

South Dakota Rancher®

Management tips for South Dakota livestock and grassland managers

Eric M. Mousel, Range Livestock Production Specialist, SDSU. 605-688-5455

October 2006

Grazing Cornstalks

Dr. Cody Wright
SDSU Extension Beef Specialist

In the very near future, beef producers in the Upper Great Plains will have access to an abundance of corn stalks that can be effectively utilized by beef cattle.

Utilizing strip-grazing can extend grazing time and make the quality of the diet more uniform over the grazing period. By limiting access to only a small portion of the field, the cattle are forced to consume residual corn and both the high- and low-quality forage components of the residue. Generally, a single strand of electric fence is sufficient to control grazing.

When determining the appropriate stocking rate and grazing time, it is important to consider the amount of residue that will be trampled and wasted in the grazing process. Research indicates that cattle grazing a whole field will utilize only 20% of the residue. This percentage can be substantially higher when fields are strip-grazed.

The nutritional quality of grazed corn residue is quite high early in the grazing period; approximately 70% TDN and 8% crude protein, then will gradually decrease over time to approximately 40% TDN and 5% crude protein. This reduction is a result of the cattle selecting the highest quality feeds first and a weathering, or leaching of nutrients from the residue over time. As the nutritional quality of the corn residue decreases, producers will need to provide supplemental protein. Non-protein nitrogen sources, such as urea and biuret, should be avoided.

To determine when supplementation is necessary, producers should watch the manure from

the cows. As the corn in the manure begins to disappear, it is time to begin protein supplementation. Generally mature, pregnant beef cows should receive 0.5 to 1 lb of supplemental protein from a natural source. Common protein sources include alfalfa, oilseed meals, and various alternative feeds. Commercial protein supplements are also acceptable.

Corn residue is also quite low in most minerals, especially calcium, phosphorus and vitamin A. As a result, a well balanced vitamin and mineral mix should be provided free-choice. Keep in mind that many of the feeds used as protein supplements will provide significant amounts of calcium and(or) phosphorus and may reduce the need for additional supplementation. However, vitamin A and white salt should be provided at all times.

Grazing corn residue also brings a slight risk for digestive disturbances in the cattle. Nutritional disorders such as bloat, acidosis, and founder can occur in cattle grazing corn residue. However, the risk for these conditions will vary greatly with the amount of grain in the field. Producers can help alleviate concerns by providing the cattle with increasing amounts of grain for 10 to 14 days prior to turning them out on the residue. This practice will help the rumen microbial population adapt to a higher grain diet.

For more information on grazing corn stalks please visit:
<http://agbiopubs.sdstate.edu/articles/ExEx2044.pdf>,
or contact your local county Extension office.

Freezing Effects on Forages

Bruce Anderson
UNL Extension Forage Specialist

Most of us have experienced a freeze already this fall. Freezing can cause hazards for grazing livestock using some forages.

When plants freeze, changes occur in their metabolism and composition that can be toxic to livestock. However, many of these problems can be prevented.

Sorghum-related plants, like cane, sudangrass, shattercane, and milo can be highly toxic for a few days after frost. Freezing breaks plant cell membranes. This breakage allows the chemicals that form prussic acid to mix together and release this poisonous compound rapidly. Livestock eating recently frozen sorghum can get a sudden, high dose of prussic acid and potentially die. Fortunately, prussic acid soon turns into a gas and disappears into the air. So wait 3 to 5 days after a freeze before grazing sorghums; the chance of poisoning becomes much lower.

Freezing also slows down metabolism in all plants. This stress sometimes permits nitrates to accumulate in plants that are still growing, especially grasses like oats, millet, and sudangrass. This build-up usually isn't hazardous to grazing animals, but green chop or hay cut right after a freeze can be more dangerous.

Alfalfa reacts two ways to a hard freeze, down close to twenty degrees, cold enough to cause plants to wilt. Nitrate levels can increase, but rarely to hazardous levels. Freezing also makes alfalfa more likely to cause bloat for a few days after the frost. Then, several days later after plants begin to wilt or grow again, alfalfa becomes less likely to cause bloat. So waiting to graze alfalfa until well after a hard freeze is a good, safe management practice. Frost causes important changes in forages so manage them carefully for safe feed.

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