

FORAGE NEWS

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MARCH 2005

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

SPRING GRAZING SCHOOL

The Kentucky Spring Grazing School will be held at the Morehead State University Expo Center in Morehead, KY. The School will start at 8:00 a.m. EST on April 20 and conclude at 3:30 on April 21. The two-day school will feature classroom and field exercises.

Cost for the Grazing School is \$100.00 and includes Grazing notebook, handouts, refreshments, three meals and a copy of Southern Forages.

To register, make check payable to the Kentucky Forage & Grassland Council and send to Rebecca Smith, 400 W.P. Garrigus Building, Lexington, KY 40546-0215. For more information contact Dr. Donna Amaral-Phillips at 859-257-7542 (damaral@uky.edu)

ALFALFA AWARD WINNERS

The Kentucky Alfalfa Awards were presented at the 25th Kentucky Alfalfa Conference in Cave City on February 24. The 2005 Award recipients were:

Charlie Schnitzler Producer Award - Roy Reichenbach
Warren Thompson Industry Award - Barney Booher
Garry Lacefield Public Service Award - Ken Johnson

Congratulations Roy, Barney and Ken, we are very proud of and for you.

HAY CONTEST WINNERS

Congratulations to the following for winning awards for highest quality alfalfa and alfalfa-grass mixture during the 2004 growing season. Awards were presented during the 25th Kentucky Alfalfa Conference in Cave City on February 24.

2004 Alfalfa Hay Contest Winners		
	Alfalfa-Grass	Alfalfa
May	Matthew Glenn Farms	Cox Farms Inc.
June	Davis and Davis	Charles Powell
July	John Nowak	Bill Folz
August	John McCoy	Stanley Slinker
September	Mark Flynn	John McCoy

Mr. John McCoy from Bowling Green received the overall award for the highest analysis during the year. Congratulations to our winners.

My thanks to Commissioner Richie Farmer and all the staff within the Kentucky Department of Agriculture Hay Testing Program for sampling, testing and summarizing the data. My special thanks to John Mark Miller for his attention to details and professionalism in conducting the Hay Quality Contest.

NEW GRASS SEED DVD AVAILABLE

The Oregon Seed Industry has recently released a new DVD titled "Oregon Quality Grass Seed Production." This 13½ minute DVD illustrates why Oregon is the Grass Seed Capital of the World. Several scenes were filmed here in Kentucky this past spring. My thanks to Mark Eclov and Agricultural Communications for making this available for loan. If you wish to view a copy, contact Ag. Communications Services, Visual Media Library (859-257-7233) or on the web at http://www.ca.uky.edu/agc/faculty_staff the reference # is DAG-0027.

TOM KEENE JOINS UK FORAGE TEAM

Mr. Tom Keene has accepted the Hay Marketing Specialist position in the Department of Plant & Soil Science, College of Agriculture, University of Kentucky, effective April 1. Tom has over twenty years experience working in the area of hay marketing. He has been an important member of the Kentucky Forage Team having served in many capacities with KFGC including board member. He is Past President of the American Forage & Grassland Council. He has been a "regular" at the Kentucky Alfalfa Conference and was a featured speaker on several conference programs. We are excited about Tom joining our UK Forage Team and look forward to working with him in his new position. Tom – Welcome Aboard!

ROUNDUP READY ALFALFA

Glyphosate-resistant crops, also known as "Roundup Ready" (RR) have become an important part of cropping systems in the United States. In 2004, approximately 85 percent of soybean acreage was occupied by RR varieties. Alfalfa (*Medicago sativa*) is the nation's third most important crop in economic value, and it occupies more than 22 million acres in the United States (USDA 2004). It is considered the premier forage crop. It is the primary feed for dairy production, and is commonly fed to beef cattle, sheep, and horses. Alfalfa is also used for greenchop and silage in many areas. California is the leading producer of alfalfa hay in the United States, followed by Wisconsin, South Dakota, Minnesota, and Idaho. Roundup Ready technology has been successfully incorporated into alfalfa and is scheduled for commercial release in 2005.

What is Roundup Ready Alfalfa? Roundup (glyphosate) is a broad-spectrum herbicide that kills a wide range of plants. It is not normally applied directly to crops. The RR technology incorporates genetic resistance to glyphosate into crop plants by inserting a single bacterial gene that modifies 5-enolpyruvylshikimate-3-phosphate (EPSP) synthase, an enzyme essential for plant growth. Monsanto has used this technology to develop several RR crops (e.g., cotton, soybeans, and corn).

Roundup Ready technology will enable the development of new weed control strategies for alfalfa. Specifically, these new varieties will allow glyphosate (for example, Roundup UltraMax—see label for the full spectrum of weeds controlled and application specifications) to be applied over the top of the entire crop to control a wide spectrum of annual and perennial weeds commonly found in alfalfa. Several of these weeds, especially perennials, are difficult to control using conventional herbicides or nonherbicide weed control methods. Although scientists at Monsanto and Forage Genetics International have developed the technology, RR alfalfa varieties will be marketed broadly by a wide range of seed companies. Important characteristics, such as genetic resistance to insects and diseases and yield potential, remain important criteria for selecting a variety. The RR trait enables a unique weed control program to be used in alfalfa. (SOURCE: Excerpted from: Roundup Ready Alfalfa—An Emerging Technology. 2004 by Allen Van Deynze, et al., University of California, Davis. An electronic version of this publication is available on the ANR Communication Services Web site at <http://anrcatalog.ucdavis.edu>.)

NOVEL OR FRIENDLY (NONTOXIC)

ENDOPHYTES

Since the discovery of the endophyte in tall fescue, scientists were hopeful of finding a tall fescue plant with a nontoxic fungus that would give all the good agronomic characteristics of tall fescue but would not cause animal performance problems. This hope became reality when Dr. Gary Latch and his co-workers at Agriculture Research in New Zealand identified and selected the first nontoxic endophyte. In cooperation with Dr. Joe Bouton at the University of Georgia, this endophyte was inserted into endophyte-free Jesup tall fescue. This combination of the Jesup variety and novel endophyte became Max Q marketed by Pennington Seed and was the first nontoxic endophyte variety commercially available. Research with Max Q in several states (endophyte-free Jesup + nontoxic endophyte) has shown animal performance equal to endophyte-free Jesup and agronomic performance equal to endophyte-infected Jesup. ArkPlus was the second "Novel" tall fescue variety released. It is a result of a novel endophyte developed in Arkansas that was inserted into a variety developed by the University of Missouri. Other varieties with novel endophyte are being developed.

Although additional research is needed and many studies are presently underway; results to date have shown:

- Animal performance with Novel endophyte tall fescue has been equal to endophyte free varieties.
- Novel endophyte do not produce toxic levels of alkaloids that cause fescue toxicosis.
- Novel endophyte is safe for horses.
- Blood prolactin levels of Novel endophyte varieties similar to endophyte-free.
- Novel endophyte varieties had yields similar to toxic endophyte varieties.
- Intake up to 40% higher for Novel over toxic tall fescue varieties.
- Novel endophyte varieties have persisted well to date and more research is underway to evaluate persistence.

EVALUATION OF A TASCO SUPPLEMENT ON REPRODUCTIVE RATE IN SUCKLED POSTPARTUM BEEF COWS

Hypothesis being tested. Tasco supplementation will enhance reproductive rate and resulting pregnancy in spring calving, postpartum suckled beef cows. Improvements in pregnancy rate will occur as a result of reduced heat stress. The effects of heat stress will be minimized as a result of reduced body temperatures among cows and bulls consuming seaweed supplement.

Experimental treatments. Two treatments were compared. Cows and bulls assigned to the Tasco treatment consumed supplement beginning approximately 3 weeks prior to a 45-day breeding season, which began on May 8, 2003.

Supplementation continued through completion of the breeding season, through the summer, and ended on September 1, 2003. The control group was offered a comparable supplement without Tasco over the same time frame.

Experimental procedures. Cows: Two blood samples for progesterone were obtained 10 days and 1 day prior to the initiation of treatment to determine estrous cyclicity rates of cows. An initial pregnancy exam was performed by ultrasound on July 29, 2003, and the final pregnancy exam was performed on September 16.

Bulls: An initial breeding soundness evaluation was performed on all bulls approximately 60 days before the breeding season, immediately prior to the breeding season, midway through the breeding season, and the day after the breeding season ended.

Percentage data were analyzed using Chi-square procedures of SAS.

Results. There was no difference between treatments in the performance of cows for the following variables: 1) initial pregnancy exam, final pregnancy, pregnancy loss or weight change. In addition there were no notable differences among bulls consuming Tasco versus control supplements with regard to semen motility, live sperm or concentration.

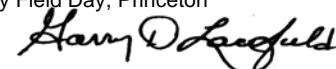
Conclusion. The results from this study indicate that there was no change in reproductive response variables among cows consuming Tasco supplement prior to or during the breeding season. (SOURCE: D.J. Patterson and D.K. Davis, *Forage Systems Research Center, Linneus, MO, Forage Systems Update Vol 14, No. 1*)

KEYS TO A PROFITABLE FORAGE PROGRAM

- 1) REMEMBER THAT YOU ARE A FORAGE FARMER**—Forage typically accounts for over half the cost of production of forage-consuming animals and provides most of their nutrition. Thus, it has a major influence on both expenses and income. Forage is the crop and animals are the harvesters or consumers. Efficient forage production and utilization are essential to a profitable operation.
- 2) KNOW FORAGE OPTIONS, ANIMAL NUTRITIONAL NEEDS, AND ESTABLISHMENT REQUIREMENTS**—Forages vary as to adaptation, growth distribution, forage quality, yield, and potential uses. Various types and classes of animals have different nutritional needs. Good planting decisions depend on knowing forage options for your land resources and the nutritional needs of your animals. Use of high quality seed of proven varieties, and attention to detail during planting increase our chances of establishment success.
- 3) SOIL TEST, THEN LIME AND FERTILIZE AS NEEDED**—This practice, can dramatically affect the level and economic efficiency of forage production. Fertilizing and liming as needed help ensure good yields, improve forage quality, lengthen stand life, and reduce weed problems.
- 4) USE LEGUMES WHENEVER FEASIBLE**—Legumes offer important advantages including improved forage quality and biological nitrogen fixation, whether grown alone or with grasses. Every producer should regularly consider on a field-by-field basis whether the introduction or enhancement of legumes would be beneficial and feasible. Once legumes have been established, proper management optimizes benefits.
- 5) EMPHASIZE FORAGE QUALITY**—High animal gains, milk production, and reproductive efficiency require adequate nutrition. Producing high quality forage necessitates knowing the factors that affect forage quality and using appropriate management. Matching forage quality to animal nutritional needs greatly increases efficiency.
- 6) PREVENT OR MINIMIZE PESTS AND PLANT-RELATED DISORDERS**—Diseases, insects, nematodes, and weeds are thieves that lower yields, reduce forage quality and palatability, and/or steal water, nutrients, light, and space from forage plants. Variety selection, cultural practices, scouting, pesticides, and other management techniques can minimize pest problems. Knowledge of potential animal disorders caused by plants can help avoid them.
- 7) STRIVE TO IMPROVE PASTURE UTILIZATION**—The quantity and quality of pasture growth vary over time. Periodic adjustments in stocking rate or use of cross fencing to vary the type or amount of available forage can greatly affect animal performance and pasture species composition. Knowing the advantages and disadvantages of different grazing methods allows use of various approaches as needed to reach objectives. Matching stocking rates with forage production is also extremely.
- 8) MINIMIZE STORED FEED REQUIREMENTS**—Stored feed is one of the most expensive aspects of animal production, so lowering requirements reduces costs. Extending the grazing season with use of both cool season and warm season forages, stockpiling forage, and grazing crop residues are examples of ways stored feed needs can be reduced.
- 9) REDUCE STORAGE AND FEEDING LOSSES**—Wasting hay, silage or other stored feed is costly! On many farms the average storage loss for round bales stored outside exceeds 30%, and feeding losses can easily be as high or higher. Minimizing waste with good management, forage testing, and ration formulation enhances feeding efficiency, animal performance, and profits.
- 10) IT'S UP TO YOU**—Rarely, if ever, do we get something for nothing. In human endeavors, results are usually highly correlated with investments in terms of thought, time, effort, and a certain amount of money. In particular, the best and most profitable forage programs have had the most thought put into them.
(SOURCE: D. Ball, C. Hoveland and Garry Lacefield)

UPCOMING EVENTS

APR 20-21	Grazing School, Morehead
JUN 11-15	American Forage & Grassland Conference, Bloomington, IL
JUN 16	Eden Shale Field Day, Owenton
JUN 26-JUL 1	20 th International Grassland Congress, Dublin, Ireland
JUL 28	UK All Commodity Field Day, Princeton



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