

To: Norton Telegram Sheridan Sentinel
Lenora Meridian Oberlin Herald
KQNK Hill City Times
Prairie Dog Press

From: Keith P. VanSike, Twin Creeks Extension District

Agronomy and Natural Resources Agent

For Print Week of November 26, 2018

Across parts of Kansas, summer moisture produced good tonnage of forage sorghum and other forages intended for winter livestock feeding. Heavy windrows extended drying time and some forage that was on the ground for weeks has received rain and snow. As a result, forage has evidence of mold. Many of the heavy windrows will have mold on the top and bottom but the center may be well preserved. In other cases, and especially in thin windrows, the hay may be moldy throughout and the leaves and stalk may be nearly black. The presence or absence of visible mold is not a reliable indicator of the presence or absence of mycotoxins. Very moldy feed may not contain any detectable amounts of known mycotoxins, while good looking feed may contain very high concentrations. Because forages do not contain the same level of carbohydrates as grains, they produce toxins less often. More than 800 mycotoxins have been detected but relatively few have been characterized and are considered important to animal health. Because mycotoxins are not evenly distributed in feeds, a thorough sampling job is needed. Collect a core sample from every ten bales, combine thoroughly, and mix cores samples before creating a one-pound subsample. Sampling in the windrow can be done but rather labor intensive (1 sample per 2-3 acres) to get a good representative sample. The dust that comes off these highly moldy forages could irritate young or stressed animals and reduce intake. Grinding and mixing with non-moldy hay would be a good way to utilize this. Grazing in the field eliminates baling and moving costs and rejected feed is left on the field. If feeding hay free choice, expect cattle to bunk sort and reject a portion. Forage nutrient quality is also a concern. Losses of highly digestible carbohydrates occur when forage moisture remains above 30%, and can continue if rain or snow prevents the early dry down. Rain or snow can cause leaching of nutrients, particularly if the forage is closer to baling when the moisture is received. Up to a 20% loss of digestible soluble nutrients such as carbohydrates, B vitamins, and potassium can occur. Nutrient detergent fiber (NDF) increases considerably in rained-on hay and intake would be expected to decrease accordingly. Nitrogen content, and thus crude protein, is minimally impacted by the leaching. However, if the hay heats in the bale, the heating can damage the digestibility of the protein. If baled a little tough (22-24% moisture) to hurry removal from the field, substantial spoilage and further loss of nutrients may result from the excessive heating and

can allow for further mold growth. To manage feed costs a nutrient analysis that includes crude protein, heat damaged protein, (ADF and NDF) and net energy or TDN should be conducted.

Lastly, producers may encounter moldy plant or grain in the crop residue fields they plan to graze. The grain has more potential for the production of mycotoxins due to the carbohydrates in the grain, but again, the presence of mold alone does not equal presence of mycotoxins. In most cases, cows grazing crop residues with some moldy grain has not caused health issues. When the total diet is considered, if mycotoxins are present, they are not likely to reach a concentration high enough to cause health issues. When feeding forage or grain of concern, the adage is “dilution is the solution”.

For more information on mycotoxins see www.KSUBeef.org or contact your local Twin Creeks Extension Office <http://www.twincreeks.k-state.edu/>