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## Forage News [2010-10]

University of Kentucky Department of Plant and Soil Sciences

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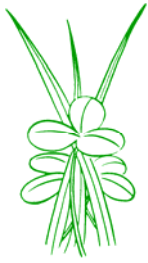
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# FORAGE NEWS

Research & Education Center  
Princeton, KY 42445

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

## October 2010

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

### GRAZING CONFERENCE RETURNING TO KENTUCKY

The 10<sup>th</sup> Annual Heart of America Grazing Conference is returning to Kentucky. It will be held January 25 & 26 at the Holiday Inn Hurstbourne in Louisville. The Conference rotates among five states (Illinois, Missouri, Indiana, Ohio and Kentucky).

The program will feature leading speakers from all five states concerning topics of interest to all producers interested in grazing. In addition to informative presentations, a silent auction and trade show will be featured.

The program gets underway January 25 at 2:00 p.m. EST with exhibit set-up. Registration begins at 3:00 p.m. Program for the evening and on the 26<sup>th</sup> includes:

#### January 25, 2011

- 5:30 Welcome, Invocation & Dinner – Dr. Garry Lacefield, University of Kentucky  
Kentucky Agriculture – Dr. Jimmy Henning, University of Kentucky  
Forages Around the World: Observations & Reflections – Dr. Garry Lacefield

#### January 26, 2011

- 7:00 a.m. Registration, Exhibits, Silent Auction  
8:15 Welcome – Dr. Garry Lacefield  
8:30 From Confinement to Grazing – Mr. Bill Payne  
Producer, Lincoln Co. KY  
9:00 How much Pasture do I have and how long will it Feed my Cows? – Dr. Ray Smith, University of Kentucky  
9:30 Tall Fescue – Endophyte – Animal Performance – Dr. Glen Aiken, USDA/ARS, Kentucky  
10:00 Break, Exhibits & Silent Auction  
10:30 Organic Dairying: Role of Grazing – Mr. Jake Schmitz, Ohio Valley Regional Coord., Organic Valley Coop.  
11:30 Mob Grazing, High Density Grazing, Management-intensive Grazing; What's the Difference? – Mr. Mark Kennedy, NRCS, Missouri  
12:00 p.m. Lunch  
1:00 Silent Auction Results  
1:15 Integrated Weed Management for Enhancing Productivity of Grazed Pastures – Dr. J.D. Green, University of Kentucky  
1:45 Grazing Goats and Cattle and Other Co-species Grazing – Mr. Jason Tower, Purdue University  
2:15 Grazing Corn, Brassicas, Chicory, Eastern Gamagrass, Ryegrass, Oats and Other Non-Traditional Forages – Mr. Jeff McCutcheon, Ohio State University  
2:45 Extending the Grazing Season and Reducing Stored Feed Needs – Mr. Ed Ballard, University of Illinois  
3:15 Adjourn

Registration is \$35.00 and includes two meals, refreshments, proceedings and other conference-related information. Complete program and registration information is available at our website [www.uky.edu/Ag/Forage](http://www.uky.edu/Ag/Forage) or by contacting Christi Forsythe at [cforsyth@uky.edu](mailto:cforsyth@uky.edu) or 270-365-7541, Ext. 221.

### KFGC UPDATE

Special thanks to Jim and Baker Landis of Barren County who hosted this year's Kentucky Forage and Grassland Council Field Day on September 14. The field day was a huge success with an estimated 217 individuals in attendance. One of the biggest surprises of the field days was the amount of "green" forages that was present on the Landis farm. It was evident that they had been blessed with more rain than most of the state, but much of the forage quantity and quality can be attributed to their forage management practices. Special thanks to Gary Tilghman, Barren County Agriculture and Natural Resources Extension agent, who helped develop the program and worked behind the scenes on the many details that makes such an educational program a big success. Thanks to Dr. Garry Lacefield, Kevin Laurent, Dr. Greg Schwab, Dr. Roy Burris and Tom Keene, who were our stop speakers. Thanks to Dr. Ray Smith and Jeremy McGill of Gallagher-North America, who gave a hands-on demonstration on calibrating forage seeders and constructing high tensile fencing and Kim Field from the KY Department of Agriculture, who attended the field day and showcased their new mobile forage testing lab. Thanks everyone for your support.

Nominations are still being accepted for the Forage Spokesperson contest and 2010 KFGC Producer, Industry, and Public Service awards. The spokesperson contest and service awards will be a part of the KY Alfalfa Conference in February. If you would like to nominate someone, please send a one page nomination to Dr. Garry Lacefield at [glacefield@uky.edu](mailto:glacefield@uky.edu).

Upcoming forage programs include 2010 Mountain Ag Field Day at UK Robinson Center on October 2; 10<sup>th</sup> Heart of America Grazing Conference in Louisville on January 25-26; and the 31<sup>st</sup> KY Alfalfa Conference on February 24 in Lexington. For information on these and other upcoming forage programs go to [www.kfgc.org](http://www.kfgc.org) or UK's forage website at [www.uky.edu/Ag/Forage](http://www.uky.edu/Ag/Forage).

### PENNSYLVANIA TO CELEBRATE FORAGE ANNIVERSARY

The Pennsylvania Forage & Grassland will celebrate the 50<sup>th</sup> Anniversary Conference November 23, 2010 at Shady Maple Banquet and Conference Center in East Earl, PA. Pennsylvania was the first State Forage Council formed. Kentucky was third (1964) following Indiana (1963). Dr. John Baylor and his committee have put together a very special program for this historical event. Congratulations Dr. Baylor and all PFGC members for this historical milestone.

### A NOVEL ENDOPHYTE TALL FESCUE HAS BEEN DEVELOPED BY THE UNIVERSITY OF KENTUCKY FOR THE UPPER FESCUE BELT

A productive and late-maturing tall fescue, KYFA9301, was selected and developed by UK forage breeder, Dr. Tim Phillips. In a collaboration with New Zealand AgResearch Ltd., KYFA9301 was infected with a nontoxic endophyte, AR584 and evaluated in a two-year grazing trial with steers as a possible option to toxic-endophyte infected Kentucky 3, MaxQ (cv. Jessup infected with AR542 nontoxic endophyte, and endophyte-free KYFA9301. Stocking rates were varied during the trial to maintain similar forage availabilities for making steer performance and pasture carrying capacities, as well as verifying that AR584 is a nontoxic endophyte. Average daily gain for AR584-

KYFA9301 (1.79 lb/day) was similar to those for MaxQ (1.86 lb/day) and endophyte-free KYFA9301 (1.77 lb/day), and daily weight gain for the three nontoxic fescues was greater than for Kentucky 31 (1.45 lb/day). Steers grazing AR584-KYFA9301 did not exhibit symptoms of toxicosis, whereas those grazing toxic Kentucky 31 exhibited toxicosis. Kentucky 31 pastures carried more steers, but extended forage production by KYFA9301 resulted in these pastures maintaining higher stocking rates than MaxQ in the late spring and early summer. This new novel endophyte tall fescue is an alternative to MaxQ in providing higher stocking rates into the summer and should be commercially available in 1 to 2 years. A cultivar name will be announced once it has been determined. (Jennifer Johnson and Glen Aiken, USDA/ARS Lexington, Ky)

### BENEFITS OF ROTATIONAL GRAZING

When you are short on grass, rotational grazing improves harvest efficiency of your pasture. By concentrating animals onto smaller pastures, grazing uniformity improves. This means your animals do less pick-and-choosing-and-trampling as they graze. They eat more of what is available to them and they waste less feed. This helps current pasture growth feed your animals longer.

This year, however, most Nebraska pastures have plenty of grass. You don't need to stretch your pasture supply so why think about rotational grazing now?

Let's think ahead. By mid-July most years, we start to notice our grasslands suffering from a lack of water. But pastures that had been rotationally grazed in previous years aren't hurt quite as bad. Why do rotationally grazed pastures do better in summer? Mostly it's because their root systems are healthier and deeper than continuously grazed pastures due to the periodic rest they receive. As a result, they can gather more soil moisture from deeper soil depths.

By starting rotational grazing when you have plenty of grass, plants will rest and begin to improve their root system immediately. This makes them better able to gather moisture during the next dry spell. That means that if you aren't already grazing rotationally, start now, regardless of whether you have abundant rain and grass or you are in a drought.

So do some extra cross-fencing. You will stretch your feed supply as well as improve plant roots and production for next year.

(SOURCE: Bruce Anderson, University of Nebraska)

### CULTIVAR PREFERENCE OF LAMBS GRAZING FORAGE CHICORY IN OHIO

**Abstract** - This project compared grazing preferences of lambs between seven cultivars of forage chicory (*Cichorium intybus* L.). This on-farm trial was conducted in central Ohio (40.53o N, 82.46o W, 1089 ft above sea level). The chicory was established by using conventional tillage in Bogart Silt Loam. The seeding rate was 6 lb/ac. The seven commercially available cultivars were 'Puna', 'Oasis', 'Choice', 'Six-Point', 'La Nina', 'Lacerta', and 'Forage Feast'. The cultivars were planted in a random block design. Each cultivar plot was 0.054 ac. The blocks were replicated three times. Grazing occurred 79 days after planting. Separate groups of 35, 110 day old weaned lambs were grazed on each replicate for 45 minutes. Feed was withheld from lambs for 8 hours prior to grazing. Clippings were taken before and after grazing to determine yield and dry matter consumption. Grab samples were taken from each replicate clipping to determine composition and dry matter. Statistically significant differences in yield, dry matter, and composition were not found. Based on consumption the lambs showed no preference for any chicory cultivar. (SOURCE: J. McCutcheon, W. Shulaw, J. Foster, T. Cooper, B. Rickard, and T. Wittum IN AFGC Proceedings, Springfield, MO, June 2010)

### EFFECTS OF A FREEZE ON FORAGES

If you haven't experienced a freeze yet this fall, you soon will. Stay tuned as we discuss how a freeze can cause hazards for using some forages.

When plants freeze, changes occur in their metabolism and composition that can poison livestock. But you can prevent problems.

Sorghum-related plants, like cane, sudangrass, shattercane, and milo can be highly toxic for a few days after frost. Freezing breaks plant cell membranes. This breakage allows the chemicals that form prussic acid to mix together and release this poisonous compound rapidly. Livestock eating recently frozen sorghums can get a sudden,

high dose of prussic acid and potentially die. Fortunately, prussic acid soon turns into a gas and disappears into the air. So wait 3 to 5 days after a freeze before grazing sorghums; the chance of poisoning then becomes much lower.

Freezing also slows down metabolism in all plants. This stress sometimes permits nitrates to accumulate in plants that are still growing, especially grasses like oats, millet, and sudangrass. This build-up usually isn't hazardous to grazing animals, but green chop or hay cut right after a freeze can be more dangerous.

Alfalfa reacts two ways to a hard freeze, down close to twenty degrees, cold enough to cause plants to wilt. Nitrate levels can increase, but rarely to hazardous levels. Freezing also makes alfalfa more likely to cause bloat for a few days after the frost. Then, several days later, after plants begin to wilt or grow again, alfalfa becomes less likely to cause bloat. So waiting to graze alfalfa until well after a hard freeze is a good, safe management practice.

Frost causes important changes in forages so manage them carefully for safe feed. (Bruce Anderson, University of Nebraska)

### NITRATE POISONING: A CONCERN WITH DRY WEATHER

The dry weather in many areas of Kentucky has increased concerns about nitrate poisoning in livestock consuming warm season grasses as pasture, crop residue, hay, silage, or baleage. Warm season annual forages (corn, sorghum-sudangrass, millet, etc...) have the highest potential for nitrate poisoning. Few plants normally contain high nitrate levels. Under normal growing conditions, roots of forage plants absorb nitrate from the soil. Shoots and leaves convert nitrate into protein about as fast as it is absorbed. Under certain conditions, such as high rates of nitrogen fertilizer/manure, drought or frost, then plants used for pasture, hay or silage can develop potentially dangerous nitrate levels. If you suspect that your forage crops may have high levels of nitrates contact your local county agent or submit a sample to a recognized lab as described below. KY County Agents have recently been given nitrate test strips that can be used to provide a "quick test" for the potential of high nitrates. If the test strips give a positive reading then the sample should be sent to lab for more accurate testing and feeding recommendations.

**Sampling for nitrates and submitting samples:** Collect a representative sample from each field. Usually five or more locations across a field will serve as a representative sample. Harvest at least one (1) pound. The plants should be cut at the intended grazing or harvest height. Fresh plants should be stored in paper bags and mailed in cardboard boxes overnight to the testing laboratory. The better option is to put the fresh plant samples in a cooler with ice and drive them directly to the lab the same day they are harvested. If fresh plant samples will be stored overnight, then they should be stored in a freezer in paper bags. When collecting and shipping fresh plant samples, don't put them in plastic bags. Silage or baleage can be shipped in a plastic bag but should be kept cool. Once plant material is completely dry (e.g. - hay) nitrate levels will remain stable and the need for low temperature storage and shipping is less critical.

**Sampling Hay Bales, Baleage, or Silage:** Collect samples just like you would for forage quality testing. Take 5 or more samples per lot and handle and ship as described above.

**Laboratories:** The Kentucky Livestock Disease Diagnostic Center (LDDC) in Lexington (phone 859-253-0571 Fax 859-255-1624) will return an answer within 3 to 5 days. The lab charges \$12 per sample plus a one time \$10 accession fee. County ANR Agents and private farmers from Kentucky can submit samples directly to LDDC. MSU Brethitt Veterinary Center in Hopkinsville also conducts nitrate tests. Their contact information is phone 270-886-3959 or FAX 270-886-4295. Several commercial laboratories conduct nitrate testing as well. Contact the lab directly for more details.

### UPCOMING EVENTS

JAN 14 Forages at KCA, Lexington  
JAN 25-26 Heart of America Grazing Conference, Louisville  
FEB 24 31<sup>st</sup> Kentucky Alfalfa Conference, Lexington



Garry D. Lacefield  
Extension Forage Specialist  
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