

Vet's Corner: Mycotoxin in NE Dairy Rations

Possible Mycotoxin contamination in dairy rations has been an important topic this fall due to wet, cool growing and harvest weather. In the past two weeks, our practice and clients have been brought up to date by excellent presentations by Dr. Ken Zanzalari, Prince Agri products and Dr. Swamy Haladi, Alltech. For comprehensive reading on the subject please check out the following websites:

www.KnowMycotoxins.com

<http://www.vetmed.iastate.edu/diagnostic-lab/diagnostic-services/diagnostic-sections/chemistry/-toxicology/mycotoxins>

When considering the possibility of Mycotoxin in rations, investigate for breakdowns in proper feeding management before going to the expense of Mycotoxin testing.

Vomitoxin (DON) is the most commonly reported Mycotoxin in forage grown in the Northeast. In ruminants, it does not cause specific disease symptoms, but reduces the palatability of feed and therefore reduces Dry Matter Intake. In this year with such poor climate conditions for harvest, monthly testing of forages is recommended to stay ahead of Mycotoxin problems. We recognize that there are a myriad of reasons for DMI to be reduced. Before just throwing an expensive feed additive into the ration, Drs. Haladi and Zanzalari recommended reviewing other causes of diminished DMI, such as inaccurate moisture content of the ration and overcrowding of the feed bunk with the herd feed rep and/or herd veterinarian.

Zealerone is another Mycotoxin found in 90% of forage samples that test positive for DON. For this reason, forage analysis usually just tests for DON and assumes that Zealerone is also present. Unlike DON, specific symptoms are associated with this Mycotoxin in dairy cattle. Zealerone mimics estrogen's effect on the dairy cow's reproductive system and has been associated with poor conception rate in cattle that exhibit abnormal estrus activity. Cows display increased vaginal secretion and swelling and heifers may exhibit abnormal mammary enlargement. Again there are many causes of abortion, early embryonic death, and irregular cycling in dairy cows that must be eliminated before placing the blame on Mycotoxin.

These are the two main mycotoxins found in the NE, but that does not mean that other mycotoxins can not be in your dairy's rations because grains imported from the Midwest could contain significant levels of Aflatoxin and Fumonisin. These mycotoxins will be concentrated 3X during the ethanol production process and therefore be concentrated in distiller's grains which are fed in the Northeast. Local grain companies regularly test loads for these contaminants and ruminants can handle a low level, but there is increased danger this year. Aflatoxin is associated with cotton seed and can be transmitted through the milk to humans. In humans, it can cause liver cancer so it is tested for at the milk plant in Midwestern states. Fumonisin is a common Mycotoxin in the Midwest that causes poor appetite and diarrhea in dairy cattle. It is suspected to be one of the causative agents in the emerging disease syndrome, Hemorrhagic Bowel Syndrome.

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