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Forage News [2006-05]

University of Kentucky Department of Plant and Soil Sciences

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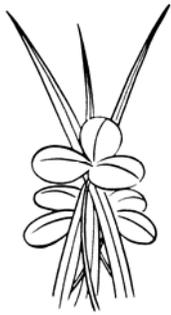


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FORAGE NEWS

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MAY 2006

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

BARREN COUNTY CONTINUED AS CATTLE CAPITAL OF KENTUCKY

Barren County continued to have the largest number of cattle in Kentucky with 89,000 head on January 1, 2006. Warren was second with 68,500 head while Pulaski was third with 67,100 head. Kentucky ranked 11th in the nation with 2.40 million head, 7 percent above the previous year. All cattle and calves in the U.S. totaled 97.1 million head, up 2 percent from a year earlier. Texas had the largest cattle herd with 14.1 million head. Kansas, Nebraska, California and Oklahoma had cattle inventories of 5.00 million head or more on January 1, 2006.

Barren County also had the largest beef cow inventory in Kentucky with 37,100 head on January 1, 2006. Other top counties included Pulaski with 32,300 head, Warren with 31,900 head, Madison with 25,000 head and Breckinridge with 24,200 head. Kentucky ranked 8th in the U.S. with 1.13 million head, the largest beef cow herd east of the Mississippi River. There were 33.3 million beef cows in the U.S., up 1 percent from January 1, 2005. Texas had 5.48 million beef cows, the largest inventory in the U.S. Other leading states included Missouri, Oklahoma, Nebraska and South Dakota. (SOURCE: Kentucky Agri-News, Vol. 25, Issue 6, March 2006)

STORING ALFALFA AS ROUND BALE SILAGE: FREQUENTLY ASKED QUESTIONS

Hay is the most popular method for storing alfalfa because it stores well for long periods and is better suited to cash sale and transportation than silage. However, many producers have recognized the potential of baled silage to reduce the losses associated with harvesting and storing forage as compared to conventional hay making methods (Table 1). Hopefully, the answers to these most commonly asked questions will improve your odds of success when making high quality round bale silage using long (unchopped) alfalfa crops.

Activity	Hay	Silage
Field Curing	25%	6%
Harvesting	15%	6%
Storage	35%	5%
Feeding	30%	8%

- 1) **What will I need?---** The minimum requirements are a mower, rake, baler, tractor of sufficient horsepower to make and carry silage bales safely, bale handling equipment, and a wrapper.
- 2) **What should I use to mow?---** Many mower types can be used to successfully, however, mower-conditioners are the most popular and easiest to use for baled silage. This is mainly

- due to faster wilting and evenly formed swaths. Raking can be avoided if a narrow swath is formed.
- 3) **When do I cut?---** For good yields and optimum quality, legumes should be cut at one quarter bloom and grasses at the late boot stage. Small grain crops should be cut just before the boot stage for best results.
 - 4) **When should I bale?---** The optimum moisture range for baled silage is 50-65%. Forage containing less than 40% or above 65% moistures should not be baled for silage in order to avoid excessive molding or spoilage.
 - 5) **How should I make the bales?---** Make bales tight and uniform. Plastic twine is recommended, but net-wrap or non-treated sisal twine can be used. Oils and rodenticides in treated twine often degrade the plastic film and can result in large storage losses.
 - 6) **How soon should I wrap the bales?---** Time between baling and wrapping should be as short as possible (<8 hrs). Delays (>8 hrs) may lower forage quality due to microbial activity and excessive heating while the bale is exposed to oxygen.
 - 7) **Where should I wrap?---** Wrap bales at the storage site to avoid unnecessary handling and the risk of damaging the plastic film. All tears and small holes in the bale's plastic should be repaired immediately with tape treated with UV inhibitor.
 - 8) **What kind of plastic film should be used?---** White plastic film containing UV inhibitor is recommended in Kentucky.
 - 9) **How much plastic needs to be applied?---** A minimum of four layers of plastic film should be applied to each bale to seal off oxygen and allow bales to vent off excess carbon dioxide as fermentation begins.
 - 10) **Is baled silage higher in quality?---** The feed value of baled silage will be no better than the quality of the forage at the beginning, and can be worse if the bale was too wet and/or spoilage has occurred.

Summary

Round bale silage offers a convenient and inexpensive way for Kentucky farmers to salvage their high quality alfalfa crops that might otherwise be lost due to poor hay curing conditions and reduce leaf losses associated with tedding, raking, baling, storing and feeding of hay. (Dr. David C. Ditsch and Dennis Hancock, University of Kentucky)

COWPEA APHID IN KENTUCKY ALFALFA

Light green pea aphids are relatively common in Kentucky alfalfa fields each spring, especially following relatively mild winters. However, alfalfa samples received this week (3/13) from Logan and Barren counties contained large numbers of very dark aphids covering plant stems and tips. They appear to be the cowpea aphid (*Aphis craccivora*), a sap feeding insect that is known to occur in at least 28 scattered states over the US and into Canada.

The relatively small cowpea aphid is easy to recognize, it is the only black aphid found infesting alfalfa. Winged or wingless adults are usually shiny black, while the smaller nymphs are dull gray to black. The first half of the antennae is white, and the legs are usually a creamy white color with blackish tips. They can be seen lining the stems or clustered in the expanding tip foliage. While the pea aphid is a sap feeder that causes little damage to healthy, growing alfalfa, the cowpea aphid poses a serious threat. The latter aphid injects a powerful toxin into the plant while feeding. If enough aphids are present, plants can be stunted or killed. Also, in contrast to the pea aphid, the cowpea aphid produces a lot of liquid waste "honeydew" that makes plants shiny and sticky and can support the growth of sooty mold. The black sooty mold reduces photosynthesis and may make leaves unpalatable to livestock. The honeydew also makes the alfalfa sticky, which causes problems with harvest.

There are no guidelines or economic threshold levels for the cowpea aphid in alfalfa. However, these guidelines provide some measure for a decision – Alfalfa under 10 inches - 50+ per stem; 10 to 20 inches tall - 100 per stem. If alfalfa that has broken dormancy is not growing properly – yellowing and stunting apparent - and cowpea aphids are present, then control measures probably are warranted. Consider the weather forecast in making management decisions. Some sources show 46F as the development threshold, so at temperatures below that aphid growth should stop. Development is slow when it is cool, it takes about 22 days for a nymph to develop to the adult stage at 53F. This speeds up to 5 days at 83F.

Control with insecticides should not be a problem. Field trials in other states have shown the pyrethroids (Warrior, Ambush, Baythroid, etc) and Furan to provide excellent control with good residual activity. Since these insects are sap feeders, control will come from direct contact with spray droplets, or as the aphids crawl over treated foliage. Again, consider temperature when planning insecticide applications. In general, pyrethroid insecticides perform better at cooler temperatures than organophosphate or carbamate insecticides. The cowpea aphid has an extensive host range with a marked preference for legumes. It infests many other crops and weeds including apple, carrot, cotton, cowpea, dandelion, dock, goldenrod, kidney bean, lambsquarters, lettuce, lima bean, pinto bean, peanut, pepperweed, pigweed, red clover, shepherds purse, vetch, wheat, white sweet clover, and yellow sweet clover. If cowpea aphid infestations are light to moderate, natural enemies will begin to appear and aid in natural control of the insect. Since this is a new pest on Kentucky alfalfa, reports of field infestations will be greatly appreciated. Please send a brief description of infestations that you find to Lee.Townsend@uky.edu. Information on field location and size, alfalfa height, estimated aphid number per stem, and extent of infestation – scattered, entire field, etc. would be helpful. (Dr. Lee Townsend, UK Extension Entomologist)

DISK VS. SICKLE CUTTERBAR MOWERS

Advantages of Disk Mowers

- Faster ground speed – more productive
- Better cutting in down, tangled crops
- Better cutting of fine stem grasses
- Will cut through gopher mounds, ant hills
- Replacing knives simpler and faster
- No reel needed – fewer moving parts

Advantages of Sickle Cutterbar

- **Cost about 10 to 20% less per foot**
- **Requires about 50% less power per foot**
- **Open station tractors can be used**
- **Less streaking in light crops**
- **Lower repair costs if major obstruction hit**

Effect of mower type on alfalfa stand and yield		
	Average First Cut Yield (t/a)	Stand Persistence Plants per sq ft
Sickle Cutterbar	1.47	6.2
Disk Cutterbar	1.49	6.2

(SOURCE: Personal communication Dr. Dan Undersander, Extension Forage Specialist, University of Wisconsin)

ORGANIC HAY

There is a new opportunity to help other Kentucky farmers. Organic hay is in high demand by many farmers seeking organic certification. The new USDA organic standard requires all organic livestock to eat 100% organic feed. This is causing some Kentucky farmers to reach deep in their pocket books to pay high dollar freight to get feed from places as far away as Minnesota. With fuel prices rising and the number of Kentucky farmers seeking certification the demand is far greater than the supply and is projected to stay that way well into the future. For hay to be certified organic it must:

- be grown on land that has had no synthetic fertilizers, herbicides, or pesticides for the previous three years;
- the seed and inoculants must be free of treatments and GMO's;
- be processed and hauled with equipment that has been cleaned; and
- It must be certified by an accredited USDA agency such as the Kentucky Department of Agriculture.

If you have a farm and hay you would like to get certified organic or need more information, contact Jake Schmitz, Organic Program Coordinator for the Kentucky Department of Agriculture at 502 564-0290 ext.230, or by e-mailing, jake.schmitz@ky.gov. (Jake Schmitz)

UK BEEF/FORAGE FIELD DAY JUNE 15

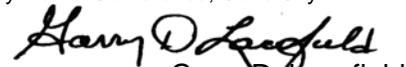
Make your plans now to attend UK's Beef/Forage Field Day at the Animal Research Center Farm in Woodford County. Registration starts at 2:00, tours start at 3:00, supper at 6:00, and exhibit viewing all afternoon. Come and learn about Optimizing Forage Management, Beef Production Research, Beef/Sheep Grazing and Swine Production/Environmental Stewardship. Details for tour stops are still being finalized, but highlights of the Optimizing Forage Management tour include: 1) Growing Corn for Grazing (Chad Lee), 2) Nitrogen Management in Pastures (Greg Schwab), 3) New Options in Pasture Weed Control (J.D. Green & Bill Witt), and 4) Successful Establishment of Legumes in Pastures (Ray Smith & Garry Lacefield).

LAST CHANCE!!!

If you don't want to miss an issue of Forage News, you need to submit your renewal NOW! **Beginning with the June issue**, we will send the newsletter only to those who have requested to stay on the mailing list. If you would like to continue receiving Forage News through the mail, just put your name and address on the form that was included with the March issue or a piece of paper and mail to: Forage News Update, Attn: Christi, P.O. Box 469, Princeton, KY 42445. If you would like to receive Forage News electronically, please send an e-mail message to Christi at cforstyth@uky.edu with the words "Forage News" in the subject line. If you are currently receiving Forage News electronically, you will continue to receive it unless you tell us otherwise.

UPCOMING EVENTS

JUN 15	Beef/Forage Field Day, UK Woodford County Farm, Versailles
SEP 12	KFGC Field Day, Dobbs Shady Meadow Farm, Campbell County
SEP 28	UK College of Ag Field Day, Robinson Station
NOV 21	Kentucky Grazing Conference, Lexington
DEC 10-13	Third National Conference on Grazing Lands, St. Louis, MO
2007	
JAN 11-13	KCA Annual Convention & Trade Show, Lexington
JAN 24-25	Heart of America Grazing Conference, Mount Vernon, IL
FEB 22	27 th Kentucky Alfalfa Conference, Cave City


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May 2006