

Grass Tetany Can Be a Concern in the Spring

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Newborn calf at the Stokka Ranch near Cooperstown, ND.

Grass tetany can be a potential problem when grazing lush spring growth. Grass tetany or hypomagnesemia results when cattle or sheep consume a diet deficient in magnesium. As the term hypomagnesemia implies, animals with this condition suffer from low blood levels of magnesium. In addition, lush spring forages contain high levels of crude protein and potassium. These further exacerbate hypomagnesemia conditions as ammonia (resulting from the fermentation of protein in the rumen) and potassium reduce the availability of the magnesium present in the forage.

Lush grass pastures in the spring are the most common forage associated with grass tetany but other diets and forages can also give rise to these conditions. The most common symptoms associated with long-term magnesium deficiency are excessive urination, muscle spasms, and staggering, as well as erratic and nervous behavior. The onset of symptoms is

usually quite rapid and affected animals may simply be found dead in the pasture. Cows in early lactation may be more severely affected as the demands of lactation increase magnesium requirements and further contribute to the mineral imbalances.

Cool season grasses such as crested wheatgrass or brome grass, and annual forages such as ryegrass or wheat have been associated with cases of grass tetany. These forages generally have high protein and potassium levels in the spring. The problem is generally associated with the first early growth of forage in the spring, as the forage matures the problems diminish. Native forages can also lead to the development of this condition, especially in areas where little forage or litter from the previous year remains. In these situations, the diet the cattle consume will be made up almost exclusively of new growth which will be low in magnesium and high in protein and potassium. In some situations, it may be beneficial to offer lower quality forages such as straw or grass hay to cattle grazing very lush pastures.

Cool, wet weather conditions can also contribute to an increase in the number of cases of grass tetany. Cool temperatures keep forages in a vegetative state further contributing to the potential problems. In addition, weather conditions, such as storms, which prevent cattle from grazing for 24-48 hours also contribute to an increase in cases.

Magnesium oxide is added to mineral mixes as a source of magnesium as a means of preventing grass tetany problems. Magnesium oxide is not very palatable and as a result, low intakes often occur. Magnesium oxide should be blended with other, more palatable, feedstuffs in order to encourage adequate consumption. Commercial mineral mixes containing 10-15% magnesium ('High Mag' formulations) should be offered when cattle are grazing lush forages. These formulations are offered by most, if not all, of the major mineral suppliers and are commonly available at your local feed dealer. If grass tetany has been a common problem, consider increasing the magnesium level two weeks prior to the turnout date for early spring pastures.



Purebred Angus cows grazing pastures near St. Anthony, ND.



Commercial Red Angus cows grazing pastures near Cooperstown, ND.