Rural Roots & Research

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Grazing Cattle on Crop Residues

In this part of the country, many producers utilize the available crop fields to extend the grazing season into the winter following the fall harvest. This year, we have received reports across the state of a higher number of fields with a greater level of downed grains remaining in fields after harvest. While these fields can still be grazed safely and economically, in some instances, it may be necessary for us to adjust our management approach. The following points are worth considering when assessing the risk, says Jason Warner, K-State Extension Cow-Calf Specialist.

Type of Grain and Degree of Attachment to the Plant

The grain sorghum or milo kernel has a very hard outer coating and it also has a slower rate and lower extent of digestion than corn. Thus, the relative level of risk of acidosis or founder is lower for grain sorghum compared to corn. In order for the starch in either grain to be fully available to the microbes in the rumen, the kernels must be cracked or processed. While the rumination, or "cud chewing", activity allows this to happen, the process of starch digestion is generally slower when the animal masticates the grain to break the kernel and is also consuming some forage from the plant at the same time. So, situations in which there are piles of loose grain on the field surface if the truck was overfilled or when cows inadvertently have access to grain that flows out of a silo bag at the edge of the field, pose a much greater risk of animal losses than corn grain still in the ear or milo still attached to the head.

How Much is A Lot?

A sound estimate of the amount of grain down on the field surface can be challenging to assess, but it is very important. A field with 10 bushels per acre down is a much different situation than one with 75 bushels per acre on the field. In general, levels greater than 10 to 15 bushels per acre require additional caution and management. Estimates from yield maps in the combine can be helpful to identify areas in the field of concern. A simple method from colleagues at the University of Nebraska for determining the amount of downed corn is to measure out three different 100' long strips in the field, add up the number of 8" ear equivalents and divide the number of ears by 2 to get approximate bushels per acre. For example, if strip 1 contained 4 – 8" ear equivalents, strip 2 contained

2.5 – 8” ear equivalents, and strip 3 contained 1.5 – 8” ear equivalents, then it would equate to 4 bushels per acre (4 + 2.5 + 1.5 ÷ 2).

Cattle Experience Matters

Research suggests that grazing is a learned behavior. Beef cows that have previously grazed crop residues will seek out and consume any grain present first before the husk, leaf, and stalk material. Heavily grazing (i.e., flash or mob grazing) fields with high amounts of downed grain with naive animals, such as weaned calves, first before turning in more experienced cows, can be a method to lessen the risk to those animals. Likewise, consider grazing cull cows or bulls ahead of pregnant cows and heifers.

Animal and Field Management

Consider strip-grazing fields with more than 10 to 15 bushels per acre rather than allowing access to the entire field. While this does increase the need for fence material and labor to move the fence, it does reduce the risk of acidosis/founder because the increased stocking density reduces grazing selectivity. Fill animals up with hay before turning them into the field to avoid them being hungry and grazing aggressively upon turnout. Consider supplementing grain, starting at 0.25% and gradually increasing up to 0.5% of BW, for at least 10-14 days prior to grazing high-risk fields to help animals adapt to the grain they will encounter during grazing. Supplementing a palatable source of hay to cattle while grazing high-risk fields can help offset risk by substituting grain intake. Protein supplementation, particularly with a source of non-protein nitrogen such as urea or biuret, as well as providing an ionophore, is a sound management strategy to improve cattle utilization of crop residue fields with excess downed grain.

For more information regarding Agriculture and Natural Resources, 4-H Youth Development, or K-State Research and Extension, call the office at 785-537-6350, email me, Lindsay Shorter, at lindsayshorter@ksu.edu, or stop by the office. Be sure to follow Riley County K-State Research and Extension on Facebook for the most up-to-date information on Extension education programs and the Riley County 4-H program.