

Lush Spring Pastures Aren't Always A Plus

COLUMBUS, Ohio — Rapidly growing spring pastures provide plenty of feed for grazing cattle, but they also can cause a potentially fatal condition called grass tetany, said Ohio State University Extension beef cattle specialist Steve Boyles.

Temperatures have been warmer than normal this spring, so pasture grasses are getting a head start on spring growth.

"If we have a lot of rain and overcast skies, the chances of grass tetany could increase," Boyles said.

Grass tetany occurs when blood levels of magnesium in cattle become too low. This often happens in the spring when cattle eat fast-growing grasses that do not absorb enough magnesium from the soil.

Pastures with high potassium levels have a greater risk of causing grass tetany. Nitrogen and potassium interfere with the absorption of magnesium from plants to cattle during digestion, Boyles said. The percentage of cattle with tetany can be 10 times higher than normal if they are grazed pastures with excess potassium fertilization.

"Have a feed analysis done to measure the mineral levels in your pastures," he said. "I have observed high potassium levels in some regions of Ohio."

A simple formula beef producers can use to evaluate potential of pasture grasses based off a feed analysis is to divide percent potassium by the sum of percent magnesium and percent calcium. If the resulting number is higher than 2.2, grass tetany potential is greater.

Phosphorus can improve absorption of magnesium by plants and may even lower potassium uptake. Phosphorus fertilization may reduce grass tetany potential if phosphorus levels in the soil are currently low, Boyles said.

Older cows that are calving and producing milk have high nutrient needs, so they are at a greater risk for grass tetany.

One of the first signs of grass tetany in cattle is nervousness, followed by incoordination, such as staggering and falling. Within hours of the first symptoms, seizures cause cattle to literally lose control

of their muscles and soon die, Boyles said.

"You may not be able to catch an animal in time for treatment, because symptoms occur so rapidly," Boyles said. "Often cows are found dead before producers can notice the signs. So prevention is the key, not treatment."

Grass tetany can be prevented by adding 10 percent to 15 percent magnesium oxide to a cow's daily mineral supplement. Animals do not store magnesium in their body like they do other minerals, so it's important that they get the amount they need from their daily diet. The daily intake for cattle should be 2 ounces per animal.

The magnesium supplement can be fed like any other mineral, either in a block or loose form. But, cattle don't seem to like the taste of magnesium oxide by itself, so producers should mix it with at least 5 percent soybean meal or molasses to ensure the cattle eat it, Boyles said.

Magnesium sulfate also can be used as a supplement.

"Incorporating magnesium into regular protein or energy supplements provides a greater assurance of consumption," he said. "And, producers normally don't put mineral

supplements next to a water source to encourage animals to graze more between the two. But if chances of grass tetany are severe, put the supplement close to a water source because you want them to eat it."

Grass tetany treatment results vary from excellent to poor, depending on how quickly an animal is treated. If animals with the illness are treated with a magnesium injection within one or two hours after symptoms appear, they usually recover quickly. Cattle on pasture should be observed at least twice a day when they are first turned out to grass, Boyles said.

Grass tetany is not as common in sheep as it is in cattle, but the condition can still occur. Sheep producers also should make sure their animals are getting enough magnesium in the spring months, especially ewes that are lambing, said Ohio State University Extension sheep specialist Roger High. Sheep that avoid the rest of the flock, don't eat and walk stiffly could be experiencing grass tetany.

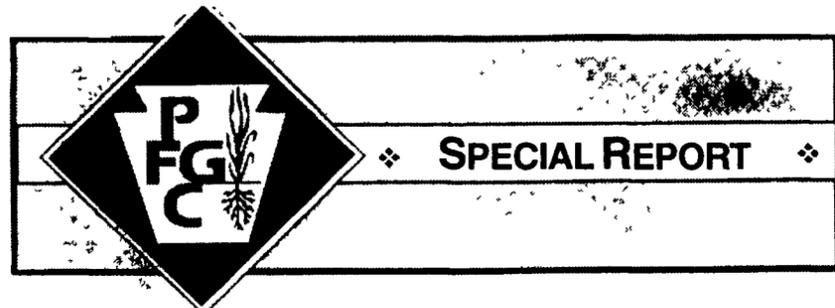
For more information about how to protect livestock from grass tetany, producers should contact a veterinarian or their county office of Ohio State University Extension.

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USING ALFALFA-GRASS MIXTURES TO MINIMIZE DEER DAMAGE

DR. MARVIN H. HALL
ROB STOUT
Penn State

The objective of research recently completed at Penn State University was to determine if alfalfa-grass mixtures reduce the level of deer feeding associated with pure alfalfa. Forages protected from deer feeding averaged 1,660 pounds per acre more dry matter yield than their unprotected counterparts. The greatest amount of deer feeding occurred in pure alfalfa and the least in pure orchardgrass.

Forage quality was not affected

by deer grazing. Weeds invasion was more severe in unprotected than protected (deer were excluded with fencing) plots.

Deer feeding resulted in average economic losses of \$80 and \$28 per acre for pure alfalfa and pure orchardgrass, respectively.

Deer selectively grazed alfalfa out of the alfalfa-grass mixtures and fed more on plots which contained timothy than those which contained orchardgrass. Economic losses associated with deer feeding were greater for mixtures containing timothy than orchardgrass. In area unprotected from deer feeding, pure orchardgrass and alfalfa-orchardgrass mixtures had greater yields than pure alfalfa.

In addition, alfalfa-orchardgrass mixtures had greater economic returns than pure alfalfa but only when alfalfa was seeded at greater than or equal to 50 percent of the mixture.

Deer feeding can greatly reduce forage yield. Deer selectively grazed alfalfa out of alfalfa-grass mixtures and showed a preference for timothy over orchardgrass. The use of orchardgrass alone or in a mixture with alfalfa minimizes deer feeding and provides the greatest yields. However, when deer feeding occurred, net economic returns were greater for alfalfa-orchardgrass mixtures because of improved quality compared to pure orchardgrass.

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