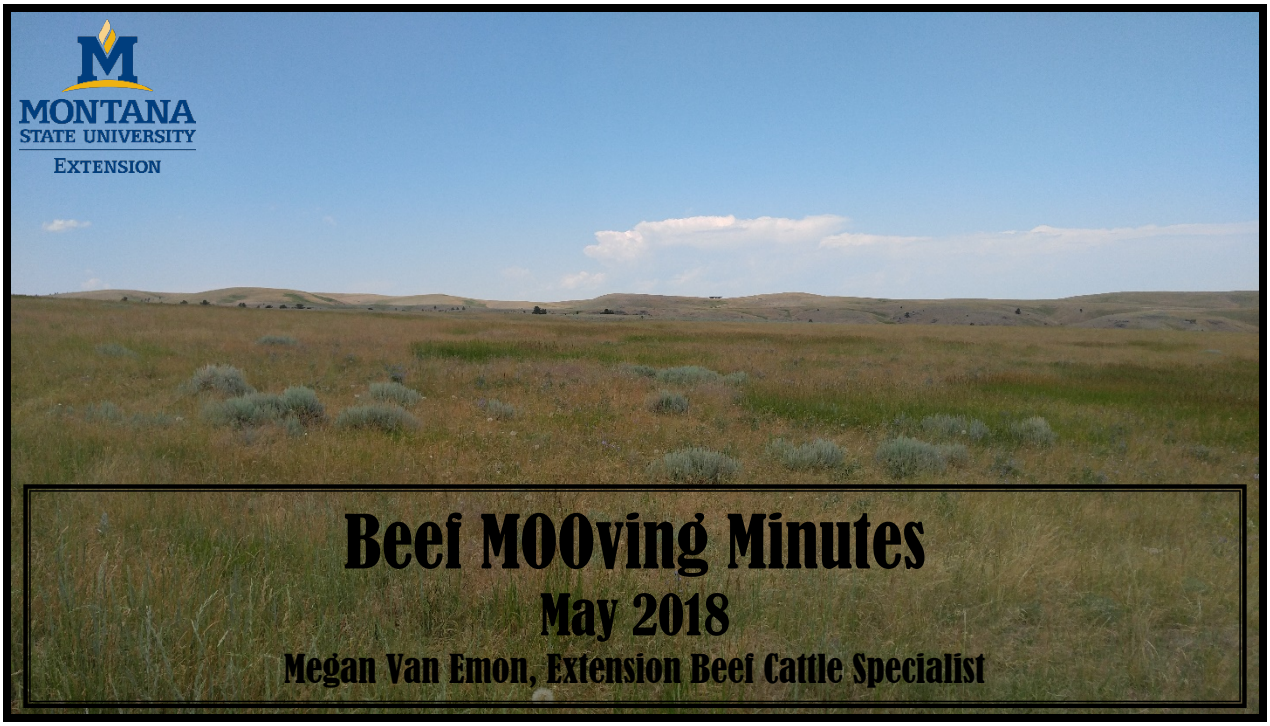


## Grass Tetany in Beef Cattle

With the abundance of snow this winter and the spring rains we have received, grass tetany may be an issue this spring. Grass tetany typically occurs when cattle are grazing rapidly growing, lush, green grass. The rapidly growing grass is low in magnesium, resulting in a magnesium (Mg) deficiency in the cows.

Grass tetany is a metabolic disorder that results in low concentrations of magnesium in the blood. Older cows tend to be more susceptible because they may be unable to mobilize Mg from their bones as efficiently as younger cows. Cows in early lactation are most susceptible to grass tetany due to higher demand for Mg in the milk.

Grass tetany risk increases in lush, green grass that is also high in potassium and nitrogen. Both potassium and nitrogen can interfere with Mg absorption from the rumen. Calcium is also in high demand during early lactation, which could result in more severe cases of grass tetany when coupled with Mg deficiency. Additional stress or harsh weather can also lead to cattle going off feed for 1-2 days, which may result in low Mg concentrations in the blood, leading to grass tetany.

The early growing season results in grasses with a greater water content, which will dilute the minerals and nutrients in the grasses. Cows may not be able to consume enough grass on a dry matter basis to meet their requirements. For example, a 1300-lb cow eating 2.5% of her body weight on a dry matter basis needs about 33 lbs of dry feed each day. If the lush, green grass is 75% water, she would need to consume 132 lbs of that green grass to eat 33 lbs of dry matter.

It may be difficult to determine Mg deficient cows because symptoms may occur rapidly and your only evidence is a dead cow. Symptoms of Mg deficiency include disorientation, weakness, convulsions, or aggressive behavior. The cow may appear continuously nervous or alert, lie down and get up frequently, or staggering. These behavioral changes indicate additional Mg may be needed. If left untreated and additional Mg is not provided, cows will begin to lie down on one side and begin paddling. Immediate treatment is needed if Mg deficiency is encountered. During treatment, cows must be worked calmly and quietly, sudden excitement can lead to convulsions and/or sudden death. Blood concentrations of Mg will

return to normal after death, but samples of eye fluid or cerebrospinal fluid do not change near death and are a good indicator of Mg deficiency.

Grass tetany can be prevented by providing a mineral or lick tubs with additional calcium and Mg. Maintaining adequate blood concentrations of Mg is essential to preventing grass tetany, which could occur within 48 hours if Mg concentrations are too low in the blood. Providing a "high-mag" supplement during the early growing season and during early lactation will help to prevent Mg deficiency.

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