

High Mag Season

If Mother Nature ever realizes that it is spring, then high mag season will be here in short order. This year has the potential to be worse for grass tetany than normal, making it important to look at your options for providing additional magnesium early season.

Grass tetany is commonly the result of a magnesium deficiency in the cattle, so it is often called hypomagnesemic tetany. However, it is not as much a lack of dietary magnesium as it is antagonism of magnesium absorption by the high protein and high potassium found in early spring grass. High nitrates and a lack of salt can also contribute to tetany because they contribute to poor magnesium absorption. Combining these factors with the high magnesium demand of a lactating cow, we end up with cows exhibiting muscle tremors, excitability, paddling, convulsions, and eventually the downers or deads characteristic of grass tetany. Often, the first sign of grass tetany is a dead cow. If you find a suspected case, immediate treatment with an IV of a solution of magnesium is required.

Grass tetany can be a fairly simple problem to avoid by using a high magnesium mineral supplement during early season grazing. There are a few challenges though. First, high magnesium minerals are not palatable. Generally, we need around 10% magnesium in the mineral to deliver adequate magnesium to overcome the antagonism of potassium and protein in early season grass. During early season grazing especially, you can use a 6% phosphorus mineral, which will help make the mineral more palatable than a higher phosphorus mineral. Second, we need all the cattle to consume the mineral. If you put out the mineral and the cattle do not consume it, they will not be protected from grass tetany. The 17% protein tubs with added magnesium are more palatable than the loose minerals and generally have more consistent consumption across the herd.

Cattle do not store magnesium very well, and so the magnesium supplement needs to be available to the cows during the time they are at risk. If you want to supply the cattle with some magnesium mineral one to two weeks before turnout to acclimate them to the mineral, that will be fine, but realize that they are not storing up magnesium or building protection against grass tetany.

A lack of salt might also contribute to grass tetany, especially when the sodium to potassium ratio is very low (around 0.05:1). Research has shown a significant improvement in magnesium absorption when the sodium to potassium ratio was increased. A complete mineral with salt will help with both salt and magnesium intake. Some additional salt along side the mineral may also be necessary in some cases. Larger-framed, heavier milking cows have an increased salt requirement (along with protein and energy), so mixing the salt with your high mag mineral may mean you get better consumption of both salt and magnesium. Providing salt alone will not take care of grass tetany risk, but it can help enhance magnesium consumption and absorption.

Older, heavier milking cows in peak lactation (<2 months post-calving) are the most at-risk for grass tetany because their magnesium requirement is very high and their ability to mobilize magnesium from bone stores is very

In a Nutshell:

- * **Grass tetany is the result of magnesium deficiency**
- * **Using a high magnesium mineral can prevent tetany**
- * **Highest risk for tetany is early season grazing**
- * **Mature, heavy milking cows are most at risk for tetany**
- * **Crested wheatgrass pastures are tetany-prone**
- * **Lack of old growth could make pasture more tetany-prone**

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limited. It is rare to see tetany in stockers, replacement females, or bulls, but it is not out of the realm of possibility. Occasionally grass tetany can break out in late summer or early fall after a good shot of rain and rapid regrowth of grass. Another management strategy to reduce the potential for tetany is to reduce the use of high potassium fertilizers, or alter when the cattle are turned out on those pastures. Chances of tetany also seem to be greater when the temperature is less than 55-60°F because plant potassium tends to increase under cool conditions.

Some pastures may be more tetany prone than others and you may have had that experience. It can be a result of the forage mix in the pasture, fertilization of the pasture, or the class of cattle you generally put in that pasture. Pastures with a lot of young, rapidly growing crested wheatgrass tend to be more tetany-prone than other grass pastures. Pastures with legumes are less tetany-prone because of their higher magnesium content. As far as the class of cattle goes, older cows are going to be more susceptible to tetany because they are not able to mobilize magnesium from bone stores like younger animals are able to do.

With the drought conditions last year, many pastures were grazed pretty hard and very little old growth was left at the end of the season. That means when we turn out this year, the cattle will be primarily consuming new growth forage, which is higher protein and higher potassium than old growth and has higher grass tetany potential because of it. When we have some residual forage left from the previous season, the cattle will consume some of that along with the new growth oftentimes just because they are searching for dry matter since the early season forage is such high moisture. Without the old growth, it puts the cattle more at risk for grass tetany. The risk of tetany decreases after new growth forage is 6-8 inches tall or more. If you can delay turnout on wheatgrass pastures, that can help reduce your risk of running into grass tetany. After the grass starts to shoot a seedhead, you should be out of the woods for tetany.

Grass tetany is not something any of us want to experience and there are things we can do to minimize our risks when it comes to green grass. The hard part is supposed to be over when we get the cattle to pasture and being aware of the potential of grass tetany and practicing some prevention can make sure that is the case. Talk to your local Dakotaland Feeds consultant about your options for supplying additional magnesium at turn-out time.

Roxanne Knock, PhD

Orphan Calves: If you ended up with some orphan calves, take care of them right. Plan on at least one bag of milk replacer per calf. For the best performance, upgrade your milk replacer from HerdMaker to Amplifier Max. For dry feed, utilize the Intense Calf Mixer pellet and mix 1/3 pellets with 2/3 corn to supply the needed protein for the calves. Creep feed is not adequate for orphan calves. Hold off feeding hay until the calves are 10-12 weeks old to avoid the hay belly on your orphan calves.

What do you need to be thinking about this time of year?

- * Use a good mineral program for breeding season- ask about Ultimate Breeder 8 or Stress Tubs
- * Talk to your veterinarian about pre-breeding vaccination and de-worming programs
- * Implant cattle going to grass
- * Get a **high magnesium mineral** to prevent grass tetany during early season grazing
- * Start feeding **Altosid** to prevent horn fly populations
- * Order wasps for feedlot fly control or add **Clarifly** to your feedlot supplement
- * Get the bulls in good body condition- they should be a BCS 5 or 6 at 60 d prior to breeding
- * Make sure the bulls have mineral too! Stress Tubs or Ultimate Breeder mineral provide the Availa-4 mineral
- * Have a breeding soundness exam and semen test done on your bulls to help ensure high pregnancy rates
- * **Book creep feed** for spring-born calves- it still pays!