

Livestock Health Series

Grass Tetany

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Grass tetany is a disease that commonly occurs in Arkansas in the months of February, March and April. It is due to an abnormally low level of magnesium in the cow's body. This decrease in magnesium can be indirectly caused by heavy fertilization of pastures. When forages are fertilized heavily with potassium (potash), this can decrease the dietary absorption of magnesium in a cow's gastrointestinal system. Young, rapidly growing forage usually has an increased content of potassium.

These two aspects (fertilization and rapidly growing forage) are the reason this disease is normally seen in late winter and early spring when these causes are abundant. This disease typically occurs in older lactating cows. It more commonly affects cows with either very poor body condition scores or cows that are overconditioned. Other factors that may play a role in the disease are weather – it is usually cloudy, misty and/or cold when this disease occurs – and stressors such as hauling, penning or heavy lactation.

Clinical signs associated with this disease range from slight changes in behavior to death. Early in the disease, cattle affected by grass tetany may show signs such as decreased appetite, decreased milk production, tendency to stay away from the herd, increased alertness and a stiff or unsteady gait. As the disease progresses, cattle may become recumbent and unable to get up. They will exhibit muscle tremors (spasms), protruding third eyelid,

increased pulse and respiratory rates and eventually death if untreated.

Treatment

The most important part of treating this disease is to correct the magnesium imbalance. This can be accomplished by administering 500mL of an IV electrolyte solution (CMPK). This solution should be administered slowly, and heart and respiratory rate should be monitored closely. After treating with the IV solution, one can then administer one tube of CMPK gel orally or give another 500mL bottle of solution intraperitoneally to decrease the incidence of relapse. If clinical signs are mild, then Mg imbalances can be corrected by treating with approximately 150cc of a 20% Mg sulfate solution given subcutaneously in several injection sites.

Prevention

Prevention of grass tetany can be achieved by providing a salt-mineral supplement containing at least 10 percent Mg. Several mineral feeders should be used if stocking rates are higher for the herd. Mineral feeders should also be conveniently located in the pasture so cattle have adequate access to them. It is also important to review fertilization practices to keep this disease less prevalent. Fertilization should be based on recent soil samples taken from the farm.

For more information about cattle diseases, contact your local county Extension office.

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