

Over The Wire

A Beef Cattle E-Letter for Area Cattle Producers

Grass Tetany in Cattle

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A Concern for Cattle Producers

We have all heard about Grass Tetany and several of you may have experienced it first hand on your ranch, so this newsletter will probably not be breaking ground in regards to new information but I thought it would be good to have a review on this subject.

What Is Grass Tetany?

Grass Tetany, also known as grass staggers, has been around for a long time and is seen all over the world. Animal Scientists are still conducting tests to determine what exactly causes Grass Tetany.

According to Dr. Chris Allison, New Mexico State University Range Management Specialist, Grass Tetany is associated with a deficiency of serum magnesium. Dr. Allison points out that normal blood magnesium levels are around 2 mg per 100 ml of plasma. If the level drops to below 1 mg, Grass Tetany can be expected to occur.

Dale Blasi, Extension Forage Specialist with Kansas State University stated in a KSU Forage Facts paper called *Grass Tetany* that low blood magnesium in cattle may be caused by:



1. Low magnesium levels in the diet.
2. A diet that is nutritionally unbalanced and the magnesium metabolism is blocked.
3. High milk production.

Are There Other Causes?

Grass Tetany usually occurs in the spring when cattle are grazing lush pastures, however, it can also occur at other times of the year.

Tetany is seen the most frequently in early lactation, older cows that are heavy milkers when they are grazing cool season grasses and when the weather has been cool, cloudy and rainy followed by a warm period. Straight grass pastures that are growing rapidly pose the greatest risk.

Prevention

There are several management practices that can be used to reduce the incidence of tetany including:

- Avoid fertilizing pastures with high rates of nitrogen and potassium fertilizer. There is evidence that this practice can create more tetany in cattle.
- Test pasture forages for magnesium levels. Forage with less than 0.2 percent magnesium are likely to cause tetany.
- Delay grazing pastures until the new grass is at least 4 to 6 inches tall. Very little magnesium is available in small immature grass plants.
- Plant legumes with grasses when seeding pastures. Tetany is usually not a problem on legume mixed pastures.
- Feed legumes during the winter feeding period. Legumes have higher levels of magnesium.
- Provide a high magnesium mineral mix supplement to the cattle free choice.
- Graze cattle less susceptible to tetany on pastures that make you nervous. Yearlings, dry cows or cows with calves over 4 months of age are not as prone to tetany as older cows in early lactation.

Dale Blasi from Kansas State University also recommends that each animal receives the proper amount of a magnesium mineral supplement on a daily basis. He states that magnesium is not stored by the body, so producers need to make sure the cattle get what they need each day. Cattle should be supplemented before they are turned out on pasture and continue to be fed until the grass plants start to mature and growth slows.

Treatment

The key to success in treating cattle that have grass tetany is finding and treating them within the first two hours after clinical signs develop. This is usually very difficult because cattle are out on large pastures and are not observed on a regular basis.

If you find a cow that is down, the best thing to do is call your veterinarian and have them treat the cow. An intravenous injection of a calcium-magnesium gluconate solution is usually given.

In a remote range situation where a veterinarian is not available, producers can administer an injection of 200 cc of a 50% solution of magnesium sulfate (Epsom salts) which will raise the magnesium level in the blood in 15 minutes according to Dr. Allison from New Mexico State. It is recommended that you consult with your veterinarian ahead of time for advice if you plan on treating cattle yourself.

Summary

Grass Tetany is a concern for cattle producers especially in the early spring when the grass is immature and lush, and the weather is cool and rainy. Older heavy milking cows that have young calves nursing them are at the most risk. Older cows don't mobilize magnesium from their bones to meet their needs as easily as do younger cattle.

Steps can be taken to reduce the risk of grass tetany including:

1. Delay grazing until grass is 4 to 6 inches tall.
2. Plant grass/legume mixes in pastures.
3. Feed legume hay during the winter feeding period prior to the grazing period.
4. Feed a high magnesium mineral supplement.
5. Avoid grazing cows that are nursing young calves, three months and under, on pastures where there is a risk of grass tetany.

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References:

Allison, Chris., Controlling Grass Tetany in Livestock. New Mexico State University Cooperative Extension Service Guide B-809. January 2008.

Blasi, Dale., Grass Tetany. Kansas State University Cooperative Extension Service Forage Facts Publication Series.

Kvasnicka, Bill., Krysl, Les., Grass Tetany in Beef Cattle. University of Nevada. Beef Cattle Handbook, BCH-3110. Adapted from Cattle Producer's Library, CL627.

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