



FORAGE NEWS

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JULY 2005

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U.K. ALL COMMODITY FIELD DAY TO BE HELD IN PRINCETON JULY 28

The University of Kentucky All Commodity Field Day will be **July 28** at the **University of Kentucky Research & Education Center in Princeton**. This Field Day truly has something for everyone including agricultural tours, youth activities, family and consumer sciences activities and educational exhibits.

The field day will begin at 7:30 under the big tent with registration. Registration will continue until 10:00. Dr. Scott Smith, Dean, College of Agriculture, will welcome field day participants at 8:00.

Tours will begin at 8:30 and run continuously until 3:00. No tours will depart after 2:30. Tours have been expanded with a record eighteen (18) different tours running continuously throughout the day. There will be wagon, bus, and walking tours. Back by popular demand is the Station Overview Tour which has attracted the highest number of participants over the years. The Overview Tour is a one hour and fifteen minute tour of research and extension activities at the station with guides discussing points of interest along the way.

In addition to the Overview Tour there will be seventeen other tours including: Protecting Water Quality, Farm Security, Beef Cattle, Tobacco, Forage, Weed Management, Corn and Soybean, Soil Fertility and Tillage, Soybean Rust, Soils Lab, Orchard/Vineyard, Small Fruit and Ornamentals, Vegetable Crops, Nursery Grown Maples and Fruit Tree Weed Control, Biosystems and Agricultural Engineering, Precision Agriculture, and Handling Atrazine in the Field and Proper Disposal of Containers.

There will be a Youth Activities Tent with many agricultural-related (fun) activities for the youngsters. Family and Consumer Sciences have expanded their program with activities at the UKREC Main Building. In addition, there will be over twenty displays and exhibits in the main building.

There will be over forty educational exhibits in the Exhibit/Display Tent. Exhibits will be open throughout the day with representatives at each booth to visit and discuss items of interest.

Lunch can be purchased under the big tent from various Kentucky producer organizations.

In addition to many exhibits covering topics on beef and forage, we will offer tours with four stops each running throughout the day. Tour topics and speakers include:

Forage Tour

Impact of Herbicides on Clover Establishment – Mr. Don Breeden

Evaluating Alfalfa and Clover Varieties – Dr. Ray Smith

Advances in Tall Fescue Varieties – Dr. Tim Phillips

Marketing Kentucky Hay – Mr. Tom Keene

Beef Tour

Shortening the Calving Season – Dr. Les Anderson

Fall versus Spring Calving – Mr. Kevin Laurent, Mr. Jim Randolph

Forage Systems for Beef Cows – Dr. Roy Burris

Minerals and Additives in Free-Choice Supplements – Dr. John Johns

For a complete program with more details, contact Christi Forsythe at 270-365-7541, X221 or visit our website at <http://www.uky.edu/Ag/Forage>.

WKU WINS AFGC GRASSLAND EVALUATION CONTEST

The WKU Forage Team won the AFGC Grassland Contest and were 2nd in the AFGC Forage Quiz Bowl at the National Conference held in Bloomington, IL in June. Team members were: Susan Priddy, Matt Futrell, Adam Massey and Cris Davis. The team is coached by Drs. Byron Sleugh, Becky Gilfillen and Nevil Speer.

CONGRATULATIONS WKU Forage Team.

KENTUCKIAN'S FAIR WELL AT AFGC

Kentucky was well represented at the recent American Forage and Grassland Council's annual meeting in Bloomington, IL June 11-15. KFGC members won three of the ten major AFGC awards. Russell Hackley, a producer from Clarkson, KY, won the Distinguished Grasslander award for his leadership within the forage and cattle industry in Kentucky and his innovation farming practices. Syngenta Seed's Phil Howell was a Merit Award winner based on his leadership within KFGC and other organizations and his commitment to serving Kentucky producers. Ray Smith, UK Forage Extension Specialist, was also a Merit Award winner based on his leadership and professional accomplishments over the last 20 years.

Kentuckians can also take pride in producer Steve Meredith's 2nd place finish in the Forage Spokesperson contest, where the top two competitors were virtually tied in every category.

USING POULTRY LITTER ON PASTURES

Poultry litter contains relatively large amounts of nutrients that can be beneficial to pasture fields in Kentucky. For example, fresh broiler litter normally will contain about 55 pounds per ton of nitrogen and phosphate and 45 pounds of potash. It also contains significant amounts of most secondary and micronutrients that may be needed by pastures. On the receiving side, we know that half the pasture fields in Kentucky are low in phosphate and one-third are low in potash. Poultry litter can be an economical source of nutrients on these fields. Poultry litter can be applied on pastures at any time; however, late winter and fall are best for our cool season grass pastures. Application rates should be limited to four tons per acre or less. (*Monroe Rasnake*)

HAY MOISTURE METERS AND MORE

The month of July is in full swing and hopefully everyone was successful in getting first crop (even a second and third cutting of alfalfa) hay made this year. We had the best month of May in recent memory to make good hay. According to the UK weather website (www.wwwagwx.ca.uky.edu), we had a deficit of 2.66 inches of rain in May. The lack of rainfall should have made for some good opportunities to make some high quality hay although some yield may have suffered.

When trying to make that high quality hay, a useful tool that can help, is a moisture meter/tester(s) that is readily available for purchase. These meter/testers can be used either for hay in the windrow (although this is the least reliable method for determining moisture), in the baler itself or for the bales that have already come through the baler.

These units all come with detailed instructions and are fairly easy to use. And although they display a reasonably reliable moisture percentage, the most accurate method still remains by the microwave method. The problem with the microwave method is that it takes more time and is not near as convenient. You have to go to the field, collect the sample properly and then return either to the house or shop to utilize the microwave. Then you have to calculate the moisture. So many commercial hay producers rely on the portable testers. Factoring in their own experience and the readings on the testers, they do a very good job in accessing whether their hay is ready to bale or not.

Some brands of meters also have temperature readings on them. This feature is very useful for hay that is baled and stacked in the barn. If you were the least bit concerned about the moisture level of the hay going into the bale, those temperature readings can inform you if the hay is curing properly or if there will be some reduction in quality due to excessive heating in the bale during the curing process. And lastly, it may save your barn if temperatures climb too high and there is the possibility of spontaneous combustion. (*Tom Keene, U.K. Hay Marketing Specialist*)

DOES FERTILIZER HARM SOIL MICROBES?

Microbes in the soil are important to the nourishment of plants. Many of them facilitate the chemical conversions and physical transport needed to make nutrients available.

Some people claim that soil microbes should supply all the nutrients needed by plants. Some also claim that

applying soluble forms of plant nutrients harms the biology in the soil and reduces its capacity to make the native soil nutrients available. Let's look at the evidence.

The microbes that supply nitrogen are from two categories – symbiotic and free-living.

The symbiotic types are mainly rhizobial bacteria that infect the roots of legumes, such as alfalfa and soybeans. These bacteria supply the bulk of the nitrogen needs of legumes. However, even genetic engineering has not yet been able to coax the non-legume crops – corn, wheat, canola, potatoes, and many others – to fix nitrogen. Most crops depend on nitrogen applications in the form of fertilizer, manure, or organic materials.

The free-living bacteria in the soil supply some nitrogen as well, but the amounts are limited and are not influenced by fertilizer. A paper published in the journal *Nature* in 1998 compared nutrient dynamics in three Pennsylvania crop rotations: one fertilized, one manured, and one legume-based. The study found that the free-living bacteria supplied less than 5 pounds per acre per year, an amount that did not differ between the three rotations. No evidence of harm.

Microbes that help supply phosphorus form an association with plant roots. The association is called "mycorrhizae", a term that means "fungus-root". Fungi explore the soil better than roots, because their hyphae are narrower. They can bring phosphorus to the root from as far as 4 inches away.

Mycorrhizal fungi depend on the plant for energy in the form of sugar. It is well known that they are more active when phosphorus is deficient. But sugar used to feed the mycorrhizae yielded 14% less than when fertilized with phosphorus. The fertilizer – even though it was applied at twice the recommended rate – reduced the density of fungal hyphae by 24%, but certainly did not eliminate it. When soil test levels are low, phosphorus additions can actually increase mycorrhizal development.

Scientists have recently discovered that mycorrhizae produce a unique substance called glomalin. It may form as much as 30% of the organic matter in soil, and it seems to help maintain soil structure. Dr. Sara Wright, a noted expert on glomalin, recently stated that the best field-scale management for the production of glomalin is to "use minimal disturbance, add no more phosphorus than is required for crop production, and use cover crops." Soil microbes depend on plants for their nourishment. Fertilizers that nourish plants also nourish the biology of the soil. (*SOURCE: PPI Agri-Briefs, Spring 2004*)

UPCOMING EVENTS

JUL 28	UK All Commodity Field Day, Princeton
<u>2006</u>	
JAN 25-26	Heart of America Grazing Conference, Cave City Convention Center
FEB 23	26 th Kentucky Alfalfa Conference, Lexington



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