



# FORAGE NEWS

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## KFGC AWARDS NOMINATION

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>

## KFGC FORAGE SPOKESMAN

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.

## SMALL GRAIN SILAGE OR BALAGE

Silage is an excellent way to utilize small grain crops used in companion cropping programs or grown to supplement forage supplies. Harvesting cereals as silage can also salvage a crop that has been damaged by hail, frost or insects.

Cereal silages should be harvested in the milk to soft dough stage to maximize the yield of energy per acre. As cereal grains mature from the boot to the dough stage, the protein level drops while the energy value increases. Dairy producers can maximize protein content by harvesting cereals in the boot stage. Little wilting is necessary when harvesting at the early dough stage.

Approximate feeding values for commonly grown cereal crops are shown below.

Feeding values of small grain and corn silage.				
Crop	Dry Matter	Crude Fiber	Crude Protein	TDN
Barley	38.8	27.1	9.0	64.3
Wheat	39.4	27.9	9.6	63.8
Oats	40.2	31.2	9.8	60.7
Rye (wilted)	39.8	33.0	12.8	58.5
Corn	37.3	24.7	8.1	66.4

(SOURCE: Virginia Polytechnic Institute and State University In Pennsylvania Forage and Grassland News, Vol. 18, No. 2, Spring 2008)

## HAY MAKING REMINDERS AND TIPS

The greatest amount of feed value is stored when both field and storage losses are minimized. The amount of each loss is largely determined by the moisture content of the forage when going into storage. Storing dry hay results in high field losses but relatively small storage losses. On the other hand, storing forages as haylage gives lower field losses but higher storage losses.

Windrows should be as wide as feasible to decrease forage density and increase the evaporative surface.

There are a number of losses associated with the production of dry hay (less than 20% moisture). Because the leaves contain about half of the dry matter and two-thirds of the protein, leaf loss has significant impacts on yield and quality.

Potential Haymaking Losses	
Source of Loss	% Loss of Dry Matter
Respiration	2-16
Cut and condition	2-5
Rake	5-25
Baling small bales	3-8
Baling large bales	1-15
Transport	1-10
Potential total loss	10-71

Hay having high moisture is at risk from spoilage due to the action of microorganisms metabolizing sugars in the hay and giving off heat. The final temperature reached by the hay is related to:

- Percentage of moisture in the hay
- Density of the bale and how tightly bales are packed in the mow
- Temperature and humidity of the outside air

The following temperature guidelines can be used if your hay begins to heat:

- 150°F – Entering the danger zone. Take temperatures daily.
- 160°F – **Danger!** Inspect every 4 hours to see if the temperature is rising.
- 176°F – Fire pockets may be anticipated. Call the fire department.
- 212°F – Critical! In the presence of oxygen, ignition will take place.

Storing bales inside or covering large bales will dramatically reduce spoilage losses. In a 5-ft. round bale, 19% of the hay is in the outside 6 in., and 36% in the outside 12 in. (SOURCE: Ontario Ministry of Agriculture, Food and Rural Affairs In Pennsylvania Forage and Grassland News, Vol. 18, No. 2, Spring 2008)

## HAY ACREAGE WILL DROP 2%, SAYS USDA

USDA's March 31 Prospective Plantings report does little to alleviate worries that hay supplies will become even tighter in the coming year. The agency says growers expect to harvest 60.6 million acres of it this year, 2% fewer than in 2007. Harvested acreage is expected to drop throughout most of the Great Plains, Southeast and Southwest. Texas is expected to have the largest decrease – 390,000 acres. South Dakota and Nebraska are expected to be down 300,000

and 150,000 acres, respectively. However, acreage is forecast to increase in most states in the northern Great Plains, Western Mountain regions and Northeast. The states with the largest expected increases are North Dakota, up 120,000 acres, and Montana, Wyoming, Kentucky, Ohio and Pennsylvania, each up 50,000 acres. In the West, minor increases are expected in Oregon, Nevada and California, while a 40,000-acre decline is predicted for Washington state.

Corn growers intend to plant 86 million acres of corn for all purposes, down 8% from last year's acreage, which was the highest since 1944. Soybean acreage is forecast at 74.8 million, an 18% increase but 1% below the record set in 2006.

Acreage of all types of wheat is estimated at 63.8 million, up 6%. USDA says growers planted 46.8 million acres of winter wheat, 4% more than they planted the previous year. (SOURCE: *E-Hay Weekly*, April 1, 2008)

## ARMYWORM ALERT

Capture of armyworm moths in our IPM traps at Princeton is well above the five year rolling average, and very similar to counts obtained in 2006 when there was known damage in Kentucky. The Lexington trap does not show such an increase, but would be expected to be later than the Princeton trap due to difference in temperature. Persons managing grasses for forage / hay should be on the lookout for the caterpillar stage of this pest. See Kentucky Pest News (<http://www.uky.edu/Ag/kpn/kpnhome.htm>) of 21 Apr 08 for more detailed information. (SOURCE: *Doug Johnson, UK Extension Entomologist*)

## NEW VIDEO FEATURE ON KFGC WEBSITE

Go to [www.kfgc.org](http://www.kfgc.org) to view the National Award Winning Forage Spokesperson presentation by Barry Drury at the last AFGC meeting. Simply look for Barry's picture on our homepage, and with a simple "click" of your mouse you will hear and see Barry's presentation on your computer screen.

## UK FORAGE TEAM WINS OUTSTANDING EXTENSION PROJECT AWARD

Tom Keene and Ray Smith recently won the Outstanding Project Award at the annual meeting of the Kentucky Association of State Extension Professionals. The award was presented for their leadership and coordination of the UK Horse Pasture Evaluation Program. This program has been one of the early success stories of UK's Equine Initiative with over 50 farms and 3700 acres monitored over the last 2½ years. Tom and Ray want to give credit to the technicians, summer students, and other faculty who have all worked to make the program a success. Find out more about the Pasture Evaluation Program on the UK Forage Website under "Horse Links."

## FORAGE ANALYSES ARE ESTIMATES, NOT ABSOLUTES

Analyzing forage quality is worthwhile – despite forage testing problems among labs and between growers and labs, and test-result disputes between hay buyers and sellers. That's according to Dan Undersander, extension forage specialist with the University of Wisconsin, who spoke at the February National Alfalfa Symposium.

Wisconsin studies have shown that milk production decreases as forage matures and its quality declines, he said. "Some people have the idea that, when forage quality is low, they can just feed a little bit more grain. This is not true." Concentrates can increase milk production in dairy cows fed mid-bloom alfalfa, but not nearly as much as when higher-quality forage is fed, studies have shown.

The results of tests that analyze forage quality, however, are just estimates, Undersander said. "I think sometimes nutritionists or others tend to forget that. We're taking a whole bunker silo, a whole lot of hay and then we're subsampling that and basically getting it down to three or four spoonfuls to measure forage quality."

The more cores taken in a sample and submitted for analysis, the less variation within that sample and the more accurate the measurements. But all samples have variation, he added. "Some people take three or four or five cores, and you can expect a wide range around a point. But as you take 20 or 25 cores, it's less of a range."

Variation is unavoidable, he said. Some is caused by growers or dairymen taking samples incorrectly. But some variation is caused by lab subsampling and analysis errors.

"With regards to the accuracy of the labs, we need to be asking a number of questions: Does the lab run the entire sample you sent in or a subsample of that? Additionally, we should be looking at what is

measured vs. what is calculated. And does this lab use standard or modified procedures?" He mentioned that growers should use labs certified by the National Forage Testing Association.

Undersander suggested that growers periodically have multiple samples analyzed – in part to see the amount of variation. Take around 20 core samples, but divide them into three sandwich bags. Then send the bags in together to be analyzed for a mean value. "And if you get into an issue with differences (in test results with hay buyers) down the road, you can assure yourself that good samples were taken," he advised. (For more on multiple sampling, see "Ward Off Disputes" in May 2007 issue of *Hay & Forage Grower* or visit [hayandforage.com/mag/ward\\_off\\_disputes/index.html](http://hayandforage.com/mag/ward_off_disputes/index.html).)

"Variation among labs is about twice the variation within labs," Undersander said. Some labs determine the amount of neutral detergent fiber (NDF) in a sample using Association of Official Analytical Chemists (AOAC) methodology. Others run NDF using the Cornell model, which gives higher values than the other method. "The National Forage Testing Association certification is based on AOAC methodology, but a number of labs are actually running NDF using the Cornell model. "So you need to know if this is an AOAC number or a Cornell number, because there will be two to three points difference in fiber."

"We have variation. If we quantify it we can deal with it. If we run a single sample we never have any idea what the error around that sample is. And it's important to begin to quantify what the error is."

For more on forage testing, watch for the May issue of *Hay & Forage Grower*. For other recaps of other Symposium topics, visit [hayandforage.com/alfalfasymposium](http://hayandforage.com/alfalfasymposium). (SOURCE: *e-Hay weekly*, April 1, 2008)

## SHOULD I PLANT SWITCHGRASS FOR BIOMASS?

"Should I plant switchgrass so I'll be ready when the biomass market takes off?" That's a question that has come up over the last months. It's a good question, but there's not an easy answer since, at present, there is no real biomass market in Kentucky. We are confident that utility companies will begin to buy biomass products from farmers and landowners over the next few years, but can only speculate as to the preferred products (switchgrass, crop residue, forestry wastes, etc...), the price they will pay, or the preferred package size. We will keep you informed, but we can assure you though that biomass is not "pie in the sky." For example, one KY utility company has told us that they plan to be buying some product within the next 2 years. This company is confident that carbon credits, demand for "green" energy, and/or that state and federal legislation will require a percent of electricity to be produced from renewable sources in the near future. For example, California has legislated that 15% of electricity must be generated from renewable sources (water, solar, wind, biomass, etc...).

At present, we do not advise planting switchgrass or any other crop just to be ready for the biomass market, but we do encourage you to consider planting native warm season grasses for forage. We have known for years that switchgrass and other native warm season grasses are extremely productive, good quality when harvested at the right stage, and long-lived. The one limitation to switchgrass is that in rare cases it can cause liver damage to horses (no problem for cattle). Therefore, big bluestem would be a better choice for the horse hay market. Eastern gamagrass has shown to be a high quality, palatable pasture crop. Indian grass has excellent late season productivity. A stand of any of these species will provide high forage production during our normal summer slump period for your livestock and as the biomass market develops you can determine if it makes sense to sell your product into that market. Fortunately, all of these grasses have nearly equivalent BTU's per ton when burned for electricity and likely have similar cellulosic ethanol yields.

## UPCOMING EVENTS

JUN 12	UK Farm Field Day, Spindletop Farm, Lexington
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

### 2009

FEB 19	29 <sup>th</sup> Kentucky Alfalfa Conference, Cave City Convention Center
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