

Spring Mineral Considerations

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This spring, beef producers will be faced with the annual problem of either Milk Fever or Grass Tetany. These problems can typically be handled with some proper mineral supplementation.

Grass Tetany

Grass Tetany is typically a disorder associated with inadequate levels of magnesium in the blood. It commonly occurs in lactating animals consuming lush green forages with magnesium levels less than .2% and potassium levels greater than 3% and crude protein greater than 25%. If calcium is low in the forage and the pasture has been fertilized, this may contribute to the problem as well. This scenario typically occurs in the first 2-3 weeks of the grazing season. Small grain pastures (wheat/oats/barley/rye) can also be potential problems. Factors such as temperature changes, prolonged cloudy weather, energy intake, and stress can add to the problem.

The following formula should help determine if the forage is prone to cause Grass Tetany:

$\% \text{ Potassium} / (\% \text{ Calcium} + \% \text{ Magnesium})$

If the number is **greater than 2.2** then the forage is prone to cause Grass Tetany.

Example of actual Barley Hay sample:

Calcium = .48%

Magnesium = .19%

Potassium = 2.67%

$2.67 / (.48 + .19) = 3.99$ **This Forage Will Probably Cause Grass Tetany**

The initial signs of a magnesium deficiency include nervousness, decreased milk yield, and attentive ears, staggering, twitching skin. Older cows and high milk production cows are more susceptible because they may have decreased body stores of magnesium.

Treatment can be very successful if given early (within 8-12 hours of symptoms) and with limited handling of the animals. Immediate treatment of 200 cc of magnesium sulfate (Epsom Salts) injected under the skin places high levels of magnesium in the system within 15 minutes. Make sure you don't give more than 50 cc in one injection site. Oral magnesium is not as effective because of the time it takes to get into the system. Additionally, cattle should consume 30 g of magnesium daily for 1-2 weeks after treatment.

Prevention mechanisms consist of starting a high magnesium mineral about 30 days prior to pasture turnout. The beef animal needs 20-30 grams/day of magnesium to avoid this problem. The forage will provide some; therefore the mineral needs to provide about 10-25 grams of supplemental magnesium/day. The ProPhos or BosBuilder Hi-Mag minerals if consumed at 4 oz/day will provide about 15 g of magnesium/day. A caution should be stated with high mag minerals, there might be a palatability problem with these products so consumption needs to be monitored. We have added highly palatable ingredients to these Land O'Lakes Farmland minerals to alleviate this problem.