January 2003

Garry D. Lacefield and Jimmy C. Henning, Extension Forage Specialists • Christi Forsythe, Secretary

HAPPY NEW YEAR!!!

I hope your New Year is off to a great start. Let’s do everything we can to make 2003 our best year yet.

Our New Year will get off to a great Forage start when we all gather in Bowling Green on Friday, January 10. This makes our 8th consecutive year we have had a Forage Conference to open the KCA Convention. Our committee has put together a very fast paced, practical program (Figure 1) with information that will be of interest to all who attend.

Our program begins at 9:20 with a welcome. At 9:30, Dr. Jimmy Henning, Extension Forage Specialist with the University of Kentucky, will speak on the topic “What we know and what we need to know about Tall Fescue-Endophyte-Animal Relations”. Dr. Henning will update us on latest developments on Tall Fescue and the Endophyte including: Max Q, ArkPlus, Mare Reproductive Loss Syndrome, and alkaloids.

The next speaker on the program will be Dr. Monroe Rasnake, Extension Soils Specialist, University of Kentucky. Dr. Rasnake will cover the important topic of “Pasture Fertility: Principles and Practices”. Dr. Rasnake will discuss pasture fertility status, share some results of a recent state forage survey, and discuss economic pasture fertility strategies along with the use of poultry litter as a fertilizer source.

The final presentation of the morning will be on “Using legumes to RENEW drought damaged pastures. This presentation will discuss the impact of the drought of 2002 on pasture legumes, value of legumes in Kentucky pastures and techniques to add legumes to grass dominant pastures.

A complete proceedings of all presentations will be provided free of charge, along with other publications, variety trial results and information on other forage-livestock programs.

There is no charge for attending the Forage at KCA program. The Forage Program will conclude at 11:00 allowing ample time to visit the KCA trade show before the KCA opening luncheon.

See you at the Convention Center in Bowling Green at 9:20 on January 10.

REGIONAL GRAZING CONFERENCE COMING TO HANNIBAL, MISSOURI

Farmers and ranchers from several Midwestern states will meet in Hannibal January 22-23 for the Heart of America Grazing Conference.

Illinois, Missouri, Indiana, Ohio and Kentucky host the annual conference on a rotating basis. This year’s conference will feature some of the top researchers in the field. The keynote speaker during the January 22 banquet will be Ed Vollborn, of Hidden Valley Ranch in Bidwell, Ohio. His address will be “Saving the Family Farm through Year-Round Grazing – The Bob Evans Philosophy.”

Other general-session speakers include Jim Gerrish, research assistant professor at the University of Missouri Forage Systems Research Center in Linneus, Missouri; Ed Ballard, University of Illinois Extension Service; Ed Rayburn, West Virginia University; and Fred Provenza, Utah State University.

There also will be four break-out sessions on January 23 that will focus on beef, dairy, horses, and sheep and goats. Participants will have the opportunity to attend two of the four breakout sessions.

The conference will be at the Hannibal Inn, Highway 61 and Market Street. A block of rooms is reserved, with prices ranging from $50-70. Conference registration is $40, which includes meals. Participants also may choose to attend one day only ($15 for January 22 and $25 for January 23). For information about advance registration, contact Melodie Marshall by phone (573-364-8732) or by e-mail (mel.marshall@mo.usda.gov). Registration also will be available at the door.

OOPS!!!

We apologize for the error that occurred in the table on storage losses last month. Below is the corrected table.

<table>
<thead>
<tr>
<th>DM Loss</th>
<th>5' diameter bale</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>1.5</td>
</tr>
<tr>
<td>20%</td>
<td>3.2</td>
</tr>
<tr>
<td>50%</td>
<td>5.0</td>
</tr>
<tr>
<td>70%</td>
<td>9.0</td>
</tr>
</tbody>
</table>

ORGANIC AGRICULTURE DEPENDS ON INORGANIC NUTRIENTS

Organic agriculture is expanding and receiving increased public attention. The “USDA Organic” label came into effect on October 21 of 2002. Organic food sales in North America total about 10 billion dollars annually – almost 2% of the total food. This expansion raises a question: Are there sufficient nutrients for organic agriculture?
Organic standards require nutrients to be chiefly from organic sources, such as manures and composts, and preferably generated on-farm. The major certifying bodies exclude use of the synthetic and soluble forms of nitrogen and phosphorus fertilizers that transformed agriculture beginning in the 19th century. They differ on allowable forms of potassium fertilizers.

Sole reliance on nutrients generated on-farm limits productivity, even if all products remain on the farm. Soil reserves of plant-available phosphorus and potassium are finite. And only certain crops – legumes such as alfalfa, clovers, and soybeans – can contribute nitrogen to the system by fixing some or all of their needed nitrogen. There are organic farms that produce good yields per acre, but in order to do so sustainably, they have to bring in nutrients from off the farm. A recent study in the northeast Great Plains, for example, found crops produced organically to yield only 44 to 75% of those produced conventionally. The study concluded that low levels of phosphorus and sulfur in the soil not only limited yield, but also could limit nitrogen fixation by legumes.

As long as the percentage of the land area farmed organically remains small, supply of organic nutrients from neighboring farms won’t be a problem. Composts, crop residues, and animal manures all contain nutrients derived in part from commercial fertilizer nutrients, either directly applied or applied in other places at some time in the past. And even after many years of transition to organic farming, soils still contain phosphorus and potassium built up by commercial fertilizer use. So organic farmers, too, benefit from North America’s long history of applying commercial fertilizer nutrients.

Commercial fertilizers supply nutrients in the inorganic form – the form that plants actually absorb – to boost the growth of plants. Plants are the only original producers of the organic materials that structure and cover the soil and feed its organisms. So inorganic nutrients are vital to the biology and health of the soil ecosystem.

Across North America, crops currently remove about 77% of the nitrogen supplied in fertilizers, recoverable from manures, and fixed by legumes. The figure for phosphorus is about 95%. Some losses occur, but growers have made progress over the past two or three decades in reducing them. Soil potassium, however, is currently being depleted. Crops remove about 44% more K than is supplied in fertilizers.

Part of the appeal of organic food is its perceived healthfulness and nutritional quality. Such qualities, however, are not related to the form – organic or inorganic – of nutrients applied, but do depend on the relative amounts applied. For example, it has long been known that nitrogen can boost carotene, but reduces vitamin C. Potassium boosts lycopene in tomatoes and isoflavones in soybeans. Applying the right rates of soluble inorganic nutrients contributes a lot toward the goal of producing healthy food.

Commercial fertilizer nutrients have played a large role in the success of today’s farms – directly with those that apply them, and indirectly with the few that don’t. All of agriculture should be oriented toward producing healthy food – not just a few on the fringe. (It is the inorganic nutrients taken up by plants that produce healthy food, regardless of the source). The Earth’s large reserves of inorganic nutrients can help sustain an agriculture that produces abundant food that is as healthy and as environmentally benign as those who purchase “organic” want it to be. (SOURCE: Tom Bruulsema and Adrian Johnston, PPI News Release, December 1, 2002)

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**23rd Alfalfa Conference Set for February 20**

The 23rd Annual Kentucky Alfalfa Conference will be held February 20, 2003 at the "newly remodeled" Cave City Convention Center. The expanded space will permit more exhibits and breakout sessions in the afternoon. World renowned alfalfa breeder, Dr. Jim Moutray, will be our keynote speaker along with Mr. Alfalfa, Mr. Warren Thompson. In addition, the 23rd Conference will feature our own Jason Sandefur, who is the current National Forage Spokesman. Other speakers include specialist from the University of Kentucky and Kentucky Department of Agriculture personnel. Alfalfa Awards will be presented at lunch. In addition, we will recognize 2002 Hay Award Winners. There will also be an expanded Silent Auction at this year's conference.

8:00 Registration, Visit Exhibits, Silent Auction
8:45 Welcome – Dr. Mike Barrett
8:50 Alfalfa Quality: What is it? – Dr. Garry Lacefield
9:20 Advances in Developing BETTER Alfalfa Varieties – Dr. Jim Moutray
10:00 Break
10:30 Alfalfa for Summer Grazing – Mr. Jason Sandefur
11:00 Alfalfa: Queen of the Forage Crops – Reflections After Sixty Years Experience – Mr. Warren Thompson
11:30 Alfalfa Hay and MRLS: What we Know After One Year of Testing – Dr. Jimmy Henning
12:00 Lunch, Hay Awards, Visit Exhibits, Silent Auction
1:00 Alfalfa Awards and Silent Auction Results
1:15 Breakout Sessions:
   1. Weed & Disease Management – Dr. Paul Vincelli & Dr. J.D. Green
   2. Alfalfa Haylage & Silage – Dr. Mike Collins
2:00 Break
2:15 Repeat Breakout Sessions
3:00 Adjourn

**Upcoming Events**

**11:00 Alfalfa: Queen of the Forage Crops – Reflections After Sixty Years Experience – Mr. Warren Thompson**

1. Weed & Disease Management – Dr. Paul Vincelli & Dr. J.D. Green
2. Alfalfa Haylage & Silage – Dr. Mike Collins

2:00 Break
2:15 Repeat Breakout Sessions
3:00 Adjourn

**Upcoming Events**

**JAN 10** Forages Conference at Kentucky Cattleman Convention, Bowling Green
**JAN 23** Heart of America Grazing Conference, Hannibal, Missouri
**FEB 20** 23rd Kentucky Alfalfa Conference, Cave City
**MAR 11** Central Kentucky Alfalfa Conference, Lexington
**APR 22-23** Kentucky Grazing School, Bowling Green
**JUN 12** UK Agronomy Field Day, Lexington
**JUL 17** UK All Commodity Field Day, Robinson Station, Quicksand
**JUL 24** South Central Kentucky Agriculture Field Day, Bowling Green

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