KANSAS STATE UNIVERSITY | Extension
Meadowlark District

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Grazing Sprouted Corn

Fall harvest was well underway when the latest round of rainfall arrived this week. Very likely this fall will be no different from most, when moisture arrives after harvest, creating the question about grazing sprouted corn left in the field. This situation can be managed if a few basic risks and principles are understood prior to turning the grazing animal out on corn residue.

A few sprouted kernels are common every year and not necessarily a problem, even at high levels. The first step is to assess the amount of ear drop and residue conditions. Before turning livestock out, walk the field to estimate ear drop per acre. If there are more than 15 ears total in three 100-ft rows, management to reduce grain intake by the animal is needed to prevent acidosis.

Nitrate accumulation is the primary concern with sprouted corn. Collect representative samples and test for nitrate concentration before grazing. Random, representative sampling by crop field will be important. Clip plants at ground level, placing plants in a bag. If there are plants taller than eight to ten inches, consider testing those separately as nitrates tend to accumulate in the lower portion of the plant. Remove air, seal, freeze, and send promptly to a commercial laboratory for analysis. Your local Extension office should be able to assist with sampling and testing.

If the laboratory analysis indicates the presence of nitrates, keep the following management approaches in mind. Adapt animals gradually by limiting initial access or feeding a palatable feed source, such as quality dry hay, to reduce intake of high nitrate corn sprouts. Fill up the rumen before grazing. Even if nitrate levels are low, ensure animals are not hungry when turned out. Feed hay first to prevent rapid consumption of sprouts. Timing does matter, so turn livestock out after noon, once filled up on hay. This timing allows observation during daylight hours and reduces risk of overconsumption. Feeding 2 to 5 pounds of grain or by-product dilutes the amount of nitrate in the total ration and provides the energy necessary for bacteria to quickly convert nitrite to ammonia.

Having the ability to strip graze or limit access to areas with higher levels of regrowth is an effective management approach as well. This not only limits the issues associated with nitrates but can allow for better utilization of the crop residues as well. Don't forget about water quality and quantity in this discussion. Frequent intake of high-quality water is important for optimal rumen fermentation. Remember that freezing temperatures do not reduce nitrate levels in plants, so this could be an issue even after a killing frost.

The take home message is that it's essential to evaluate corn fields before grazing, test for nitrates, and manage turnout carefully. These steps will help minimize risk while making effective use of valuable fall residue. Reference the K-State publication Nitrate Toxicity MF3029 to learn more about this topic.