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Forage News

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## Forage News [2011-08]

Department of Plant and Soil Sciences, University of Kentucky

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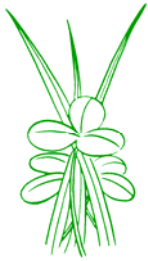
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# FORAGE NEWS



Research & Education Center  
Princeton, KY 42445

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

## August 2011

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

### GRAZING SCHOOL

The August U.K. Grazing School is just days away (August 15-16). It will be held in Woodford County. Check our website or with your County Agent for details or call Grazing School Coordinator Lyndsay Jones at 859-257-7512 or e-mail: [lyndsay.jones4@uky.edu](mailto:lyndsay.jones4@uky.edu) to register and save your seat.

### KFGC FORAGE FIELD DAY

The Kentucky Forage and Grassland Council will hold its Annual Forage Field Day at the C. Oran Little Research Center in Woodford County September 8. This will be a late afternoon – early evening event with different tours and exhibits.

### VARIETY TEST INFORMATION

Each year the University of Kentucky conducts over twelve different forage species variety trials in different locations across the state. This program is conducted by Mr. Gene Olsen. Following harvest and data analysis each year, the results are published and available through all County Extension Offices and on our Forage Website at <http://www.uky.edu/Ag/Forage/ForageVarietyTrials2.htm>. If you are planning on seeding forage grasses or legumes in the next few weeks, I encourage you to study the results before making your final variety decision.

### U.K. ALL COMMODITY FIELD DAY

The 2011 U.K. All Commodity Field Day was held July 21 at the U.K. Research and Education Center in Princeton. Over 1200 from several states as well as visitors from other countries attended. During the day, attendees participated in ten different agricultural tours, many Family and Consumer Sciences displays and exhibits, along with many educational exhibits in the big tent. Youth activities included a variety of educational opportunities including demonstrations on Raptors, Snakes, Lizards and Reptiles. On behalf of the entire Field Day Committee, I want to thank everyone who participated, contributed and attended.

### KENTUCKY TO HOST NATIONAL FORAGE MEETING

The American Forage & Grassland Annual Conference will be held January 9-11, 2012 at the Crowne Plaza Hotel in Louisville, Kentucky. Mark your calendars and hold the dates. More details will be available soon.

### LOW HAY ACRES, HIGH HAY PRICES

Hold on to your hats. The most recent USDA estimate for hay acreage to be harvested in the U.S. during 2011 has likely set the stage for a wild, upward ride in hay prices for the rest of the year.

U.S. growers plan to harvest 57.6 million all-hay acres in 2011, down 4% from 2010, according to the June 30 [Acreage report](#). Harvested acres are expected to be below or equal to last year's figures for most states in the Corn Belt, Great Plains, Pacific Northwest and Rocky Mountain regions, the ag department adds. Record-low harvested acreages are expected in Iowa, Nebraska, Minnesota, Maine, Pennsylvania and Wisconsin. For alfalfa and alfalfa mixtures, USDA expects a harvested area of 19.3 million acres in 2011, down 3% from that of last year.

Throughout spring, most market watchers had been predicting a large drop in hay acres and that growers would switch to corn, wheat

and other crops to capitalize on projected high commodity prices. In its March 31 *Prospective Plantings* report, USDA had forecast all-hay production at 59 million acres.

"That would have been a drop of about 1% from 2010," says University of Wisconsin Extension educator Ken Barnett, who compiles the [Weekly Hay Market Demand and Price Report for the Upper Midwest](#). "Given all the reports we were hearing and reading through the winter about farmers taking land out of hay to plant corn and other crops, I don't think many people really believed that number."

Even so, the size of the spread between the March and June acreage numbers surprised many analysts. "Shocking is the only word I can think of to describe it," says Matt Diersen, ag economist at South Dakota State University Extension. "It's a big, big drop."

That virtually ensures dramatically lower U.S. hay production overall. Diersen points out that, if this year's yields meet the 10-year average of 2.43 tons/acre, national all-hay production would total 140 million tons, a 7-million-ton drop from production in 2010 and the lowest production since 1988.

A relatively low inventory of hay coming out of the winter promises to tighten supplies even more. Hay stocks on May 1 of this year totaled 22 million tons. "That's not crazy tight like it was in 2007 when May 1 stocks were under 15 million tons," he says. "But when you couple it with the lower production, it will put a lot of pressure on the supply."

At the same time, demand is likely to be stronger than normal in some areas of the country. Severe droughts in Texas, Oklahoma and other parts of the Southern Plains have burned up pastures, forcing livestock producers to feed hay much earlier in the year than normal. "It's really going to put a stress on supply throughout the marketing year, which will only push prices higher," says Diersen.

U.S. hay prices as of late May were already at an all-time high, Diersen adds. "It's similar to 2008, when hay prices were high at the start of the marketing year, then stayed high for the rest of the summer."

His bottom line on the *Acreage* report: "It's good news for someone with hay to sell. It's very bad news for anybody on the buyer's side." (SOURCE: Rick Mooney, Editor, *eHay Weekly*, Jul 5, 2011)

### ORCHARDGRASS STAND PERSISTENCE IN THE MID-ATLANTIC REGION

**ABSTRACT-** Growers across the Mid-Atlantic region have experienced problems with orchardgrass stands in recent years. Reduced forage yield, fewer hay harvests each year and premature death of orchardgrass stands have been reported and confirmed in University sponsored forage variety trials. With the help of Extension agents in Virginia and other neighboring states, I organized a survey to help answer questions about this orchardgrass problem. The survey contained 28 questions that covered a wide range of issues. Data were entered on-line by agents who interviewed growers – usually in the field. Of the 43 orchardgrass stand surveyed, most growers reported poor stand persistence and these included seemingly well-managed stands. None of the individual variables surveyed (e.g., pests, disease, cutting management, soil fertility) were well correlated with orchardgrass persistence. Recent droughts in the Mid-Atlantic and an overall warming trend in climate may be at the heart of the observed persistence problems. (SOURCE: B.F. Tracy, Dept. Crop and Soil Environmental Sciences, Virginia Tech, Blacksburg, Va. IN 2011 *Proceedings & Abstracts, AFGC Annual Conference, June 12-15, French Lick, IN*)



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## EFFECTS OF CO-GRAZING DAIRY HEIFERS AND GOATS ON FORAGE INTAKE, BOTANICAL COMPOSITION, AND DRY MATTER YIELD OF MIXED SPECIES PASTURES

**Abstract** - Improving forage quality by utilizing management-intensive grazing can offer an alternative management system for rearing dairy replacement heifers. A 2-yr study was conducted to determine the effects of co-grazing growing Holstein heifers with Boer x Kiko goats on forage intake, pasture composition, and forage DM yield of mixed species pastures. The two grazing strategies used in this study were heifers grazed alone (HO) and heifers co-grazed with goats (HG) and pastures were predominately low-endophyte infected tall fescue and white clover. In Year 1, overall daily gains and feed efficiency were similar between grazing strategies, despite estimated pasture DM intake being greater for HO heifers compared to HG heifers ( $P < 0.05$ ). Presence of broadleaf weed species tended to be greater after one grazing rotation in HO pastures ( $P = 0.09$ ), but were similar at the end of the study with weed percentages of 16.9% in HO and 3.1% in HG ( $P = 0.12$ ). Grass DM yield tended to be greater in HG pastures after grazing compared to HO pastures ( $P < 0.10$ ), likely attributed to changes in diet selectivity. In Year 2, HO heifers consumed more pasture and total estimated DM than HG heifers ( $P < 0.01$ ); however, daily gains and feed efficiency were similar between grazing strategies. Prior to grazing, HG pastures tended to yield more grass, legume, and total DM than HO pastures ( $P < 0.10$ ), possibly due to carry over effects from the previous grazing season. After grazing once, grass, legume, weed, and total DM yields were similar between grazing strategies. Grass and total DM yield tended to be greater in HO pastures after the second grazing rotation ( $P < 0.10$ ). Legume presence was significantly greater ( $P < 0.05$ ) in HG pastures at the beginning of Year 2, yet botanical composition was similar between grazing strategies throughout the remainder of the study. Visual estimation of botanical composition at the end of Year 2 showed that HO pastures had 3.5 times more weed presence than HG pastures ( $P < 0.01$ ). Co-grazing resulted in decreased forage intakes but average daily gains were similar to heifers grazed alone, indicating that replacement heifers can be successfully co-grazed with other livestock species without negative effects on performance. (SOURCE: T. S. Dennis, L. J. Unruh-Snyder, J. E. Tower, and T. D. Nennich, Purdue University IN 2011 Proceedings & Abstracts, AFGC Annual Conference, June 12-15, French Lick, IN)

## SPECIES EVENNESS HAS LIMITED INFLUENCE ON WEED INVASION OF FORAGE MIXTURES

**Abstract** - Our objective was to test the hypothesis that mixed plant communities with greater species evenness are more resistant to weed invasion than mixtures with lower evenness or monocultures. Field studies were conducted at two sites in Pennsylvania and two sites in Wisconsin. The mixtures and monocultures included orchardgrass, quackgrass, alfalfa, and white clover. Fifteen treatments were sown in a design that systematically varied relative abundance of each species with a fixed level of overall initial abundance. We tested resistance to weed invasion by determining the proportion of unsown species in each plot at all four sites and by hand planting seeds of plumeless thistle and canola into subplots of each treatment at the two Pennsylvania sites. There were no significant differences among mixture treatments in the number and dry mass of canola or thistle plants at any assessment date. At all locations, monocultures of grasses and legumes had a greater proportion of weeds in harvested biomass than did mixtures. Increasing the species evenness of grass-legume mixtures reduced the proportion of naturally occurring weeds in the harvested herbage at four locations. When mixtures were challenged with the addition of specific weeds there were no effects of species evenness or mixture composition on the establishment of the sown weeds. (SOURCE: Matt A. Sanderson, Geoff Brink, and Robert Stout, USDA-ARS in ND, WI & PA, respectively IN 2011 Proceedings & Abstracts, AFGC Annual Conference, June 12-15, French Lick, IN)

## PERFORMANCE AND CARCASS PARAMETERS WHEN MEAT GOATS WERE FINISHED ON CHICORY, BIRDSFOOT TREFOIL, OR RED CLOVER PASTURES

**Abstract** - The meat goat industry is growing rapidly in the eastern U.S., particularly on small farms, to supply ethnic market demands. Body weight (BW), average daily gain (ADG), and carcass parameters were determined when meat goat kids were finished on pastures of chicory (*Cichorium intybus* L.; CHIC), birdsfoot trefoil (*Lotus corniculatus* L.; BFT), or red clover (*Trifolium pratense* L.; RCL) during the 2010 growing season. Final BW ( $P < 0.03$ ), shrunk BW ( $P < 0.02$ ), carcass wt ( $P = 0.08$ ) and body wall thickness ( $P < 0.02$ ) were greater for goat kids finished on RCL pastures compared to CHIC pastures;

goats grazing BFT were intermediate. The ADG were similar for RCL and BFT; both were greater ( $P < 0.01$ ) than CHIC. Dressing percentage (mean 50.5 %) and ribeye area (REA; mean 1.4 sq. in.) were similar ( $P > 0.10$ ) among groups. Backfat was similar for RCL and BFT (mean 0.05 in.); both were greater ( $P < 0.001$ ) than CHIC (0.03 in.). The internal fat score, REA:carcass wt. ratio, leg score, lean score, and conformation score were not different ( $P > 0.10$ ) among groups. Small ruminants finished on pasture produced desirable finished BW and carcass characteristics for most ethnic markets. (SOURCE: K.E. Turner and K.A. Cassida IN 2011 AFGC Proceedings & Abstracts, French Lick, IN, June 13-15)

## EFFECTS OF CUTTING HEIGHT AND VARIETY ON SWITCHGRASS YIELD IN TENNESSEE

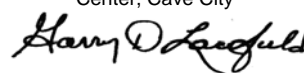
**Abstract** - Switchgrass (*Panicum virgatum* L.) is often promoted as a high-yielding forage species. However, it is not well understood how varietal and cutting height differences influence yield. In order to examine the impacts of varietal type and cutting height, we established 48 plots representing 3 varieties of switchgrass in 1990. These varieties included one upland variety (Cave-in-Rock) and two lowland varieties (Kanlow and Alamo). Beginning in 2008, we harvested the 18-year-old switchgrass plots at 4-, 8-, 12-, and 16-in cutting heights in June and August to determine if cutting height and/or variety influenced yield. We determined yields were similar among the 3 varieties examined ( $P > 0.05$ ). However, we determined yield interacted with year and cutting height. Yield was highest in 2009 and lowest in 2008, averaging 0.8, 3.9, and 3.2 T•ac<sup>-1</sup>, in 2008, 2009, and 2010, respectively. In 2008, yield did not differ among cutting heights. In 2009, the 4-in cutting height had > 51% higher yield than the 12-in cutting height. In 2010, the 4-in cutting height had > 77% higher yield than the 12-in cutting height. Over all years, the 12-in cutting height had the lowest yield. These results suggest Kanlow, Cave-in-rock, and Alamo switchgrass will produce comparable yields given similar growing conditions. However, harvesting switchgrass at the shortest cutting heights did not necessarily produce higher yields as the 16-in cutting height was not always significantly different from the 4-in cutting height ( $P > 0.05$ ). (SOURCE: E. Doxon, A. Ashworth, P. Keyser, G. Bates, and C. Harper IN 2011 AFGC Proceedings & Abstracts, French Lick, IN, June 13-15)

## ERGOVALINE RECOVERY FROM DIGESTED RESIDUES OF GRAZED TALL FESCUE SEEDHEADS

**Abstract** - Ergovaline has been shown to concentrate within the seedheads of tall fescue, and consumption of these seedheads may likely lead to symptoms of fescue toxicosis, such as poor growth and rough hair coats. Little is known about the amount of ergovaline that is released from these tissues during digestions, particularly for different maturities at which these culms may be consumed during the grazing season. The purpose to this study was to give an *in vitro* estimate to the amount of alkaloid released from tall fescue seedheads collected at different stages of maturity from central Kentucky pastures. From the results of this study, it was determined that the ergovaline concentration, as well as digestibility, increased with seedhead maturity. The percentage of the ergovaline released during digestion decreased slightly later in the season; however, a greater total amount of the alkaloid was released from seedheads collected at these dates. Therefore, it may be concluded that the control of the production of seedheads, by mowing or PGRs, is an effective management strategy to partially combat fescue toxicosis, as it prevents the consumption of high concentration of ruminally-available ergovaline. (SOURCE: B.M. Goff, G.E. Aiken, W.W. Witt IN 2011 AFGC Proceedings & Abstracts, French Lick, IN, June 13-15)

## UPCOMING EVENTS

- AUG 15-16 Kentucky Grazing School, Woodford County
- SEPT 8 KFGC Forage Field Day, C. Oran Little Research Center, Woodford County
- OCT 13 Kentucky Grazing Conference, Western Kentucky University Expo Center
- 2012
- JAN 9-11 American Forage & Grassland Council Annual Conference, Crowne Plaza Hotel, Louisville
- FEB 23 32<sup>nd</sup> Kentucky Alfalfa Conference, Cave City Convention Center, Cave City



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