

# NFREC NEWS



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**Inside this issue...**

Congressman F. Allen Boyd, Jr. Awarded Hall of Fame Award by IFAS NFREC	1
<a href="#">Growing the NFREC Feed Efficiency Project</a>	2
<a href="#">What Wildlife is in Your Woods?</a>	3
<a href="#">Global Warming and Plant Health</a>	3
<a href="#">Know our Staff</a>	4
<a href="#">Coming Events Calendar</a>	4



**Congressman F. Allen Boyd, Jr.** of the Second Congressional District in Florida was presented the UF/IFAS North Florida Research and Education Center **Hall of Fame** award by IFAS/NFREC Center Director Dr. Nick Comerford on February 19, 2009. Congressman Boyd was at the Quincy NFREC presenting HazMat issues to area farmers and other interested parties. Congressman Boyd was honored for his 12 years of dedicated service in the integration of Science into all aspects of Agriculture and Development in North Florida.

Congressman Boyd is a member of the House Appropriations and Budget Committees, including the Subcommittee on Agriculture, Rural Development, Food and Drug Administration and Related Agencies, Financial Services Subcommittee and the Subcommittee on Defense of the House Appropriations Committee. These committee memberships have provided him the opportunity to ensure support for a secure food supply and a robust agricultural economy in Florida and throughout the nation. As a businessman and fifth generation farmer in Jefferson County, Congressman Boyd knows first-hand the issues that these and his other constituents face. [Vicky Morris]

**Special points of interest:**

- **April 14, 2009 - Fruit & Nut Twilight Field Day**, North Florida Research & Education Center - Suwannee Valley, Live Oak, FL. For more information contact Karen Hancock at 386-362-1725 x 101 or email [khancock@ufl.edu](mailto:khancock@ufl.edu).
- **July 10-11, 2009 - Tractor and Implement Short Course**, North Florida REC - Quincy, FL. For more information call 850-875-7100.
- **August 1 & 2, 2009 - Florida Small Farms & Alternative Enterprises Conference**, Osceola Heritage Park, Kissimmee, FL. For more information on educational program content contact Danielle Treadwell at 352-392-1928 or email [ddtreadw@ufl.edu](mailto:ddtreadw@ufl.edu). For general conference information contact Mandy Stage at 352-392-5930 or email [mstage@ufl.edu](mailto:mstage@ufl.edu).

For information on other events happening around the state go to <http://calendar.ifas.ufl.edu>

## Growing the NFREC Feed Efficiency Project

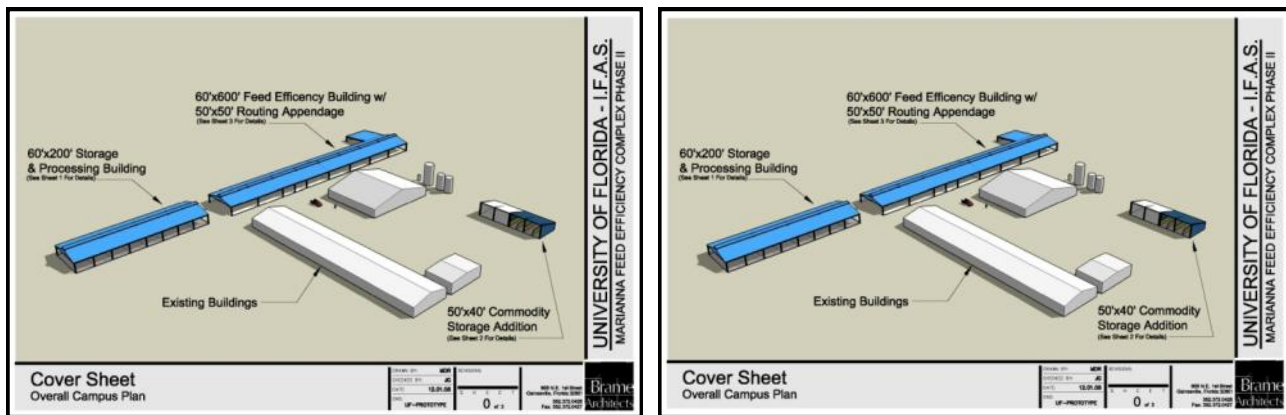
### Overview:

A key component of NFREC's beef research is the feed efficiency facility. One of the largest feed efficiency facilities in the United States, it is unique as it is the only facility in the Southeastern U.S. that has the capability to measure feed and water intake in real-time. This unique facility is the only one of its kind conducting research in the U.S. placing a major emphasis on identifying cattle that are more efficient in subtropical climates. ***Additionally, it is the only facility of this scope and magnitude that has the capability to investigate feed efficiency in subtropical/tropical environments.***

The state-of-the-art Feed Efficiency Facility has enabled researchers at NFREC to obtain data to determine factors that affect feed efficiency in cattle as follows: 1) evaluating the relationship of feed efficiency to economically important traits; 2) evaluation of nutritional relationships to feed efficiency; 3) physiological mechanisms related to feed efficiency (such as reproduction and nutritional physiology); 4) management interventions that may alter feed efficiency in cattle

### Plans for the Future:

NFREC's feed efficiency project continues to adjust to the industry's changing needs. Even with this strong track record, challenges remain. To manage these challenges, NFREC must expand and enhance its facilities. Long-term priorities for NFREC include expanding the feed efficiency facility; constructing grain storage and handling facility and expanding the existing commodity storage facility. Other priorities feature construction of a new grain handling facility and expansion of the existing manure handling facility.



Upgraded facilities will help researchers understand the interactions of feed efficiency on biological processes and management procedures. This information is critical to utilizing feed efficiency as a tool for cattle selection by beef producers. An expanded feed efficiency facility will greatly improve the industry's economic viability and allow IFAS researchers to find ways to improve feed and forage efficiency. The information they gather and disseminate to the area's cattle industry will allow ranchers to reduce input costs, which is especially critical as the cost of feed resources continues to increase, and the availability of forages continues to decrease. In addition, the facility will permit researchers to address the industry's environmental concerns. As knowledge of the animals' feed efficiency is expanded, the information obtained will help reduce potential environmental disruption by reducing animal nutrient waste. This is especially critical now as the need to consider the effects of the cattle industry on the environment intensifies.

### Expected Impact to Florida Cattle Industry:

Approximately 55 to 75% of the total costs associated with beef cattle production are feed costs. Studies in feedlot cattle demonstrated that 10% improvement in average daily gain (ADG) as a result of a 7% increase in appetite improved profitability 18%, whereas, a 10% improvement in feed efficiency returned a 43% increase in profits. Thus efforts at improving the efficiency of feed/forage use will have a large impact on reducing input costs of beef production. ***For example, in Florida alone with approximately 1.83 million cattle on inventory, a 10% increase in feed/forage efficiency could reduce production costs by at least \$36 million annually.***

An added benefit of improved feed/forage efficiency would be a decrease in the volume and nutrient composition of manure as well as reduction of methane gas emissions. [G. Cliff Lamb]

## What Wildlife is in Your Woods?



Weather-proof infrared-triggered cameras (also called 'trail cameras', 'wildlife cameras', 'game cameras', or 'camera traps') can be a useful tool for learning about the wildlife on your property. Although known primarily for their use by private landowners interested in discovering the activity patterns of game species, these devices are also an invaluable means for wildlife biologists to investigate the activity of rare and/or elusive species. Trail cameras can be a handy gadget for virtually anyone interested in knowing more about the animals that live in a given area.

Wildlife trail cameras provide a wealth of information, including the species of animals present, daily activity patterns, and seasonal activity patterns. We used a trail camera to monitor the use of a highway underpass by wildlife during a 10 month period from March through December 2008. Of the 58 photos that had a clearly identifiable animal, a whopping 72% were of bobcat! The remaining photos captured raccoons (12%), coyotes (10%), and domestic cats (5%). More than half of this animal activity occurred within a single month (May), and nearly  $\frac{3}{4}$  of this activity was nocturnal (occurred between 7 pm and 7 am). These results provide a sense of just how much information can be gained from a single camera mounted at a single location.

Most infrared-triggered cameras currently on the market range in price from \$100 to \$500. A variety of features are available, including sensitivity adjustments, temperature and moon-phase recordings, and photo delay options. Nearly all cameras are waterproof and many are equipped with a password to prevent the use of the camera if it is stolen.

One of the most common uses of wildlife trail cameras is to obtain information on game species that is difficult (if not impossible) to obtain by other means. If used appropriately, cameras can provide rough estimates of white-tailed deer population sizes, fawn production rates, and sex ratios. Cameras can also aid in the determination of locations of high deer activity, and will capture photographic evidence of individual animals potentially available for harvest. To obtain reliable estimates of the size of white-tailed deer populations, research in Mississippi suggests that at least 1 camera should be set for each 100 acres to be surveyed. If surveys are conducted during winter, 8 consecutive days should be adequate to obtain estimates of population sizes, whereas 11 days would be required during autumn.

The location of your camera is the key to your success as a passive photographer. Wildlife trail cameras are triggered to take photos when motion is detected in front of the camera. For this reason, it is important to position your camera in such a way as to avoid locations where wind is likely to cause movement of the vegetation, or where people are likely to frequent. Also take care not to face your camera directly toward the east or west, as this could result in many washed-out pictures at sunrise and sunset. If located along a trail, cameras will get more photos if positioned to view the length of the trail rather than perpendicularly across the shortest distance. Be careful in your selection of photo delay settings; if set too low you may get many pictures of the same animal, and if set too high you may miss a lot of activity. [Holly Ober]

## Global Warming and Plant Health

One of the major issues that Florida growers will have to address is the potential impact of global warming on plant health. Every year, Florida is a major source of important plant pests for the rest of the country including the fungus that causes soybean rust (which overwinters on our kudzu), beet armyworm, southern armyworm, and others. Because of our location, slight changes in winter temperatures can have a significant impact on survival of plant pests. The warmer winter temperatures associated with global warming will allow for more successful overwintering of insect and disease pests, especially on successful volunteer plants that may have been frozen out in past years.

The phenological development of the pests will also be affected. For example, degree day models have been developed for over 550 insect pests. These models, using daily temperatures, can monitor and predict the developmental rate of an insect. Although one day may result in little change, over the season the effect is cumulative. For example, if the temperature during the season increases just 4 F, the cumulative effect on beet armyworm would be an increase from 4-5 generations a season to 6 generations a season. Thus higher pest pressure would be experienced in the fall, and more insects would be available for overwintering – providing a feed back loop for increasing insect populations the next year. Similar degree day models, with similar impacts, have been developed for important weeds as well, such as one for predicting nutsedge emergence.

An extension Focus Team "Climate Change and Variability: Adaption and Mitigation" G2-F5 has been established. The first symposium sponsored by the Focus Team was held in Plant City February 18-20, 2009. The presentations will be made available in the next few weeks. [Jim Marois]

## Know Our Staff



### Shannon Darby, Maintenance Mechanic, NFREC Quincy

Shannon conducts preventative maintenance programs for the NFREC Quincy buildings and equipment. He maintains and repairs mechanical equipment, irrigation pumps, vehicles, farm equipment, greenhouses, field equipment and any additional issues that may arise. Shannon willingly assists with NFREC Quincy field day preparations and activities.

Shannon is the recipient of the 2008 NFREC Distinguished Service Award for Farm Support Personnel. He has been employed with the center for 4 years. Shannon lives on Lake Talquin with his wife Lisa and son Josh. He enjoys hunting, mud racing and motorcycle riding.

## Coming Events Calendar

**March 20-21, 2009 - [Georgia Organics 12th Annual Conference & Trade Show](#)**, Agnes Scott College, Decatur, GA.

**March 20- 21, 2009 - [2nd Annual Bee College](#)**, UF Whitney Labs, St. Augustine, FL. For more information visit <http://www.UFhoneybee.com>.

**April 1, 2009 - Building a Local Food and Agriculture Economy**, Bradenton, FL. For more information call 941-723-3252 or visit [www.fwercd.org](http://www.fwercd.org).

**April 14, 2009 - Fruit & Nut Twilight Field Day**, North Florida REC - Suwannee Valley, Live Oak, FL. For more information contact Karen Hancock at 386-362-1725 x 101 or email [khancock@ufl.edu](mailto:khancock@ufl.edu).

**April 14-16, 2009 - [Restoration Planning and Techniques for Forested Lands](#)**, Bristol, FL. For more information visit <http://nata.snre.ufl.edu>

**May 5, 2009 - Peach Field Day**, Citra, FL. For more information contact Jeff Williamson at 352-392-1928 x 303 or email [jgrw@ufl.edu](mailto:jgrw@ufl.edu).

**June 7-9, 2009 - [Florida State Horticultural Society Meeting](#)**, Jacksonville, FL. For more information contact Mary Lamberts at 305-248-3311 x 234 or email to [lamberts@ufl.edu](mailto:lamberts@ufl.edu).

**July 10-11, 2009 - [Tractor Short Course](#)**, North Florida Research and Education Center - Quincy, FL. For more information call 850-875-7100.

**July 13-16, 2009 - [American Society for Plasticulture Meeting](#)**, Peen State University. Save the date.

**August 1 & 2, 2009 - [Florida Small Farms & Alternative Enterprises Conference](#)**, Osceola Heritage Park, Kissimmee, FL. For general conference information contact Mandy Stage at 352-392-5930 or email [mstage@ufl.edu](mailto:mstage@ufl.edu). For educational program content contact Danielle Treadwell at 352-392-1928 x or email [ddtreadw@ufl.edu](mailto:ddtreadw@ufl.edu).

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**NORTH FLORIDA RESEARCH AND EDUCATION CENTER Phone: 850-875-7100 <http://nfrec.ifas.ufl.edu>**

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