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Rochester Sentinel Article

What is may not be

Just because it's there, doesn't mean it is there. Now that is a convoluted statement but one that is very true when it comes to talking about natural poisons. I think the classic example for a person who studies animal nutrition is mycotoxins. These potentially dangerous chemicals grow in a variety of molds we find on grains. Given the right conditions, these will grow, but that does not mean they will have produced the toxins.

Gibberella mold is more prevalent when cool, wet weather occurs during the first 21 days after corn silking. Extended periods of rain in the fall, which delay dry down, increase the severity of the disease. This mold can produce several toxins. One of them mimics estrogens in the body and the other one causes hogs to lose their lunch, hence the name vomitoxin. Cattle do not have the mechanism to vomit so they can handle higher levels of this toxin.

When corn is brought into the elevator, putting a sample under a black light will indicate if the mold is present but it will not tell you the level of toxins. That takes another test. So, the mold is there but the toxin may not be present.

This time of year, when summer heats up, our waters may develop harmful algae blooms. One is commonly referred to as "blue-green algae," but it is actually cyanobacteria microscopic, a single-celled organism similar to algae. These organisms can grow in multiple sources of surface water but thrive in shallow, stagnant, and warm waters. Cyanobacteria are naturally present in freshwater bodies at relatively low densities and are a normal part of aquatic ecosystems. However, when aquatic systems become imbalanced, cyanobacteria have the potential to dominate, form and become visible to the human eye, which is often referred to as a "bloom".

Many species of cyanobacteria can produce toxins that can affect the nerves, liver and kidney. There are many toxins that can be produced by cyanobacteria that are still being discovered. The only way to confirm whether toxins are being produced is to have a water sample collected and tested by a laboratory. Even then, a positive toxin detection one day does not guarantee toxins will be detectable the following day.

Blue green algae does have potential health issues because these toxins can be poisonous to both humans and animals. Dog deaths are possible as they may drink water with accumulations of cyanobacteria cells or lick their fur after swimming. Humans are less likely to drink scummy water but we can be exposed. Places like Lake Erie have monitoring systems to advise people of the current situation. Lack of rainfall and the accompanying polluted water entering the lake this year has reduced the bloom. The point to remember again is this, just because the bloom is present doesn't mean there is a problem. Only the potential exists. So just because the toxin producer is there, it does not mean the toxin is there. Kind of like the people on Lake Erie with the big boats. Just because they have them does not mean they are paid for yet.

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