

SWFREC Update

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 SOUTHWEST FLORIDA RESEARCH
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Expo, Institute Educate Growers, Industry Reps

The 14th Annual Citrus Expo and the Tomato Institute provided clientele and other industry personnel with valuable information and updates on the most important issues facing the two industries.

About 150 people attended each session of the Citrus Expo Seminar Program, sponsored by the SWFREC, in Fort Myers in August. Among the topics addressed were “Developing Connections Between Urban and Farm Communities,” “Creating New Revenue Streams for Environmental Services on Ag Lands,” and SWFREC professor of entomology Dr. Phil Stansly’s presentation on “A New Bug for Leafminer Control.”



A Citrus Expo display enables SWFREC staff to share information with attendees.

Nearly 350 people attended the UF/IFAS Tomato Institute in Naples in September. Three SWFREC researchers presented information: Dr. Kent Cushman, assistant professor of vegetable horticulture, “Hurricane-Damaged Tomato Plants”; Dr. Monica Ozores-Hampton, “BMP Fertilizer Trials in Central and Southwest Florida”; and Dr. Stansly, “Whitefly Q Biotype: How Big a Threat?”

Center Director’s Corner

With summer behind us and fall plantings in full swing, it’s a good time to reflect on some of our recent accomplishments at SWFREC and our continuing search for improvements to programs, personnel, facilities, equipment, and the farm that will enable us to provide the highest quality of research and extension to move agriculture forward in profitability and productivity in our region.



One such major project currently underway is the installation of a new water well that will help bring farm fields #3 and #4 into better use for the vegetable horticulture program. With in-kind grower support from Hilliard Brothers Farm, we have also accomplished land renovation on field #9, which was idle for several years. We also recently completed a canker decontamination spray loop at the entrance to the Foundation Citrus Grove and budwood facility with support from Collier Enterprises. In addition, we contracted necessary land-leveling on several fields and have made critical equipment purchases, including a new rototiller and seed drill. And we purchased improved reverse-osmosis water purification equipment for the laboratories and have made numerous other priority improvements to the center.

At a facility like SWFREC, there are obvious corrections that can be made quickly and economically, and then there are those that require longer-range planning and significant funds to accomplish. Among the obvious are keeping up with minor repair work and routine maintenance, such as painting, trash cleanup, mowing and pruning, taking inventory and discarding unusable items, etc. The intermediate and long-range items take a higher level of planning and entail more capital investment. It would be great if we could see the future, but we can only imagine it and plan for it based on what we’ve learned through experience. That’s where regular faculty meetings and input from our clientele and advisory committees help greatly in charting the path. From there, it’s just a matter of staying the course.

John Dunckelman

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Spotlight On . . . Agricultural Economics Program

This SWFREC department supports other applied research programs in Florida with economic data and strives to improve the quality of cost, price, and market information available to Florida farm owners and managers. The program is led by associate professor of agricultural economics Dr. Fritz Roka, who is assisted by senior statistician Barbara Hyman. Emphasis is placed on providing growers with data that will enable them to make profitable decisions for their operations. One project doing just that explores the economic feasibility of harvesting citrus mechanically.



Dr. Fritz Roka studies the operation as a mechanical harvester moves along a row of citrus trees.

“Mechanical harvesting is important to Florida’s overall effort to reduce harvest costs and be more globally competitive,” Dr. Roka explains. “For some growers mechanical harvesting is already a viable way of doing business. But we need to improve the conditions that will generate greater savings, thereby attracting more growers to it.”

One of the primary concerns with mechanical harvesting is the harvesting of late-season Valencias, which carry two crops at one time—this year’s crop and next year’s—because harvesting machines do not discriminate between mature fruit and immature fruit when they shake a tree. That’s where abscission comes into the process by loosening mature fruit on the tree.

“With abscission, machines would be able to work through the entire season,” Dr. Roka says. “It loosens the mature fruit, which helps to enhance the selectivity of the machines. Then, the machines can shake the trees more gently. Mature fruit comes off more readily; immature fruit stays on the tree.”

“We’re looking at one particular abscission agent—its dosage rate and application rate—and at the spray technique and when to spray. For example, the agent works slower when it’s cooler outside and faster when it’s warmer, so when you spray and how quickly you harvest are key issues.”

In addition to Dr. Roka and Hyman, the mechanical harvesting project includes several UF/IFAS individuals: Dr. Bob Rouse and Dr. Kelly Morgan from the SWFREC; Dr. Jackie Burns, Dr. Jim Syvertsen, Dr. Bill Castle, and Dr. Reza Ehsani from the Citrus Research and Education Center in Lake Alfred; and Dr. Tom Burks from Gainesville. Beyond the research, the team realizes the importance of getting its findings into growers’ hands.

“We want to make sure growers, harvesters, and processors are apprised of the current status, such as what machines can and can’t do and under what conditions they are most effective,” Dr. Roka says. “We’ll do more workshops, participation in programs, field days, and small-group meetings.”

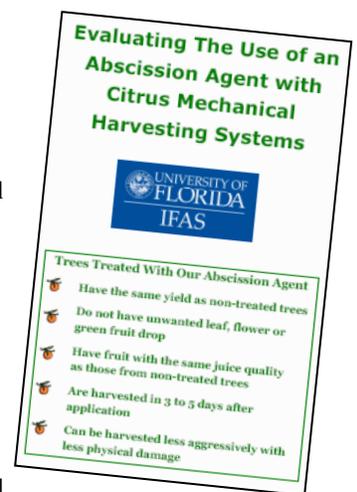
Such grower interaction will include grower experiences, for which the research group will collect yield data on blocks where growers have utilized mechanical harvesting for five to seven years. This data will reveal the impact of mechanical harvesting over time as compared to hand harvesting.

“For harvesting to be a success, the harvest price has to go down for growers and the harvest savings must more than compensate them for any costs incurred at the grove to accommodate mechanical harvesting,” Dr. Roka says. “The machine capacity has to be pushed in terms of boxes per season. As we push that capacity, the price per box should come down. That’s the inherent potential of mechanical harvesting that can’t be achieved with hand harvesting.”

For more information about the SWFREC Agricultural Economics Program, contact Dr. Roka at 239-658-3400 or via e-mail at fmro@ifas.ufl.edu.



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Students Make Educational Visit to SWFREC

Twenty-seven science class students from Oakridge Middle School in Naples visited the SWFREC in September as part of a field trip organized by teacher Georgia Stamp. The group, which also included three other teachers, heard presentations from—and asked great questions of—SWFREC personnel in four program areas, including:



Mark Terrell demonstrates the process of grafting a citrus bud onto an existing tree.

◆ Peter Newman, a biological scientist in the agronomy program, shared information about a sugarcane water quality project at the center, showing the instrumentation used and discussing the harvesting process for sugarcane.

◆ Mark Terrell, an employee of Florida's Department of Plant Industry who helps to oversee the SWFREC Budwood Foundation's source for propagating new citrus trees, discussed the purpose of the citrus budwood program and showed the students how a bud is cut from one citrus tree and grafted onto another.

◆ Professor of entomology Dr. Phil Stansly discussed good plants in the Florida landscape versus bad plants, such as the noxious weed tropical soda apple (TSA). He then introduced the students to a new "bug" that his program is studying as a control of TSA: the tortoise beetle.

◆ Assistant professor of plant pathology Dr. Pam Roberts and post-doctoral researcher Dr. Ronald French offered the students examples of good fungi and bad fungi and enabled them to see fungi growing inside a Petri dish. They also provided information and answered numerous questions on citrus canker, explaining its impact on the state's citrus industry.



Oakridge Middle students check out the tortoise beetles' effect on TSA with Dr. Stansly (below, left), then get an up-close look at the critters themselves.

Upcoming Events

October 11: *Vegetable Growers Seminar (addressing phosphorus as a plant nutrient and improving plant health).* 6:00-8:00pm, SWFREC, Immokalee. For more information and to RSVP, phone Hendry Co. Coop. Extension Service, 863-674-4092.

October 12: *Certified Crop Advisor Seminar.* SWFREC (via videoconference). Soil/water management, 5 CEUs; Crop management, 5 CEUs; Florida CCA-Ten-year celebration, .5 CEUs. For more information, contact Dr. Ed Hanlon, SWFREC soil scientist, 239-658-3400.

October 18: *Citrus Squeezer Seminar: Topic to be announced.* 10am-1pm, SWFREC. For more information and to RSVP, phone Hendry Co. Coop. Extension Service, 863-674-4092.

October 18: *Vegetable Growers Seminar: Topic and time to be announced.* SWFREC, Immokalee. For more information and to RSVP, phone Hendry Co. Coop. Extension Service, 863-674-4092.

November 15: *Citrus Squeezer Seminar: Topic to be announced.* 10am-1pm, SWFREC, Immokalee. For more information and to RSVP, phone Hendry Co. Coop. Extension Service, 863-674-4092.



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SWFREC Staff News

- ◆ Dr. Sanjay Shukla, assistant professor and water resources scientist, was named the American Society of Agricultural Engineers Florida Section Young Extension Worker for 2005. This award honors outstanding success in motivating people to acquire knowledge, skills, and understanding to improve agricultural operations.
- ◆ Dr. Fritz Roka, associate professor of agricultural economics, was one of five new members elected to serve on the UF/IFAS Faculty Council. Led by senior vice-president Dr. Jimmy Cheek, the group addresses issues of broad faculty interest that extend across administrative units, including research and education centers. Dr. Roka's two-year term began in September.
- ◆ Dr. Marty Main, associate professor of wildlife ecology, currently is serving a one-year sabbatical at Cambridge University in England, where his research focuses on the sexual segregation of ungulates. He will return to the SWFREC faculty in August 2006. In his absence, senior biological scientist Ginger Allen may be contacted for information about the Florida Master Naturalist Program or other wildlife ecology issues at 239-658-3400.
- ◆ Dr. Ed Hanlon, professor of soil science, was elected to serve as treasurer on the Council for Agricultural Science and Technology (CAST) board of directors. He begins a three-year term as a member of the group's executive committee in November. Dr. Hanlon has five years' experience working with the board of CAST, an organization created in 1972 to meet the need for better communication about the science behind food and agricultural issues.



Shukla



Dr. Rama Urs (center), a senior biological scientist in the plant pathology program, retired on July 29. He coordinated the Plant Disease Diagnostic Clinic for ten-plus years. Associate center director Dr. John Duncelman and plant pathologist Dr. Pam Roberts present Dr. Urs' plaque.