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Watch for Grass Tetany This Spring

Spring is officially here according to the calendar and the greening grass gives hope to those of us feeding livestock and counting how much feed inventory remains, that we will have opportunity to get animals out on growing grass soon. Our ruminants would like to be off the dry winter diet and onto lush growing grass, just as much as we want to get them there, but there is one big factor to consider with early turn out - Grass Tetany.

Grass tetany is primarily a disease of early-lactation beef cows when circulating Magnesium (Mg) is low in the beef animal. The Mg requirement in the pregnant cow is 0.12% of the diet on a dry matter basis and jumps to 0.20% with lactation. It occurs mostly in cattle consuming lush, early-spring, grass or cereal grain pastures. While the earliest growth periods are potentially high risk, the highest risk of having clinical signs seems to be five to ten days after a period of cold, wet weather.

Symptoms include staggering, convulsions, excitability, twitching, and can result in death. While it can affect growing cattle, it generally affects older, lactating cows most often. Many times, the first indication of a problem is finding a dead cow in the pasture with marks of struggling on the ground around her legs and head. Cows in the early stage of the disease may appear as "down cows" similar to a dairy cow with milk fever, but more likely they are nervous, trembling, overly excited or staggering.

Cows on primarily grass or fall-seeded small grain (oats, rye, wheat, rye grass) pastures are at the highest risk because the plants accumulate potassium and tend not to accumulate magnesium. Although pastures with a legume component are less likely to cause problems, cows can suffer grass tetany in these pastures too, due to the fact that the grass grows more quickly than the legume early in the spring and cows tend to prefer the taste of grass versus legume.

A high level of potassium in the forage has one of the highest correlations to the incidence of grass tetany. Heavy fertilization of pastures in the spring with nitrogen and potassium (potash) significantly increases the risk of grass tetany. Historically, many studies pointed to too little magnesium in the soil as the primary cause of grass tetany, but more recent thinking points to the key issue being excessive potassium levels in forages.

A cow suspected of having grass tetany is truly in an emergency situation. Call your herd health veterinarian immediately to confirm the diagnosis and to initiate treatment with an intravenous solution of calcium and magnesium. Treatment is possible, but prevention is always the best approach. While use of a magnesium-containing mineral mix is one of the commonly mentioned preventive strategies, it shouldn't be the only one. Many of the cows typically treated for grass tetany have been on an adequately Mg formulated, free-choice mixture. Magnesium isn't very palatable, so mixing ground corn with the salt/mineral mix helps with consumption. Place this mixture in numerous mineral feeders in the pasture, before the grass greens up.

Other preventive strategies for grass tetany include:

- * Soil test pastures in the fall and apply appropriate amounts of nutrients at that time (don't over-fertilize with nitrogen; especially not with potassium).
- * Incorporate legumes and other forbs to grass pastures. Monocultures are rarely a good thing!
- * Continue to feed dry hay daily when cows are introduced onto new, lush pasture.
- * Graze "low-risk" animals IE: stocker calves, yearling heifers, cows with calves more than four months, on pastures at high risk for grass tetany before cows with younger calves.