Rutherford County
FROM THE GROUND UP
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Preventing Grass Tetany

Rebekah Norman, Extension Agent III

AHHH springtime! The time of year we see beautiful shades of green reappearing in the landscape and young animals bouncing about the fields. We long to get outside, and animals are no exception to this "fever." In the spring, cows with calves by their sides also long to get into those newly greened-up fields and graze the lush growth. Those grasses will be full of moisture and potentially diluted of mineral content. Combine this low mineral content with a lactating cow's increased demand for magnesium, and a deadly disease called grass tetany may result. Grass tetany, simply put, is a magnesium deficiency.

Grass tetany can affect all classes of cattle, but mature cows with calves by their side (usually in peak production years) during late winter and early spring are most at risk. Cattle store magnesium in their bones and muscles, but cannot readily access and utilize these stores when needed. The animal constantly loses magnesium in waste products and especially milk, so when grazing lush green magnesium-deficient grass, cattle need magnesium supplementation to meet daily requirements. A cow in peak lactation (six to eight weeks following calving) needs a constant source of magnesium to replace the large amount lost from the body in milk.

Potential causes of grass tetany include but are not limited to:
- Cattle grazing cool-season grasses and legumes, which tend to have a low concentration of magnesium
- Cattle grazing pastures low in magnesium while cattle magnesium requirements are high due to lactation
- Applying excess potash and nitrogen fertilizers, not according to soil test. Potassium is antagonistic to magnesium uptake, and excess potassium can decrease magnesium uptake.
- High moisture content in grass causing rapid gut transit and low mineral uptake

What are the signs of grass tetany? Unfortunately, the most common sign is a dead animal. There may be signs of struggle on the ground beside the animal indicating they were leg paddling before death. Early signs include some excitability with muscle twitching, an exaggerated awareness and a stiff gait. Animals may appear aggressive and may progress through galloping, bellowing and then staggering. In less severe cases the only signs may be a change in the character of the animal and difficulty in handling.

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Prevention is the best cure!Avoid the deadly deficiency by changing minerals to a high-magnesium mineral mix during the lush growing season.If not already, begin now to supply the high-magnesium mineral mix in anticipation of greening up forages.

Remember that grass tetany is simply a magnesium deficiency. A deficiency is caused by supply not being sufficient to meet demand.Understand what creates demand in cattle. All cattle need magnesium, but lactation is the biggest driver of increased demand.Also understand the factors impacting supply. Grass can't absorb what is not in the soil. Soil test pastures every three years and hay fields every year. Apply fertilizer according to soil test. Never apply fertilizer without knowing why.Remember the adage, "if it ain't broke, don't fix it!" Potassium is antagonistic to forage uptake of magnesium. If fertilizer is routinely applied without determining if and how much is needed, money is wasted and unneeded nutrients are applied.Excess nutrients may increase the likelihood of magnesium deficiency due to the antagonism between the minerals.

Thanks to Dr. Lew Strickland, UT Extension Veterinarian and Assistant Professor, for information contained in this article. For more information concerning Grass Tetany Prevention and Treatment, call your Rutherford County Extension office at 615-898-7710 and ask to speak to Rebekah Norman or request Publication No W 789, "Grass Tetany Prevention and Treatment."