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Forage News [2018-06]

University of Kentucky Department of Plant and Soil Sciences

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UK Forage News

Keeping Forage-Livestock producers in Kentucky informed
Dr. S. Ray Smith and Krista Lea, MS.~ Editors

June 2018

Featured Publications: Crabgrass (AGR-232) and Foxtail Millet (AGR-233)

In Kentucky, cool-season grasses produce ample forage in the spring and fall, but high temperatures and short-term drought stress often limits growth during the summer months. Warm-season annual grasses can fill this gap with relatively high quality forage when properly managed. Although most of us think about sorghum-sudangrass, sudangrass, and pearl millet as the main summer annual choices, two additional options for KY producers include crabgrass and foxtail millet.

Crabgrass is sometimes considered a weed, but possesses significant potential for supplying high quality summer forage. Additionally, it does not have prussic acid potential and is a poor host for the sugarcane aphid. A primary advantage of crabgrass is that it is well adapted to Kentucky and occurs naturally in most summer pastures, especially those that have been overgrazed. It is also highly palatable and a prolific reseeded.

Foxtail millet (German millet) is fine stemmed, has no prussic acid potential and is well suited for hay-making. Susceptibility to sugarcane aphid is not known. It is the lowest yielding of the summer annual grasses since it will not regrow after cutting. It is a good smother crop to be used before no-till seeding another crop such as tall fescue or alfalfa.~ Find the full list of publications at forages.ca.uky.edu/foragepublications including new publications for all the summer annual grasses.

Forage Timely Tips: June

- ✓ Clip pastures for weeds and grass seed heads as needed.
- ✓ Soil test for late-summer seedings.
- ✓ Protect round bales of hay from weather damage to minimize storage losses of yield and quality.

Sivanto Prime Available on Sweet Sorghum for 2018

The Kentucky Department of Agriculture (KDA) just announced that Kentucky will again have Sivanto Prime available for use on sweet sorghum and other sorghums to fight sugarcane aphid. This is good news as this insecticide is very effective and the sugarcane aphid can severely damage sweet sorghum and all crops in the sorghum family. This marks the third year that the emergency use of this material has been secured for Kentucky.

Last year, sugarcane aphid was found over the entire

state for the first time; however, each year this insect must recolonize the state from southern overwintering areas. There will be an announcement if and when it is detected in Kentucky in 2018.

Sivanto Prime is used as a rescue treatment when sugarcane aphid reaches an average of 50 or more aphids on 25% to 30% of the leaves. In order for a producer to use Sivanto Prime on sweet sorghum, they



Surgacane aphid can be recognized by its yellow color and black tips to its antennae, cornicles ('tailpipes'), and tarsi ('feet') (Photo: Ric Bessin, UK).

ensures we will be eligible to obtain these exemptions in the future). This product is allowed on forage sorghum, sorghum-sudangrass, and sudangrass without restrictions, so there is no need to report applications on these crops. Check label for application rates and timing.

~ Ric Bessin, Extension Entomologist, from Kentucky Pest News, May 2018.

Quote of the Month: Weeds are Thieves

When a good forage stand is not obtained in a pasture or hayfield, or a stand thins due to stress factors, weeds will invade. Weeds steal water, nutrients, sunlight and space from forage crops. Many weeds have some forage value, but often they are unpalatable, low quality, unproductive or even poisonous; otherwise, we wouldn't consider them weeds. Good management, including providing a suitable soil pH, furnishing adequate amounts of plant nutrients and exercising appropriate grazing or cutting practices enable forage crops to be much more competitive. In many situations, timely use of herbicide to control weeds can be effective, efficient and economical. Weeds are thieves that hurt profits more than many forage-livestock producers realize. To purchase a Livestock Quotes and Concepts Book, contact us at ukforageextension@uky.edu.

need to 1) Have a copy of the section 18 label in their possession, and 2) Be a certified applicator (either private or commercial).

If applied to sweet sorghum the acreage treated to the KY Department of Agriculture for reporting purposes (this

The Cost of a Windrow

When harvesting hay or haylage we tend to think in terms of how long it takes to get the hay off the field. However, the first concern for quality hay/haylage should be how long it takes to lose the first 15-20% moisture. Forages have 75-80% moisture when cut; they will continue to respire sugars (break down and give off heat and carbon dioxide) at a high rate until the plant is dried to 60% moisture. If we want to save the energy of the starch and sugars for our cattle, we need to dry off the first 15-20% moisture as quickly as possible.

Most of the respiration takes place in the leaves. We should remember that conditioning is for drying the stems but has little impact on drying the leaves. A wide swath has the biggest effect on rate of leaf drying. Leaves dry faster in a wide swath because:

- More sunlight falling on the field is intercepted for drying. (A windrow intercepts only 25-30% of sunlight falling on the field while a wide swath intercepts 70-100% of sunlight.)
- Light keeps the leaf stomates open longer, so moisture can leave through leaf openings. Since most of the forage in a windrow is in the dark, the leaf stomates close to seal the leaf surface.

Table 1 shows the losses that can occur due to making a windrow rather than a wide swath. Data indicate that starch and sugar loss can range from 2-8% of dry matter. If we assume a median starch/sugar loss of 4% of dry matter due to hay in a windrow compared to a wide swath, then the dry matter economic loss is \$6.40/ton, according to current hay prices in the Midwest for large square bales.

However, the respiratory losses of starch and sugar

Table 1. Forage Losses Due to Respiration			
Dry matter loss	2%	4%	8%
—Economic Loss —			
Hay Value \$150/ton	\$3.00	\$6.00	\$12.00
Hay Value \$186/ton ¹	\$3.20	\$6.40	\$14.88
—Forage quality of Prime (>151 RFQ) hay —			
ADF, %	NDF, %	RFQ	Value \$/ton
30.0	40.0	153	\$186 ¹
-Forage quality if lose 40% dry matter starch/sugar-			
33.0	43.4	134	\$148 ¹
Value of quality loss/ton			\$38
Value of dry matter and quality loss			\$44.40

¹Hay price for large square bales from Midwest Hay Price summary, March 26, 2018

also increase the fiber content of the forage. If the forage was near 40% NDF (prime hay/haylage) when cut, then the 4% starch loss will increase fiber 3.4 units and lower the quality to Grade 1 hay (125-150 RFQ). Grade 1 hay is currently selling for \$38/ton less than Prime hay. The value to dairy producers is about twice the price differential between hay grades.

Many farmers have switched to making wide swaths when mowing. A wide swath is the single most important factor affecting forage drying rate; it is more important than conditioning. Farmers who continue to put hay into windrows are increasing drying time and risk of rain damage. They are also currently losing about \$44.40/ton due to yield and quality losses from increased respiration. Considering this dollar loss, most farmers could figure out a way to make wider swaths with their existing equipment; they should also look at wide swath mowers when replacing mowing equipment. ~ Dan Undersander, NAFA News Release May 15, 2018

Spray Timing for Roundup Ready Alfalfa

During the last month I have had several calls about the proper timing to spray Roundup Ready alfalfa varieties with Roundup. This is reported in the new "Weed Control in Alfalfa" publication highlighted in last month's issue. It states "the initial glyphosate application is necessary at the 3 to 5 trifoliate leaf stage to remove the small percentage of glyphosate-susceptible alfalfa plants that can be present in a new seeding (and to kill any weeds present in the stand). Spraying at the 3 to 5 leaf stage insures that all alfalfa seedlings have emerged. But if weeds are present at earlier stages of alfalfa growth Roundup can be sprayed on Roundup Ready alfalfa from emergence up through any stage of plant growth.

Are Soybeans an Option for Summer Annual Forage?

Soybeans are an option as an emergency hay or silage crop, and have the added benefits of being a legume (thus needing no nitrogen fertilizer). Additionally, they do produce prussic acid (cyanide) or accumulate nitrates like other summer annual forages. Soybeans can be very challenging to cure as hay because of their thick stems – using a conditioning mower to crush these stems helps curing. When harvesting soybeans for forage it is important to harvest when plants are still in a vegetative or leafy growth stage to maximize forage digestibility and protein. Soybeans are also a great rotation crop to precede a fall seeding of an improved cool season grass like orchardgrass or novel endophyte tall fescue. Some producers have added a low rate of sudangrass (5-10 lbs/A) to soybean hay and silage crops, but higher rates often compete with the soybeans. ~ Dr. Jimmy Henning, excerpted from the May 17 issue of Farmer's Pride. This is a free online publication available at <https://thefarmerspride.com> or call 270-384-9454 to request a paper copy.

Upcoming Events (see website for details and online registration)

AUG 7 or 9 –KFGC W. KY Field Day, LaCenter, KY
 SEPT 6 - KFGC E. KY Field Day, Morehead State Univ.
 SEPT 25-26 - KY Grazing School, Versailles, KY
 OCT 30 - KY Grazing Conf. West, Hopkinsville, KY
 NOV 1 –KY Grazing Conf. East, Winchester, KY
 JAN 6-8 –AFGC Conference, St. Louis, MO
 JAN 22-23—Heart of America Grazing Conf., Indiana
 FEB 21 –KY Alfalfa and Stored Forage Conf., Lexington

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