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Managing Summer Annual Harvest

Summer annuals are a great option for producers wanting lots of biomass production during the warmest months of the year. Species like sudangrass, sorghum-sudan hybrids, forage sorghum, and millets are all reaching their harvest window for grazing and haying now. Managing these species correctly no matter how you harvest is critical for success.

If you plan on grazing, sudangrass and sorghum-type species need extra precautions due to the risk of prussic acid poisoning. Prussic acid or cyanide is produced in all sorghum species at various levels with forage sorghums producing the highest amount, sorghum-sudan hybrids in the middle, and sudangrass producing the least. Prussic acid shouldn't be feared, but it does need to be managed correctly.

The first rule for using sorghum species is to never turn out hungry animals to graze. While an all you can eat buffet of new growth sounds pretty appetizing from a cow's perspective, it can also lead to a quick overdose of prussic acid. A better method is to limit grazing for a short period or feed animals prior to turn out so grazing is slower and any issues that may arise can be caught and corrected.

Next, ensure animals are avoiding areas of the plant where prussic acid is highest. Typically, prussic acid is at its highest concentration in new shoots. By letting plants grow to a proper height before grazing, we can dilute the prussic acid and prevent an overload. Sudangrass should reach a height of 15-18 inches before grazing where forage sorghum and sorghum-sudan hybrids with higher risk should be 18 to 24 inches tall. Regrowth following grazing can contain even higher levels of prussic acid, so use a grazing rotation and back fence to prevent animals from snacking on new growth until it has reached appropriate heights.

Both foxtail and pearl millet are great options for producers wanting a summer forage without having to worry about prussic acid, as neither are in the sorghum family. Pearl millet may be a better option for those looking to graze as it will regrow if 8 inches of stubble is left over, unlike foxtail millet which has no regrowth potential.

While only sorghum species pose a risk for prussic acid poisoning, all summer annual species do need to be watched for nitrates. Nitrates build up in lower portions of the plant, particularly during drought, other weather stress like lodging or hail damage, or with excessive nitrogen fertilization. Avoid grazing too low in fields where you suspect nitrate risk to avoid issues.

For producers putting up hay, prussic acid isn't a concern as it dissipates out of dead plant material in a few days. Nitrates are something to watch out for and fields where the risk is high should be cut high or ensiled. Fermentation that occurs during ensiling can cut nitrate levels by 60%, making high nitrate forages feedable. If you still want hay, leaving at least 8 inches of stubble height not only avoids the portion of the plant where the highest nitrate levels are concentrated, but also holds the windrow up off the ground to aid in dry-down.

Hay from high yielding species like forage sorghums and millets can be difficult to dry, leading to mold and heat in the bale. Besides cutting high, crimping the hay and breaking open the stem is a great way to speed up the dry down process. Another thing to consider is cutting early. Harvesting when plants have less stem and more leaf may reduce yield, but will produce a higher quality hay that is more likely to be put up at the correct moisture. Leave enough stubble height so that plants can regrow for a second cutting to make up for some of that lost yield early one.

Summer annuals are a great opportunity for added forage in any operation and can be harvested in a number of different ways. When grazing, don't turn out hungry animals, ensure enough growth to prevent prussic acid issues with sorghum species, and leave stubble in fields where nitrates may be of concern. Those looking for hay should cut high, cut early, and crimp to ensure a dry and quality product. -*Ben Beckman is a beef systems Extension Educator serving the counties of Antelope, Cedar, Knox, Madison and Pierce. He is based out of the Cedar County Extension office in Hartington. You can reach him by phone: (402) 254-6821 or email: ben.beckman@unl.edu*