Expert: Beware of grass tetany, pasture bloat in cattle

Beef producers should expand their knowledge about grass tetany and bloat to help keep their cows from expanding, said a Purdue University expert.

The recent temperature change from cold to warm in the Eastern Corn Belt has many beef producers anxious to turn their cattle out to pasture. But Ron Lemenager, Purdue Extension beef nutrition specialist, said it presents some challenges and producers should manage their herds to prevent grass tetany and bloat.

"Benjamin Franklin once said 'An ounce of prevention is worth a pound of cure' and that is sure the case with these two abnormalities that we often see in some of the beef cow operations," Lemenager said.

Grass tetany, commonly called grass staggers or hypomagnesaemia, is a magnesium deficiency that usually occurs during a transition from cloudy, overcast and drizzly days to warmer temperatures, Lemenager said.

Early lactating cows are the most susceptible, he said, with older cows considered more susceptible than those with their first or second calves. Older cows seem less capable of pulling magnesium reserves from their bones than younger cows, Lemenager said.

He explained that when animals are deficient in magnesium they become highly excitable, which presents a challenge not only from the animal's perspective, but also from an animal handling standpoint. So producer safety needs to be considered when moving these animals to be treated, he said.

"Grass tetany incidents tend to increase in soils with higher potassium and nitrogen levels," Lemenager said. "These are soils where maybe a lot of manure has been applied causing a mineral imbalance.

"If suspicious, have your soil tested and forage analyzed. Forage containing less than 0.2 percent magnesium, more than 3 percent potassium and more than 4 percent nitrogen are likely to create grass tetany problems."

Lemenager recommended feeding a high magnesium supplement during this period of increased risk. A feed tag with an 8 to 10 percent magnesium content would be appropriate, he said.

"Magnesium oxide is a common supplemental form of magnesium, but it is bitter and unpalatable, so something like molasses needs to be added to make it palatable," he said. "Magnesium sulfate is another form and it's more palatable, but can cause problems if a producer has been feeding byproducts such as corn gluten or dried distillers grains with solubles. This combination is too high in sulfur and can create additional problems."

Animals that have had grass tetany are more prone to grass tetany in the future, Lemenager pointed out. Producers need to think about how they are going to manage an animal that has had grass tetany in the future—whether culling it from the herd, feeding it differently or keeping a closer eye on it, he said.

The second unrelated challenge producers face is pasture bloat, often called frothy bloat, a condition in which an animal is unable to get rid of gas that is a normal part of rumen fermentation.

"The gas is not a free gas," he said. "It's actually entrapped in foam bubbles and the animal can't get rid of it, which causes extreme discomfort and can suffocate the animal."

Pastures that are a 50/50 mix of legume/grass can help prevent both grass tetany and

pasture bloat, Lemenager said.

"Because bloat is more of a problem with legume pastures, particularly alfalfa and clover, it's important to make sure the animals are full when you turn them out to pasture," he said. "Even feeding a couple pounds of grain will help.

"It's best to not send cattle out on wet pastures. Make sure the dew is off or, if it just rained, make sure it has dried up before you put the animals out—dry forage is better than wet forage."

He added that when rotating cattle to new pasture, make sure they are full on the old pasture before moving to the new. Time rotation so that there is still forage left in the old pasture and so that animals aren't hungry going to the new pasture.

Lemenager also said an anti-bloat agent such as Poloxalene can be fed (2-4 grams per 100 pounds of live weight) and should be fed three days to a week before cattle go to grass, and then during the time period when the animal is most susceptible to bloat. Rumensin also has been shown to be of some value in minimizing bloat, he said.

Another management practice that can help is planting birdsfoot trefoil—one of the non-bloating legumes—when renovating pastures.

Producers also need to make sure their animals are getting enough nutrients to meet their requirements, because while the grass is greening up and it's growing rapidly, it contains a lot of water, Lemenager said.

"This means the nutrients are diluted, which can create some challenges from the animal's ability to eat enough to meet their nutritional requirements," he said.

"I can't stress prevention enough," Lemenager said.

For more information about grass tetany and pasture bloat, visit http://www.ansc.purdue.edu/beef/, or contact Lemenager at 765-494-4817, rpl@purdue.edu.