High Magnesium Minerals and Grass Tetany  
Jim Turner, Ph.D., Beef Nutritionist  

Spring is just around the corner and with it in many parts of the country the possibility of grass tetany. This is a problem that affects mature cows grazing lush green pastures in the early spring, but it is also seen in stocker calves and bulls. Grass tetany is most common on cool season pastures such as tall fescue and orchardgrass but can also occur on winter cereal pastures such as wheat.

The underlying cause of grass tetany is high potassium levels in the lush pasture. Potassium inhibits magnesium absorption which can lead to grass tetany. Sodium absorption is decreased by high levels of potassium which in turn decreases the absorption of magnesium. The rapid digestibility of lush pasture increases the concentrations of rumen ammonia which decrease the absorption of magnesium. All together these factors can cause a mineral imbalance which results in the symptoms of grass tetany. Symptoms include restlessness, abnormal gait with staggering, tetany and convulsions. Untreated animals may die in a short period of time.

Cattle can be treated for grass tetany with a combination of magnesium salt and calcium through intravenous injection. Not all animals respond favorably to treatment and relapses can occur following treatment especially if the animals remain on the same pasture.

The most common means of controlling grass tetany is the feeding of high magnesium loose minerals such as STOCKMASTER® Sweet Mag 14 (#70A6) and STOCKMASTER® Hi Mag 14 Breed Back Mineral (#70A7) or blocks such as CRYSTALYX® SuperMAG™ supplement (#3921). These products should be fed beginning 30 days ahead of the expected spring green up. This will allow plenty of time for the cattle to become accustomed to the high magnesium product. It is important to keep these products available throughout the lush pasture season as there are no significant body stores of magnesium. This means that we must supply the daily magnesium needs continuously through the lush grass season.

The palatability of the supplement is increased using molasses, carriers such as dried distillers grains and flavoring agents. Magnesium is very unpalatable by itself. The supplement should also contain an adequate amount of salt to counter the lowered absorption from high potassium in the forage.

STOCKMASTER® Sweet Mag 14, STOCKMASTER® Hi Mag 14 Breed Back Mineral and CRYSTALYX® SuperMAG™ supplements are formulated with these needs in mind. They are palatable and provide optimal levels of magnesium and salt to help counter the effects of lush green pasture.

For more information on high magnesium minerals and grass tetany, contact your Hubbard Feed representative.
Hubbard Feeds  
P.O. Box 8500, Mankato MN 56002  
1.800.869.7219  
www.hubbardfeeds.com