

Johnsongrass-Good or Bad?

By Marty Morgan, Wise County Ag Agent

Well when the first frost hits, beef producers should be concerned for grazing cattle if the field contains Johnsongrass. Cattle may suffer from prussic acid (hydrogen cyanide) poisoning caused by this grass, which by the way, is an excellent forage for cattle if properly managed.

But Ole Jack Frost is not the only culprit that causes prussic acid as it can occur after stressful conditions such as drought, extended periods of cloudiness or exposure to a herbicide that kills grasses. Any condition that causes stress to the grass has a potential of producing this poison that can kill your cattle. It's not a common occurrence, but poisonous nitrates or prussic acids can form in everything from Bermuda, ryegrass, alfalfa etc., but is most common in Sorghum Grasses like Johnsongrass. These plants can produce toxic levels of prussic acid, especially when stressed during cold temperatures and droughts.

Cyanide-producing compounds in living plant cells are converted to prussic acid when cells are crushed or otherwise ruptured. The prussic acid potential of plants is affected by species and variety, weather, soil fertility and stage of plant growth. Prussic acid is one of the most potent toxins in nature. As ruminants like cows and goats consume plant materials containing cyanide-producing compounds, prussic acid is liberated in the rumen, absorbed into the bloodstream and carried to body tissues where it interferes with oxygen usage.

When lethal amounts are consumed, animals can die without visible symptoms of poisoning, but bloating is a common symptom seen. Symptoms from smaller amounts include labored breathing, irregular pulse, frothing at the mouth and staggering.

Suggestions for farmers to help their cattle avoid prussic acid poisoning:

- Remove cattle from fields containing Johnsongrass until the first hard freeze and when the grass is completely dry. The toxin usually dissipates within 48 hours, but to be safe give it several days.
- Do not allow cattle to graze for two weeks after a non-killing frost.
- Do not allow cattle to graze at night when frost is likely.
- Allow hay to cure properly to remove the danger of prussic acid poisoning from hay containing johnsongrass. This usually means adding a few extra days of drying time over what is normal.
- **A good rule of thumb is to hold cattle out for two weeks following any frost, whether a killing or non-killing frost, to allow the prussic acid to dissipate.**

Watch cattle closely if you have to leave them exposed to Johnsongrass. Of course, you can't save a dead animal, but those displaying symptoms prior to death can be treated. A proprietary sodium nitrite-sodium thiosulfate combination can be administered and repeated once if necessary. It must be injected

intravenously and very slowly. The dosage and method are critical, so keep a veterinarian's emergency phone number close by. Most animals that live two hours after onset of symptoms are likely to recover.

Believe it or not Johnsongrass can be just as high in crude protein and energy (TDN) than coastal bermudagrass. Its an excellent grazing and haying forage, you just need to pay attention and manage it correctly. When I was growing up we depended on our Johnsongrass meadows for hay. Dad had about 200 acres that we cut and square baled a couple times a year and we knew to watch for signs of stress that would cause prussic acid. Johnsongrass was very common on our ranch so it was used for grazing as well as hay. I remember many times turning a few test cows in and watching to see if they bloated or showed symptoms of prussic acid poisoning. If they did we would stick them to let the air off and use Grandads homemade concoction of raw eggs, 7 Up and other ingredients, that was forced down them, but hey it worked most of the time so that's all that mattered. Yes we would lose one every now and then, but for the most part we got along pretty good. Some folks hate it and spend a lot of money trying to rid their pastures of it, even though it's a tough one to get eradicated. Other than using a glyphosate (which kills whatever it touches), there are not many herbicides out there that will do the job. Us other folks, we like it, or at least tolerate it, and manage it to benefit our operations.