Forage News [2005-12]

Department of Plant and Soil Sciences, University of Kentucky

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DECEMBER 2005

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

Grazing Conference in Cave City

The Heart of America Grazing Conference set for January 25-26 at the Cave City Convention Center is rapidly approaching. Registrations are coming in from several states. We strongly encourage you to pre-register by filling out the application on the program flyer or going to our website at www.uky.edu/Ag/Forage and printing off a registration form. If you have any questions, contact Christi at 270-365-7541, Ext. 221 (cforsyth@uky.edu) or Garry Lacefield at 270-365-7541, Ext. 202 (glacefie@uky.edu).

Renew KFGC Membership

The Kentucky Forage and Grassland Council provides members with the national Forage Leader magazine, regular issues of Forage News, automatic membership in the American Forage and Grassland Council, and many other benefits. If you are a member of the Kentucky Forage and Grassland Council keep an eye out for your membership renewal in the mail. If you are not a KFGC member, or your membership has lapsed, we encourage you to go to the KFGC website and download the form or you can contact Ray Smith and he will mail you a form (859-257-3358 or raysmith1@uky.edu).

National Forage Meetings

Do you want to know more about forage production? Then mark your calendar for March 11-13, 2006 for the American Forage and Grassland Council annual meeting in San Antonio. At this meeting you will meet and interact with the leading forage producers, researchers, extension specialists, and industry personnel from around the country. See www.afgc.org for more details. If you can't make it to Texas, then join us for the AFGC meeting in Pennsylvania June 24-26, 2007. In 2008 we will host this meeting in Louisville January 26-February 1. AFGC 2008 will be combined with the annual Society of Range Management meeting and will be one of the major forage meetings this decade.

Still Room for Improvement

Recently as I visited around Lincoln County looking at calves consigned for our CPH 45 Feeder Calf sales, I saw some great forage production and management. I saw feeder calves grazing alfalfa orchardgrass in a rotational system. I saw calves enjoying round bale alfalfa-grass silage on a well constructed and maintained feeding pad. I saw calves gaining well on stockpiled fescue. I saw dairy cows grazing lush rye/ryegrass pastures. I saw several hay barns and a lot of plastic wrapped round bales for silage, thanks to the Phase I cost share dollars.

My thoughts were that we have come so far and are making great strides in improving our forage production and management. That thought is a reality as it is true that we are making great improvements with forage management but, I have to share that on my drive I saw cattle standing up in a round bale of fescue hay that had new green grass growth on top of the bale. I saw pastures grazed into the dirt. I saw fields of mature fescue, sage grass, and weeds. This made me realize that our job is never done.

We have made great improvements but there is much more need for on going educational programs, research and promotional activities to help farmers improve forage production and utilization. Extension and industry have so much information that farmers can use to manage forages in a more profitable way. We must continue with our efforts of getting information and recommendations to farmers and industry.

I believe that membership in Kentucky Forage and Grassland Council is a great way for everyone to learn about forage improvement. For a small dues fee of $20, you can get many benefits as the membership entitles you to a book of discount coupons on forage products, membership in both the Kentucky and American Forage and Grassland Council, a subscription to the “Forage Leader” magazine, periodic newsletters and mailing from KFGC and U.K. Forage Extension, and opportunities to participate in several conferences and events to learn how to improve forage production and utilization. I encourage you to get involved today in an organization that is dedicated to helping improve forages in Kentucky. I hope you will mail your $20 check for dues today to KFGC, Byron B. Sleugh, Western Kentucky University, 1906 College Heights Blvd. #41066, Bowling Green, KY 42101-1066.

Remember better forages equal better profits! (Dan Grigson, Lincoln County Extension Agent for Agriculture and Natural Resources)
Stockpiling forages may be beneficial to cattle producers in the southeastern United States by reducing winter feed costs and lowering the amount of harvested forage needed during the winter months. Stockpiling is the accumulation of available forage produced during late summer and early fall and grazing the surplus in late fall to early winter. Tall fescue is well adapted for this type of grazing practice because of its high autumn production, and the ability to resist deterioration during the winter months. However, the optimum proportion of acreage to stockpile has not been determined for fall-calving cows. Therefore, our research compared different proportions of acreage to stockpile consisting of no stockpiling, 33% of the acres stockpiled, and 50% of the acres stockpiled at a stocking rate of one cow/2.4 acres across all treatments. It appeared that stockpiling 50% of total fescue acreage might be excessive for fall-calving cows because of greater weight loss prior to grazing the stockpiled acreage and lower daily gains by their calves. The most beneficial proportion appeared to be 33%. Calf gains tended to be improved without substantial differences for cow weight or body condition, thereby demonstrating that the proportion of acreage to stockpile may impact performance of fall-calving cows. (SOURCE: J. D. Caldwell, K. P. Coffey, W. K. Coblenz, R. K. Ogden, J. A. Jennings, T. F. Smith, and D. S. Hubbell, IllI, IN AFGC Forage Progress, Vol. 3, October 2005, p. 2)

**EFFECT OF MATURITY ON QUALITY OF VARIOUS SMALL GRAINS**

<table>
<thead>
<tr>
<th>Species</th>
<th>Boot</th>
<th>Headed</th>
<th>Bloom</th>
<th>Seed</th>
<th>Milk</th>
<th>Dough</th>
<th>½ Crude Protein %</th>
<th>Total Digestible Nutrients %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rye</td>
<td>13</td>
<td>11</td>
<td>9</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triticale</td>
<td>11</td>
<td>9</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oat</td>
<td>12</td>
<td>10</td>
<td>9</td>
<td>9</td>
<td>8</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


**EFFECT OF N PRICES ON FERTILIZATION OF COOL-SEASON GRASSES**

A few years ago I reported some research data that showed economic nitrogen application rates for several cool-season forages. This analysis was based on a hay value of $80 per ton and $0.25 per pound of N. Today, some of you may be getting more for your hay but I'm certain all of you are paying more for your N. So what is the economically optimum N rate with higher costs and possibly higher hay values if all other variable costs remain constant? These questions can be answered by referring to the table below. If hay is selling for $80/ton and the price of N is $3.00/lb, then applying up to 46 lb of N for every expected ton of yield is profitable. Anything over 46 lb will cost more than can be recouped with increase yield. In other words, you are making money by applying up to 46 lb N but will be losing money at 47 lb N per ton of expected yield.

When hay is selling for $120/ton and the price of N is $0.30/lb, then 51 lb of N per ton of expected yield is the most that can be applied before losing money. Economically optimum nitrogen rate per ton of expected orchardgrass, tall fescue and timothy dry matter yield at 3 hay and 3 nitrogen prices. Values to calculate these rates are the means of a 3X and 4X harvest per year over a 3 year period.

<table>
<thead>
<tr>
<th>Crop</th>
<th>N fixed, lb/Ayr</th>
<th>N value, $/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25¢/lb</td>
<td>35¢/lb</td>
</tr>
<tr>
<td>Alfalfa</td>
<td>150-250</td>
<td>38-63</td>
</tr>
<tr>
<td>Red clover</td>
<td>75-200</td>
<td>19-50</td>
</tr>
<tr>
<td>White clover</td>
<td>75-150</td>
<td>19-38</td>
</tr>
<tr>
<td>Vetch, lespedeza, and other annual forage legumes</td>
<td>50-150</td>
<td>13-38</td>
</tr>
</tbody>
</table>


As price of nitrogen increases the economically optimum rate of N decreases but not as much as you might expect. Notice that a $40/ton increase in hay value compensates for a $0.20/lb increase in N price in that both have the same optimum N rates. Accurate estimates of expected hay yields are extremely important in determining how much N to apply. Over application of N fertilizer can increase the risk of nitrate leaching through the soil profile (wasted money and environmental risk) and nitrate accumulation in the plant which increases the risk of nitrate poisoning in consuming animals. (SOURCE: Marvin Hall, Pennsylvania State University)

**VALUE AND AMOUNT OF NITROGEN FIXED BY VARIOUS LEGUMES**

<table>
<thead>
<tr>
<th>Crop</th>
<th>$60/ton of hay</th>
<th>$100/ton of hay</th>
<th>$120/ton of hay</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.30</td>
<td>0.40</td>
<td>0.50</td>
</tr>
<tr>
<td>Orchardgrass</td>
<td>46</td>
<td>43</td>
<td>40</td>
</tr>
<tr>
<td>Tall Fescue</td>
<td>65</td>
<td>56</td>
<td>48</td>
</tr>
<tr>
<td>Timothy</td>
<td>45</td>
<td>41</td>
<td>38</td>
</tr>
</tbody>
</table>

Hall et al., Penn State University

**REFLECTIONS: 2005**

Usually in this column, I try to pass on some new information or new trends concerning the hay industry and how it might affect Kentucky hay producers. However, when it comes to December, I always get caught up in the “Season”.

But suffice it to say, we still live in the greatest country on earth and our ability to comfort and support our fellow neighbors and families was all too apparent this year with the hurricanes in the South. And even though our crops may not have produced as we would have liked them too, counting our blessings seems like a pretty good thing to do this time of year.

I hope that each and everyone one of you enjoy the Holiday Season, friends and family and next month, we’ll get back to discussing hay and hay issues.

Lots of excellent meetings are on the horizon for the New Year. Please see the list at the end of this publication and also at www.uky.edu/Af/Forage. (Tom Keene, UK Hay Marketing Specialist)

**UPCOMING EVENTS**

JAN 13 | Forages at KCA, Executive Inn, Owensboro
JAN 13-14 | Kentucky Cattleman Association Convention, Executive Inn, Owensboro
JAN 25-26 | Heart of America Grazing Conference, Cave City Convention Center, Cave City
FEB 23 | 26th Kentucky Alfalfa Conference, Fayette County Extension Office, Lexington
MAR 10-14 | American Forage & Grassland Council, San Antonio, TX

Happy Holidays!

Garry D. Lacefield
Extension Forage Specialist
December 2005