

Dean's Notes & Quotes

As you are aware, UF/IFAS Extension is in the process of working on three key organizational priorities; namely Strategic Staffing, Revenue Enhancement and Urban Extension. For each of these initiatives, we have Task Forces who are working on strategies and recommendation as to how we can advance our organization in these critical areas. The first two Task Forces we kicked off, Staffing and Revenue, have submitted their final reports to me. First, I want to thank both of these Task Forces for their hard work, excellent thinking and very good idea generation that they have invested into these efforts.

In the past two weeks, the Extension Leadership Team has thoroughly reviewed these reports, and we have come up with a number of plans, strategies, recommendations, next steps, etc. based upon the reports we received. As a key next step, we will be holding a series of Town Hall meetings the week of July 20. See the save-the-date flyer below with further information on dates, locations and times of these Town Hall sessions. Each of the sessions will be the same in format and content.

The purpose of these Town Hall sessions are to provide an opportunity for our UF/IFAS Extension faculty to learn more about both of these organizational initiatives. The format will be to spend time focusing on each of the two initiatives; and we will provide an overview from the Task Force, I will share perspectives and next steps we'll take, and then we'll have time for Q&A. Prior to the Town Hall sessions, we'll be sending out further information that you can review ahead of time. I look forward to seeing many of you at these Town Hall sessions.

At our next Extension Connections on June 15, my guest will be Dr. Ricky Telg, Director of our PIE (Public Issues Education) Center. He will be sharing his vision as the new Director, and particularly honing in on the organizational value of the PIE Center for UF/IFAS Extension in regards to public issues, surveys, professional development, etc. At the completion of our discussion about the PIE Cen-

May/June 2015

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ter, I'll be focusing my part on these upcoming Town Hall sessions and the organizational initiatives we have underway.

As always, thanks for all the great work you do on behalf of UF/IFAS Extension!

Regards,
Nick

Click on the image to enlarge.

They always say time changes things, but you actually have to change them yourself. – Andy Warhol

SAVE THE DATE

Monday, July 20, 2015
10:00 a.m. – Noon
UF/IFAS Extension Orange County
6021 S. Conway Road
Orlando, FL 32812
(407) 254-9200

Tuesday, July 21, 2015
10:00 a.m. – Noon
UF/IFAS Extension Palm Beach County
523 N. Military Trail
West Palm Beach, FL 33415
(561) 253-1700

Wednesday, July 22, 2015
1:00 p.m. – 2:00 p.m.
Straughn IFAS Extension Professional
Development Center
2142 Shealy Drive
Gainesville, FL 32608
(352) 294-2915

Thursday, July 23, 2015
10:00 a.m. – Noon
UF/IFAS Extension Jacksonville
2745 South Ave. # 3
Mariana, FL 32448
(850) 482-9620

UF/IFAS Extension Town Hall Meetings
to present the task force reports on strategic staffing and revenue enhancement
All faculty are invited and encouraged to attend these town hall meetings at the nearest and most convenient location.

QUESTIONS? Contact Kim Rollins at rollink@ufl.edu

Feature Story

The IR-4 Southern Region Program at the University of Florida—Helping Specialty Crop Growers Gain Access to Pest Management Tools

Michelle Samuel-Foo, Associate Research Scientist and IR-4 Southern Region Field Coordinator, UF/IFAS Food Science and Human Nutrition

Did you know that before any pest control chemical can legally be used on an agricultural crop for food use, field residue trials in compliance with Good Laboratory practices (40 CFR Part 160) standards are conducted whereby the Maximum Residue Levels (MRL) are determined? Did you also know that research at UF/IFAS plays a critical role in generating the data that is used to support these pesticide tolerances?

Interregional Project No. 4, popularly known as 'IR-4' is the USDA-NIFA program that helps procure pesticide tolerances so that growers can have access to a wide variety of tools in their crop protection toolbox. IR-4 has its Southern Region program headquartered on the UF/IFAS campus in Gainesville and also has two field research centers at the UF/IFAS RECs in Citra and Homestead. The IR-4 project was established in 1963 to address the pest and disease management needs of specialty crop growers throughout the US. The IR-4 Southern region is one of four state regional arms of the program (others located at Univ. of California-Davis, Michigan State Univ. and Cornell Univ.). The program is a collaborative effort amongst several groups including: Grower and commodity groups, land grant universities, the agrichemical industry, USDA-NIFA, USDA-ARS, and the US Environmental Protection Agency (EPA).



**IR-4
Regional
Field
Coordinator
Michelle
Samuel-Foo.**

Background of the IR-4 Program:

The program took effect when the directors of State Agricultural Experiment Stations (SAES), in collaboration with USDA, recognized the need for specialty crop growers to have access to chemical pest control options. Minor crops or specialty crops refer to crops that are typically grown on small allotments ($\leq 300,000$ acres) compared with traditional large acreage crops such as wheat, corn, and soybean. Despite their small acreages, minor crops are usually high value crops. Unfortunately, there is often lax incentive for manufacturers (agrichemical industry) to pursue registrations of pesticides for minor crops, as focusing efforts on larger-acreage crops translates into greater profits. Potential liability issues from crop injury also act as a deterrent for registrants.



IR-4 SOR group picture-Field teams from across the IR-4 SOR program at a recent GLP training workshop in Gainesville.

IR-4 Program Mission and Process:

The mission of IR-4 is to facilitate the registration of conventional chemical pesticides and biopesticides to manage pest and diseases on specialty food crops. Requests for assistance are vetted via an online system whereby stakeholders (specialty crop farmers/specialty use stakeholders) are able to make their pest management needs

known. Annual priority setting occurs in each of the IR-4 regions. (The 2015 IR-4 Southern region priority setting meeting is scheduled for August 18-19 in Coconut Grove, FL; contact mfoo@ufl.edu for more information) Subsequently, interested parties gather at the National IR-4 Food Use Workshop to decide on a research plan for the upcoming year. Priority setting is followed by a great magnitude of residue field trials that are conducted according to US EPA growing

regions guidelines. Florida represents EPA growing regions 3 and 13. Data generated from the field trials are included in petitions submitted to the US EPA. After a comprehensive risk assessment is performed at EPA, if all goes well, a tolerance for that chemical/commodity is established. IR-4 also conducts product performance (crop safety and/or efficacy) field trials on ornamental plants, food use plants and biopesticides to provide specific data needed by registrants in making decisions to market their products on specialty crops and specialty uses. Many UF/IFAS research and extension faculty participate in this aspect of the program. In 2015, UF/IFAS faculty participating in IR-4 studies included Nathan Boyd, Daniel Carillo, Jonathan Crane, Peter Dittmar, Oscar Liburd, Stephen Marble, Dave Norman, Calvin Odero, Aaron Palmateer, Hugh Smith, Gary Vallad and Shouan Zhang.

The IR-4 Southern Region Program at UF/IFAS

The IR-4 Southern region field program and residue chemistry analytical laboratory is located in the Food and Environmental Toxicology Lab, an extension of the Food Science and Human Nutrition Dept. Dr. Michelle Samuel-Foo leads the IR-4 Southern region field program. She is an entomologist by training with expertise in Integrated Pest Management, Pesticide Registrations and Regulatory Affairs. Michelle provides oversight, ensures compliance with GLP standards, and coordinates all the field residue and efficacy trials that are conducted throughout the IR-4 southern region that encompasses 13 southern states (AL, AR, FL, GA, LA, KY, MS, NC, OK, SC, TN, TX, VA) plus Puerto Rico. The field program has an annual operational budget that averages \$1,000,000.

Dr. Wlodzimierz (Wlodek) Borejsza-Wysocki serves as the director of the IR-4 southern region analytical chemistry laboratory. Wlodek is assisted by a team of experienced residue chemists who determine residue



Members of the IR-4 Southern region program L-R: Susan Estevez, Dr. Wlodzimierz Borejsza-Wysocki (lab director), Letitia Waters, Dr. Maurice Marshall (regional director), Carolyn Turlington, Dave Guderian, Dr. Gail Mahnken, Dr. Milena Ramirez and Dr. Michelle Samuel-Foo (regional field coordinator).

levels in crop samples from MRL field trials. Analytical techniques used at the lab include gas chromatography with mass spectrometry (GC/MS) and liquid chromatography with mass spectrometry (LC/MS).

IR-4 Program at the IR-4 North Florida Plant Science Research and Education Center



Peter Dittmar leading a field workshop demonstration during a recent field training session for IR-4 fields researchers in Gainesville.

Dr. Peter Dittmar, Asst. Prof. of Horticulture Sciences, is the faculty administrator for the IR-4 Southern region field research center at the UF/IFAS Plant Science Research and Education Center in Citra. Peter is assisted by a field team that includes David Studstill, Michael Long, and Darrel Thomas. Collectively, the group is able to conduct an annual average of 28 field residue trials under US EPA mandated GLP guidelines. GLP trials differ from typical crop safety and performance trials that a researcher might conduct in that there is a tremendous

amount of documentation and detailed record keeping that is involved in the process. This includes receipt of GLP certified test substances from the manufacturer, keeping detailed application records, harvest of samples, and sample shipment to analytical chemistry labs around the country where the pesticide residues are measured. The field research center is located in EPA US Crop Production region 3. The team conducts MRL field tri-

als on a wide variety of vegetable row crops (e.g. radish, sweet potato, lettuce, tomatoes, and basil) as well as tree fruits including oranges and grapefruit. In 2015, pomegranate has been added to the list.

IR-4 Program at TREC (Tropical Research and Education Center), Homestead FL

Dr. Jonathan Crane, professor and tropical fruit specialist in the Horticultural Sciences Dept. at UF serves as the faculty lead for the IR-4 field research center that is located at TREC. Jonathan is assisted by a field team that includes TREC staff Reed Olszack, Rebecca Tannebaum and Armando Gaza to conduct MRL residue trials to generate data in support of pesticide tolerance petitions on tropical fruits. Many of the pesticides that are registered for use on tropical fruits are a result of the efforts in part by the IR-4 team at TREC. Homestead is in EPA US Crop Production region 13; commodities of interest there include avocado, banana, carambola, dragon fruit, guava, lychee, mango, papaya, sugar apple, and others.

IR-4 and Florida Agriculture

Florida fruit and vegetable growers annually produce about \$3.5 billion worth of crops for US and international markets. Healthy crops are critically important to Florida growers. Florida farms produce nearly 300 different commodities, many of which are specialty crops. IR-4 has responded to more than 750 requests from Florida for registration of pest management products in food crops. By developing the data required for support of pesticide tolerance petitions, thousands of new product uses have been registered that support Florida growers.



IR-4 UF Citra field researcher Michael Long examining a tomato plot in Citra for an upcoming residue trial.



Ir-4 field team at UF/IFAS TREC Reed Olszack and Dr. Jonathan Crane examining papayas on the station.

UF/IFAS Extension Martin County Master Gardener & Florida Yards and Neighborhoods Programs Host Arbor Day Tree Giveaway

Yvette Goodiel, Sustainability & Commercial Horticulture EA II, Martin Cty

On Saturday, January 18, 2014, in honor of Florida's Arbor Day, the UF/IFAS Extension Martin County Florida Yards and Neighborhoods (FYN) and Master Gardener (MG) programs presented their annual tree giveaway at the office in Stuart. Val Martin of Florida Classics Library, who is a republisher of books about the Florida experience, generously donated funds to purchase 250 Florida Longleaf Yellow Pine Tree seedlings. Fred Burkey with the FYN program also donated 400 native trees. After visiting education booths, residents were able to choose one native tree and one tree seedling to take home and plant. Agent Fred Burkey and MG volunteers, coordinated by agent Yvette Goodiel and Master Gardener Facilitator Mary McNulty, provided education booths to discuss best management practices for planting success. In October 2014, attendees were surveyed to learn more about the outcomes of this educational community program.



FYN Agent Fred Burkey teaches tree giveaway attendees about proper tree planting. Photo credit: UF/IFAS Extension Martin County Master Gardeners.

Event attendees were emailed a link to a quick on-line survey, wherein they were asked about the health of their trees and their adoption of key best management practices. A total of 29 out of the 204 attendees responded to the survey questions. Of those receiving 3-gallon native trees, 92% (23 of 25 respondents) reported their

trees were healthy. Similarly, 73% (11 of 15 respondents) of those receiving 1-gallon native longleaf pines reported their trees as healthy. Of those whose plants were doing poorly or did not survive, 25% (1 of 4) respondents stated they had consulted UF/IFAS Extension. The respondents stated they learned that the tree may go through transplant shock and take up to 2 years to establish, so they are continuing to watch and nurse the tree along. Those who did not consult UF/IFAS Extension stated their trees had not survived because they did not provide sufficient water; the trees were either planted in a remote area, or the owners had gone away on vacation without providing for irrigation in their absence. Some of the positive comments respondents gave included:

- "Appreciated getting guidelines on how to plant and maintain the plant given me. Enjoyed being able to select the plant I wanted. Keep the event going!"
- "Wonderful community service!!! The gifts of trees AND best practices education are greatly appreciated. Thank you."
- "It was a bonus and surprise. My tree is healthy and happy."

Participants were also asked whether they had adopted key best management practices as a result of the event. Before participating in the educational sessions at the tree give-away, only 20% (5 out of 25 respondents) stated they performed proper pruning on their trees to maintain good structure; 68% (17 out of 25 respondents) reported they had either started or increased proper pruning after attending the event. Right plant, right place became a new or increased consideration for 67% (18 out of 27 respondents). Only 33% (9 out of 27 respondents) stated that before the event they considered soil, sunlight, water availability, size at maturity, and other factors when selecting trees and deciding where to plant them. Before the event, only 24% (7 out of 29 respondents) planted new trees so that their top-most roots were just above the soil level; after the event, 73% (21 out of 29 respondents) stated they had adopted or

increased their practice of planting at the proper depth. Overall, the tree give-away was well-received by the public, increased the number of trees planted in our community, and resulted in beneficial behavior changes by attendees. The best management practices adopted by attendees will help to maintain healthy trees in our community, saving resources, reducing greenhouse gas emissions, and contributing to a better quality of life.

The tree give-away has been an annual event here in Martin County for at least the past 7 years. Since 2008, a total of 6,650 native trees have been distributed to the community.

According to UF/IFAS, properly located trees can reduce air pollution, improve water quality, lower heating and cooling costs, minimize storm water runoff, decrease soil erosion, lessen the urban heat island effect, buffer noise pollution, provide habitat for wildlife, increase property values, and contribute to the psychological and social health of communities. The National Tree Benefit Calculator (<http://www.treebenefits.com>), developed by Davey Tree Expert Company and Casey Trees, can be used to estimate the monetary value of trees' ecosystem and societal benefits. For the primary tree species offered during the years of the annual tree give-away (South Florida slash pine saplings), the National Tree Benefits Calculator estimates a value of \$1 per year in overall benefits. Once the tree reaches 1-inch diameter, the estimated benefits for each tree reach \$5 per year, including the interception of 31 gallons of stormwater runoff and a 2 lb reduction in atmospheric carbon in a 1-year period. The total economic benefits for the trees given away thus far, assuming about 50% reach a 12-inch diameter, is estimated at approximately \$172,900 per year (\$52 per tree at 3,325 trees).



MG Volunteers present information on proper pruning and tree selection at education tables during the 2014 tree giveaway. Photo credit: UF/IFAS Extension Martin County Master Gardeners.

Culinary Student Agriculture Experience

Christa Kirby, Livestock EA III and Samantha Kennedy, Comm Resource Dev EA II, Manatee Cty
The need was expressed to educate culinary participants about where their food comes from and how it is grown and processed. Agricultural and FCS agents worked together to develop the first annual Culinary Agriculture Experience. The objectives of this program were to increase the awareness of locally produced agricultural commodities, strengthen confidence in the safety of the US food supply, and stress the importance of agriculture to the economy of Manatee County. Participants visited three farms, including an agri-tourism destination growing hydroponic and traditional fruit and vegetable crops, a cattle ranch, and a potato farm. At each location the participants were able to see the diversification of the industries along with harvesting some of the products. Lunch featured Manatee County-grown products. The final component was a question and answer period with local producers. The tour hosted 33 students and instructors of diverse backgrounds. Prior to the tour only 33% of the participants had visited a commercial agriculture operation. Participants increased their knowledge of agriculture and its impact on the economy of Manatee County by 20%. Their confidence in



American grown foods increased 25% as a result of the tour. After the tour they were

Farmer Alan Jones, right, shows a student from the Manatee Technical College culinary program how to dig up potatoes during an agricultural tour designed specifically for student chefs.

interested in collaboration on future tours for student chefs. Students were interactive and interested in how the crops and products were produced. The day allowed the participants to get away from their kitchen and see truly how their food is produced and processed. Several students were collecting business cards from the producers to do future business. Future plans for this program are to expand to more students, instructors and local chefs as resources allow.

The Small Flock Poultry Production Conference: A Mobile Program for new Central Florida Producers and Backyard Hobbyists.

Megan Brew, 4-H EA II, Lake Cty

The increased popularity of small scale and backyard chicken production has resulted in a large number of new chicken owners who lack education on proper animal husbandry and best management practices for poultry production. Members of the Central Florida Livestock Agents Group (CFLAG) recognized the need for small scale poultry education in their communities. Together livestock agents from Lake, Volusia, Brevard, Orange, and Marion Counties developed a day-long conference-style educational program targeting small scale poultry producers and hobbyists. Objectives for this program included increased knowledge of basic poultry management, improved understanding of laws and regulations relating to poultry production in Florida, and increased adoption of best management practices related to small scale poultry production. Three Small



Small Farms Agent Jonael Bosques from Marion County demonstrates coop building.

Scale Poultry Production Conferences have been held in Lake (70 attendees), Brevard (20 attendees), and Marion (35 attendees) counties. Topics addressed included: getting started, nutrition, health, egg production, egg processing and sales, and coop construction. Attendees enjoyed lectures, demonstrations, and a chance to network with one another. Of those surveyed, 96% (n=32) reported an increase in knowledge related to poultry keeping and 92% reported an intention to adopt or change a practice based on information received. Follow up interviews with several participants have revealed that three have registered as limited egg producers with FDACS, two began processing their own broilers for personal consumption, and four have made significant changes to their feeding and biosecurity practices. Small farm/urban agriculture programs like the Small Flock Poultry Production Conference expose new audiences to extension services and result in better compliance with local and state laws as well as increased adoption of best management practices. The mobile format allows agents to reach a greater number of citizens while promoting an effective use of time and resources in the development of educational programs.

SmartIrrigation Apps Helps the County Government Save Money

Michelle Atkinson, Env Hort EA I, Manatee Cty
Fresh water supply shortages are increasingly common with growing populations in this region contributing to water stress. Spencer and Altman 2010's report indicated that by 2050 much of Florida is projected to be at high to extreme risk of water shortage. If irrigation practices can be



A full house of chicken enthusiasts participated in our first session of the Small Flock Poultry Production Conference.



Irrigation Technician Tom Funari, second from the left, demonstrates how to use the new SmartIrrigation App.

improved then irrigation can provide one source of potential water savings. The UF/IFAS Manatee County Extension Service is showing its value to Manatee County Government by helping to save irrigation water on county owned properties. Extension staff provides a full irrigation evaluation on county sites to identify breaks, leaks, and other inefficiencies in the irrigation system. With the help of extension staff, county site managers program Agroclimate's SmartIrrigation App with soil type and unique zone characteristics like sprinkler type and number of sprinklers that then generates an irrigation schedule. Site managers also receive a detailed irrigation evaluation report that makes recommendations to correct inefficiencies in the system. Using the app instead of a set time-based schedule for irrigation, county site managers can provide irrigation amounts to turf that are more closely matched to water needs. Using this app for irrigation is expected to reduce irrigation amounts annually by 25 to 30% if the app-suggested schedules are followed. County sites that have received irrigation evaluations can save 30% of overall irrigation water used by following extension staff recommendations.

Extension Helps Complete School Greenhouse Project

Nichelle Demorest, Env. Hort EA III, Columbia Cty
A local teacher obtained a grant to install a greenhouse at his school. He was able to get the

structure initially erected but the finish work was left to complete. He then approached his horticulture county agent for assistance in getting the greenhouse and the students ready to begin producing vegetables. The teacher needed manpower to complete the greenhouse, construct and install an evaporation cooling unit, and build an entry room at the front. He also needed technical assistance to erect vertical growing systems and to design and install the irrigation and fertilizer injection system for the greenhouse. This project began to really take shape in the heat of the summer of 2014.

The agent invited the multi-county vegetable agent to speak to the teacher and the group of interested master gardener volunteers about what was needed to be done in the greenhouse to achieve the goals of the teacher. The Master Gardeners (MG) and agent helped provide the manpower needed to finish the construction and prepare the greenhouse for production. A dedicated MG was presented with the "Volunteer of the Year" award from the school for his dedicated service to this and other projects. The agent paid the tuition fee for this MG volunteer to attend a 2-day commercial greenhouse grower workshop at the Suwannee Valley Agricultural Extension Center so he could effectively help with the greenhouse vegetable growing program as it progressed at the school.

To help prepare the students for their greenhouse experience, the agent instructed students (174 contacts during 6 class periods) on food-borne illnesses and risk management practices while growing and harvesting produce. Some teaching methods used were whole-group vocabulary matching games, 'germ glow'/black light demonstrations and small-group production of hand washing posters. These completed posters were displayed in various locations throughout the school.

Master Gardeners assisted in preparing students by teaching a session on vegetable plant propagation: starting transplants from seed. Although plants were successfully started by the students, rodents feasted on the seedlings. Luckily

enough, back-up plants to fill the vertical planters had been prepared by MGs.

As a result of the dedicated work of extension personnel and the MG volunteers, a crop of lettuce was harvested from the vertical systems in the spring of 2015. The systems were then replanted with student-grown cucumber plants. The teacher's goal is for students to learn production as an introduction to the occupation. The teacher plans to supply the school cafeteria with some fresh vegetables. He was very grateful and said that this project was possible only because of the help from UF/IFAS Extension.

Vegetable Gardeners are Growing Green and Sustaining

Lisa Hickey, Urban Landscaping/Water Conserv. EA I, Manatee Cty

Across the United States 42 million households have a home vegetable garden, an increase of 17% in a 5 year period (Cristelli, 2014). As more people start their own vegetable gardens, it is important to meet the demand with residential workshops on the basics of starting a vegetable garden. The Manatee County Urban Horticulture Program annually averages five vegetable gardening classes with an average of 465 participants annually. In the spring of 2015, 54 residents attended the "Spring Vegetable Gardening" workshop. TurningPoint technology was used to determine pre- and post-knowledge gain. There was a 28% gain in knowledge (19% pre-score versus 47% post-score) of residents who understood the correct north/south orientation of the garden; 10% gain in knowledge (38% pre-score versus 48% post-score) determining the correct time to plant warm-season crops; 26% gain in knowledge (21% pre-score versus 47% post-score) of the correct type of plastic to use when solarizing vegetable garden soils; 98% (n=50 out of 51 responses) understood the concepts of integrated pest management and by the end of the workshop, 94% (n=50 out of 53 responses) knew that fungicides did not cure plant diseases.

A post survey has been sent to measure knowledge retained for these questions and behavior changes in three areas (scouting the garden, use of pesticides, and testing of soil pH). Results are pending.



Students enjoy learning about how to grow vegetables successfully in their own back yards at the Spring Vegetable Gardening workshop.

New Farmers' Market Connects Rural Martin County Residents with Fresh, Locally-grown Produce

Yvette Goodiel, Sustainability & Commercial Horticulture EA II, Martin Cty

The Indiantown Farmers' Market, first proposed by a stakeholder during the August 2014 Extension Overall Advisory Committee meeting, quickly became a reality thanks to the efforts of all involved. Event organizers include the FCS agent Chris Kilbride, Sustainability & Commercial Horticulture agent Yvette Goodiel, the Indiantown Chamber of Commerce, the Seminole Inn (local, historic restaurant in Indiantown), the Indiantown Boys & Girls Club, and the Indiantown Sheriff's office. The first market day was held on November 30, 2014 and drew ten vendors of locally-produced goods, including quail eggs, vegetables, canned fruits/vegetables, vegetable seedlings, and crafts. Market days are being held once a month through May. The event offers residents of Indiantown an opportunity to connect with their local growers; brings fresh, locally-grown produce to an area defined by the USDA as a food desert (<http://www.ers.usda.gov/>

data-products/food-access-research-atlas/go-to-the-atlas.aspx); and gives producers a new avenue by which to reach potential consumers.



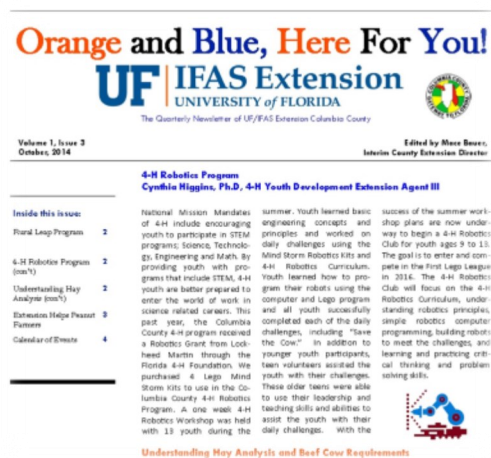
A local producer of quail eggs interacts with customers on the inaugural market day. Photo credit: Yvette Goodiel.

pondered what my wife might like to read? She is not interested in weed control in peanuts, how to balance a ration, the new child protection requirements of volunteers or umpteen other issues we in Extension know are important, but are not widely of interest to the general public. However, this audience does want to know what is going on in their county and community. They like to learn that IFAS Extension is helping farmers grow a new crop of “jet fuel” or that 64% of Floridians are concerned about invasive plants and Extension delivers this information to them, or that 4Hers are learning more about robotics and that the Robotics Team took 2nd place in the North Florida Fair. They like to know some county employees are “here to help” and are earning the tax money citizens and businesses pay them as a salary.

Spreading the Word

Mace Bauer, Ag/Comm Hort CED III, Columbia Cty
I cannot say how many times in my brief tenure as a beginning agent in the Columbia County Extension office I was told we “needed” a county newsletter. Upon being assigned Interim County Extension Director I was well aware the faculty did not particularly care for a county newsletter and the community didn’t demand one. However, I continued to hear of the need to market Extension and agreed there was room for improvement. Conversely, I agreed with the office faculty about the aversion to another assignment. We already had Agronomy, 4-H, Family and Consumer Science, Commercial Landscaping, Natural Resources and various other newsletters targeted to specific audiences as well as weekly newspaper columns.

Upon further reflection, I began to wonder what information we delivered to John Q. Public, i.e., those individuals who don’t participate in extension programming. This “average Joe” could be my wife, my neighbor, the County Manager or a County Commissioner. It was obvious to me that these members of the community were not interested in the various technical articles we publish for specific clientele groups. I often



As I developed the Columbia County Newsletter, “Orange and Blue...Here for You,” learned that Extension Faculty are much better at sharing technical information about subjects in their program area than they are at sharing how this technical information changes people’s lives and improves the livelihood of the community.

I constantly remind faculty that “Orange and Blue” is not a technical publication. Our goal is to document ways Extension makes a difference in local lives and the community. We immediately received very good feedback about the content of our newsletter. Recently, the

County Manager said, “You guys are doing really good things at the Extension Office. I read all about it.” Sometimes, putting the good things we do on paper in a glossy publication formalizes things for our stakeholders. In my local experience, it is important to “spread the word” in a consistent, recurring manner, and we have attempted to do that with our newsletter, “Orange and Blue...Here for You.”



The open hive demonstration done by UF/IFAS Undergraduate Intern Ricardo Meraz, was an integral part of the Beekeeping Basics Workshop.

as wax and honey production.

There is a growing interest from farmers and urban residents in increasing their understanding of where their food comes from. Some are also seeking educational opportunities on producing food in their backyards and additional alternatives that fit their agricultural enterprises. For this

reason, Marion County hosted the Beekeeping Basics workshop. This day-long educational event guided the audience through important subjects related to keeping honeybees. The topics covered during this workshop were:

A Growing Interest for Beekeeping

Jonael Bosques, Small Farms EA I, Marion Cty

For centuries humans have been inspired by honeybees. Honeybees have been domesticated for close to 10,000 years when bee colonies were introduced to meet caloric needs of early civilizations in Middle Eastern cultures. Today, these amazing arthropods have an important role in American agriculture serving as the primary pollinator agent on crops such as citrus, almonds and many other fruits and vegetables.

Recently backyard beekeeping has resurged as one of the top educational topics sought by Marion County citizens and farmers. Providing alternatives for diversifying resources applicable to small farms is one of the many roles of UF/IFAS Extension Marion County. Our mission states that we offer citizens and farmers science based information which can in turn be translated into economic alternatives aimed at improving the viability of their agricultural operations.

Honeybees have been in the news for many reasons ranging from colony collapse disorder to alternative farming opportunities through pollinator services and value added products such



Class attendants had the opportunity to handle bees, taste honey and wear personal protective equipment related to apiculture.

demonstration hive. Most of the attendees had limited apiculture experience and enjoyed observing and handling the beehive. The instructor demonstrated how to assemble and take apart a beehive, appropriately smoke the colony, comb extraction, and spot the queen and drones in the hives.

The evaluation results revealed a great need for additional training related to apiculture. It also revealed that 66% of attendees (25) were visiting the extension office for the first time.

Of the attendees, 97% (35) rated the program as

useful while 2% (1) rated the program as somewhat useful. Important topics for attendees were: getting started (15), basic biology (14), swarm management (7), and



Dr. Jamie Ellis talks about the correct use of beekeeping protective equipment.

equipment needed to start a honeybee enterprise (7).

Other topics of interest identified by this audience include: alternative pollinator management (4), urban beekeeping (2), and small ruminant production (2) among others.

As a result from this training, three Beekeeping Basics Workshop attendants have started their beehives and are now engaged in amateur apiculture. Some of the attendants expressed their satisfaction for the quality of programming and have returned to UF/IFAS Extension at Marion County for further educational opportunities related to small farms.

The Beekeeping Basics Workshop clearly demonstrated that there is a great demand for additional apiculture programs. This educational opportunity can successfully serve as a way to introduce non-traditional clients to the services provided by Extension in Marion County.

Land Judging...a Dirt Success

Diana Smith, 4-H YD EA IV, Manatee Cty

Studies have indicated that there is a dire need for youth to enhance their science and technology knowledge and skills. The 4-H land judging program series was offered to Manatee County youth to increase their knowledge of soil and water and to develop an appreciation for the capability of the land and the contributions it makes to an individual's level of living. A total of 16 youth participated in the land judging training series. On average, training sessions were 60 minutes long except for the site evaluations. Post evaluations indicated an 85% overall increase in knowledge. For youth enrolled in the soil and water sciences project, 100% (16) developed an appreciation for the capability of the land and the contribution it makes to the individual's level of living; 81% (13) acquired adequate knowledge and skills necessary to compete in the county land judging contest; 50% (8) acquired adequate knowledge and skills necessary to qualify to compete in the state land judging contest; and



Manatee County 4-H youth study the soil layers closely as they compete in the county land judging competition.

50% (8) completed the project by submitting record books. As a result of participating in land judging, youth increased their science and technology knowledge, specifically soil and water, and developed an appreciation for the capability of the land and the contributions it makes to an individual's level of living.

Building Volunteers One LEGO at a Time

Becky Bennett, 4-H YD EA I, Madison Cty

Madison County's newest club is a STEM-inspired architectural and engineering group call the Legomaniacs 4-H Builders Club. The club's leader chose to build a team to participate in the North Florida Fair Junk Drawer Robotics competition. Youth had modified hands-on trainings to prepare for the competition. With determined leadership and the youths' creativity, the team returned with the Mechanical Ingenuity Award. A social media post from the leader stated, "After this weekends' Junk Drawer Robotics experience, I think this is something our little group will enjoy as well, so I am pleased and excited to announce that we will now incorporate this project into our club! I really think the boys and girls will love it and they will learn a lot. We will still have the Legos, but Junk Drawer will just add to the fun!" The club has been selected as a grant recipient to fund the new

Legomaniacs 4-H Builders Club hard at work on their engineering challenge!





Legomaniacs Intermediate Team receives Mechanical Ingenuity Award at the North Florida Fair 4-H Junk Drawer Robotics competition.

project. Once the funds are obtained, the new leader has expressed great interest in having the youth teach their 4-H peers engineering and architectural skills, particularly our special needs club. This effort could potentially expand the STEM project to 40 more club members. This story provides evidence that a well-trained and empowered volunteer can successfully help 4-H agents expand and grow county programs.

more fruits and vegetables, increasing physical activity, and decreasing sugar beverages. One of the participants shared that she and her children started walking at 6 AM every day before school/work. The mother, who is diabetic and had high blood pressure, lost enough weight that she was able to decrease her medications. The program has many stories showing that the program is working and making a difference in both youth and adult lives. In addition to the partnership with Health First, the classes have been taught at different venues, including Boys and Girls Clubs, Police Athletic Leagues, and other public housing sites, which has brought about new teaching opportunities and audiences for additional programs.



Family members playing a game with a parachute together.

Partnership with Health First Reaching Low-Income Youth and Their Families

Elizabeth Shephard, FCS EA III, Brevard Cty
Health First approached UF/IFAS Extension in Brevard County to partner in providing healthy lifestyle classes for teens and their families. It seemed a natural fit to help combat obesity issues within the community. Since January 2014, there have been more than 125 participants in the Family-Be-Fit program. The 8-week series includes nutritional and physical activity education, a family friendly physical activity or game, and a taste test using a low-cost recipe. Each week participants receive an incentive for attendance. Incentive items include: journals, pedometers, jump ropes, aprons, cutting boards, jar openers, Frisbees, beach balls, and a \$10 grocery card. The items were chosen to encourage food preparation or physical activity. Often, the games during class are centered on the incentive items. Participants have reported through post-tests that they have made significant lifestyle changes, such as eating

Game Boards

Rachel Slocumb, 4-H YD EA I, Lake Cty
Game Boards are a Science, Technology, Engineering, and Math (STEM) project that 4-H youth in Lake County have the ability to enter in two different fairs (Central Florida Fair and Lake County Fair). Regardless of the ability to receive multiple premiums and accessibility to these fairs, Lake County has traditionally had a low turnout for this contest. During the 2014-2015 4-H year, Lake County had four entries at each of these fairs. The thought came to me to host a Game Board workshop that would show youth the basics in completing a circuit and creating a game board. "Get Your Game On," the program that I

created, did just that. Participants were asked to come with an idea in mind, and my program assistant and I typed up and printed the information for the youth participants. The 4-Hers that attended the program were then asked to cut out the printouts for their posters and design an attractive board. The fee for the program was \$5 per youth, which included lunch (provided by the Eat4-Health mini-grant), foam core, wiring, brass brads, light bulb, battery, paper, and glue. Six youth from Lake County and four from Seminole County participated in the “Get Your Game On” program. For the Central Florida Fair, seven of the participants received blue ribbons, two received red ribbons, and one received a Cloverbud participation ribbon. At the conclusion of the program, youth participants were able to describe a circuit, and multiple youth were able to successfully troubleshoot issues with the circuit on their boards. One-hundred percent of youth that participated indicated that they were planning on participating in this project again next year. Furthermore, there were requests for a more advanced class for those that participated this year. I found that there was a need and provided an opportunity for youth to learn a specific set of skills to participate in the Game Board project. After learning the skills associated with the creation of a game board, such as correctly defining and executing a circuit, youth expressed interest in participating in the Game Board or electricity project in the future.

FCS Volunteers Donate Their Talents to Improving Women’s Lives

Erin Landauer, FCS EA I, Manatee Cty

Breast cancer is the most common cancer among women in Florida. Many patients undergoing mastectomy surgeries are faced with the option of reconstructive surgery or wearing uncomfortable breast prosthesis. Blake Hospital reached out to the Manatee County FCS volunteer

group in search of volunteers with skills to help improve the lives of breast cancer patients. Hospital staff voiced patients concerns that the silicone prosthesis is very uncomfortable to wear and can be very expensive depending on the needs of each patient and their insurance coverage. The volunteer group worked in collaboration with the non-profit organization Knitted Knockers™ to provide soft knitted prosthetics free of charge for the patients at Blake Hospital. The volunteer group lent their time and talents and began crafting the knitted prosthetics in various sizes and colors. The group sent out press releases to local media outlets to drum up support for supplies and new volunteers. Blake Hospital’s Patty Madsen, RN and Tricia McKay Powers stated, “These items are a blessing to our patients who have recently undergone surgery as a result of breast cancer. The support of family, friends, and community is of vital importance to a cancer patient’s recovery. Rest assured that your donation is making a difference in the lives of women every day.” The economic impact is not known due to the nature of varied situations and prices the patients incur during their recovery time. The volunteers have donated over 200 knockers to Blake Hospital and continue working on this project.

Improving Hay Yield in Alachua County

Barton Wilder, Ag/Row Crops EA I, Alachua Cty

In 2014, rancher Mr. Glen Ritch contacted the Alachua County Agriculture and Natural Resources Agent, Barton Wilder, with a problem. Barton had worked with Glen for the last several years to improve the condition of Mr. Ritch’s pastures. Mr. Ritch had recently taken over a lease of a bahiagrass hayfield that had not been properly managed for the past 15 years. The 32-acre field was infested with thistles, dogfennel, and other broadleaf weeds. Due to the competition from the weeds, Mr. Ritch was only able to harvest 105

bales of poor quality hay from the field. The bales contained around 30% weeds, which reduced the estimated value to only \$35 per bale. Barton created a management plan for the rancher to reduce the weed population to an acceptable level. He also recommended a fertility plan based on the hayfield's soil test results to increase the bahiagrass yield and to enable better competition with weeds. The rancher followed the plan and treated the thistles in winter while they were still in the rosette stage. Treating the thistles at this stage allowed him to use a less expensive herbicide and prevented the thistles from going to seed and infesting the hayfield the following growing season. The dogfennel was treated in the spring when it was less than 2 ft tall. Treating the dogfennel at this stage allowed the rancher to use a less expensive herbicide. It also prevented the dogfennel from competing with the bahiagrass the entire summer. UF/IFAS research has shown that waiting to control dogfennel in August can reduce bahiagrass yields by more than 75%. That September Barton visited the hayfield to check its progress. Despite the heavy rainfall the hayfield received that limited the number of cuttings, Mr. Ritch was able to harvest 188 bales from the hayfield, an increase in yield of 79%. The bales were weed free and had an estimated value of \$50 per bale. As a result, Mr. Ritch's hayfield had an increase in value of \$5,725. Since the hayfield is visible from Highway 301, Mr. Ritch mentioned that he had received several comments from the community on how much better the hayfield looked and wanted to know how he improved it. Mr. Ritch told them that he simply followed the advice of the county agent.



Mr. Ritch's hayfield after he had followed Barton's recommendations. The hayfield had a 79% increase in yield.

Growers See a New Way to Irrigate

Crystal Snodgrass, Ag & Nat Res EA II, Manatee Cty

Seepage irrigation is the most commonly used irrigation method for both potato and snap bean production in Florida. However, seepage is much less efficient than other methods. In a partnership with SWFWMD, a 3-year study is being conducted using center pivot irrigation in four locations growing snap beans and potato in Manatee County. In the spring of 2014, a grower field day demonstration was conducted at one of the trial sites. Before visiting the field, growers gathered for a classroom style educational session that introduced the "what and why" of what they would see in the field. A total of 25 participants attended the Potato and Snap Bean Field Day. Of the participants, 72% (18) showed interest in converting to center pivot irrigation as indicated by a verbal survey. Initial studies have shown that on average, center-pivot uses 40 to 60% less water than seepage saving approximately 345,000 gallons per acre in potato and 88,000 gallons per acre in snap bean. Manatee County grows approximately 2,500 acres of potato and 1,500 acres of snap beans annually. If all of the acreage was converted to center-pivot, more than 860 million gallons of water used for potato and 132 million gallons used for snap bean could be saved. Education of potato and snap bean producers and potential center-pivot conversion would not only save water but help to maintain water quality. Further research is being conducted to develop plant nutrition programs that compliment overhead irrigation in potato and snap bean in Southwest Florida.



A demonstration of center pivot irrigation on a potato farm shows one of the many ways commercial farmers save water.

As One Season Goes, Another Begins

Christian Miller, Vegetable Crops EA II, Palm Beach Cty

Vegetable farmers in south Florida are beginning to see the proverbial light at the end of the spring growing season tunnel. Though there are many acreages yet to harvest, the mild, relatively warmer temperatures and dry conditions that are a big part why agriculture flourishes in the southern counties and are giving way to increasing rainfall and hotter conditions. These stressors that help hasten development of key pests and the long haul to reach south Florida production areas factor into the ultimate point of being cost-prohibitive to continue spring vegetable production.

Vegetable crop production will continue elsewhere, migrating to regions where it is cheaper for haulers to get to and environmental conditions are less extreme. Some vegetable farmers will migrate with their crops, others will welcome a vacation or "staycation" depending on how successful the season was and all at some point will evaluate, take stock, and make preparations for the fall growing season. Tropical fruit farmers on the other hand are just around the corner from their peak harvest season. For example, it is already May and bananas are approaching peak season. Just a few weeks away in June, early ripening mangos will be ready for harvest. Mango season will then continue all through the summer with later varieties ripening into September and October. The Florida famous alligator pear (or green-skinned avocado) will also be ready to harvest in June and continues all the way until February. Carambola (or star fruit) will not far behind with early varieties readying for picking in July. This dooryard favorite will continue producing fruit into the winter months and beyond.

Other much loved tropical fruit standards nearing maturity for peak harvest season in June are lychee, mamey Sapote, and passion fruit. Come July, consumers can look forward to the peak

harvest of annonas, jakfruit, guava, and papaya. In the fall the tropical fruit harvest season will close with the harvest of longans and dragon fruit (pitaya) peaking in August and September. Enjoy these exotic fruits when you can find them at your local store. Many of the fruit growers also have online storefronts and will ship their produce directly. Depending on your love for and devotion to these delicacies, you may also want to consider joining other tropical fruit enthusiasts at any one of a number of tropical fruit celebrations being held during the next few months in south Florida. These events often provide the best opportunity to try several varieties of the same fruit. If you have had an unpleasant experience with a rare fruit before, you probably should try other varieties. There is often more than subtle differences in taste and texture.

The annual Redlands Summer Fruit Festival at the [Fruit and Spice Park](#) takes place June 13-14 and showcases local agriculture, tropical fruit, and locally made wine.

[UF/IFAS Martin County Extension Service](#)'s holds Taste of the Tropics on June 27 at the Blake Library in Stuart. The [Mounts Botanical Garden](#) in West Palm Beach will also host their Tropical Fruit Festival on June 27 and will feature educational seminars by me and other experts, cooking demonstrations, fruit sampling and sales. Then in July, mango lovers may rejoice with several celebrations featuring this tropical fruit favorite. First up is the 23rd Annual International Mango Festival taking place at [Fairchild Botanic Garden](#) in Coral Gables from July 10-12. [Erickson Farm's](#) Sample Sunday takes place the following weekend on July 19th on the eastern banks of Lake Okeechobee in Canal Point. If you are closer to the west coast of Florida, check out [Mango Mania](#) on Pine Island happening July 18 and 19. These are just a few of the many opportunities Floridians have to take advantage of the coming tropical fruit bounty. Over the next few months, watch for early ripening varieties of rare fruit to arrive at a store near you or take charge and avoid taking the chance of missing out by ordering online.

Combining Assets Increases Access to Pesticide and Worker Protection Standards (WPS) Training

Martha Glenn, Comm Hort EA I, Manatee Cty
Pesticide education and WPS safety training are required for Florida Agribusinesses. Extension offices provide exam training classes, Continuing Education Units (CEUs), testing for Restricted Use Pesticide (RUP) license holders, as well as WPS Train-the-Trainer classes. The constraints of time, funding, and facilities restrict how often agents can provide these services. Agents from four counties are trying to alleviate those constraints by coordinating efforts. The objective is to provide frequent exam training and testing to more clientele, achieve a passing rate higher than 75% for private applicators taking the test, and to provide CEUs. This arrangement eases responsibilities of individual agents while continuing to offer high quality programming on a monthly basis regionally. Agents met to coordinate future trainings, testing dates, and teaching responsibilities. Flyers were created and distributed. Traditional classroom style presentations were delivered. Agents traveled to assist with registration, class set-up, teaching, and testing. Participants were provided with copies of



Landscape professionals learn about proper worker safety procedures when spraying pesticides.

PowerPoint presentations as well as other educational materials. WPS posters, manuals, and scouting loops were provided to stimulate participant interaction. A total of 30 classes have been held reaching 450 clients. Pre and post

testing indicated that 98% felt more capable of complying with WPS laws, 85% would adopt changes to do so, and 72% agreed that attendance would lead to a positive social or economic impact to their business. Also, 98% reported they would change at least one pesticide use practice and 87% increased their knowledge of pesticide topics by 55%. A positive economic impact of \$266,673 was realized when 82% of participants passed the exam.

Easy as PIE

TOPIC: The UF Critical Thinking Inventory: Measuring critical thinking styles

DATE/TIME: Wednesday, June 24, 2-3 pm (Eastern)



Speaker: Alexa Lamm, Assistant Professor, Department of Agricultural Education and Communication and Associate Director of the PIE Center, University of Florida.

Critical thinking has been called one of the most important attributes for success in the 21st century. The UF Critical Thinking Inventory (UFCTI) is a new instrument that measures critical thinking style on a continuum that ranges between two styles of critical thinking: Engagement and Seeking Information. By understanding how different people think critically, it becomes easier to put your organization or team members in a position to capitalize on each other's strengths and succeed by grouping people together in the most effective way. Participants will have an opportunity to take the UFCTI and learn their own critical thinking style at no charge. Join this session to learn more about critical thinking styles, how to become a certified UFCTI trainer,

and examples of ways the UFCTI could be used with students and clients.

Registration is required for each session, visit our website to register and to learn more about the Easy as PIE Webinar Series:

<http://www.piecenter.com/easy-as-pie/>

Contact Becky Raulerson for more information:

beckyraulerson@ufl.edu or 352-273-2751.

Arrivals

We would like to welcome the following new faculty:

Patrick Troy, Agronomic Crops RSA III, SVAEC and Suwannee Cty

Susan Tyler, Community Gardens Education & Implementation RSA I, Polk Cty

Erin Elsberry, School Gardens Education & Implementation RSA II, Polk Cty

Laura Tiu, Sea Grant EA II, Okaloosa & Walton Cty

New Positions

We would like to congratulate the following faculty members on their new position:

Laurie Hurner, Ag EA III Highlands Cty to CED III Highlands Cty

Shep Eubanks, Ag CED IV Holmes Cty to Ag CED IV Gadsden Cty

Retirement

We would like to give our best wishes for an enjoyable retirement to the following faculty following many years of dedicated service:



Audrey Norman, Housing CED II, Palm Beach Cty



Eileen Buss, Associate Professor, Entomology & Nematology



Celia Hill, FCS EA IV, Lee Cty



Extension Comings and Goings is a monthly newsletter distributed by the Office of the Dean for Extension via e-mail and on the Extension web site at <http://extadmin.ifas.ufl.edu>.

If you have any suggestions or would like to submit your own recognition or short article of interest, please send them to Valkyrie Shah. Please feel free to also forward any questions or comments about this periodical to Valkyrie Shah at valkyrieshah@ufl.edu.
