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### **Could Herd Fertility Problems Stem from Feedstuffs?**

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In these volatile markets, dairy producers have to be good managers in order to survive. Producers may follow the guidelines and recommendations outlined by their veterinarian or nutritionist, but maybe something still doesn't seem right. Milk production is a bit off, feed intake is down and a good portion of the herd isn't showing heats or settling. The problem could be an undetected enemy lurking in stored feeds and forages... mycotoxins.

Mycotoxins are produced naturally by specific types of molds. Molds produce mycotoxins as response mechanisms. There are many conditions that can elicit mycotoxin production such as:

- Plant stress – soil infertility, insect damage and temperature extremes
- Agronomic practices
- Harvest stress – late harvest or crop too dry
- Storage stress – wet grain, poor fermentation and improper storage management/packing
- Feed-out problems – poor bunk and feed-out management

Any of these conditions can lead to mycotoxin production. In addition, due to the increased global trading of feedstuffs, mycotoxins are not found only in certain geographical regions, but are widely distributed globally.

There are approximately 500 known mycotoxins; however, it has been theorized that there could be as many as thirty-thousand. “In most cases we are dealing with animal exposure to more than one toxin at any given point in time. This interaction between toxins makes it even more difficult to diagnose the problem. The effects of long term exposure to even low levels of mycotoxins in the diet can reduce production and

reproductive performance,” says Randy Asher, owner of Animal Science Consulting. Asher is currently working toward a doctoral degree at South Dakota State University in the Veterinary Science Department. His area of expertise encompasses the effects of mold, mycotoxins and pathogenic yeasts on animal production.

Mycotoxins can affect fertility in many ways. With clinical mycotoxicosis, direct effects may include decreased fertility, prolonged estrus, abortions, early embryonic mortality and irregular cycles. Asher says, “Molds and mycotoxins can also alter the nutrient content of feedstuffs, reduce feed intakes, reduce nutrient absorption and cause damage to the GI tract. All of these have a secondary effect on fertility.”

It is possible to test feedstuffs for mycotoxins, but testing is unreliable because only a few of the hundreds of known mycotoxins can be identified with the methods that are currently available. Obtaining a representative sample is also difficult, since mycotoxins are not uniformly distributed.

For problems that you suspect may be due to mycotoxin contamination, first remove or minimize the use of any questionable or contaminated feeds or forages, then consult your veterinarian and nutritionist to eliminate other possible causes of the problems. Feedstuffs with visible molds are clearly a potential source of problems, but mycotoxins can be present even if feed or forage appears to be of top quality.

If the farm suspects a mycotoxin issue is already present, “Nutritional therapy should be employed with a focus on offsetting **any** problems associated with mycotoxicosis. The first step **is** to add a glucan-based **product with proven results** to the diet to **adsorb** the mycotoxins,” says Asher. The benefits of **such a** product **include** low inclusion levels for cost effectiveness and a high surface area allowing for the adsorption of **many types and numbers** of mycotoxins.

To prevent mycotoxin problems from impacting fertility in the herd, Asher suggests feeding clean feeds and forages, keeping a toxin adsorbent in the feed at all times, having

a good vitamin and mineral program, maintaining gut health and focusing on management and cow comfort.

Mycotoxins are a leading area of study at Alltech. Through 28 years of research-driven product development, Alltech has created a range of natural solutions for the feed and food industries. For more information, please visit the website at [www.alltech.com](http://www.alltech.com) or [www.knowmycotoxins.com](http://www.knowmycotoxins.com).

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