Vet's Corner Spring 2012   Jeff Collins, DVM

Most areas of the country would agree that this past winter and spring have been quite different compared to 2010-2011.   Many cattlemen/women have been able to graze their cattle over the winter and early spring. However, with the heat on the way, and those of us who've been blessed with recent moisture- grass should be taking off soon. With that comes the threat of Grass Tetany.

What's Grass Tetany?

Grass Tetany is the common name given to "hypomagnesemia"- which is a magnesium deficiency of the blood and cerebral spinal fluid in cattle. It usually occurs after consuming lush, fast growing, cool season grasses. These grasses are both low in magnesium, yet high in potassium and protein. Furthermore, the potassium level increases all the more when temperatures are less than 60°F. The deficiency is not entirely caused by a lack of dietary magnesium, but additionally the high protein and potassium levels actually antagonize the absorption of magnesium. Other things that can contribute to poor magnesium absorption are high nitrates or lack of salt (specifically sodium). Cows nursing calves in the first 60days after calving are the most vulnerable, as they have a high magnesium demand for producing milk for their calf. Older cows are even more prone as they have a harder time mobilizing magnesium from their bones compared to their younger herd-mates.

What does it look like?

The word tetany may be a little misleading, as it does not resemble Clostridial tetanus; but refers to the muscle spasms that can be evident in severe cases. Unfortunately, the most common first sign of Grass Tetany is a dead cow. However, early signs of the problem can be recognized by a variety of signs including: muscle tremors, excitability (may charge), staggering, convulsions, and eventually not able to get up. Cows may walk with a high-stepped uncoordinated forelimb gait and they may bellow excessively. If you do find a cow in the early stages of Grass Tetany, an immediate, yet slow intravenous treatment of magnesium and calcium is necessary, which your vet will likely need to do.

What can I do to prevent it?

Annually, Grass Tetany kills up to 3% of cattle, goats, and sheep, but thankfully, it is preventable and treatable if caught early enough.   Supplementing with a high magnesium mineral during early season grazing is very effective at preventing it, however high magnesium minerals are not palatable (not tasty). 10% magnesium is needed in the mineral supplement, so many cattleman will get it in the form of a lick tub to help ensure it is properly received. Cattle do not store magnesium very well, so supplementing prior to pasture turn-out is not effective. It is only needed and effective during the high risk times (spring/early summer; or regrowth from small grains in the fall). In addition, supplementing salt during this time helps improve magnesium absorption by increasing the sodium to potassium ratio. Another management strategy is to reduce the use of pasture fertilizers in the spring. Fertilizing increases the available nitrogen which increases the protein level of the grasses and some fertilizers have high potassium levels- the two culprits for "tying" up magnesium. Adding legumes (alfalfa, clover, etc) to your pasture will also help reduce the incidence of Grass Tetany, as legumes have higher magnesium content. If seeding new pasture, consider mixing some crested wheatgrass or Italian ryegrass into your mix- as they will be higher sources of magnesium. Supplementing with some dry grass or alfalfa bales during periods of lush growth also helps reduce incidence.

In Summary:

Remember that high potassium and protein and lack of sodium (salt) contribute to Grass Tetany. Avoid pasture fertilization in the spring; supplement dry hay, salt, and possibly lick tubs with 10% Mg content if grazing lush spring grasses. Letting pairs out to grass is supposed to be the easiest part of the year for Dexter owners, but be on the watch for any early signs of Grass Tetany!