March 2008

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

28th Alfalfa Conference: Success in Spite of Worst Ice Storm in Our 28 Years

Approximately 100 made it to the Cave City Convention Center February 21 for the 28th Kentucky Alfalfa Conference. Many of those who attended came the night before or arrived early before the worst ice storm in the 28 year history of the conference. Those present agreed it was one of, if not, our best conferences from the speakers and topics delivered throughout the day. Keynote speakers included: Dr. John Baylor, Professor Emeritus, Pennsylvania State University; Dr. Neal Martin, Director, Dairy Forage Research Center, Madison, Wisconsin; Dr. Gary Bates, University of Tennessee; and Mr. Ron Tombaugh, President of the National Hay Association. Alfalfa and Hay Awards were presented as well as having one of our largest Silent Auctions. Over eighty percent of our exhibitors were able to make it and have their booths ready when we started. My THANKS to all who truly went the extra ICY mile to attend, participate and support financially.

Alfalfa Awards

The 28th Kentucky Alfalfa Conference presented the state’s highest alfalfa recognition during the awards ceremony at the Cave City Convention Center February 21st. Awards are presented in three categories. Our 2008 recipients are:

- Charles Schnitzler Producer Award – Mr. Clayton Geralds
- Warren Thompson Industry Award – Mr. Mike Phillips
- Garry Lacefield Public Service Award – Dr. John Baylor

CONGRATULATIONS Clayton, Mike and John.

Alfalfa Hay Contest Awards

Top alfalfa hay quality awards were presented at the 28th Kentucky Alfalfa Conference in Cave City February 28, 2008. Awards are presented for highest quality sampled during each month of the growing season in both alfalfa-grass and alfalfa categories.

<table>
<thead>
<tr>
<th>Month</th>
<th>Alfalfa-Grass</th>
<th>Alfalfa</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>Debi Davis</td>
<td>John McCoy</td>
</tr>
<tr>
<td>June</td>
<td>Charles Powell</td>
<td>David Glover</td>
</tr>
<tr>
<td>July</td>
<td>Steve Farmer</td>
<td>George Eckler</td>
</tr>
<tr>
<td>August</td>
<td>Joe Hobbs</td>
<td>George Eckler</td>
</tr>
<tr>
<td>September</td>
<td>Terry Radar</td>
<td>John McCoy</td>
</tr>
</tbody>
</table>

Best Overall - 2007 Champion Alfalfa Hay

George Eckler

Congratulations to all winners for demonstrating the Art and Science of Quality Alfalfa Hay Production.

My thanks to Commissioner Richie Farmer, Mac Stone, Kim Field and all the fine staff at the Kentucky Department of Agriculture Hay Testing Program for sponsoring this event and analyzing all our samples.

2007 Hay Summary

Alfalfa hay production was estimated at 540,000 tons, down 48 percent from a year earlier. Other hay production was estimated at 3.60 million tons, down 32 percent from the 2006 crop. Combined acreage cut for hay totaled 2.70 million acres, the largest on record. Farmers cut as many acres of alfalfa and other hay as they could to produce hay supplies to winter their cattle. A hard freeze Easter Sunday killed almost all first cutting alfalfa and a very dry summer limited alfalfa and other hay yields. (SOURCE: Kentucky Agri-News, Vol. 27, Issue 2, January 2008)

Value and Amount of Nitrogen Fixed by Various Legumes

<table>
<thead>
<tr>
<th>Crop</th>
<th>N fixed, lb/acre/year</th>
<th>N value, $/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa</td>
<td>150-250</td>
<td>68-113</td>
</tr>
<tr>
<td>Red clover</td>
<td>75-200</td>
<td>34-90</td>
</tr>
<tr>
<td>White clover</td>
<td>75-150</td>
<td>34-88</td>
</tr>
<tr>
<td>Vetch, lespedea, and other annual forage legumes</td>
<td>50-150</td>
<td>23-68</td>
</tr>
</tbody>
</table>

SOURCE: Adapted from Southern Forages 2007

Kentucky Farm Numbers and Livestock Operations

In 2007, there were 83,000 farms in Kentucky, 1,000 fewer farms than a year ago. A farm is defined as “any establishment from which $1,000 or more of agricultural products were sold or would normally be sold during the year”. Sales also include government payments. Farm numbers include properties with acres enrolled in the Conservation or Wetland Reserve government programs. Research and institutional farms are included in the farm definition. Kentucky was the fourth ranking state in the number of farms. Texas ranked first with 229,000. Missouri was second with 104,500, and third placed Iowa had 88,400. Kentucky farm numbers were further divided into 5 distinct sales categories: 51,000 had sales of $1,000-$9,999; $100,000-$249,999; 1,500 with sales of $250,000-$499,999; and 1,200 with sales of $500,000 or more. Total land in farms was 13.7 million acres, unchanged from 2006. Farmland represents 53.9 percent of Kentucky’s approximate 25.4 million total acres. The number of farms declined while land in farms remained constant resulting in the average farm size to increase by 2 to 165 acres.

The cattle and calf inventory for January 1, 2008 was estimated at 2.40 million head. Inventory was down 60,000 head from the 2.46 million for last year. This was due in large part to the hot, dry summer that reduced availability of pasture for grazing and reduced hay supplies going into winter. Steers and milk cow replacement heifers showed an increase in inventory, bulls remained equal to the previous year, while all of the other individual categories showed declines.

Cows and heifers that have calved were estimated at 1.25 million head, down 50,000 head from the 1.30 million for 2007. Beef cow inventory was estimated at 1.16 million head and milk cows were estimated at 91,000 head. Milk cow numbers in Kentucky continue to decline.

The 2007 calf crop was estimated at 1.11 million calves, a decrease of 20,000 from the previous year estimate. (SOURCE: Kentucky Agri-News, Vol. 27, Issue 4, February 2008)
**The Differences Among Hay Conditioners**

If you're in the market for a new hay cutting machine, here's a crash course from Dan Undersander, University of Wisconsin extension forage specialist, taken from his presentation at the National Alfalfa Symposium in early February. He discussed the available conditioning options and also talked about wide swaths, other haying equipment and ways to reduce ash content in forages.

"There are two major types of conditioners," he explained. One is a flail/impeller and the other uses rubber/steel rolls. "The big argument is over which is better. The impeller creates a stripping action; the rubber rolls create a crushing action. The impeller tends to have higher leaf losses and the roll may leave strips in the field if you have light crops."

Flails/impellers are "definitely better for grasses," he said. But for alfalfa, he would vote for conditioners with rubber rolls. Research shows that flail conditioners lose 2-4% more alfalfa dry matter than conditioners with rubber or steel rolls, Undersander said.

"But whether it's a flail or a roller, it's the adjustments that are so crucial. I've seen time and again where machines came from the dealer that had not been adjusted as they should have been. You should really take charge of that yourself and pay attention to it," he warned. Adjusting the amount of tension will depend on the amount of hay going through "and you will need to adjust that for each field."

The spacing of the rollers is another area that needs attention, he said. "Generally, the spacing should be about the thickness of a quarter. The easiest way to check that is to go into your kitchen and take a sheet of aluminum foil and roll it up into an inch roll. Then feed it through your mower-conditioner's rollers."

"Now, my safety people tell me I need to remind you to shut the mower off first," he said. "Then you put that roll through and look for thin spots (where clearance is more or less than a quarter)."

"We find that the real difference (between the two types of conditioners) is in the adjustments, the management of the machines. So either can do a good job in terms of drying rate."

For "more severe" conditioning, growers may want to research superconditioners or macerators, Undersander said. "The difference between the superconditioner and a regular conditioner is that the superconditioner completely crushes the alfalfa stems instead of simply breaking them in a few places." Superconditioners don't strip off the leaves, either.

"They really do work, but you have to decide how much you need that extra drying time. There have been numerous trials of these products and the superconditioner always did dry a little bit faster. In a day it made about seven to eight points of dry matter difference, so we're seeing maybe three to five hours difference in drying rate." Superconditioners can cost $15,000-20,000 more than regular conditioners, he added.

Macerators fracture hay stems, Undersander said. Hay is crushed first by two rotating rubber rollers, then by a set of steel serrated rollers, rotating at a slightly different speed. "In addition to smashing the whole stems, it just scrapes off the wax, really enhancing the drying rate." Developed at the U.S. Dairy Forage Research Center, Madison, WI, the macerator is being marketed by a Canadian company.

"The original model could pretty much get alfalfa hay dry in the Midwest in a day for haying. The challenge was, it was a very slow process. With the macerator that is on the market, we still have the problem that it is slower than our mowing and conditioning although we speeded up the haymaking by macerating less. The unit on the market does work, it's just important to remember that it doesn't macerate as much as the pilot unit did."

"It is an expensive unit, and we need to decide if we really need that three or four or five or six hours in terms of increased drying time over conditioning." (SOURCE: eHay Weekly, February 19, 2008)

**AFGC Issues Resolution on Forage Crop Production**

The American Forage and Grassland Council (AFGC) Board of Directors unanimously adopted a resolution supporting separate systems for efficient forage crop production at its January 31 meeting in Louisville, Kentucky. According to AFGC President Bill Tucker, Tucker Family Farms, Amherst, Virginia, the resolution supports the coexistence of both Genetically Modified Organism (GMO) and non-GMO (organic, natural, etc.) science based systems for the improved sustainability of the forage industry and society.

"AFGC is about advancing the use of forages as a resource and promoting both economical and environmental production practices," said Tucker. "The industry is developing both GMO and non-GMO solutions, and the decision to utilize one system or the other is based on a variety of personal, economic and marketing reasons."

He continued, "As an organization, AFGC believes that science is the key and that we need to do what we can to support those who work with GMO's, as well as those who favor non-GMO approaches to production. After all, our common goal is advancing the use of forage as a prime resource for everyone's benefit."

A complete copy of the AFGC Genetically Modified Organism (GMO) Resolution is attached to this e-mail.

Additionally, the Department of Agriculture is accepting comments to its "Environmental Impact Statement: Determination of Regulated Status of Alfalfa Genetically Engineered for Tolerance to the Herbicide Glyphosate" through February 6. AFGC encourages its members to comment by visiting http://www.regulations.gov/fdmspublic/component/main?main=Docket Details&d=APHIS-2007-0044.

**Symposium to Examine Energy Potential of Forage Crops**

The buzz these days is all about ethanol. And the buzz when talking about ethanol production is often about corn. But University of Kentucky College of Agriculture researchers have been studying the use of other biomass crops to produce energy. They will share their information March 13 at the Maysville Community and Technical College in a public symposium titled, "Ethanol from Hay and other Biomass Crops: Do They Make Sense for Northeastern Kentucky?"

The term biomass refers to renewable crops that are used for fuel. Often people refer to grain crops in that context. However, Ray Smith, UK forage extension specialist and one of the organizers of the half-day conference, said the focus of these talks will be on the use of forage crops and crop residues to produce ethanol and electricity.

"We've got a major project that's been started through funding with the ag development board to look at the potential for biomass crops," he said. "So we're working with 20 farmers in northeast Kentucky to plant switchgrass, a potential biofuels crop. But we realize there's a lot of general interest in what we're talking about as biomass crops and in this business of ethanol from cellulose."

For that reason, the organizers decided to have a seminar that would not only include those 20 producers in the research project, but also anyone from the general public who might be interested in the subject.

The free symposium begins at 8 a.m. and concludes at 12:45 p.m. It is not necessary to register in advance. Joining Smith as speakers are UK Hay Marketing Specialist Tom Keene, Biosystems and Agricultural Engineering Professor Mike Montross, Chad Lee, UK grain crops extension specialist and Scott Shearer, Department of Biosystems and Agricultural Engineering chair. Also included in the morning sessions will be John Seymour, co-owner of Roundstone Native Seed, LLC, Jim Spinh, Spurlock manager of East Kentucky Power Cooperative and Mark Coffman, director of projects and engineering at Alltech Biotechnology.

Discussion topics will include:

° Establishment in Eastern Kentucky
° Storage, Processing and Transportation
° From Grass to Energy: Conversion
° Opportunities and Costs of Removing Crop Residue
° Utilization: Farm to Home and In-between
° Burning biomass for electricity: What are the chances?
° Rural Community Integrated Biorefinery

Smith said the intent is for people to leave the seminar with a greater understanding of the subject of bioenergy.

"I would hope that they will have a feel for not only the hype that it sounds great and it's going to change the world, but they'll also see realistic options for growing biomass crops in the short term and in the longer term," he said. "We're also hoping that students from nearby colleges and universities will come to gain a perspective of the whole emerging industry." (SOURCE: UK News Release, Feb. 20, 2008)

**Upcoming Events**

**MAR 13** Ethanol from Hay and Other Biomass Crops, Maysville Community & Technical College, Maysville
**JUN 12** UK Farm Field Day, Spindletop Farm, Lexington
**SEP 4** KFGC Field Day, Christian County
**OCT 23** 9th Kentucky Grazing Conference, Fayette County Extension Office, Lexington

Garry D. Lacefield
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