycotoxins can change nutrient quality, absorption and metabolism, as well as decrease dry matter intake, reduce feed conversion, create digestive upset, depress immune function and cause an unthrifty appearance.
Reproductive Inefficiency	Producers may see higher rates of abortion, irregular heat cycles and low conception rates.
Reduced Overall Health	Mycotoxin ingestion can lead to a marked decrease in milk production, decreased body condition, diarrhea, increased disease incidence, poor reproductive performance and digestive upset.