



# 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>

## July 2009

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

### UK ALL COMMODITY FIELD DAY – JULY 23

The University of Kentucky All Commodity Field Day will be July 23 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 and educational exhibits.

The field day will begin at 8:00 under the big tent. Tours will begin at 8:30 and run continuously until 3:00. No tours will depart after 2:30. There will be eleven (11) different tours running continuously throughout the day. 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. The Overview Tour is a one hour and fifteen minute tour of research and extension activities at the station with guides discussing points of interest along the way.

In addition to the Overview Tour there will be ten other tours including: Beef, Equine, Tobacco, Forage, Grain Crops Management, Weed Management in Grain Crops, Fertility Management in Grain Crops, Orchard/Vineyard/Small Fruits, Vegetable Crops, and Ornamental Crops.

There will be a Youth Activities Tent with many agricultural-related (fun) activities for the youngsters including an animal petting/viewing 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.

For additional information look under Upcoming Forage Events – UK All Commodity Field Day on our forage website <http://www.uky.edu/Ag/Forage/>

### MAMMOTH CAVE AREA FIELD DAY

“Producing Alfalfa Hay for the Cash Market” is the theme for the field day to be held July 9 on the Clayton Gerald’s farm in Hart County beginning at 4:00 p.m. Program includes:

4:00 p.m. Welcome – Overview of Our Hay Enterprise – Clayton Gerald

#### TOUR STOPS

- 1 Keys to Successful Establishment – Ray Smith
- 2 Production Management for High Yields – Bret Winsett
- 3 Harvesting for Quality – Garry Lacefield
- 4 Quality Hay-How Do You Know? – Tom Keene
- 5 Storing and Marketing: How We Do It – Clayton Gerald
- 6 Our Harvesting System – Chris Gerald

A meal will be served at 5:30. For additional information and directions to the farm, contact the Hart County Extension Office (270-524-2451).

### ANDERSON COUNTY TO HOST KFGC FIELD DAY

The Kentucky Forage and Grassland Council Field Day will be held September 3 on the James R. Smith Farm in Lawrenceburg. County Agent Tommy Yankey and all the group have done an outstanding job planning and preparing for this event. It will start at 4:00 p.m. with registration. Tours start at 5:15. Tour stops and speakers include:

- 1 11 Acres of Eastern Gamagrass Interseeded with Red Clover and Pasja Forage Turnips for Summer Grazing –  
Dr. Glen Aiken, USDA Agricultural Research Service, Animal Scientist
- 2 Alfalfa/Orchardgrass Hay Production and Management –  
Dr. Garry Lacefield, Extension Forage Specialist
- 3 Field Corn Planted for Grazing in Fall/Winter –  
Tommy Yankey, Anderson County Extension Agent for Agriculture
- 4 Renovating Fescue Pastures –  
Dr. Ray Smith, Extension Forage Specialist
- 5 Watering Systems for Rotational Grazing –  
Ralph Quillin, Kentucky Graziers Supply
- 6 Balancing Nutritional Requirements when Grazing Field Corn –  
Dr. Jeff Lehmkuhler, Extension Beef Specialist

Supper will be prepared and served by the Anderson County Cattlemen’s Association. For more information about the program and directions to the farm, see our website <http://www.uky.edu/Ag/Forage>

### IMPROVED NITRATE TESTING FOR KY

The state Livestock Disease and Diagnostic Center (LDDC) in Lexington has just developed an improved procedure for testing nitrate levels in forages. Nitrate levels can build up to harmful levels in warm season forages or small grains during severe drought or immediately after frost, especially on fields where manure or high levels of nitrogen have been applied. If any of these conditions are present in your fields then take a representative sample of what the animals will eat if grazing or using a core sampler if hay or baleage. Normally samples are submitted to the lab by a vet, but county agents can submit by putting their name as the vet and the owners name under the owner heading. The fee is \$10 per sample with a 2 to 3 day turn around. Samples can be dry or wet -- if wet, sample should be boxed with ice packs and mailed overnight or delivered in person so the nitrate does not breakdown. With dry hay samples, no need to put on ice packs.

To arrange sample drop off call the LDDC at 859-253-0571. Turn around is 2 to 3 days.

### STOCKER CATTLE PERFORMANCE AND CALCULATED PASTURE COSTS

To get a clearer view of the performance of stocker cattle on forages, performance criteria for stocker steers grazing 37 different pasture treatments used in these Auburn University grazing studies were summarized from various research reports and articles. Subsequently, Auburn University 2008 budget estimates for the various forage species or species mixtures involved in these studies were used to determine both the approximate pasture costs/acre and the pasture costs/lb of gain.

#### Notable Points Revealed –

- 1) The seven lowest total pasture costs/lb of gain and eight of the ten lowest total pasture costs/lb of gain involved legumes.
- 2) The seven lowest total pasture costs/lb of gain and eight of the ten lowest total pasture costs/lb of gain involved perennials.
- 3) The range of total pasture costs/lb of gain (lowest to highest) is much broader than it was in the early 1990s when a similar exercise (calculating pastures costs using this date) was conducted. This provides evidence that as input costs increase, producers need to be increasingly focused on costs and returns to guide their decisions.

- 4) Forage yield is an important economic factor, as evidenced by the fact that in the Wiregrass test, total pasture costs/lb of gain for Coastal bermudagrass were less than for bahiagrass, and those for bahiagrass were less than for common bermudagrass. The forage quality of these three is similar, so the primary difference in pasture cost/lb of gain was production/acre. Data from this test also indicate that application of nitrogen is a more cost efficient practice (results in more dry matter production/lb of N applied) on some forages than on others.
- 5) Coastal bermudagrass overseeded with vetch was a lower-cost treatment than any of the other warm-season perennial grass treatments, which suggests that overseeding a legume can be a cost effective practice.
- 6) Use of a sorghum/sudagrass hybrid was a very expensive option. Both average daily gain and calendar days of grazing provided by this grass were low as compared to most other treatments.
- 7) In general, the higher the percentage infection by toxic endophyte in tall fescue, the more costly the gains. For example, among treatments at the Black Belt the total pasture cost/lb of gain was almost double (\$2.12/lb vs \$0.65/lb) in the high- versus low-endophyte treatments.
- 8) Adding legumes to either tall fescue or orchardgrass substantially lowered pasture cost/lb of gain. In fact, this management practice resulted in the lowest three pasture costs/lb of gain of the 37 forage alternatives evaluated.
- 9) It appears that both improved forage quality and reduction of the amount of fertilizer nitrogen used were factors in substantially lowering total pasture cost/lb of gain when legumes were included in stocker cattle pastures. An important concept is that stocker cattle producers who are able to increase animal performance via providing higher quality pastures and/or who are able to lower fertilizer inputs (with legumes or by other means) can achieve lower pasture costs/acre and lower costs/lb of gain.
- 10) Of the 37 forage treatments, only five had less than a \$0.50 total cost/lb of gain. Careful assessment of performance and pasture cost/lb of gain are the crux of sound pasture decisions.

(SOURCE: Don Ball and Walt Prevatt, Auburn University IN 63<sup>rd</sup> Proceedings of the Southern Pasture & Forage Crop Improvement Conference, Lexington, KY 2009)

## EFFECTS OF FEEDING SOYBEAN HULLS AND STEROID IMPLANTS ON WEIGHT GAIN AND PHYSIOLOGY OF STEERS GRAZED ON TOXIC TALL FESCUE

**ABSTRACT:** An endophyte (*Neotyphodium coenophialum*) that infests tall fescue (*Lolium arundinaceum*) produces ergot alkaloids that cause a malady collectively termed 'fescue toxicosis'. A two-yr grazing experiment was conducted with yearling steers grazed on toxic, endophyte-infected 'Kentucky-31' fescue to determine if feeding soybean hulls (SBH) can be combined with steroidal implantation to increase weight gain and mitigate the effects of toxicosis. Sixty-four steers were grazed from 7 May to 5 July in 2008 and sixty steers were grazed from 29 April to 24 June in 2009. Steers were assigned to six, 3.0-ha toxic fescue pastures. Treatments were assigned using a split-plot design, with the main plot treatment being with or without SBH, and the split-plot treatment being with or without ear implantation with steroid hormones (200 mg progesterone-20 mg estradiol), which were assigned to two subgroups within each pasture. Pelleted SBH were group-fed to provide daily consumption of 2.3 kg/steer (as fed). Unshrunk bodyweights were measured at initiation and termination of grazing. Jugular blood was collected on the final day of grazing for assaying serum prolactin. Hair coats also were rated on the final day as being rough, transitional, or sleek. Average daily gain was highest ( $P < 0.05$ ) with the combining of SBH and implantation (1.23 kg/d), and was higher for SBH (0.95 kg/d) than for implantation (0.81 kg/d). Prolactin concentrations were not affected ( $P > 0.10$ ) by steroid implants, but concentrations were greater ( $P < 0.001$ ) with than without SBH. Similarly, there was no effect of implantation on hair coat ratings, but steers with SBH had a lower frequency of rough hair coat ratings (44%) than without SBH (61%). Results indicated that combining SBH with steroid implants can increase weight gain on toxic fescue, and that feeding SBH can reduce the severity of toxicosis. (SOURCE: Jessica Carter and Glen Aiken, IN Proceedings 63<sup>rd</sup> Southern Pasture and Forage Crop Improvement Conference, Lexington, KY 2009)

## NOMINATIONS REQUESTED

Nominations are being received for the 2009 KFGC Awards and Forage Spokesman. Awards will be given to deserving individuals representing producers, industry, public (State & County). We also need nominations for our Forage Spokesman Contest to be held in conjunction with the 10<sup>th</sup> Kentucky Grazing Conference in Princeton on October 29. To nominate a producer send a one-page nomination to Dr. Ray Smith, [raysmith1@uky.edu](mailto:raysmith1@uky.edu) or mail to Plant and Soil Science Dept., 105 Plant Science Bldg., 1405 Veterans Road, University of Kentucky, Lexington, KY 40546-0312. To nominate someone for a KFGC Award, send a one-page nomination to Dr. Garry Lacefield, [glacefie@uky.edu](mailto:glacefie@uky.edu) or mail to P.O. Box 469, Princeton, KY 42445. If you have any questions, contact Garry or Ray. KFGC and AFGC

## KFGC AND AFGC

The Kentucky Forage and Grassland Council is one of 21 states (mostly east of the Mississippi River) that make up the American Forage and Grassland Council (AFGC). Each year, AFGC hosts an annual conference in which individuals representing forage producers, industry and the public or educational sector come together to share their knowledge about the opportunities and challenges that face our forage industry. The conference not only highlights the latest forage research but also allows producers and young University forage students an opportunity to share their knowledge and experiences.

This year's conference was held in Grand Rapids, Michigan with Kentucky being well represented by all sectors of KFGC. Congratulations to Clayton Gerald of Hart County who placed second in the AFGC Forage Spokesperson Contest. Clayton, who is a commercial hay producer, did an excellent job representing KFGC. The late Mr. Larry Jeffries of Henry County was recognized with the Distinguished Grassland Award. Larry was an outstanding forage and livestock leader, having served the forage and agriculture industry for more than forty years in leadership roles with organizations such as AFGC, KFGC, UK Extension Service and the Conservation District.

James (Buddy) Smith and Tommy Yankee, Extension Agent for Agriculture and Natural Resources, have been working hard to put together our fall KFGC forage field day which is scheduled for September 3 in Anderson County. This field day will showcase several forage demonstrations focusing on pasture renovation, livestock water systems, alfalfa production and using non-traditional forages such as eastern gamagrass, standing corn and turnips in livestock operations. Go to the UK forage website for more information on this and other field days.

KFGC summer board meeting will be held on August 6 at the Hardin County Extension office. If you have any suggestions how KFGC can better serve you, contact me at 859-572-2600 or [dsorrell@uky.edu](mailto:dsorrell@uky.edu). I will be glad to bring up your suggestion to the KFGC Board of Directors. As always, don't forget to check out the KFGC website at [www.kfgc.org](http://www.kfgc.org) and the UK forage website at [www.uky.edu/Ag/Forage](http://www.uky.edu/Ag/Forage) for up to date forage information.

## UPCOMING EVENTS

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|-----------------------|---|
| JUL 23                | UK All Commodity Field Day, UK Research & Education Center, Princeton                   |
| SEP 3                 | KFGC Field Day, Anderson County   |
| SEP 17-19             | National Hay Association Annual Conference, Deadwood, SD                                |
| OCT 29                | 10 <sup>th</sup> Kentucky Grazing Conference, UK Research & Education Center, Princeton |
| <b>2010</b><br>FEB 25 | 30 <sup>th</sup> Anniversary: Kentucky Alfalfa Conference, Cave City Convention Center  |



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