

Be Aware of Mycotoxins

Steve Blezinger

Dairy producers in some parts of the country have been marginally aware of the affects of mycotoxins on their herds. They have seen the problems these affected grains can create on herd production and health.

Over the last few years, the dairy industry has become increasingly aware that mycotoxins are a larger problem than once thought. This is especially true in situations where the grain crop has been influenced by environmental effects such as drought or excessive rainfall. Both extremes can delay harvest and increase moisture levels in grains going into storage.

The problem, however, is not limited only to the milking herd. Mycotoxins in grains affect all animals on the dairy. This includes the newborn calf. It is a problem that has to be managed in all areas of the dairy herd and at all stages of production.

Molds and Fungi

Mycotoxins include a wide array of compounds produced by hundreds of different molds and fungi that can be found on grains while in the field and in storage. In many cases, the molds and fungi may be present at some level on the grain, but never produce these toxic metabolites.

Under the right conditions however, these toxins are produced by these naturally occurring organisms. Being aware of the potential for this problem is critical. Working with a grain and feed supplier that focuses on taking measures to reduce or eliminate both molds and mycotoxins is no less critical.

Of the fungi that can be found on standing crops or stored feeds about 20 have been associated with the production of toxins that are related to different naturally occurring diseases.

Affects on Young Calves



Young calves are especially susceptible to the toxic effects.

In many cases, when fed to cattle, the rumen can detoxify these compounds to some degree. Younger calves, however, are especially susceptible to the toxic effects. This may be largely due to the fact that early in life the rumen is under developed so any detoxifying activity is very limiting. In young cattle the effects of mycotoxins can be to-fold. The fetus can be affected prior to birth in cows that consume mycotoxins during pregnancy. As noted this can result in embryonic or fetal death and subsequent abortion, calves may be born smaller than normal, very weak and with significant suppression to an already underdeveloped immune system. Since many of the mycotoxins affect the liver, if the calf survives, common symptoms are increased sickness due to immunosuppression, depressed appetites and subsequent poor performance. Mortality rates in affected calves are high.

Also, treatment of calves affected prior to birth is ineffective since the damage has been done. In this case, protecting the calf from the effects of mycotoxins is part of the overall management of the grain

and feed supply for the pregnant cow.

The calf and your calf starting and development program are the foundation of your herd and the long term performance and profitability. Taking the appropriate steps to insure mycotoxins are minimized in all areas of the dairy is important and particularly important where your calves are concerned.



Mycotoxins can be found in corn silage

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Managing Lameness In Winter

Dan Schimek

Here are some recommendations for overcoming winter lameness:

1. Review your use of footbaths during the winter months. Consider using portable footbaths. Remember that formalin solutions lose their effectiveness below 45° F. So use of an alternate product is necessary in winter months. Position footbaths close to the parlor or in warmer areas to avoid frozen solutions.

2. In freezing and harsh conditions, routine scraping becomes even more important. Rather than decreasing the cleaning schedule, it is vital to maintain or increase efforts during freezing conditions in order to avoid uneven, rigid walking surfaces. Having protocols in place and discussions in advance with employees to enforce this may be necessary.

3. In smaller herds or groups, a dry footbath may be a viable alternative. These should consist of hydrated lime with an inclusion of 5% copper sulfate. Dry footbaths work best when feet are fairly clean and need to be deep enough for the lime to get between the claws where infections begin.

4. Additional efforts to keep feet clean, such as spraying feet in the parlor, can help. This is even more important on days where footbaths are used, as it keeps the footbath cleaner, which improves the effectiveness of the footbath. Use of topical solutions in the parlor also provides another way to treat cows with infectious lameness, and it can serve as a preventative as well.

5. Other areas such as return alleys and icy waterers can be potential hazards as well. So preventative maintenance on waterers as well as increased or more thorough scraping of these areas is necessary in winter months.

6. Claw horn lesions such as ulcers are often a result of increased time spent standing. Improperly maintained stalls can easily lead to this. To avoid this, make sure that sand stalls are filled and raked routinely. Ensure mattresses have adequate bedding to promote good stall usage.

7. Maintain a regular trimming schedule during the winter months. Considering that each case of lameness cost approximately \$400 and that a hoof trimmer may charge \$20 per

cow, dairy producers can perform 20 maintenance trims for every one case of clinical lameness.

8. Given the recent dairy economy, producers may have made the decision to remove some vitamins and minerals from rations to save on cost. Now may be a good time to place them back into rations in order to improve foot health.



While all of these suggestions may not be applicable on every dairy, it is important to be aware of the costs associated with lameness and to make sound management decisions to best minimize those costs and maximize profitability.



Van Beek Nutrition Mission:

“To enhance herd health and production through nutrition by providing high quality premixes, custom mineral blends and technical advice with attention to the specific needs of our clients.”

Van Beek Nutrition Vision:

Van Beek Nutrition is dedicated to providing high quality products and services, building customer relationships, and maintaining its leadership in the livestock nutrition industry.

Van Beek Nutrition Values:

Van Beek Nutrition is founded on the values of God, family, and work in that order. We strive to present these values through our policies and priorities and to demonstrate these values as we conduct business with our employees and the customers we serve.

5 Key Factors to Create a Culture of Excellence at Your Dairy

- 1) Employee selection
- 2) Training and education
- 3) Organizational structure
- 4) Consistent message
- 5) Effective feedback and communication



How to Determine if a Technology is Right for Your Dairy

Here are some questions you should ask when evaluating new (or new to you) technology.

- 1) What will it cost?
- 2) What are the expected results and values?
- 3) How will we measure and evaluate the results of our decision?
- 4) Will it replace something that already needs replacing?
- 5) How confident are we that our operation will realize the expected results?
- 6) What is the risk?
- 7) What is the negative risk?
- 8) Can we use partial budgeting to estimate the return on this decision?
- 9) Who will use this technology in our operation?
- 10) Am I (or are we) an innovator, early adopter or follower? Will we be “guinea pigs” for this technology or application?

New Faces



Schoolcraft, Michigan Facility

Amanda Martin joined the Van Beek Nutrition Team in early September. She is the Administrative Assistant in our Schoolcraft, Michigan facility.

Prior to coming to the Kalamazoo area, Amanda spent three years in New York City studying musical theatre performance at the American Musical and Dramatic Academy. While in New York, she had the privilege of working for one of the top commercial talent agencies in the country, Cunningham, Escott Slevin Doherty Talent Agency. Within the first two months of her internship at CESD, she accepted a salary position as a receptionist. From there, she was quickly promoted to the assistant to lead on-camera agent.



In June of 2006, she decided to move back home to Michigan in order to finish her Bachelor's Degree. She received her BA in Theatre and Psychology from Western Michigan University in the spring of 2010. For two years at Western, she worked as an office and classroom assistant to Dr. Bruce Haight, professor of African History.

Amanda is looking forward to and welcoming the challenges and opportunities her new position here at VBN may bring.



Edmar Freitas joined our Van Beek Nutrition Team in late July. Edmar is a Ruminant Nutritionist and will be covering the territory of Southwest Michigan.

Edmar comes to us from Boituva, Brazil. He has a Ph.D. in nutrition as well as a Doctorate in Veterinary Medicine from Paulista State University in Brazil. Edmar has eighteen years of veterinary medicine and nutrition experience.

After finishing Veterinary School in 1988, he worked as a consultant in animal reproduction and nutrition for seven years. He then decided to go back to school and get his Masters and Ph.D.. While back in school, he worked as an animal nutrition consultant for farmers.



Edmar is excited to be in the United States with his wife Lia and daughter Luisa.



Mark Neff joined the Van Beek Nutrition Team in July. Mark is our main delivery driver in Michigan, and helps with production in the mill while not on the road.



Mark has lived in Southwest Michigan most of his life, however he lived in Texas for two years working on recovery efforts after Hurricanes Rita and Katrina.

Mark farms 1,000 acres in Jones, Michigan with his father. He enjoys hunting, fishing, and spending time with his wife Amanda and children.

New Faces



Twin Falls, Idaho Facility

Elias Bungenstab joined the Van Beek Nutrition Team in late August. Elias is a Beef Nutritionist and will be covering a territory around Pocatello, Idaho.



Elias was born and raised on a farm in Brazil. He received his Bachelors Degree in Agricultural Engineering from Federal University of Mato Grosso do Sul, Brazil, in August, 1994. He also received a Specialization Degree in Soils and Environment from Federal University of Lavras, Minas Gerais State, Brazil, in November 1996.

After working in the animal feeding industry for 5 years, during which he co-authored 2 books on beef cattle production in Mato Grosso do Sul State, Brazil, he attended Texas A&M University where he obtained his Masters in Agriculture Degree in December 2000. Elias returned to Brazil and worked as a feedlot nutritionist. In August, 2009, he obtained his Ph.D. in Ruminant Nutrition under Dr. Russell Muntiferer.

At Auburn University Elias was the first president of the Animal Sciences Graduate Student Council at Auburn University, was recognized as one of the top 10 outstanding doctoral students by the Auburn University Graduate Student Council in 2008, and received 6 other honorary awards during his student career.

Elias' professional goal is to make a positive impact on the beef cattle industry by improving efficiency and reducing costs of production.



Kendra Baker joined the Van Beek Nutrition Team in early September. Kendra is the Administrative Assistant in our Twin Falls, Idaho facility.

Kendra grew up on a dairy in Jerome, Idaho, working with cows, pigs, horses and goats. After graduating high school, Kendra went to Beauty School and received her Nail Technician License. Later she decided to find a more stable career, which is why she came to Van Beek Nutrition.

Kendra is excited to be a part of the Van Beek Nutrition Team and welcomes the challenges ahead of her.



*We welcome all our new faces to the
Van Beek Nutrition Team!*

Make Room to Groom

Mechanical cow brushes have many benefits—and cows love them.



Pennsylvania dairy producer Matthew Nealy has given his cows the brush-off, but they don't mind. In fact, they're absolutely loving it.

This past summer, the Nealys installed a swinging cow brush at their dairy. The dairy owners like the mechanical grooming device, but more importantly, the brush is a big hit with their cows.

Designed to satisfy cows' innate need to groom, cow brushes have been shown to boost cow comfort, calmness and even milk production. They also help decrease mastitis, a 2009 study shows.

Nealy and his family milk 350 Holsteins 3X in a free stall operation near Newville, PA. They decided to install the cow brush when they upgraded their milking parlor. Working with equipment supplier DeLaval, the Nealys placed a swinging cow brush for their 2-year-olds in the barn's loafing area.

"It makes the cows happier," Nealy says. "There's not a time that I haven't seen them using it. We plan to add another one."

The distinctive yellow bristled brushes help the Nealys' cows scrape off the crust that builds up on their coats during the summer. The crust is the result of dried, limestone-laden water that is released through the dairy's cooling misters. In the spring, the brushes help the cows shed their winter coats.

Nealy prices his cow brushes at approximately \$3,000 each. They say it's important to maintain a ratio of about 50 cows to one cow brush to avoid wearing out the brush. "We've had our brushes for three years and they still have 50% life left in them."

The swinging cow brushes are cylindrical, self grooming devices usually mounted on a wall or post. They're placed at shoulder level for the cows. The brushes start rotating on contact.

While cows most often use the brushes to groom around their heads and backs, they also use the devices to rub sensitive areas, especially around the eyes.

In July 2010, DeLaval reported that its swinging cow brush sales had topped the 30,000 mark worldwide. The cow brushes are part of DeLaval's Sustainable Dairy Farming initiative, aimed at reducing farms' environmental impact while improving milk production, farm production, farm profitability and the well-being of the people and animals involved.

Catherine Merlo



Cow Brushes Improve Production, Cut Mastitis

-Using a cow brush led to an average milk-production increase of 2.2 lb. per day in second-lactation cows, revealed a 2009 study by Yrite Schukken of Cornell University and G. Douglas Young of New York's Spruce Haven Farm and Research Center.

-The field study, performed at an 1,800-head New York dairy, also showed "a clear and significant difference in mastitis incidence as soon as the cow brushes were installed."

-Schukken isn't clear why first-, third-lactation and older groups didn't see an increase. "It may be that cows that walk to the brush are inclined to visit the feed bunk as well," he says. He also hypothesizes that active cows utilize ketone more effectively, thus increasing feed intake.

-Schukken speculates that the mastitis decrease also reflects the increased activity of cows that use the brush. Those cows may also spend less time in their stall and thereby expose themselves to less bacteria on the stall surface.

-"Grooming behavior may lead to an overall cleaner skin in animals with access to the cow brush," Schukken says. "Although the mammary gland itself is not groomed by the brush, the tail and hind areas are groomed, which may result in lower exposure of the mammary gland due to general reduction of dirt."

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Avoid Costly Errors

Attorneys caution employers against these common I-9 errors:

-Illegal bias. Avoid charges of discrimination by requiring every employee to fill out an I-9.

-Entry errors. “Any mistake can result in fines,” cautions lawyer Carlina Tapia-Ruano. One of the most common errors is incorrect indication of the employee’s immigration status. An employee with a work visa, for example, may have erroneously filled in “permanent resident.” Such a mistake is significant even if done innocently. Accuracy is the employer’s duty.

-Failure to assess authenticity. The employer must not accept documents a reasonable person would suspect were fraudulent.

-Procrastination. Don’t put off examining the employee’s documents and getting the I-9 in order. “It’s not uncommon for employer to wait more than three days,” Tapia-Ruano notes. “That can result in fines.”

-Don’t let expiration dates slip by. Many employees have permission to work for only a limited period of time. “You need a system to continue to verify an individual’s employment status throughout that period of employment,” Tapia-Ruano cautions. Prior to the expiration date, ask the employee to present new verification documents.

-Retain I-9 forms in a safe place. “At any time, DHS or U.S. Department of Labor may perform what they call an ‘employment audit’ of I-9,” Tapia-

Phillip Perry

Ruano says.

“Be protective and audit your I-9’s to protect yourself,” Schwartz adds. “We just completed an audit for an employer with locations in 20 states. Of the 5,000 I-9 forms in the files, 4,100 had issues. I’ve never seen an employer with 100% compliance. Part of the problem is that staff often aren’t adequately trained on how to properly complete I-9 forms.”

-Beef Magazine, March 2009

