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## Forage News [2002-10]

University of Kentucky Department of Plant and Soil Sciences

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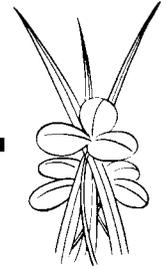
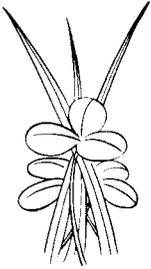
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# FORAGE NEWS



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## In this month's issue:

! Forage Survey Near Completion ! Fall Grazing School ! KFGC Beef-Forage Field Day ! A Proposal for Replacing Relative Feed Value with an Alternative: Relative Forage Quality ! Yield, Quality, and Toxicity of Stockpiled Tall Fescue ! Production and Persistence of Max-Q Tall Fescue Under Grazing in Alabama ! Upcoming Events

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**OCTOBER 2002**

*Garry D. Lacefield and Jimmy C. Henning, Extension Forage Specialists ! Christi Forsythe, Secretary*

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## FORAGE SURVEY NEAR COMPLETION

THANKS to our dedicated County Extension Agriculture Agents for their valuable contribution in responding to the Kentucky Forage Past-Present-Future Survey. The results will provide much needed information to assess our past, evaluate our present, and strategically plan for our future Forage Research & Educational programs in the State. THANKS Agents and remember **October 15** is the last date to submit the on-line survey to insure your County is included.

## FALL GRAZING SCHOOL

The Fall Grazing School will be held in Owensboro October 15 & 16 at the Daviess County Extension Office. The registration fee is \$100.00 and covers selected meals, breaks, the Kentucky Grazing Manual, a copy of the 3<sup>rd</sup> Edition of Southern Forages, Forage Crop Pocket Guide and many other publications. The school starts with registration at 7:30 a.m. on Tuesday, October 15.

The Grazing School features classroom and hands-on (field) training and will enable you to start or fine tune your grazing program for greater efficiency. Field activities include fence design and construction, water system design and construction, estimating pasture yield and quality, weed identification, and grazing principles.

To register for the school, please send checks in the amount of \$100.00, payable to Kentucky Forage and Grassland Council, to: Ken Johnson, P.O. Box 700, Tompkinsville, KY 42167. For more information, contact: Ken Johnson 270.487.6589 ext 3, or Jimmy Henning (859.257.3144, [jhenning@uky.edu](mailto:jhenning@uky.edu)) or Garry Lacefield (270.365.7541 ext 202, [glacefie@uky.edu](mailto:glacefie@uky.edu)).

## KFGC BEEF-FORAGE FIELD DAY

Over 150 attended the KFGC Beef-Forage field day at the new Beef Unit of the UK Animal Research Center on Thursday September 5. In spite of 'extra crispy' conditions, participants were able to get a first look at a little of the beef and forage research underway at the new facility. Thanks to the presenters and to our special guests, Dr. Mike Barrett, Dr. Bob Harmon, Associate Deans Turner and Cox, and Dean Scott Smith.

## A PROPOSAL FOR REPLACING RELATIVE FEED VALUE WITH AN ALTERNATIVE: RELATIVE FORAGE QUALITY

Relative Feed Value (RFV) is an index of forage quality based on a sound concept: voluntary intake of digestible dry matter. It was developed in 1978, and has become an important tool in the marketing of forage, and in forage quality education. National Forage Testing Association (NFTA) laboratories analyze forages for NDF and ADF, then use equations to predict RFV. Recent studies have shown, however, that the equations used by NFTA often provide unacceptable estimates of RFV, and that more accurate approaches are available. It is impossible, however, to separate RFV from the equations used to calculate it. Therefore, in order to provide the opportunity to use new prediction equations that are more accurate and forage-specific, we propose a new index called Relative Forage Quality (RFQ). The basis of RFQ is voluntary intake of total digestible nutrients (TDN). Based on animal data, RFQ and RFV values are equal, and the reference values are the same, i.e., 100 = full-bloom alfalfa. When predicted RFQ and

RFV values differ, however, RFQ should be related more closely to actual forage quality because more accurate equations will be used. In order to implement RFQ successfully, equations for predicting intake and TDN must be chosen that are specific for various types of forage, i.e., alfalfa, grass, mixed hays, silage, etc. A nation-wide communication network is needed to foster the development of new equations, help laboratories choose appropriate equations, and educate clients about the new program.. (SOURCE: J.E. Moore and D.J. Undersander, AFGC Proceedings, Vol. 11, July 2002, Bloomington, MN)

## **YIELD, QUALITY, AND TOXICITY OF STOCKPILED TALL FESCUE**

Many livestock producers use stockpiled tall fescue (*Festuca arundinacea* Schreb.) to extend the grazing season into winter. Tall fescue (TF) infected with new non-toxic endophytes have not been studied for stockpiled yield, forage quality and toxicity. Our objective was to determine the yield, forage quality and ergovaline content of TF infected with a native endophyte (K31 E+), a non-toxic endophyte (HiMag NTE), and with no endophyte (HiMag E-) through the entire winter. Plots of K31 E+, HiMag E- and HiMag NTE were established at the Southwest Missouri Center in fall 1998. Forage yield, quality and ergovaline content was measured monthly from mid-December through mid-March in 1999-2000 and 2000-2001. Forage yield did not change from mid-December through mid-March for any entry. All entries had similar levels of acid detergent fiber on comparable dates. Neither HiMag E- nor HiMag NTE contained any ergovaline, but K31 E+ had substantial levels of ergovaline in both years. The ergovaline content in K31 E+ declines approximately 6 fold from December to March each year. The stable yield, slowly declining forage quality and rapidly falling ergovaline levels in K31 E+, suggest that livestock producers could minimize winter toxicosis by delaying the use of stockpiled K31 E+ until mid or late winter. (SOURCE: R.L. Kallenbach, G.J. Bishop-Hurley, G.E. Rottinghaus, M.D. Massie, and C.P. West, AFGC Proceedings, Vol. 11, July 2002, Bloomington, MN)

## **PRODUCTION AND PERSISTENCE OF MAX-Q TALL FESCUE UNDER GRAZING IN ALABAMA**

Limited research indicates that Max-Q tall fescue, which contains a non-toxic endophyte,

provides similar cattle weight gain to that from cattle grazing fungus-free tall fescue, but superior persistence, similar to that associated with toxic infected fescue. Our objective was to verify these results under soil and weather conditions in Alabama. Grazing experiments were conducted with beef steers at Crossville, northeast Alabama, and Winfield, northwest Alabama. At both locations 'Jessup' fungus-free, Max-Q non-toxic, and infected toxic fescue were planted in fall of 1999. Pastures were continuously grazed at 1.5 steers/ac for 224 days at Crossville and for 84 days at Winfield. Cattle weight gain did not differ among treatments at Winfield, but at Crossville weight gain for cattle grazing Max-Q was 22% (.37 lb/day) greater than that for cattle grazing toxic infected fescue, and similar to that for cattle grazing fungus-free fescue. Associated returns over pasture costs were \$30/acre (13.6%) greater for Max-Q when compared to toxic infected fescue, and similar to that for fungus-free fescue. Following grazing at Winfield, fungus-free fescue stands had decreased to 30%, while those of Max-Q and toxic infected fescue were 82% and 80%, respectively. Consequently, initial grazing results in Alabama suggest that weight gain of cattle grazing Max-Q tall fescue is similar to that of cattle grazing fungus-free tall fescue, and persistence of Max-Q fescue appears to be similar to that of toxic infected fescue. (SOURCE: David Bransby, Tony Dawkins and Randall Rawls, AFGC Proceedings, Vol. 11, July 2002, Bloomington, MN)

## **UPCOMING EVENTS**

- OCT 15-16 Fall Grazing School, Owensboro
- NOV 26 3<sup>rd</sup> Kentucky Grazing Conference, Bowling Green
- DEC 12 Forages Commodity Conference at Farm Bureau Convention, Louisville
- 2003**
- JAN 10 Forages Conference at Kentucky Cattleman Convention, Bowling Green
- JAN 23 Heart of America Grazing Conference, Hannibal, Missouri
- FEB 20 23<sup>rd</sup> Kentucky Alfalfa Conference, Cave City
- APR 22-23 Kentucky Grazing School, Bowling Green
- JUL 17 U.K. All Commodity Field Day, Robinson Station, Quicksand

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Extension Forage Specialists  
October 2002