Animal Science

UF UNIVERSITY of FLORIDA IFAS Extension

Newsletter

April 2008

In This Issue...

Dates to Remember

April

5	State 4-H & FFA Livestock Judging Contest - Gainesville, FL
5	NFBFG Forage Management Basics Field Day - Live Oak, FL
5	Small Farms Livestock Conference III - LaBelle, FL
8	Everglades REC Field Day - Belle Glade, FL
11	Goat Field Day - Quincy, FL
12	State 4-H & FFA Horse Judging Contest - Gainesville, FL
19	State 4-H & FFA Meats Judging Contest - Gainesville, FL
26	First Annual All-Judging Team Reunion Lunch - Gainesville, FL
29	Florida Dairy Production Conference - Gainesville, FL
30 - May 2	UF/IFAS Florida Beef Cattle Short Course - Gainesville, FL

May

30 - May 2	UF/IFAS Florida Beef Cattle Short Course - Gainesville, FL
12-16	Certified Master Goat Producers Program - Quincy, FL
29	2008 Corn Silage/Forage Field Day - Citra, FL

Celebrating the 57th Annual Florida Beef Cattle Short Course

Hilton University of Florida Conference Center, Gainesville, FL

April 30 – May 2, 2008

Complete information, schedules, and registration can be found online at http://animal.ifas.ufl.edu/extension/beef/short.shtml, or contact the University of Florida, Department of Animal Sciences at (352) 392- 1916.

UF | Veterinary Medical Center
UNIVERSITY of FLORIDA

Healthy Horses:An Educational Conference on Successful Equine Health Care

Welcome to the UF Veterinary Medical Center's First Annual Healthy Horses!

Healthy Horses is an educational day with a focus on equine health care for horse owners and enthusiasts. The day will include lectures, lunch, tours of the hospital, and live equine treadmill demonstrations. The topics will include vaccination, deworming, nutrition, lameness, and gastric ulcers – just to name a few. The presenters will predominately be the board certified faculty of UF's Large Animal Hospital, and a brief summary book of the lectures will be provided to all attendees. Purina and Fort Dodge will be present as our sponsors and to answer any questions you may have about their products. We sincerely appreciate their sponsorship, which makes it possible for the low registration fees for all attendees (one of the lowest for an event of this type in the state!) Thank you for your interest and support. We are dedicated to improving owner education and hope you will make this an annual event. Registration is limited, so please register soon!

Lectures will include the following topics:

Vaccination
Deworming
Foal Care
Lameness
MRI for Horses
Gastric Ulcers
Nutrition
Live Treadmill Demonstration
Hospital Tour
and More!
Refreshments and Lunch provided!

The conference will be held at the University of Florida, College of Veterinary Medicine in Gainesville, Florida from 8:30am-5:00pm. A map will be mailed upon receipt of your registration form.

Registration

Register On Line :
http://www.conferences.dce.ufl .edu/equine

OR

Mail or Fax Completed Form To:
UF Department of Conferences
2209 NW 13th Street, Suite E
Gainesville, FL 32609
Fax: (352) 392-5437

Healthy Horses: An Educational Conference on Successful Equine Health Care
May 10, 2008

Participant Information:

Name: _____

Address: _____

_____

City, State, Zip: _____

_____

Phone: _____

Fax: _____

Email: _____

Special Needs: _____

Amount Due:

___ Registration..... $30

Method of Payment:

___ Check
___ Visa/MasterCard
___ American Express

_____
Card Number

_____ _____
CVV (security) Code Expiration Date

Interesting Ag Statistics To Ponder

In commemoration of National Ag Week, March 16-22, 2008, here are some interesting statistics about U.S. ag today:

■ The top-five U.S. ag products are cattle and calves, dairy products, broilers, corn and soybeans. The U.S. produces 46% of the world's soybeans, 41% of the world's corn, 20% of the world's cotton and 13% of the world's wheat.

■ It takes the average American about 35 days to earn enough disposable income to pay for all the food that is consumed at home and away from home during the entire year. By comparison, it takes consumers more than 100 days of earned income to pay all federal, state and local taxes each year.

■ About 19¢ of every consumer dollar spent on food actually goes to the farmer. The other 81¢ is spent on processing, packaging, marketing, transportation, distribution and retail costs.

■ The average U.S. farmer produces enough food and fiber for about 150 people. This number was 19 people in 1940, 46 people in 1960 and 115 people in 1980.

■ 99% of all U.S. farms are family farm businesses owned by individuals, partnerships and family corporations. These family-based farm enterprises account for about 94% of all the U.S. ag products that are sold each year.

SOURCE: Corn & Soybean Digest
http://cornandsoybeandigest.com
Release - March 19, 2008

Splitting Nitrogen Applications For Bermudagrass

Bermudagrass growers can save money by splitting nitrogen (N) applications, suggested Dennis Hancock at a recent Hay Production School in Waynesboro, GA.

"Usually on a long-term average, splitting N applications rather than providing a one-time N application will generate between 1,200-2,400 lbs./acre additional yield," he says. "That strategy also increases N-use efficiency by 25-30%, which can be a big deal both economically and environmentally." Splitting N applications can also be beneficial when drought hits.

"Another topic of concern is our inability to get reliable sources of ammonium nitrate. We've been comparing different N sources. As producers look to reduce their N rates, and as we get down into those lower rates, urea-based products are less efficient at the lower rates. We are both reducing our rate and we are reducing our effectiveness at that rate," he adds.

Georgia hay growers have been showing interest in integrating legume crops with bermudagrass, either with annual crops such as crimson clover, or by interseeding perennial legumes such as alfalfa into the bermudagrass.

"The annual legumes can add 75-100 units of N during the winter, then the N is released during the following production year," Hancock explained. "Generally speaking, the perennial legumes we would grow as a companion crop, like alfalfa, would provide yields equivalent to adding 200 units of N. That's a significant amount of N added to the system."

SOURCE: Hay & Forage Grower
http://www.hayandforage.com
Release - March 19, 2008

2008 UF/IFAS Meat Judging Team

The University of Florida Intercollegiate Meat Judging Team returned recently from their initial competitive activity, the Houston Livestock Show and Rodeo Contest in Houston, TX. In this year's contest, 67 contestants representing 18 teams from 10 universities participated.

This was our first spring contest compared with most other team's 3rd and final spring contest. Despite our inexperience, these students had numerous bright spots. Expect big things from these students at our second contest, the Southeastern, coming in April. Until then, we will strive to improve in efforts to continue to represent the University of Florida at

ommy Estevez and their special efforts in support

2008 UF/IFAS Meat Judging Team from left to right: Adam Spann, Okeechobee; Danielle Brewer, Arcadia; Nick Londono, Medellin, Columbia; Jessica Murphy, Myakka City; John Spann, Okeechobee. Coach; Dr. Chad Carr (notpictured).

You are cordially invited to the first annual all judging team reunion luncheon to be held in Gainesville on April 26th at 11 am.

For information, please visit http://animal.ifas.ufl.edu/calendar.shtml

More to Mycotoxins than Just Aflatoxin

If you can remember the droughts of 1977 and 1980 in the Southeast United States, then you most likely remember the infectious toxins that accompanied the low moisture season. In those two years, the aflatoxin problems in both corn and peanuts reached extreme proportions, damaging the sale of crops and causing severe losses in livestock where the contaminated products had been fed. The 1980 outbreak alone is estimated to have cost $100 million to the agricultural industry.

While aflatoxins continue to be a sore subject in the Southeast, most producers have learned some type of damage control for avoiding repercussions. By keeping the feed fresh and equipment clean, using proper storage techniques and establishing programs for testing and sampling, many producers have educated themselves as to how to combat the infamous toxin. But what most agricultural professionals in the South have missed in their attack plan is their awareness and defense plan against other types of mycotoxins.

One family of mycotoxins that producers should be more attentive to is the *Fusarium* toxins. While *Fusarium* molds normally thrive in temperate climates and are more common in the Cornbelt and Southern Canada, this species can make its way south through interstate commerce. The mycotoxins produced by *Fusarium* are less eminent than the Aspergillus-produced aflatoxin, but can be more harmful to animal health.

A faculty member for more than 30 years at Guelph, Dr. Trevor Smith has devoted much of his research to the characterization and dietary treatment of *Fusarium* mycotoxicoses. While mycotoxins are nothing new to the animal feed industry, the research on toxins has greatly expanded. Once thought of as individual toxins, scientists have now determined that mycotoxins can form compounds and increase toxin responses in livestock.

For example more than 100 tricothecenes have been chemically identified. The most common is deoxynivalenol, vomitoxin or as it is often referred to, DON. DON and its associated compounds can influence behavior causing reduced feed intakes resulting in reduced milk production. The compounds can also trigger bleeding and ulcers in the digestive tract leading to reduced nutrient absorption. Finally the compounds are known to initiate immunosuppression and increased susceptibility to diseases including mastitis and increase somatic cell counts in milk.

"The greatest cost arising from feeding these materials is reduced disease resistance, failure of vaccination programs and lack of response to medications," Smith said.

With research on these types of molds continuing each year, scientists are finding more and more harmful effects that can be linked to the notorious toxins. According to the 2007 *Journal of Dairy Science* article, "Effects of Feedborne *Fusarium* Mycotoxins on the Performance, Metabolism, and Immunity of Dairy Cows" by Korosteleva, Smith and Boermans, feeding a combination of *Fusarium* mycotoxins in naturally contaminated feed can increase the incidents of immunosuppression and reduced utilization of nitrogen.

According to Smith, while DON is the most prevalent *Fusarium* mycotoxin, livestock producers should also be on guard against zearalenone and fumonisins. Zearalenone is estrogenic and causes infertility and abortions in dairy cows. Fumonisin is a recently discovered mycotoxin that can cause kidney and liver damage, decrease animal performance; impair the immune system and even cause death.

Mycotoxins are never found in isolation. The mycotoxins mentioned above and much more can be present together in the feed ingredients and complete feed. When they are present together, they exert additive or synergistic interactions and cause significant adverse effects on livestock and poultry. DON has been shown to interact with T-2 toxin, fusaric acid and aflatoxin, while fumonisins interact with T-2 toxin and diacetoxyscirpenol (Devegowda and Murthy, 2005).

With the increased research in mycotoxins each year, the agricultural industry is also improving their knowledge in finding solutions to the mycotoxin problem. Mycotoxin control begins by managing mold growth from pre-harvest to post-harvest and sustaining a low mold count throughout feeding.

In the recent article, "Methods for preventing, decontaminating and minimizing the toxicity of mycotoxins in feeds," Jean Pierre Jouany made mention of twenty-one different areas in the battle to prevent and then deal with molds and mycotoxins throughout the production and feeding chain. During pre-harvest, he suggests examining areas such as crop rotation and tillage, chemical and insect control and plant breeding, as these can potentially have a large impact on the crop.

During harvest and post-harvest, the producer must consider the age of the plant, combine harvester setting, humidity and temperature level during storage, the physical treatment of the grain, biological treatments and adsorbents. Biological methods such as bacteria, enzymes and live yeast have shown the ability to detoxify certain mycotoxins. One challenge with these technologies is their high degree of specificity that is not always applicable to the wide degree of possible mycotoxin contamination found typically in feedstuffs.

Adsorbents are seen as the last step. When all preventative measures have been taken the use of adsorbents is the final chance of preventing the mycotoxin negatively impacting animal health and productivity.

For Smith, there is only one absolute answer to mycotoxicoses.

"The only complete solution to the problems arising from mycotoxins in dairy feeds is to avoid the feeding of mycotoxin-contaminated feedstuffs," Smith said.

Mycotoxins are a leading area of study at Alltech. Through 28 years of research-driven product development, Alltech has created a range of natural solutions for the feed and food industries. For more information, please visit the Web site at http://www.alltech.com or http://www.knowmycotoxins.com.

SOURCE: Billy Frey
Alltech Biotechnology Center
Nicholasville, KY
Phone: (859) 881-2236
Email: bfrey@alltech.com
Release - February 15, 2008