



## **Sorghum Cystitis Ataxia Syndrome of Horses**

*by Jason Turner, Extension Horse Specialist*

### **Introduction**

From time to time horse owners wish to investigate the use of other forage options for horses. Most often this occurs in times of drought when there are price increases in traditional forages (alfalfa, warm-season grasses, or cool-season grasses) used for hay for horses, or when there is limited availability of those traditional forages. In these instances, one recurring question is “Can I graze or feed sorghum pasture or hay to my horses?” This article provides a brief overview to owners on the challenges and potential risks associated with feeding sorghum, sudangrass, sorghum x sudangrass hybrid forages to horses.

### **Toxicity and Clinical Symptoms**

Many livestock owners are aware of the potential for nitrate toxicity and prussic acid (hydrogen cyanide, HCN) poisoning with animals consuming sorghum species (e.g., forage sorghum, sudangrass, and sorghum x sudangrass hybrids; See NMSU Extension Guide B-807 and B-808 for more details). Beyond these two concerns, horses grazing these forages may develop sorghum cystitis ataxia syndrome, a poorly understood syndrome, which causes nerve damage in all types of horses and fetal birth defects in pregnant mares.

The sorghum cystitis ataxia syndrome of horses appears to be due to chronic ingestion of cyanide (HCN or another metabolite) over a longer period, rather than the acute toxicity problems observed with feeding sorghums to ruminants. As the horse consumes low levels of the toxin from the forage over a period of weeks, the clinical symptoms related to the damage to the spinal cord and nerves begin to appear. The horse will gradually develop ataxia, especially in the hind end, most evident when asking the horse to back or turn. Paralysis of the bladder can lead to dribbling or leaking of urine in both males and females with the latter showing signs of urine scald on the hindquarters. Inflammation of the bladder, kidneys, and urinary tract may also develop. The toxins may lead to abortion in pregnant mares or skeletal malformations of the developing fetus. Once the neurological symptoms appear, the nerve damage is permanent, and the prognosis for the animal is poor. As the condition progresses, paralysis of the tail and hind legs may develop.

### **Conclusion**

In regard to feeding sorghum, sudangrass, and sorghum x sudangrass hybrid hay to horses, there is a mix of opinions in the available literature on whether or not this is a safe practice. Some experts report that sorghum cystitis ataxia syndrome is not observed when properly cured hay is fed to horses, but others firmly warn against feeding hay from these forages to horses. At this time, the author does not recommend grazing horses on fields of growing sorghum plants, especially for extended periods, without testing for potential toxins. Furthermore, horse

owners are advised to strongly consider the potential risks associated with feeding sorghum-type hays to horses versus any perceived benefit from this forage selection for their horses.



**Note the date change:**

**Virtual Webinar Clinic!**

**Saturday, March 6, 2021**

**8:30 am to 2:00 PM (Central Time)**

We plan to offer sessions on judging the following classes: halter, western pleasure, western horsemanship, and reining. We will use a combination of email, Zoom, and YouTube videos to share the resources with you. With the date change, online registration will open on February 15 and close February 25 at Noon. The online registration fee is \$10 per person.

**For more information, contact:**

**Ms. Alyssa Oates, CC Horse Judging Team Coach at [alyssa.oates@clarendoncollege.edu](mailto:alyssa.oates@clarendoncollege.edu)**

**Dr. Jason Turner, NMSU Extension Horse Specialist at [jturner@nmsu.edu](mailto:jturner@nmsu.edu)**



The College of Agricultural, Consumer and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research, and Extension programs. New Mexico State University is an equal opportunity/affirmative action employer and educator. NMSU and the U.S. Department of Agriculture cooperating.