

# FORAGE NEWS

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

## OCTOBER 2004

*Garry D. Lacefield, Extension Forage Specialist • Christi Forsythe, Secretary*

### 5<sup>TH</sup> KENTUCKY GRAZING CONFERENCE ALMOST HERE

Our 5<sup>th</sup> Kentucky Grazing Conference will be held October 26 at the WKU Expo Center in Bowling Green. The program committee has put together an outstanding program with outstanding speakers from Kentucky, Tennessee, and Alabama. Registration fee is \$15 (students \$5.00) and included proceedings and other publications, lunch and refreshments. No preregistration is required.

Listed below is the complete program. Make sure you plan to stay for the Forage Spokesman Contest.

- 8:00 Registration, Visit Exhibits, Silent Auction
- 8:30 Welcome – Dr. Gary Ransdell
- 8:45 Role of Legumes in Pasture Systems – Dr. Garry Lacefield
- 9:00 Fertilizing Pastures for Profit – Dr. Byron Sleugh
- 9:20 Present & Future Tall Fescue Varieties – Dr. Tim Phillips
- 9:40 Will Improved Grazing Pay for Extra Fencing & Watering Cost? – Mr. Ken Johnson
- 10:00 Grazing: Getting From Where You Are to Where You Want to Be – Dr. Gary Bates
- 10:20 Discussion
- 10:30 Break, Visit Exhibits, Silent Auction
- 11:00 Stocking Decisions: They Make or Break You – Dr. Glen Aiken
- 11:30 Strategies to Minimize Stored Feed Requirements – Dr. Don Ball
- 12:00 Discussion
- 12:15 Lunch, Visit Exhibits, Silent Auction
- 1:15 KFGC Business Meeting and Awards
- 1:30 KFGC Forage Spokesman Contest
- 3:00 Adjourn

For more information, contact Christi Forsythe (270-365-7541, X221 [cforsyth@uky.edu](mailto:cforsyth@uky.edu)) or Garry Lacefield (270-365-7541, X202 [glacefie@uky.edu](mailto:glacefie@uky.edu)) or visit our Forage Extension Website <http://www.uky.edu/Ag/Forage> for a copy of the program and directions.

### KENTUCKY AGRICULTURAL CASH RECEIPTS

	Crop Receipts (\$)	Livestock Receipts (\$)	Total Cash Receipts (\$)
2002	1,192,813	1,972,790	3,165,603
2003	1,243,300	2,225,703	3,469,002

Source: Kentucky Agricultural Statistic Service, Louisville, KY

### STOCKPILED TALL FESCUE QUALITY

Quality of tall fescue is better in late fall and winter than at other times of the year Table 1.

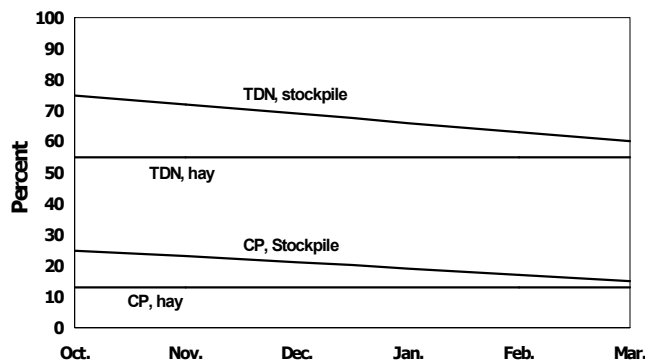
Table 1. Seasonal percentage changes in chemical composition and digestibility of tall fescue.

	Spring	Summer	Fall
Sugars	9.5	8.5	19
Protein	22	18	19
D.D.M.*	69	66	74

\*Digestible Dry Matter

Quality of stockpiled tall fescue is better throughout fall and winter than the average tall fescue hay Figure 1.

**Figure 1. Quality of stockpiled fescue v. hay on nine Arkansas farms**



Source: University of Missouri

### HOW MUCH IS A BIG BALE WORTH?

As I travel the state, I hear of large round bales of grass hay selling for \$10.00 to \$25.00. It is not uncommon to see bales of approximately 750± pounds selling for \$15.00 per bale. We did some quick math on just the fertility value in a bale and with current fertilizer prices we calculated a value of N-P-K in a 1000 pound bale to be \$8.50 to \$15.00. Think about it as we move hay from one farm to the other, we are moving a lot of fertilizer as well. We also need to recognize that we usually have more invested in our average round bale (labor, equipment, field, etc.) than most of us realize. How much is it worth is certainly a question of supply-demand and quality.

Table 1 below shows some examples of pounds of nutrients removed from various hay species.

Table 1. Approximate pounds of nutrients removed by various forage crops at specified yield levels when harvested as hay.<sup>1</sup>

	Species and assumed hay yield, tons/acre				
	Alfalfa 5	Tall Fescue 3.5	Sorghum- sudan 4	Orchard- grass 3	Bermuda- grass 6
Nitrogen (N)	280	135	160	150	258
Phosphate (P <sub>2</sub> O <sub>5</sub> )	75	65	61	50	60
Potash (K <sub>2</sub> O)	300	185	233	185	288
Magnesium (Mg)	25	13	24	13	18
Sulfur (S)	25	14	--	13	30

<sup>1</sup>Source: Potash & Phosphate Institute

## NEW CLOVER SHOWS EXCELLENT GAINS

Durana white clover is one of the new releases out of Dr. Joe Bouton's research program at the University of Georgia. The following table shows excellent average daily gains and gains per acre.

Pasture	Average daily gain (lb/d)	Gain per acre (lbs)
Toxic tall fescue + N	0.60	187
Toxic tall fescue + Durana	1.79	296
Toxic tall fescue + Regal	0.89	136

SOURCE: John Andrae, White Clover Establishment and Management Guide, University of Georgia.

## FORAGE PRODUCTION AND FORAGE MIXTURE COMPLEXITY

Forage mixtures composed of many well adapted species could increase forage production and improve its seasonal distribution. Mixtures could reduce seasonal fluctuations in production and thereby increase seasonal sustainability of forage systems. However, previous research with simple (2 or 3 species) mixtures and complex (more than 3 species) mixtures was unable to show differences in forage production. This study was undertaken to ascertain if there were differences in forage production and its seasonal distribution between simple mixtures and complex mixtures under rotational grazing. Seasonal distribution of dry matter (DM) was unaffected by the number of species in the mixtures. Differences in DM distribution were chiefly dictated by climatic conditions. Complex mixtures produce more DM than simple mixtures. The most important factor determining forage yield was the particular species that composed the mixture. Red clover appeared as the best adapted species to the environment. Consequently, mixtures that had red clover as one of its components yielded more forage than other mixtures. Data from this study indicates that it is more important for producers to focus on species selection than mixture complexity in order to achieve high yield over time. (SOURCE: A. Deak, M.H. Hall, and M.A. Sanderson IN AFGC Proceedings, Vol. 13, p. 23, June 2004)

## STORAGE LOSSES AND NUTRITIVE VALUE OF WARM-SEASON FORAGES CONSERVED AS BALEAGE

The baleage system for conserving forages is becoming widely accepted by Louisiana dairymen. The most popular baleage crop grown in southern Louisiana is annual ryegrass.

Although properly managed ryegrass is high in quality, yield per acre for this crop is insufficient to meet stored forage needs of most producers. As a consequence, many producers are finding it necessary to conserve some warm-season crops as baleage. In the present study, we were interested in determining how well three locally grown warm-season forages stored/ensiled as baleage and what nutritive value these crops possessed when harvested to optimize quality and yield. The forage crops evaluated were bermudagrass, signalgrass, and forage sorghum. These crops were compared to annual ryegrass. Primary criteria used to evaluate baleage crops were: final pH, surface mold, dry matter losses during the six-month storage period, along with baleage chemical composition. Forage sorghum baleage tended to have the lowest pH and surface mold, but storage losses were minimal for all crops. Protein concentration was over 18% for signalgrass and ryegrass baleages. Fiber concentrations were lowest and predicted energy concentrations were highest for signalgrass. We concluded that under the management conditions employed in this study, all warm-season forages evaluated would ensile and store successfully as baleage, but only signalgrass possessed nutrient composition comparable to ryegrass. (SOURCE: M.E. McCormick IN AFGC Proceedings, Vol. 13, p. 48, June 2004)

## UTILIZING POULTRY LITTER IN A FERTILITY PROGRAM FOR ORCHARDGRASS HAYFIELDS

Poultry ranked second to horses and stud fees in its contribution to Kentucky's farm income in 2002-2003. Poultry industry expansion and increased in the organic fertilizer prices have led to an increase in the use of poultry litter as fertilizer. Some farmers apply litter to dispose of it while others apply litter to satisfy crop nitrogen requirements. In doing so, they inadvertently over-apply phosphorus. Future regulations may require that manure applications on cropland be based on the recommended phosphorus (P) rate rather than the recommended nitrogen (N) rate. We applied poultry litter at the recommended N rate, recommended P rate, recommended P rate plus supplemental inorganic N, and recommended organic fertilizer. Differences in the forages grown under these conditions were studied to see if they could be used to remove excess nutrients in the form of hay or silage. Applying poultry litter based on a recommended P rate followed by addition of supplemental inorganic N could lower the accumulation of certain soil minerals in some instances, reduce the likelihood of adverse environmental impacts, and provide comparable yield and quality to forage produced using higher application rates or inorganic fertilizer. Lower application rates are less expensive and may become even more appropriate in situations where long term application of poultry litter is likely to occur. (SOURCE: Byron Sleugh, D. Embry, W.T. William, and R.A. Gilfillan IN AFGC Proceedings, Vol. 13, p. 57, June 2004)

## UPCOMING EVENTS

- OCT 3-5 Fourth Eastern Native Grass Symposium, Lexington
- OCT 26 5<sup>th</sup> Kentucky Grazing Conference, Bowling Green
- 2005
- JAN 7 Forages at KCA, Owensboro
- FEB 24 25<sup>th</sup> Kentucky Alfalfa Conference, Cave City Convention Center
- JUL 28 UK All Commodity Field Day, Princeton

*Garry D. Lacefield*

Garry D. Lacefield  
Extension Forage Specialist  
October 2004