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# Forage News [2011-07]

University of Kentucky Department of Plant and Soil Sciences

COOPERATIVE EXTENSION SERVICE • UNIVERSITY OF KENTUCKY • COLLEGE OF AGRICULTURE • LEXINGTON, KY, 40546

# FORAGE NEWS

UNIVERSITY OF KENTUCKY College of Agriculture

Research & Education Center
Princeton, KY 42445

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

## July 2011

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

### U.K. All Commodity Field Day – July 21

The University of Kentucky All Commodity Field Day will be July 21 at the Research & Education Center in Princeton. This Field Day truly has something for everyone including agricultural tours, youth activities, family and consumer sciences activities, educational exhibits, food and the opportunity to visit with people from throughout Kentucky and many other states. The field day will begin at 8:00 under the big tent. Tours will begin at 8:30 and run continuously until 3:00. There will be wagon, bus, and walking tours. Back by popular demand is the Station Overview Tour which has attracted the highest number of participants over the years. There will be a Youth Activities Tent with many agricultural-related (fun) activities for the youngsters including a viewing/petting zoo with many different species of animals. Family and Consumer Science activities and exhibits will be at the UKREC Main Building. There will be over forty educational exhibits in the Exhibit/Display Tent. Exhibits will be open throughout the day with representatives at each booth to visit and discuss items of interest.

The U.K. Equine Team will combine talents with an expanded area in the Exhibit Tent. Six booths will be combined and will feature the Kentucky Forage & Grassland Council, Pasture Weed Control, Plant I.D. and Pasture Evaluation along with publications on many areas involved in Equine Science.

The Forage Tour will feature four stops:

Status & New Developments in Novel Endophtye Tall Fescues - Tim Phillips

Animal Performance on Endophyte Infected, Endophyte Free and Novel Endophyte Tall Fescues- Glen Aiken

U.K. Forage Variety Testing: Overview & Results - Gene Olsen

Switchgrass for Biofuels - Tom Keene

Lunch can be purchased from various Kentucky producer organizations.

For a complete program with more details, contact Christi Forsythe at 270-365-7541, X221 or visit our website at http://www.uky.edu/Ag/Forage.

See you in Princeton July 21.

### KFGC Forage Field Day – September 8

The Kentucky Forage and Grassland Council will hold their annual field day at the C. Oran Little Research Center (formerly U.K. Woodford County Animal Research Facility) in Woodford County in September. The program committee is hard at work and details will be forthcoming. Mark your calendars and plan to attend on September 8.

### 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.

### Dr. Dougherty Retires

Dr. Chuck Dougherty, Professor of Plant and Soil Sciences with teaching-research emphasis in Grazing Management and Utilization retired at the end of June following thirty-three years at U.K. Dr. Dougherty has maintained a busy teaching schedule and hundreds of students complete the class over his long tenure. A native of New Zealand, he brought a new through process to Grazing Management and Utilization. We wish Chuck the very best as he embarks on this new, exciting phase of his life.

### Forage Tour Photos

Each year, U.K. Forage research, teaching, and extension faculty and staff tour farms in different areas of Kentucky. This years' tour was in Barren and Hart Counties. Farms toured included Jim and Baker Landis in Barren County along with Clayton Geralds and Weldon Hawkins in Hart County. Our thanks to host farm families and especially to Jim and Baker and the entire Gerald family and friends for providing great meals. Thanks to County Agents Gary Tilghman and Chris Clark for all their assistance. Photo highlights are on our website at http://www.uky.edu/Ag/Forage

### KFGC Members Place in all AFGC Contests at the Annual Meeting

Members of the Kentucky Forage and Grassland Council did well at the recent American Forage and Grassland Council Annual meeting in French Lick, IN. Weldon Hawkins from Hart County placed first in the Forage Spokesperson contest, continuing the tradition of KFGC members winning this competition more than any other state. Kelly Vaughan and Taylor Reiter, students at the University of Kentucky, won the undergraduate student Forage Bowl competition. Kelly was also on the winning team at last year's meeting. Lisa Baxter and Shauni Nichols from Berea placed third in the competition. Christopher Gerald's again showed his photographic skills by placing 2nd in the photo contest.

Each year the AFGC holds an emerging scientist competition where students from across the U.S. present their research projects. Allison Cooke placed 3rd in this competition. Allison is a student from Transylvania University who conducted her research in Dr. Rebecca McCulley's University of Kentucky Grasslands Ecology lab. Clayton and Christopher Geralds had an excellent showing in the Hay Competition by placing 2nd in three classes; alfalfa hay, legume/grass hay, and perennial grass hay.

A change in AFGC's meeting schedule means that next years meeting is coming up soon. It will be held January 9-10 in Louisville, KY. If you are interested in entering any of these competitions we encourage you to go to the UK Forage Website (www.uky.edu/Ag/Forage) and click on the AFGC button.

### Arkansas 300 Day Grazing Program – Demonstration Results

**Abstract** - Increased cost of feed, fuel, and fertilizer make it difficult for livestock producers to stay in business. Arkansas livestock producers rely heavily on hay and stored feed during winter and struggle during summer drought to provide enough forage for their herds. Mentioning the concept of year-round grazing often prompts negative responses from producers who normally feed hay four to six months per year. However, many producers are interested in improving their forage systems. In 2008, University of Arkansas Animal Science Extension specialists along with a county agent advisory committee developed the 300 Day Grazing Program to show producers how to extend the grazing season and reduce hay feeding to 65 days or less with improved grazing and forage management practices. The program emphasized on-farm demonstration of eight practices including 1) improving grazing management, 2) adding summer annuals, 3) adding winter annuals, 4) adding legumes, 5) stockpiling bermudagrass, 6) stockpiling fescue, 7) reducing hay losses by improved storage, and 8) reducing hay losses by improved feeding practices. An animal science

program associate worked closely with county agents to improve success of each demonstration. Over two years, 99 demonstrations were implemented in 42 Arkansas counties. Producers using stockpiled fescue or bermudagrass saved an average of $42-$54/AU and reduced hay feeding by up to half. Producers using legumes reduced N fertilizer costs by more than $5,000 and improved early summer grazing. Use of winter annual forages saved $62/AU compared to hay feeding costs. Nine producers that constructed electric fence instead of barbwire fence saved nearly $15,000. Strip-grazing stockpiled forages doubled the grazing days per acre. Improved hay feeding practices cut waste by nearly 50%. Due to the hands-on nature of the program and excellent follow-up with agents, producers using these practices plan to continue on their own. *(SOURCE: K. J. Simon, J. A. Jennings, T. R. Troxel, B. L. Barham, M. S. Gadberry, and S. M. Jones, Univ. of Arkansas, IN Proceedings AFGC Annual Conference June 12-15, 2011, French Lick, IN)*

## Arkansas 300-Day Grazing Program – Whole Farm Projects

**Abstract** - Increased cost of feed, fuel, and fertilizer make it difficult for livestock producers to stay in business. In Arkansas, like many states, livestock producers rely heavily on hay and stored feed during winter and struggle during summer drought to provide enough forage for their herds. In 2008, University of Arkansas Animal Science Extension specialists along with a county agent advisory committee developed the 300 Day Grazing Program to show producers how to extend the grazing season with improved grazing and forage management practices. Farms in Lawrence, Van Buren, and Randolph counties were selected to serve as "whole farm" demonstrations to include as many forage management practices as necessary to achieve a grazing season of 300 days or more. A primary emphasis was to improve management of the existing forages on each farm and add complementary forages only when necessary. Each farm had spring-calving herds and backgrounded calves with stocking rates ranging from 1.1 to 2.1 acres per AU (animal unit). A fourth whole farm demonstration was set up on the University of Arkansas Livestock and Forestry Branch Station near Batesville where Animal Science Extension specialists implemented the same practices in a controlled setting. That system was a fall-calving herd with a stocking rate of 2.7 acres/AU. Record keeping notebooks with recommendations for each demonstration were provided to both the producer and county agent. An animal science program associate worked closely with county agents to improve success of each demonstration. For 2009, the Lawrence, Van Buren, and Randolph county farms achieved grazing seasons 335, 312, and 310 days respectively. The summer and fall of 2010 had record high temperatures and drought which forced many producers to begin feeding hay in September. However, the three whole farms achieved grazing seasons of 275, 280, and 300 days, respectively, which was 80-100 days more than typical farms across the state. Over three years at the Livestock and Forestry Branch Station, grazing seasons were 347, 311, and 330 days. (SOURCE: K. J. Simon, J. A. Jennings, T. R. Troxel, B. L. Barham, M. S. Gadberry, and S. M. Jones, Univ. of Arkansas *IN Proceedings AFGC Annual Conference June 12-15, 2011, French Lick, IN)*

## Beef Cow Reproductive Performance is Negatively Impacted by the Grazing of Toxic Tall Fescue

**Abstract** - The impact of toxic tall fescue (F) on beef cattle reproductive performance has been sporadically addressed, and few studies examine the effect that exposure timing has on conception rates. In addition, the literature is unclear as to whether F impacts gamete development or affects reproductive performance post-ovulation. The objective of this study was to determine if F grazing negatively impacts reproduction pre- or post-ovulation. To determine if F altered reproduction during gamete development or by altering uterine environment, cattle were exposed to F prior to or immediately following insemination. Two and 3 yr old beef cows (99 hd total) were blocked by breed, body condition score (BCS) and age; and allotted to groups (n = 50) grazing F(> 92% wild-type infected) or alternate forages (O; common bermudagrass and annual ryegrass) for 210 d prior to timed insemination. All cows were subjected to estrous synchronization and artificial insemination (AI). Insemination (d 0) occurred 210 d after the animals were on study. Eight days prior to timed insemination, all animals received CIDRs and maintained for 5 d. The CIDRs were removed, followed by 2 injections of PGF2α 8 h apart, and AI was performed 72 ± 2 h post-CIDR removal. Immediately following insemination, 25 cows from each group were switched to the alternate grazing treatment for the remainder of the trial (130 d), consistent with a 2x2 factorial arrangement consisting of the following treatment combinations: fescue-fescue, fescue-other, other-fescue, and other-other. Following timed AI, cows were visually checked for estrus behavior from d0 to d10 after which bulls were placed with cows for 60 d. Blood was collected on d-18 and d-8 for P4 analysis to assess cyclicity. Blood was also collected on d-18 and d10 for prolactin (PRL) concentrations. Pregnancy was determined using trans-rectal ultrasonography at d130 and verified with calving records. Fescue treatment was effective at inducing toxicosis as cattle grazing tall fescue on d-18 had lower serum PRL levels than cattle grazing O. There was a forage type interaction for serum PRL on d10. Prolactin concentrations of FF and OF did not differ and were lower than both OO and FO groups. Prolactin level of FO was higher than OO at d10. Grazing F post-AI lowered final pregnancy rates compared to O treatment. (SOURCE: M. G. Burns, J. G. Andrae, S. L. Pratt, W. C. Bridges, and F.N. Schrick, Univ. of Tennessee IN *Proceedings AFGC Annual Conference June 12-15, 2011, French Lick, IN)*

## Producer Attitudes Toward Renovating Toxic Fescue with Novel Endophyte Fescue

**Abstract** - Tall fescue is the most widespread perennial cool season grass in Arkansas. Fescue toxicosis from fescue endophyte is a widespread problem with livestock production, but producers are reluctant to convert toxic fescue in many areas. Recent research has shown the benefit of using limited acreage of novel endophyte fescue at key periods of the cattle production cycle to reduce impact of fescue toxicity. A survey was conducted to determine producers' knowledge about managing fescue toxicity and to determine their interest in converting toxic fescue to non-toxic forage or novel-endophyte fescue. The survey was taken by 456 producers by three methods including mail-in, online, or audience response at producer conferences. Most respondents were cow/calf producers (65%) and most considered themselves as part-time producers with off-farm income (74%). Fescue was more commonly used grazing than for hay. About 64% of respondents used rotational grazing, but rotation frequency ranged from daily to 2 weeks or more. About 45% used electric fence for grazing management. Approximately half of respondents had made efforts to reduce fescue toxicity in their livestock. Many respondents indicated they do not have any problems with fescue toxicity in livestock, but identified several fescue toxicity behavior symptoms of their livestock. Cattle standing in ponds was the most common symptom of fescue toxicosis, and low weaning weights and low percentage calf crops were the least commonly noted symptoms. Grazing alternative forages and adding legumes to pastures were the most common methods for reducing fescue toxicosis. Approximately 65% of respondents indicated they would be interested in planting a novel-endophyte fescue based on information they received through Extension educational programs, but most did not have a definite timeframe for adding it to their forage system. Less than 5% of respondents indicated that they had already planted novel-endophyte fescue. The most common drawback to planting novel-endophyte fescue was the perception that it would not provide enough benefit to farm profitability. About half of respondents were using stockpiled forages being nearly evenly split between stockpiled bermudagrass and stockpiled fescue. In the past five years, forage management practices with the highest adoption rate were grazing stockpiled forages, planting legumes, and rotational grazing. (SOURCE: K. J. Simon, J. A. Jennings, K. P. Coffey, B. L. Barham, R. Poling, J. Gunsaulis, and D. Henderson, Univ. of Arkansas IN *Proceedings AFGC Annual Conference June 12-15, 2011, French Lick, IN)*

## Upcoming Events

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| JUL 21 | UK All Commodity Field Day, Princeton |
| AUG 15-16 | Kentucky Grazing School, 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 | 32nd Kentucky Alfalfa Conference, Cave City Convention Center, Cave City |

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