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Forage News

Plant and Soil Sciences

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## Forage News [1999-03]

Department of Plant and Soil Sciences, University of Kentucky

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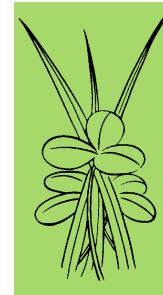
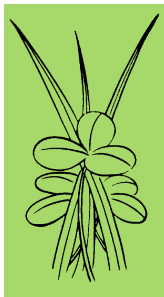
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# FORAGE NEWS



## In this month's issue:

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

## **Commissioner of Agriculture to Address Alfalfa Conference**

Commissioner of Agriculture, Billy Ray Smith, will be the keynote speaker at the 19<sup>th</sup> Kentucky Alfalfa Conference to be held March 4 at the Cave City Convention Center. Commissioner Smith will address the topic "Keys to Success in Marketing Alfalfa Hay in Kentucky".

Other speakers and topics include:

**Which Grasses Work Best With Alfalfa?** - Dr.

*Tim Phillips*

**"Secrets" to Getting a Good Stand of Alfalfa** -

*Dr. Jimmy Henning*

**Alfalfa Following Alfalfa: What Works & What**

**Doesn't Work** - Dr. Monroe Rasnake

**Practical & Economical Ways to Increase Alfalfa**

**Hay Drying Rates** - Dr. Mike Collins

**What We Have Learned From Four Years of**

**Alfalfa Grazing Tolerant Variety Trials** - Dr.

*Jimmy Henning*

**Grazing Alfalfa** - Dr. Garry Lacefield

**How I Produce & Market Alfalfa Hay** - Mr. John

*Nowak*

**Marketing Alfalfa Hay: What the Consumer**

**Demands** - Mr. Tom Keene

Our exhibit space will be full again this year with over 30 exhibits.

A registration fee of \$15.00 covers meal, breaks and proceedings.

Contact us if you have any questions.

## **Jeffries New AFGC President**

Mr. Larry Jeffries, Henry County, has been elected at President of the American Forage and Grassland Council. Larry is only the third producer in history to serve as President of this national forage organization. President Jeffries assumed the office at the business meeting in Omaha, Nebraska this past week. **Congratulations Larry!!!**

## **Ken Johnson Elected to AFGC Board**

Congratulations to Ken Johnson, Monroe County, for being elected to the board of directors of the American Forage and Grassland Council. Ken was elected from the producer sector and began his term on the board at the national meeting in Omaha, Nebraska this past week. **Congratulations Ken!!!**

## **Grazing Data Summarized**

The first four years of the Kentucky Forage Variety Grazing Tolerance Tests have been summarized and are being worked through the printing process. The purpose of this short note is to let you know that they will be on the UK College of Ag home page with the other progress reports shortly. Copies will be mailed to county agents as soon as they are printed. These tests were begun in the fall of 1994 and have included alfalfa, tall fescue, and orchardgrass varieties. Varieties are allowed to become established and then are grazed for two seasons and/or until the variety differences appear. In summary, differences in tolerance to grazing were observed for alfalfa, tall fescue, and orchardgrass varieties. In general, alfalfas that had been selected under grazing during the breeding process were found to tolerate overgrazing. Hay-types did not. Alfalfa varieties that were at the top of the test after two seasons of grazing included (in alphabetical order): ABT 205, ABT 405, Alfagraze, Amerigraze 401Z, Feast, Spredor 3, Wintergreen, and WL326GZ. Endophyte infection improved persistence in tall fescue based on tests of the same variety with and without the fungus. Stands of some endophyte-free varieties were equal to infected Kentucky 31 after two seasons of over-grazing. These varieties included Cattle Club, Dovey, Festorina, Richmond, and Stargrazer. Orchardgrass varieties that were in the top group for tolerance to grazing included Benchmark, Dawn, Hallmark, Profile, and Shiloh. Significant winterkill in the oldest trial may have masked some differences or lack of differences in orchardgrass varieties. Please check the

## **Economic Optimum Stocking**

### **Rates:**

#### **Some Alternative Perspectives**

Most economic analyses of stocking rate data have assumed that selling price of animals from different stocking rates is the same. However, cattle grazed at different stocking rates will differ in final weight, and market price increases as weight decreases. Therefore, assuming the same selling price for animals grazed at different stocking rates does not represent market conditions. Furthermore, contract grazing is a common arrangement in which a landowner grazes cattle that are owned by someone else for a specified price of weight gain, but it represents a different set of economic conditions to those which apply when cattle are bought and sold by the landowner. Consequently, the objective of this paper is to determine economic optimum stocking rates, taking into account the effect of stocking rate and final animal weight on selling price, and assuming contract grazing. Data from a stocking rate experiment on annual ryegrass were used for the analysis. Average daily gain (y, in kg) of steers decreased linearly as stocking rate (x; in head/ha) increased ( $y = 1.37 - 0.13x$ ;  $r = 0.97$ ), and the stocking rate which corresponded to maximum gain/ha was estimated at 5.2 animals/ha. The stocking rate at which profit was maximized if the same selling price was assumed for animals off all stocking rates was 3.9 animals/ha, but it was 5.1 animals/ha if market prices, as influenced by stocking rate and final weight of animals, were taken into account. For contract grazing profit was maximized at a stocking rate of 4.9 animals/ha. (SOURCE: David D. Briske, ABSTRACTS AFGC/SRM, Vol. 52 SRM/Vol. 8 AFGC, Feb. 1999, p. 7)

## **Quality Characteristics of Eastern Gamagrass Forages**

Eastern gamagrass [*Tripsacum dactyloides* L.] is a native, warm-season, perennial bunch-type grass adapted generally to moist sites throughout much of the eastern US. Throughout much of the US, N concentrations will usually exceed 20 g kg<sup>-1</sup> at growth stages (boot and anthesis) that produce reasonable yields. With moderate N fertilization, N concentrations approaching 30 g kg<sup>-1</sup> are realistic at boot stage in the Midwest. Recent studies suggest that high proportions (>50%) of this N are insoluble in neutral detergent, thereby implying association with the cell wall. In situ studies in Kansas have shown that potential extents of ruminal N degradation for gamagrass harvested at boot stage are very competitive with those of high-quality legumes, but degradation occurs at slower rates. Generally, similar trends have been observed for in situ disappearance of dry matter and fiber; increasing plant maturity appeared to primarily limit extent, but not the rate of degradation for these plant components. Neutral detergent fiber concentrations are generally high (>600 g kg<sup>-1</sup>), even at immature growth stages; this observation is consistent with findings for other warm-season grasses.

Grazing studies conducted throughout the mid-South suggest that average daily gains may range between .5 and 1.0 kg d<sup>-1</sup> for steers continuously grazing these pastures. Daily gains are likely to be reduced as days on pasture increase. Mounting evidence suggests that gamagrass grown in the Midwest demonstrates better quality characteristics than that grown in the Southeast. (SOURCE: Wayne K. Coblenz, ABSTRACTS AFGC/SRM, Vol. 52 SRM/Vol. 8 AFGC, Feb. 1999, p. 13)

## **Harvesting Quality Hay: What the Research Shows**

Variable losses in hay quality occur during field curing and storage depending upon weather conditions, crop species, crop moisture concentration and a number of other factors. Curing periods of 3-5 days are often required to reach safe storage moisture levels resulting in substantial incidence of rain damage in many parts of the U.S. Avoidance of rain damage, which reduces hay quality by reducing digestibility, increasing fiber concentrations and reducing organoleptic quality, can be accomplished by hastening the field curing process or by harvesting the crop at elevated moisture levels. Field curing rates can be increased by the use of tedding, by inclusion of grass in legume hay crops, by using mechanical or chemical conditioning treatments and by other means. Hay additives that inhibit growth of undesirable microorganisms during storage of moist hay allow harvest up to about 300 g kg<sup>-1</sup> moisture, thereby shortening the time of exposure to potential rain damage. Artificial drying after harvest can allow baling at even higher moisture levels, up to about 350 g kg<sup>-1</sup>. (SOURCE: Michael Collins, ABSTRACTS AFGC/SRM, Vol. 52 SRM/Vol. 8 AFGC, Feb. 1999, p. 14)

## **UPCOMING EVENTS**

- |           |  |
|-----------|--|
| MAR 4     | 19 <sup>th</sup> KY Alfalfa Conference, Cave City                  |
| APR 28-30 | KY Grazing School, Eden Shale                                      |
| MAY 13    | KY Grazing Mini-School, Morehead                                   |
| MAY 18    | KY Grazing Mini-School, Springfield                                |
| MAY 19    | KY Grazing Mini-School, Richmond-EKU                               |
| MAY 22    | KFGC Sponsored Forage Field Day, Boyd Co.                          |
| JULY 15   | Agronomy Field Day, Spindletop Farm, Lexington                     |
| JULY 22   | All Commodity Field Day, UK Robinson Experiment Station, Quicksand |
| OCT 12-14 | KY Grazing School, U.K. Research & Education Center, Princeton     |

Garry D. Lacefield

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Jimmy C. Henning

Jimmy C. Henning

Extension Forage Specialists  
Forage News, March 1999