



# FORAGE NEWS

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

## September 2008

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

### FORAGE SPOKESMAN NOMINATION

#### DEADLINE SEPTEMBER 15

Kentucky holds the national record for having more National Forage Spokesman winners than any other state. The reigning National Forage Spokesman is Barry Drury from Woodford County. We are now accepting nominations for the next Forage Spokesman Contest to be held in conjunction with the Kentucky Grazing Conference in Lexington October 23. If you would like to nominate a Kentucky Forage Producer to participate, please send a nomination to Dr. Ray Smith, Plant & Soil Science Dept., 105 Plant Science Bldg., 1405 Veterans Road, University of Kentucky, Lexington, KY 40546-0312 or by e-mail to [raysmith1@uky.edu](mailto:raysmith1@uky.edu). Nominations should contain nominees' name, address, and a brief (less than one page) paragraph describing the candidates forage program. **Nominations are due by September 15.**

### KFGC AWARDS NOMINATION

#### DEADLINE SEPTEMBER 19

Each year, the Kentucky Forage & Grassland Council presents Forage Awards to individuals that have made significant contributions to Kentucky's Forage Industry. Awards will be presented in four categories (producer, public (county and state), and industry) at the KFGC Business Meeting in conjunction with the Kentucky Grazing Conference October 23 in Lexington. To nominate a deserving individual, please send a one page nomination to Dr. Garry Lacefield, Research & Education Center, P.O. Box 469, Princeton, KY 42445 or by e-mail to [glacefie@uky.edu](mailto:glacefie@uky.edu). For a list of past award recipients, see our website <http://www.uky.edu/Ag/Forage/KFGC%20Award%20Winners%20History.pdf>. Deadline for submitting nominations is September 19, 2008.

### 29<sup>TH</sup> KENTUCKY ALFALFA CONFERENCE – FEBRUARY 19

The program committee is working on program and details for the 29<sup>th</sup> Kentucky Alfalfa Conference to be held **February 19, 2009** at the Cave City Convention Center. More details will be forthcoming.

### HOW GOOD IS YOUR HAY?

After our experiences this past year, I think we are all more aware and appreciative of hay quality. Our hay and pasture supply is drastically better than last year at this time. As we prepare for winter, we certainly want to use our pasture efficiently and as long into winter as possible. Likewise, we need to plan for efficient hay feeding. Hay is simply too expensive to waste. In order to match our hay quality to

animal based on their nutrient needs, we need to know the "quality" of our hay. The most accurate way to determine this is through a hay test. The Kentucky Department of Agriculture Forage Testing Program offers an excellent, inexpensive service for testing hay and haylage. It's easy, just call 1-800-248-4628 and make an appointment for a trained professional to come to your farm and sample your hay. The cost is only \$10.00 per lot of hay tested. Results will be mailed to you and will be listed on the KDA webpage if you have hay for sale.

### BRASSICAS AND CEREALS: HIGH QUALITY OPTIONS FOR FALL GRAZING

Many of you have heard about the high quality fall grazing available from Brassicas like turnips. More and more KY producers are planting these high quality forages along with cereals for extended fall grazing, with cereals like rye and wheat still available for spring grazing. One of the best options is to plant turnips with Oats and Cereal Rye (or wheat, triticale, or ryegrass) during late August or early September.

**What should we plant?** - Plant 2 bushels of spring oats, 1 ½ bushels of cereal rye and 3 to 5 lbs of turnips per acre. Most grazers prefer turnips that have a small bulb or taproot because they put more energy into leafy growth than the older Purple Top variety. Ask your seed dealer about varieties. Note: Spring oats provide substantially more tons of forage in the fall than the cereal rye. Be sure to ask for "seed quality" cereal grains. Another option is to add annual ryegrass to this mixture (20 lbs/acre) instead of cereal rye for longer season grazing next spring. Under good growing conditions, add at least 30-40 units of N after sowing for good yields of palatable forage.

**When do I plant?** - Late August to mid-September is a good timing. Remember, the earlier you plant the greater the potential for fall grazing.

**How quickly can you graze?** - If you have adequate rainfall then many people have been able to graze 40 to 50 days after emergence. In some cases you may need to wait for two months. Higher rates of N allow earlier grazing. Planting depth on the brassicas is ¼" so be careful to not get them too deep.

**How do I get the best out of this crop?** - Ask your seed dealer for varieties that allow multiple grazing. The large bulb types like Purple Top only allow one grazing in the late fall. It is important though to strip graze or rotationally graze for best utilization. Back fencing is important to allow re-growth for subsequent grazings. If you cannot back-fence then at least strip graze so you get the best utilization.

**What about sowing after corn?** - Many producers have had good success no-till seeding this mix after corn is harvested though timing is critical if you hope to have fall grazing. Make sure you did not apply more than one lb of Atrazine per acre in the spring. .

**What will I have next spring?** - If you use rye, wheat, triticale, or one of the annual ryegrasses, you should have very good early spring grazing. Cereal rye may give the quickest green-up of the group. The oats and turnips will not live through the winter.

## FALL FERTILIZER APPLICATIONS TO HAY FIELDS AND PASTURES

As you are probably well aware the price for agricultural inputs has increased dramatically. Fertilizer is no exception. The price of fertilizer is so high that several cattle producers have asked me if it is economical to apply fertilizer to pasture and hay ground this fall. The answer to that question is difficult because it depends on your specific situation. When considering the answer for your operation the first thing you should do is examine your soil test levels. If you have not taken soil samples within the past 3 years then you would be wise to collect new ones before making a decision. From the soil test results, determine what, if anything, is most limiting. In terms of soil pH, the minimum value depends on the type of forage you are producing. If it is alfalfa then I would recommend lime if the pH is below 6.0, a grass legume mixture can probably tolerate soil pH down to about 5.8, and a pure grass system can probably go down to pH 5.5 before yields are affected by pH. Similar statements could also be said for phosphorus (P) and potassium (K) nutrition – with alfalfa requiring the most and pure grass (fescue) requiring the least.

The University of Kentucky recommends P applications starting when the soil test P level drops below 60 lbs/acre and K when soil test K drops below 300 lbs/acre. If soil test levels are above 60 lbs P/acre and/or 300 lbs K/acre, then the likelihood of a yield response to additional P and/or K fertilizer is extremely low, but if you want to be sure that P and K are not limiting, apply fertilizers as recommended. If you are conservative (assume some risk that P and K might reduce yield), then you might allow soil test levels to decline further. From small plot research, we know that once soil test P drops below 30 lbs/acre and/or soil test K drops below 200 lbs/acre, a yield response to added fertilizer is likely, therefore, these would be the minimum tolerable levels. In the range between 30 – 60 lbs/acre for P and 200 – 300 for K we make fertilizer recommendations mainly because of soil variability. A soil sample represents the average value, but there are areas of the field below average and areas above average. The fertilizer recommendation in this range is designed to supply nutrient to those less fertile. As fertilizer prices continue to increase, grid soil sampling may also be beneficial to further refine whole-field sampling techniques.

For nitrogen the answer is easier. Research has shown that each lb of nitrogen applied in early to mid-August increase cool-season grass production by 20-25 lbs dry matter per acre. Therefore, if one pound of nitrogen cost less than the cost of 25 lbs hay on a dry matter basis then N should be applied. Of course this assumes adequate growing conditions this fall.

The source of nitrogen used in the fall is also important. Ammonium nitrate is most efficient fertilizer to use when stockpiling because it is not subject to volatilization. However ammonium nitrate is becoming harder to get and can be cost prohibitive. Research has shown that urea is approximately 79 to 89% as effective as ammonium nitrate. However, urea can be just as effective as ammonium nitrate, if a urease inhibitors like 'Agrotain' is used.

For more information on soil sampling and fertilizer recommendations, contact your local county Extension office. (SOURCE: Greg Schwab, UK Extension Soils Specialist)

## USDA FORECASTS 2% LESS ALFALFA

Sufficient rainfall in much of the country will result in slightly higher average alfalfa yields than were harvested last year, USDA predicts. But the yield gain won't offset a 4% drop in acreage.

In its Aug. 12 Crop Production report, USDA forecasts production of alfalfa and alfalfa mixtures at 70.9 million tons, 2% below last year's number. Yields from 20.8 million harvested acres are expected to average 3.41 tons/acre, up from 3.35 tons/acre in 2007. Yields are forecast to be above last year's number across the Corn Belt, Ohio Valley and Tennessee Valley, but slightly lower in California, Nevada, Utah and Colorado. Slight yield increases are anticipated in Oregon, Idaho and Wyoming.

Production of all other types of hay is forecast at 77 million tons, 1% below last year's final figure, and the expected harvested acreage, at 39.7 million, is also down 1%. Based on Aug. 1 conditions, yield is expected to average 1.94 tons/acre, down slightly from last year's yield. Moisture deficiencies will reduce the average Texas yield by 1.2 tons/acre, according to USDA, but yields are within 1 ton of last year's figure in all other states. (SOURCE: eHay Weekly, August 12, 2008)

## SWITCHGRASS FOR ENERGY WILL TAKE TIME

Prospects for using switchgrass as a feedstock to make cellulosic ethanol have been getting plenty of headlines around the country over the past several months. But farmers shouldn't plan on producing switchgrass for that market anytime in the near future, says Ken Goddard, extension specialist with the University of Tennessee (UT) Biofuels Initiative. "It will probably be at least 8-10 years before the first full-scale commercial refinery for cellulosic ethanol made from switchgrass is on line," he predicts.

Goddard is currently finishing up a four-year-long switchgrass growing project with five farmers in western Tennessee. Purpose of the project, involving 91 acres of switchgrass, was to take a closer look at on-farm considerations – yield potential, weed control, fertilizer requirements, equipment needs, etc. – related to producing switchgrass. Switchgrass produced in the project was used to replace coal at an electricity-generating plant in Alabama.

Project results confirm that, while yield potential of switchgrass can be high, it does take time to get the crop established. "In the first year, we saw yields of 1-2 tons of dry matter/acre," reports Goddard. "That jumped to 4-5 tons dry matter/acre by year two and 6-12 tons/acre by the third year. Once it is established, though, it doesn't require much in the way of fertilizer or other inputs."

This spring, UT researchers launched a follow-up project in eastern Tennessee. The 16 farmers involved have planted more than 700 acres of switchgrass to supply a pilot-scale cellulosic ethanol biorefinery near Vonore, TN. (See "Switchgrass-Fueled Ethanol Plant Proposed For Tennessee," eHay Weekly, July 29). All of the farms involved in the project are located within a 50-mile radius of the Vonore plant. "That's necessary because of the costs associated with transporting large amounts of switchgrass any distance," Goddard explains.

Determining which enzymes can efficiently be used to transform biomass feedstocks like switchgrass into cellulosic ethanol is the major hurdle to full-scale production at this point, Goddard says. "There's a mad rush on right now to find enzymes that can be produced in abundance and at low cost."

Goddard estimates there could be as much as 70 gallons of ethanol in a ton of switchgrass dry matter. "So with a yield of 7 tons of switchgrass/acre, the amount of ethanol produced would be almost 500 gallons/acre," he says.

In July, the U.S. Department of Energy (DOE) announced \$240 million in federal funds will be awarded over a five-year period to nine small-scale cellulosic biorefineries in the U.S. DOE says the funding will further President Bush's goal of making cellulosic ethanol cost-competitive with corn-based ethanol by 2012. Two of the nine DOE projects will use switchgrass as a feedstock, while the remaining plants will use other non-use feedstocks including corn stover and forest wastes such as sawdust and forest thinnings. To see a list of projects go to [www.energy.gov/media/Small\\_Scale\\_Biorefineries\\_Matrix.pdf](http://www.energy.gov/media/Small_Scale_Biorefineries_Matrix.pdf).

To contact Goddard, phone 865-441-1123 or e-mail [kgoddard3@utk.edu](mailto:kgoddard3@utk.edu).

To learn more about the University of Tennessee's Biofuels Initiative, go to [www.utbioenergy.org/TNBiofuelsInitiative/](http://www.utbioenergy.org/TNBiofuelsInitiative/). (SOURCE: eHay Weekly, August 12, 2008)

## UPCOMING EVENTS

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|-------------|---|
| SEP 4       | KFGC Field Day, Christian County  |
| SEP 25      | 2008 All Commodity Field Day, UK Robinson Station, Jackson                              |
| OCT 23      | 9 <sup>th</sup> Kentucky Grazing Conference, Fayette County Extension Office, Lexington |
| <b>2009</b> |   |
| JAN 6       | Kentucky Small Ruminant Grazing Conference, Fayette County Extension Office             |
| JAN 21-22   | Heart of America Grazing Conference, Columbus, IN                                       |
| FEB 19      | 29 <sup>th</sup> Kentucky Alfalfa Conference, Cave City Convention Center               |



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