

NFREC NEWS



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Buy Local, Help Your Community

Ever wonder where your produce dollars go when you shop at chain stores? Some of the money stays in the community in the form of wages paid to employees but much of it goes to corporate headquarters many miles from your community. How would you like to keep almost 100% of these dollars locally? You could if you shopped at local farmers markets, roadside stands and directly at the farm.

By buying from local farmers, they in turn spend your dollars with other local businesses contributing to better economic stability within the region. Additionally, if producers continue to be profitable they will keep farming thus maintaining open space which benefits wildlife, reduces pollution due to less transportation of product and promotes responsible land development. Other benefits to you the consumer might be:

- the freshest produce you can buy as it's usually harvested within 24 hours of it going to your table.
- better tasting food as it's picked at the peak of favor to be enjoyed by you.
- longer lasting produce which has been handled with "tender loving care" by the person who spent months tending it.
- reconnecting with the seasons as grandma and grandpa did by eating what's in season locally.
- a wider variety of produce including local favorites and heirloom varieties.
- feeling more comfortable about who and where your food is coming from-your neighbor, the farmer!

To help you know what's in season, check out this new website from Florida Department of Agriculture at http://www.florida-agriculture.com/shopping_list.htm. With your shopping list in hand, seek out a venue where local produce is available. A good place to start is at <http://www.localharvest.org/> or http://www.florida-agriculture.com/consumers/farmers_markets.htm. If you'd like to pick your own product, go to <http://www.pickyourown.org/> for a list of u-pick farms in the region. You will enjoy your meal even more by knowing that you helped to support a local farmer and your community. [Linda Landrum]

Special points of interest:

- **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. For general conference information contact Mandy Stage at 352-392-5930 or email mstage@ufl.edu.
- **August 20, 2009 - Peanut Field Day**, North Florida Research and Education Center, Marianna, FL. For more information call 850-482-9904.
- **September 19, 2009 - NFREC 8th Annual Fall Field Day**, North Florida REC, Quincy, FL. For more information contact Vicky Morris 850-875-7115.

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

Tomato Yellow Leaf Curl Resistant Variety Trial NFREC, Quincy, Fall 2007

During the 2007-2008 production season 31,500 acres of tomatoes were harvested with a farm-gate value of over \$619 million. Total production was 45.5 million 25-pound boxes. Tomatoes accounted for about 26% of the total value of vegetables grown in Florida during the 2007-2008 production season making it the most valuable vegetable crop in Florida. In the panhandle area of Florida, tomatoes are by far the most valuable of the vegetable crops.

A tomato variety trial was conducted at NFREC, Quincy during the fall season of 2008 to evaluate fresh market (large rounds) tomato varieties and potential new hybrids. The replicated trial started out with 23 entries but due to a very high incidence of Tomato yellow leaf curl virus (TYLC), only 5 entries are being reported on. Growing conditions were very poor. Plants received extensive damage from wind rain due to a tropical storm. Crop was also matured much later than normal due to damage.

Entries were seeded on 26 June into planter flats containing a commercial media. Cell size of flats was 1.5 in. by 1.5 in. by 2.5 in. Seedlings were fertilized weekly with a dilute solution of 15-16-17 (N-P₂O₅-K₂O) peat-lite special. Plants were hardened off before transplanting by reducing water and fertilizer. Production was on raised full bed mulched system. Beds were fumigated with methyl bromide/chloropicrin (67/33) at broadcast rate of 200 lbs/acre before mulch (white on black Blockade) application. Irrigation was with single drip tube placed 6 inches off center. Total fertilization was 195-60-195 lbs/acre of N-P₂O₅-K₂O. Row spacing was 6 feet between rows with a finished bed width of 34 inches. Transplanting was done on 5 August. Plots consisted of 12 plants spaced 20 inches apart. Plots were tied 4 times and maintenance pesticides were used as needed to control pest problems. Design was a random complete block with 4 replications. Fruit were harvested at or beyond the mature-green stage on 4 and 11 November. At each harvest fruit were graded and sized into medium, large and extra-large fruit. Weights and fruit numbers of each size along with cull weight were recorded.

Incidence of TYLC in susceptible entries was nearing 100% by harvest time. Total yields ranged from 490 boxes/a for 'Tygress' to 897 boxes/a for 'Tycoon' (Table 1.). As comparison, 'BHN 602', a widely used variety in fall, only produced about 100 boxes/a total. Fruit size ranged from 5.7 oz for 'Tycoon' to 4.7 oz for 'Tygress'. [Steve Olson]

Table 1. Yield and fruit size of TYLC resistant varieties trialed at NFREC, Quincy. Fall, 2008.

Entry	Yield (25 lb boxes/a)		Fruit wt. (oz)
	Extra-large	Total	
Tycoon	547 a ^z	897 a	5.7 a
BHN 765	380 ab	810 ab	5.2 a
Inbar	396 ab	737 ab	5.5 a
Security 28	342 ab	645 ab	5.5 a
Tygress	189 b	490 b	4.7 b

^z Mean separation Duncan's multiple range test, 5% level

Are Bats on the Verge of Extinction?

During the winter of 2006-2007, a mysterious epidemic began killing hundreds of thousands of bats wintering in caves in the northeastern U.S. Somewhere between 8,000 and 11,000 bats were reported dead in 3 sites in NY this first winter. A year later, the epidemic had spread to 26 sites in close proximity to those affected the first year, with nearly half a million bats estimated to have died during this second winter. By the end of the third winter (winter of 2008-2009), the epidemic had spread to sites in NY, VT, NH, CT, MA, RI, NJ, PA, WV, and VA.

In northern climates, most bats enter hibernation during the colder portion of the year. Bats affected by the epidemic appear to enter hibernation with lower than average fat stores, and these fat stores are being depleted at a rate much faster than normal. As a result, bats are emerging from hibernation to feed in extremely cold weather, when little food (i.e., insects) is available, and perishing.

Researchers are having an extremely difficult time identifying the actual cause of death of these bats. The epidemic has become known as "White Nose Syndrome", due to the appearance of a white fungus on the muzzle of many of the affected animals. However, it is not currently known whether the white fungus is a cause of bat deaths or a symptom. Factors under investigation include fungus, viruses, bacteria, parasites, and environmental contaminants.

Despite the rapid southward spread of white nose syndrome during the past few years, it is fairly unlikely that white nose syndrome will become an issue for bats in Florida, for several reasons. First, white nose syndrome is a problem for bats that use caves and mines, and of all the species of bats that reside in Florida, only 3 regularly use caves and mines (the gray bat, the south-

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eastern bat, and the pipistrelle). Of these three, only one has been reported to have white nose syndrome in other states - the pipistrelle. Unlike the bats that have been affected thus far in more northern states, the pipistrelle never occurs in large congregations in FL. This means that the spread of white nose, if it were to arrive, would be quite slow relative to what has occurred in the large bat colonies further north.

Second, even if bats with white nose syndrome were to appear in the state, the epidemic is unlikely to have the devastating effects it has had on bats in other states because of our warmer temperatures. Few bats enter hibernation in FL, and fat accumulation prior to hibernation in those individuals that do is not so critical, because food is more likely to be available during winter months in warmer climates than in colder regions. If bats needed to leave hibernation caves in FL during winter, they would probably be able to find at least some insect food most nights of the year. Thus, at this point it seems quite unlikely that the astonishing bat die-offs currently occurring in other eastern states will be an issue in FL. [Holly Ober]

Understanding the Economic Impact of Residual Feed Intake in Beef Cattle

Residual feed intake, or RFI, is the difference between actual feed intake and expected feed intake. Daily feed intake is measured on each individual animal. Performance, for example weight gain in growing and developing beef cattle, is tracked across the feeding period, usually a minimum of 70 days. Using the weight and intake information, expected intakes can be calculated. The difference between the expected and actual intakes is the residual. Cattle that consume less than expected are more efficient. Residual Feed Intake is phenotypically independent of the traits that are used to calculate it. As an example, a data set that was collected in the Feed Efficiency Facility (FEF) at the North Florida Research and Education Center in Marianna is shown with RFI and average daily gain (ADG) presented. As is usual in a data set of this size ($n = 58$), there is a substantial representation of different gains and variation in RFI. Calves A and B (noted in the figure) both entered the FEF weighing 819 pounds and left weighing 1051. Their weights and gains (3.32 lbs/day) are identical. Based on their weight and performance numbers, the calves were expected to consume 24.32 pounds of feed/day. However, calf A's actual daily intake was 22.86 pounds and calf B's actual daily intake was 25.76 pounds for RFI's of -1.46 and +1.44, respectively, a difference of 2.90 pounds of feed consumed per day.

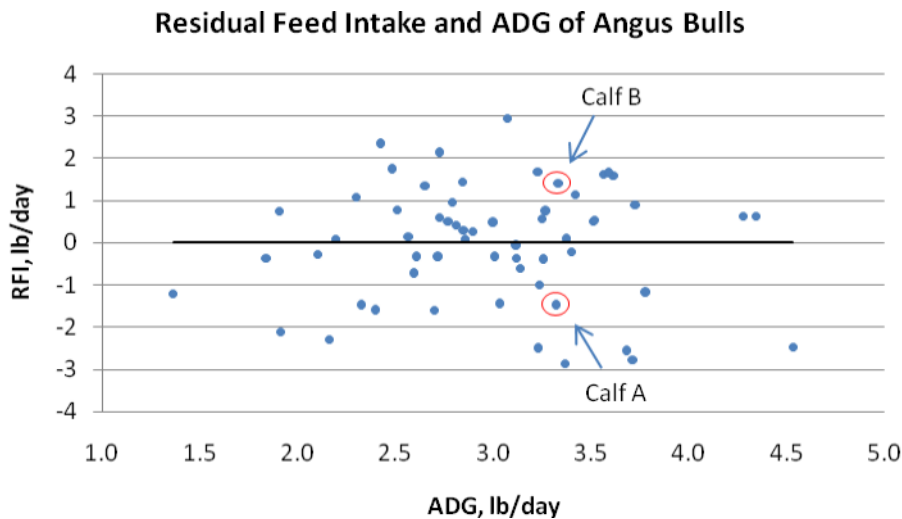


Figure 1. Residual feed intake (RFI) and average daily gains (ADG) from a test of Angus bulls fed at the North Florida Research and Education Center, Marianna.

Over the course of the 70 day feeding period, calf A consumed 203 pounds less feed than calf B, yet performed exactly the same. Assuming similar diets and a similar rate of gain (3.32 pounds/day) it would take each calf 180 days to gain 600 pounds but calf A would consume 522 pounds less feed. For 100 calves in a feedlot pen, this translates into 52,200 pounds less feed, and at \$0.08/pound feed, this would result in a savings of \$4,176 (\$41.76 per calf). Assuming all other costs are equal the resulting cost of gain in pen A would be \$0.07/lb less than in pen B. Once again this is a significant savings for the feeder or owner.

Residual feed intake is moderately heritable. Lines of cattle selected for low RFI had similar weights and performance after two generations yet consumed 11% less feed. In addition, there is a strong correlation with RFI measured after weaning and RFI measured in mature breeding females. Selecting for RFI has not increased mature weights or affected other phenotypic traits in cattle. [Travis D. Maddock and G. Cliff Lamb]

Got Weak Wildlife Food Plots? Take Your Doctor's Advice.

Summer is fast approaching and your summer food plots are looking lackluster. What can you do now to ensure that you have a summer's worth of forage bounty for your wildlife? Many things can contribute to a poor stand. Symptomology is not always straight forward. Answering the following will also arm you with information to share with your local county extension agent or advisor if you need further assistance in food plot sleuthing:

Where is your food plot located?

- Are shadows cast over the food plots a large portion of the day? Food plots require ample sunlight to promote vigorous growth.
- Are plots receiving ample moisture? Location of brush and/or trees too close to small food plots will rob the forages of needed soil moisture.
- Are plots located in lowlands or depressions? Natural open areas usually hold water during big rain events. Many forage species do not tolerate "wet feet".
- Have the plots been cut out of old forest or pine stands? Most forested areas have highly acidic soil (below 5.5) that can lead to aluminum (Al) toxicities.
- Are you planting the same species on the same land year after year? Just as with farming, rotations are required to avoid pest and disease build-up.

What kind of soil are your food plots growing in?

- Is your soil pH below 5.5? You need to lime that soil (gypsum does NOT have liming ability). Pelletized lime is easy to spread, fast-acting, and it is reasonably priced for small areas and can be applied over plants. Hydrated lime WILL BURN vegetation. It is VERY fast-acting but should not be applied directly on plants. Wear a mask and safety glasses when applying hydrated lime.
- What is the soil fertility? Some soils have high phosphorus, iron, and manganese while many have very low nutrients, particularly micronutrients. If you have not sampled your soil, DO IT NOW. If plants look weak, sample leaf tissue also. The soils are the plant's grocery store. They utilize the groceries and their tissue composition will tell you if they have been eating well. Interpreting plant analysis reports is tricky. Results hinge upon many factors (a poor value may not be due simply to soil fertility). Your county agent can help you with sampling procedures and interpretations. Specialists are at hand to assist them.
- Did you fertilize according to IFAS recommendations? To save money and the environment, do not apply more than what is recommended for the forages you are growing. Your plots are likely located in natural settings. Over-fertilizing pollutes the water and promotes weed growth in natural areas.

What are you growing?

- Are you planting the correct species at the correct time? Each forage species has an optimum planting date. Be sure you are following the forage's calendar or select forage species that better fit yours.
- Are you planting varieties adapted to your environment/conditions? Florida has a unique climate and soils. Be certain the varieties you choose were developed for this area. Otherwise, all the care and sweat-equity you plow into your plots will reap little. [Cheryl Mackowiak and Ann Blount]

Additional recommended reading can be found on-line:

Forages of Florida: <http://agronomy.ifas.ufl.edu/ForagesofFlorida/index.php>, Mackowiak

Soil Fertility Management for Wildlife Food Plots. <http://edis.ifas.ufl.edu/pdffiles/SS/SS46800.pdf>

[Cheryl Mackowiak]

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

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Know Our Staff

Sherry Alday joined NFREC in April 2005 as OPS Secretary at the Quincy center. This role in Quincy requires Sherry to wear many hats throughout her day, including but nowhere limited to being the greeter at the front desk for staff and visitors, telephone attendant for all incoming calls, making sure that all incoming and outgoing mail and packages reach their destinations, repair and maintenance for the center office machines (fax and copiers) and assisting faculty and staff in their many secretarial needs.

Sherry has been and continues to be a great asset to the NFREC center. She handles every situation in a positive manner; she treats people with the utmost respect, and sees challenges as new adventures.

Sherry lives in Greensboro. She enjoys gardening, cooking and crocheting.

Sherry Alday, OPS Secretary



Faculty in the News

“Don Hicks, Union County Farmers Market Manager presented Linda Landrum, RSA Marketing & Rural Development, an award in appreciation for the years of steadfast devotion, support, and farmer training she had done. Linda Landrum has helped make this market successful! This award was presented at the ceremony held at the Opening for the 2009 Season, in Lake Butler, Florida.”

Linda Landrum, NFREC-SV

Coming Events Calendar

June 23, 2009 - Palm Production Seminar, Jasper, FL. To register call Allen Tyree at 386-792-1276, email ATyree@ufl.edu or Linda Landrum at 386-362-1725 x 105, email LLandrum@ufl.edu.

June 27, 2009 - Crape Myrtle Field Day, North Florida Research and Education Center, Quincy, FL. For more information contact Jill Williams at B419@aol.com.

July 9 - 12, 2009 - Southeastern Equestrian Trails Conference, Gainesville, FL. For more information call 352-317-0273 or email to setc2009@aol.com.

July 13-16, 2009 - American Society for Plasticulture Meeting, Penn State University. Save the date.

July 29-31, 2009 - Farm to Fuel Summit, Rosen Shingle Creek, Orlando, FL. For more information visit http://www.floridafarmtofuel.com/summer_2009.htm

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. For educational program content contact Danielle Treadwell at 352-392-1928 x or email ddtreadw@ufl.edu.

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