



5-2009

## Forage News [2009-05]

University of Kentucky Department of Plant and Soil Sciences

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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>

## May 2009

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

### EXTENDING GRAZING

A new publication "Extending Grazing and Reduced Stored Feed Needs" written by forage specialists from Kentucky, Alabama, Illinois, Missouri and Wisconsin was published last month and is now available on our website as UK AGR-199

<http://www.uky.edu/Ag/Forage/ForagePublications.htm>

### KENTUCKY GRAZING CONFERENCE

The 10<sup>th</sup> Kentucky Grazing Conference is heading WEST. It will be held at the UK Research & Education Center in Princeton on October 29. The Conference has rotated between Lexington and Bowling Green for the past nine years. The program committee is hard at work putting together top speakers from Kentucky and other states to address timely, practical topics relating to grazing. In addition, we expect a full house of exhibitors and a large Silent Auction. The Kentucky Forage and Grassland Council will have their annual business meeting and awards program following lunch. The program will conclude with the Forage Spokesman Contest. Program and additional information will be available soon.

### KFGC AWARDS PROGRAM

Each year the Kentucky Forage & Grassland Council recognizes outstanding accomplishments and contributions to forages with four awards. Statewide awards will be presented to an individual representing the Public, Private and Producer sectors of our industry and one "County" Public Service Award. To nominate a deserving Kentuckian, send a one-page nomination to Dr. Garry Lacefield, Research & Education Center, P.O. Box 469, Princeton, KY 42445 (e-mail – [glacefie@uky.edu](mailto:glacefie@uky.edu)). Deadline for nominations is September 15, 2009.

### RENOVATION OF PASTURE AND HAY FIELDS

AGR-26 "Renovation of Pasture and Hay Fields" has been one of the most popular publications ever released by Kentucky Cooperative Extension. It shows the tremendous animal production benefits when you add legumes to pastures. AGR-26 also describes simple, practical steps for successful stand renovation and how to manage renovated fields. We have recently revised this publication and it is now available in the UK Forage Website, [www.uky.edu/Ag/Forage](http://www.uky.edu/Ag/Forage). Just click on "Publications" and then "Renovation."

### NEW WARM SEASON ANNUAL GRASS REPORT

There is a renewed interest in warm season annual grass production in Kentucky. Warm season annuals include traditional forages like pearl millet and sorghum/sudangrass and new ones like teff. They also include grasses like sudangrass where completely new varieties have been recently released. The "2008 Warm Season Annual Grass Report" has just been released and reports the forage yield of numerous varieties of five warm season annual grasses in KY in 2007 and 2008. This report can be found at the UK Forage Website, [www.uky.edu/Ag/Forage](http://www.uky.edu/Ag/Forage), under "Forage Variety Trials."

### KFGC UPDATE

One third of the KY Forage and Grassland Council Board of Directors are elected each fall by KFGC membership. Board members represent the three sectors of our forage industry: producers, industry and public or education. A special welcome is given to the following newly-elected Board members: **Daniel Smith**, who is a beef cattle producer from Scott County; **Todd Clark** is a major hay, beef cattle, and tobacco producer in Fayette County; Clayton Gerald is a commercial hay producer from Hart County; **Bret Winsett** is the lead forage agronomist with Miles Farm Supply; **Bill Talley** is President of Summit Seed Coatings; **Bryant Rogers** is manager of the Burkman Feeds store in Danville; **Sid Brantley** is the NRCS State Grazing Specialist; **Dan Grigson** is the Lincoln County Extension Agent for Agriculture and Natural Resources; **Chris Eubanks**, Forage Product Specialist, Winfield Solutions, Seed Division of Land O' Lakes, Kirksey, KY; and **Steve Moore**, who is the Henry County Extension Agent for Agriculture and Natural Resources.

One of the activities of the KFGC Board of Directors is to assist in the development of educational opportunities such as the Grazing Conference, Alfalfa Conference and KFGC Forage Field Day. Mark your calendars for the September 3 KFGC Forage Field Day that will be hosted by Jamie R. "Buddy" Smith of Anderson County. This year's field day will showcase the use of eastern gamagrass and standing corn as livestock forages. I had the opportunity to visit the Smith farm on March 11 and observed two groups of Angus cattle who had been wintered on standing corn, fescue pasture and minerals. They were in excellent body condition and had received no hay during the 2008-09 winter feeding period. I will have more on the KFGC Field Day in future newsletters. Don't forget to check out the KFGC website at [www.kfgc.org](http://www.kfgc.org) and the UK forage website at [www.uky.edu/Ag/Forage](http://www.uky.edu/Ag/Forage) for up to date forage information. (SOURCE: Don Sorrell, KFGC President)

### USE MICROWAVE TO TEST HAY MOISTURE

If you don't want to invest in a commercial probe or meter to measure hay moisture, consider the microwave method, advises Dennis Hancock, University of Georgia extension forage specialist.

Start with a small scale (a cheap food scale will work) and a hand-me-down microwave. "There's no need to spend much money on these," says Hancock. "Between a yard sale and your favorite discount department store, you should be able to get what you need at about half the cost of a new hay moisture meter."

Once you have the materials on hand, dry about ¼ lb of the forage in the microwave until it reaches a stable weight. Hancock suggests doing this in increments of one to two minutes. He also advises putting a cup of water in the microwave with the hay sample to keep the forage from catching fire.

To come up with the percent moisture, divide the change in weight (before and after) by the beginning weight, then multiple by 100. For more detailed instructions, go to [www.caes.uga.edu/commodities/](http://www.caes.uga.edu/commodities/). Under Hot Topics, download the pdf for *Measuring the Moisture Content of Forage Using a Microwave Oven*. (SOURCE: eHay Weekly, April 14, 2009)

## INCREASE PASTURE PROFITS USING CROSS FENCES

Even though your cows no longer are grazing corn stalks, don't put away your electric fence for the summer just yet. I'll explain why in a moment.

Electric fence is the easiest and cheapest way to increase production from summer pastures. Dividing pastures with electric cross fences gives you more control of when and where your cattle graze. It helps you encourage cattle to graze pastures more uniformly and completely, including areas they normally avoid. And, it can help you improve the health and vigor of your grass by giving it time to recover and regrow after each grazing. As a result, your grass production and pasture carrying capacity will increase.

I'm sure you've seen many ads promoting high-powered, high-tensile, imported electric fencing systems. In fact, I encourage using these systems in many situations -- I use them myself sometimes. But, cross fences do not need to be permanent, nor do they need to be expensive. This is especially true if you already have electric fencing your animals respect. And using fencing you already have gives you an inexpensive opportunity to experiment with where you might eventually place a more permanent cross fence.

The electric fence that keeps your cows on stalks during winter can give you this inexpensive opportunity to try some cross fencing where you have been reluctant to try it before.

So, as the rapid spring growth of your pastures begin to slow down, use your winter electric fence to try some extra summer cross fencing of your pastures.

More grass, better gains, and better profits might be the result. (SOURCE: Bruce Anderson, Extension Forage Specialist, University of Nebraska)

## IMPROVING FUEL EFFICIENCY OF YOUR FORAGE HARVESTER

With higher fuel prices, the proper operation and maintenance of forage harvesters (choppers) becomes more important to ensure maximum forage production profitability. Some simple maintenance steps can have a significant impact on the fuel usage in harvesting alfalfa or grass silage and the machine's capacity. A well adjusted forage harvester will require an estimated 1.5 gallons of fuel per acre. Using a fuel price of \$3.00 per gallon, the fuel cost is \$4.50 per acre.

Three adjustment/maintenance steps that will have a significant impact on fuel consumption are theoretical length of cut, knife sharpness and knife/shearbar clearance. For the forage harvester, the energy/fuel consumption can be divided among 1) pickup and feed rolls (20%), 2) cutterhead (40%) and, 3) blowing (40%) for a properly adjusted machine. The three adjustment/maintenance steps influence the portion of the energy required by the cutterhead.

As the cutterhead knives wear, the power requirement increases. In one report, worn knives doubled the fuel requirements of the cutterhead. Therefore the estimated cutterhead fuel requirement goes from 0.6 gallons (1.5 times 0.4) per acre to 1.2 gallons per acre. For \$3.00 fuel, the added fuel cost is \$1.80 per acre. The added fuel requirement will be greatly affected by the degree of wear.

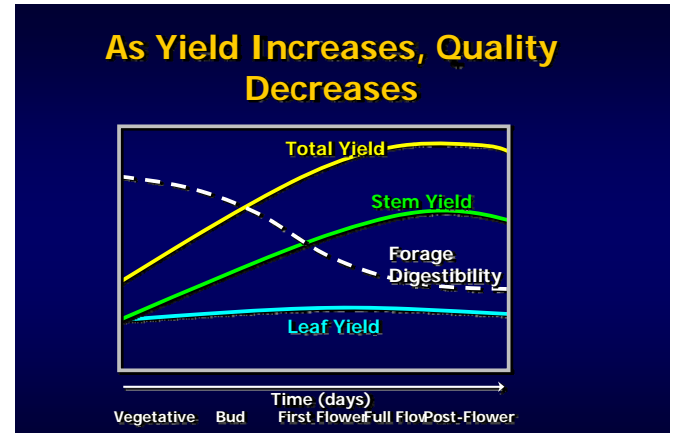
The power requirement increases as the knife/shearbar clearance increases. When considering a clearance of 0.01 inches versus 0.02 inches, the power requirement of the cutterhead is doubled when increasing the clearance. This result is similar to the worn knives, an increased fuel cost of \$1.80 per acre. If the clearance is 0.03 inches, the fuel cost increase over 0.01 inches of clearance is \$3.60 per acre. If the machine has worn knives and a knife/shearbar clearance of 0.03 inches, the added fuel cost will be estimated at \$5.40 per acre.

Increasing the theoretical length of cut will reduce the fuel consumption. Carefully select the theoretical length of cut to meet the requirements of the animals and storage system. If there is a choice, go with longer length of cut.

Another hidden cost with higher fuel consumption is the machine driveline wear due to the higher loads on the gears, shafts, and chains. A higher fuel usage leads to a shorter machine life. Also, the increased fuel consumption will reduce the machine capacity with respect to acres per hour and tons per hour. Again these are estimates of the increase in fuel consumption. Nonetheless properly adjusting the forage harvester cutterhead will lead to lower fuel consumption, higher field capacity and a more profitable forage production system. The machine's operator's manual provides the details on adjustment procedures for the most productive operation of

the forage harvester. (SOURCE: Ronald Schuler, University of Wisconsin-Madison IN Pennsylvania Forage and Grassland News, Volume 19, No 2, Spring 2009)

## HARVEST EARLY FOR HIGHEST QUALITY HAY



## COMMENTS FROM NEBRASKA ON TEFF

Teff grass has been gaining interest and that interest is generating a number of questions. In a moment I'll share some of my views on how teff should be used and some of its challenges.

Teff is a relatively new summer annual forage grass for our region. Compared to the millets, sorghums, and sudangrasses we normally use, teff is much leafier and finer stemmed, and it often contains more crude protein and TDN. However, it usually doesn't produce quite as much total tonnage.

It makes a very palatable hay and is well accepted by horses, llamas, alpacas, and similar livestock. Recently weaned calves also adapt to teff hay quite quickly. These may be the kind of uses where teff is better suited than most of our other summer annual grasses. Of course, stock cows, replacement heifers, and other cattle also like it. However, since other summer annual grasses usually produce more tonnage and also are acceptable for these animals, they may be a better choice.

Furthermore, teff can be difficult to establish. It has a very tiny seed, much smaller than an alfalfa seed. It must be planted very shallow, about one-eighth of an inch deep, or seedlings will not emerge. Many producers who have planted teff have had thin or uneven stands, partly because the seed was placed too deep by their drills. Extra firm seedbeds may be needed when a drill is used; broadcasting seed and rolling or irrigating afterwards might work better.

Seedlings also need a week or so of moist soil to become established well enough to survive. This shouldn't be a problem with irrigation, but dryland growers have had some failures, especially when planting after wheat.

Teff has much potential when used with the right livestock. But know also that it has some risks and challenges. (SOURCE: Bruce Anderson, Extension Forage Specialist, University of Nebraska)

## UPCOMING EVENTS

- MAY 10-12 Southern Pasture & Forage Crop Improvement Conference, Lexington
- JUN 21-24 American Forage & Grassland Council, Grand Rapids, MI
- JUN 27 UK Equine Field Day, UK Maine Chance/Spindletop Research Farm, Lexington
- JUL 23 UK All Commodity Field Day, UK Research & Education Center, Princeton
- SEP 17-19 National Hay Association Annual Conference, Deadwood, SD
- OCT 29 10<sup>th</sup> Kentucky Grazing Conference, UK Research & Education Center, Princeton

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