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FORAGE NEWS

Research & Education Center
Princeton, KY 42445

For more forage information, visit our UK Forage Extension Website at: <http://www.uky.edu/Ag/Forage>

March 2013

Garry D. Lacefield and S. Ray Smith, Extension Forage Specialists • Christi Forsythe, Secretary

KENTUCKY GRAZING SCHOOL

The Spring Kentucky Grazing School will be held April 17-18 at the University of Kentucky Research & Education Center in Princeton. The two-day school features U.K. faculty and staff, NRCS Specialists, Industry personnel and farmers as leaders and speakers. Cost for the two-day school is \$50.00 which includes notebook, all conference materials, breaks and two lunches. To sign up, call Lyndsay Jones at 859-257-7512 or e-mail lyndsay.jones4@uky.edu. For a list of speakers and topics along with directions, see our website [http://www.uky.edu/Ag/Forage/Princeton%202013%20brochure%20\(2\).pdf](http://www.uky.edu/Ag/Forage/Princeton%202013%20brochure%20(2).pdf)

33RD KENTUCKY ALFALFA CONFERENCE

The 33rd Alfalfa Conference was held in Lexington on February 21. Over 140 participated in this day long program featuring leading alfalfa scientists, industry representatives and producers. Topics included Grazing Alfalfa, Keys to Success when harvest alfalfa as baleage, farmer experiences with Roundup Ready Alfalfa, Making and Marketing Hay for the Horse Industry and Finishing Beef on Alfalfa. The keynote speaker was Dr. Dennis Hancock, Extension Forage Specialist, University of Georgia who spoke on the topic: Fertilizer – How much is in each bale? All speakers participated in a panel discussion at the end. Participants were able to visit with many exhibitors and bid on silent auction items. Proceedings for the Conference will be available soon on our website.

KENTUCKY ALFALFA AWARDS

The Kentucky Alfalfa Awards were presented at the 33rd Kentucky Alfalfa Conference held at the Fayette County Extension Office February 21. Each year awards are presented in the public-private-producer category. This year's recipients were:

- Mr. Tony Chapman – Charles Schnitzler Producer Award
- Mr. Sam Stratton – Warren Thompson Industry Award
- Dr. Dennis Hancock – Garry Lacefield Public Service Award

Congratulations to Tony, Sam and Dennis on being selected to receive these prestigious awards.

KENTUCKY ALFALFA HAY AWARDS

The Kentucky Department of Agriculture and the 33rd Kentucky Alfalfa Conference presented the 2012 Alfalfa Hay Quality Awards at the Alfalfa Conference in Lexington February 21. Awards are presented to the highest quality alfalfa and alfalfa-grass sampled and tested by the KDA Hay Testing service. Winners were:

Month	Alfalfa	Alfalfa-Grass
March	John McCoy	No participants
April	Cox Farms, Inc.	Geralds Farms
May	Hunts Forage Farm	Woodland Place, Inc.
June	John McCoy	John Nowak
July	Chris Creech	Mike Malone
August	John McCoy	Jerry Samples
September	John McCoy	Geralds Farms
October	Geralds Farms	Rick Horn
November	John McCoy	No participants

The best overall Champion Alfalfa Hay went to Mr. John McCoy from Bowling Green. Congratulations John and all the other Hay Award Winners.

HEART OF AMERICA GRAZING CONFERENCE

Over a decade has passed since Mr. Ed Ballard (IL), Garry Lacefield (KY), and Mark Kennedy (MO) initially started the Heart of America Grazing Conference. Before the first conference was fully planned, Indiana and Ohio joined. The Conference began in Mt. Vernon, IL and has rotated among the five states. Kentucky has hosted two conferences and will host its third in 2016. The 12th Conference was held in conjunction with the 29th SW Missouri Spring Forage Conference in Springfield, MO February 25-26, 2013. Dr. Garry Lacefield was the opening banquet speaker addressing Forages: Change-Challenges-Opportunities. He also presented a breakout session on Alfalfa Management for Quality.

CAN PREGNANT MARES GRAZE PASTURES CONTAINING TALL FESCUE: PRACTICE ASSESSMENT METHODS

Abstract - It is well documented that pregnant mares in their last trimester have a low tolerance for grazing endophyte infected tall fescue (*Lolium arundinaceum* Schreb.) At the University of Kentucky we are often asked the question, "Can pregnant mares graze pastures that contain tall fescue." The UK Horse Pasture Evaluation Program has developed methods to assess the risk that is present in a given pasture based on the percent pasture composition including: tall fescue, desirable forages species, weeds, and bare soil. These measurements, combined with information on current ergovaline levels and the infection status of the pasture, allows farm managers to determine the true risk of grazing a pasture with pregnant mares. Infected tall fescue is found in every horse pasture in Central Kentucky; however these pastures can be managed in a way to reduce the risk of toxicity to mares and successfully raise the next generation of equine athletes. (SOURCE: S. Ray Smith, Krista Cotten, and Tom Keene IN AFGC Proceedings & Abstracts, January 2013)

INTAKE AND DIGESTIBILITY BY BEEF STEERS FOR SWITCHGRASS HAY HARVESTED AT THREE DIFFERENT MATURITIES

Abstract - Switchgrass (*Panicum virgatum*) has potential to be used in Kentucky as a dual purpose crop for both renewable energy and hay for feeding beef cattle. Switchgrass forage quality rapidly decreases with increasing maturity. If switchgrass hay is to be used by beef producers, greater understanding regarding the effect of maturity on switchgrass hay utilization by beef cattle is needed. The objective of this study was to evaluate the effect of maturity on the apparent dry matter intake (DMI), digestible dry matter intake (DDMI), crude protein (CP) digestibility, and dry matter digestibility (DMD) of 'Alamo' and 'Cave-in-Rock' (CIR) switchgrass hay consumed by beef steers (450-600 lbs). Apparent DMI of both cultivars decreased as the switchgrass stands matured. Apparent CP digestibility was also reduced with a delay in harvest. This combined with the reduction in concentration of CP may indicate the need for protein supplementation if switchgrass hay is harvested at a latter maturity. A significant ($p < 0.05$) cultivar x maturity interaction was indicated for apparent DMD and apparent DDMI. This suggests that steers may utilize Alamo and CIR switchgrass hays differently. Delaying the hay harvest will reduce beef steers' ability to utilize switchgrass hay most efficiently, and reduce the benefit obtained in growing switchgrass for hay. (SOURCE: D. Davis, S.R. Smith, B. Pratt, and G.E. Aiken IN AFGC Proceedings & Abstracts, January 2013)

POST-GRAZE RECOVERY OF BLOOD CIRCULATION IN STEERS EXHIBITING FESCUE TOXICOSIS AS INFLUENCED BY SEED HEAD SUPPRESSION

Abstract - Tall fescue is a productive and persistent cool-season perennial grass that is the predominant grass utilized for forage in the transition zone between the temperate northeast and subtropical southeast. Unfortunately, ergot alkaloids produced by a fungal endophyte that infects most tall fescue plants can cause fescue toxicosis in cattle. Ergot alkaloids cause a constriction of blood flow to peripheral tissues that reduces the animal's ability to regulate body temperature and the animals become vulnerable to both heat and cold stresses. Ergot alkaloids are highly concentrated in the seed heads of tall fescue and, unfortunately, are selectively grazed by cattle; however, seed heads of tall fescue can be chemically suppressed using Chaparral herbicide (Dow AgroSciences, Indianapolis, IN). Preliminary data was generated from a pen experiment conducted with steers that previously grazed tall fescue pastures that were either with or without suppression of seed heads. Results indicated that blood flow in steers grazed on seed head suppressed pastures had more rapid recovery than those on pastures without seed head suppression. Steers on seed suppressed pastures also had post-graze body weights that were comparable to the steers that had grazed the bermudagrass control pastures. These results will be useful to cattle producers that are backgrounding beef calves on tall fescue pastures for the feedyard and need management technologies to improve weight gain and well being. (SOURCE: G. E. Aiken, IN AFGC Proceedings and Abstracts, January 2013)

PERFORMANCE FOR STEERS GRAZING NWSG IN TENNESSEE

Abstract - Native warm-season grasses (NWSG) can enhance forage production during summer when cool-season species are less productive and can be used in dual biomass-forage production. We conducted experiments at two Tennessee locations, Ames Plantation (AP; SW TN) and Highland Rim (HR; Springfield, TN) REC's to examine performance of steers (593 lb initial weight) during 2010 – 2011. Forage treatments were a big bluestem/indiangrass (BB/I; *Andropogon gerardii/Sorghastrum nutans*) blend, lowland switchgrass (SG; *Panicum virgatum*), and at AP only, eastern gamagrass (EG; *Tripsacum dactyloides*). Grazing treatments were full season (FS; approximately 100 days annually) and early season (ES; 30 days beginning about May 1 annually). Each forage X grazing treatment combination was replicated three times at each location in a CRD. Paddocks (3 ac each) were established in 2008 except for SG at AP, which was established in 2009. We used continuous stocking with testers (n = 4 per paddock) and grazers managed on a put-and-take system to maintain forages at target heights (FS: BB/I and EG at 15 – 18 in, SG at 18 – 24 in); ES target was to reduce stand height to 8 – 12 in within 30 days. At AP, performance of steers (ES) grazing BB/I and SG differed ($P < 0.05$) from EG (2.60, 2.47 and 1.70 lb/day, respectively) and for FS, BB/I differed ($P < 0.05$) from SG and EG (1.67, 1.12 and 0.88 lb/day, respectively). For HR, ADG on BB/IG and SG did not differ for ES (2.38, 1.90 lb/day, respectively) or FS (2.09 and 1.76 lb/day, respectively). Our results suggest NWSG provide adequate summer performance for cattle grazing in the Mid-South. (SOURCE: P. Keyser, M. Backus, J. Waller, G. Bates, E. Daxon, and C. Harper IN AFGC Proceedings & Abstracts, January 2013)

MANAGING ROUNDUP READY ALFALFA: WEED CONTROL

Weed Control: An initial application of glyphosate between emergence and the 4th trifoliolate growth stage is important to establish a thick and productive alfalfa stand.

It is important to understand that the trait purity for Genuity Roundup Ready Alfalfa is 90% or greater. This means that up to 10% of the plants in a newly seeded crop will not contain the gene that provides tolerance to Roundup brand agricultural herbicides. Expect that the first application of glyphosate will result in up to 10% of the emerged plants dying. This is a normal occurrence due to the complex genetic nature of alfalfa and the breeding practices required to integrate the Genuity Roundup Ready gene into the plant. The remaining plants will quickly grow to fill any gaps, resulting in a thick and productive stand.

In the vast majority of trials comparing Genuity Roundup Ready Alfalfa vs. conventional alfalfa (treated with glyphosate vs. conventional herbicides), there is a significant establishment year advantage in both yield potential and quality. This is a result of the

improved weed control and crop safety through the Roundup Ready system. Most growers reported that establishment year yield and forage quality benefits outweighed the cost of the Genuity Roundup Ready Alfalfa technology.

Typically, one or two applications per season of Roundup brand agricultural herbicide provide excellent weed control (Table 1). Therefore, not all four applications listed in Table 1 are required, but provide the grower the flexibility to manage weeds when needed. When Roundup PowerMAX® is used, apply the same use rates shown in Table 1.

Table 1. Recommended rate and time of application options for Roundup® brand agricultural herbicides.

Time of Application	Roundup WeatherMAX® (oz/A)
Preplant – emergence	22-44
Emergence – 4 trifoliolate	22-44
5 trifoliolate – 5 days before first cutting	22-44
Total in – crop application per cutting after first cutting, applied up to 5 days before next cutting	22-44
Combined total ounces per year for all in – crop applications	132

FORAGE YIELD AND QUALITY DIFFERENCES AMONG COOL-SEASON GRASSES

Rotationally-stocked, perennial cool-season grasses are often utilized at vegetative stage of maturity. We compared the yield and forage quality of leaves, stems, and total forage of meadow fescue, orchardgrass, quackgrass, reed canarygrass, smooth bromegrass, EF (endophyte-free) and EI (endophyte-infected) tall fescue, and timothy in the spring, summer, and fall in Wisconsin. Total forage production of all grasses was greatest during the spring as expected. Leaf yield differences in spring, however, were relatively small (mean of 1090 lb/acre), except for smooth bromegrass (1430 lb/acre). Tall fescue (EF and EI) produced the greatest leaf yield during the summer (mean of 1420 lb/acre) and fall (mean of 920 lb/acre), and quackgrass, smooth bromegrass, and timothy (mean of 640 lb/acre) the least. Significant leaf crude protein (CP) differences occurred during the spring, summer, and fall, but leaf CP of all grasses exceeded 16% and would likely have little effect on animal performance. Lowest neutral detergent fiber (NDF) and greatest NDF digestibility were measured in the leaves and stems of meadow fescue and timothy. Producers should consider forage leaf yield and nutritive value relative to livestock requirements. Across the growing season, EF and EI tall fescue had the most uniform distribution of leaf yield, but meadow fescue and timothy had the greatest nutritive value. (SOURCE: G.E. Brink and M.D. Casler IN AFGC Proceedings & Abstracts, January 2013)

JANUARY 1 CATTLE INVENTORY DOWN 2 PERCENT

All cattle and calves in the United States as of January 1, 2013 totaled 89.3 million head, 2 percent below the 90.8 million on January 1, 2012. This is the lowest January 1 inventory of all cattle and calves since the 88.1 million on hand in 1952.

All cows and heifers that have calved, at 38.5 million, were down 2 percent from the 39.4 million on January 1, 2012. This is the lowest January 1 inventory of all cows and heifers that have calved since the 36.8 million head in 1941.

Calf Crop Down 3 Percent - The 2012 calf crop was estimated at 34.3 million head, down 3 percent from 2011. This is the smallest calf crop since the 33.7 million born during 1949. Calves born during the first half of 2012 are estimated at 25.0 million, down 3 percent from 2011. (SOURCE: Released February 1, 2013, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA).

UPCOMING EVENTS

- APR 17-18 Kentucky Grazing School, University of Kentucky Research & Education Center, Princeton
- MAY 22-24 American Forage & Grassland National Tour, Graves Mountain Lodge, Syria, VA


Garry D. Lucefield
Extension Forage Specialist
March 2013