

Southwest Florida
Research and
Education Center

2685 SR 29 North
Immokalee, FL 34142

Phone: 239-658-3400

Fax: 239-658-3469

E-mail:

swfrec@ifas.ufl.edu

Update Editor:

Julie A. Carson

carsonj@ufl.edu

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Center Director's Corner

I am pleased to report that our Center's main construction project is complete, with only a few cosmetic items left to tackle!

A dedication ceremony for our newly constructed wing, which is beginning to house additional faculty and staff, took place on January 5, and what an event it was! More than 250 people were in attendance, including UF President Dr. Kent Fuchs, Senior Vice President Dr. Jack Payne, UF/IFAS deans, elected

well as renovations to existing laboratories and office space.

New faculty are now coming on board. Dr. Ute Albrecht, our new plant physiologist, began work in



early January. Please see an introductory article about her and her research focus areas on page 7.

Dr. Sarah Strauss has accepted the position of Assistant Professor of Soil Microbiology at the center. She will begin work in May. Dr. Strauss comes to us from the USDA-ARS Crops Pathology & Genetics Research Unit in Davis, California. She earned her bachelor's degree in biology and environmental science from Washington University in Saint Louis, Missouri, in 2002 and her Ph.D. in plant biology from Arizona State University in Tempe in 2010.

Interviews are slated to be conducted soon for the citrus plant pathology faculty position. And both the weed scientist and agricultural resource economist positions are currently being advertised.

Calvin Arnold

cearnold@ufl.edu



officials, industry representatives, and key community leaders. For more details and photographs, see pages 2 and 3 of this newsletter.

The construction project also included an updated entrance to our existing building, as

Building Dedication Draws Crowd

More than 250 people attended a dedication ceremony for the SWFREC's new wing on January 5.

The ceremony featured UF President Dr. W. Kent Fuchs, UF/IFAS Senior Vice

President Dr. Jack Payne, and several UF/IFAS deans. Additional special guests included Senator Dwight Bullard, Senator Garrett Richter, Representative Ben Albritton, Representative

Matt Hudson, Representative Kathleen Passidomo, and Representative Matt Caldwell. And, of course, key growers and other members of the agricultural community were on hand.



Chair of the South FL Ag Council Aaron Troyer, Albritton, Bullard, Richter, Dr. Fuchs, Dr. Payne, Hudson, SWFREC director Dr. Calvin Arnold, Passidomo, and Caldwell.



The dedication event featured a ribbon-cutting ceremony, comments from UF President Dr. W. Kent Fuchs and other dignitaries, and tours of new office and lab space. Photos courtesy of Tyler Jones, UF/IFAS Communication Services.



Latest SWFREC Research

South Florida Vegetable Variety Testing Program

Dr. Monica Ozores-Hampton, Vegetable Horticulturist

Variety selection is one of the most important decisions a vegetable grower makes. Varieties need to be well adapted to different growing seasons and condi-

tions, have consistent and desirable harvestable-part characteristics, have typical or unusual types and/or colors, and be resistant to the main diseases and virus

infections in the area. Because of the number of new varieties released each year and the number of crops grown in Florida, UF/IFAS no longer has

“recommended” varieties, but only a list of “varieties commonly grown in Florida.” Nevertheless, growers need science-based variety recommendations and assistance to design on-farm variety trials to collect disease rating data and interpret the results. Seed companies also need to introduce and test their advanced breeding lines in commercial conditions before they are released (or not) as varieties.

Our variety trials are conducted on-farm to accurately reflect commercial conditions, facilitate variety adoption, and help new growers adapt their cultural practices to these new varieties and crops (<http://swfrec.ifas.ufl.edu/programs/veg-hort/veg-variety/>). Additionally, seed company representatives and growers prefer to have a scientific basis for variety evaluations with randomization, replication, clear controls, and statistical reports

that help select varieties based on objective criteria. This variety and advanced germplasm testing program provides unbiased and comprehensive horticultural information on the adaptation and performance of tomatoes, peppers, and other specialty vegetable crops, including heirloom tomatoes, broccoli, and radish, across the entire spectrum of growing seasons and regional farm environments.

Following are some outcomes and highlights of the program. The number of vegetable growers participating in the on-farm variety evaluation in the state between 2009 and 2014 was fourteen, with 46 trials and 538 new varieties and breeding lines tested.

Twenty-three varieties were identified as suitable alternatives to the current standards for tomatoes, peppers, radish, and broccoli and have been used by vegetable growers.



Tomatoes being harvested at a variety trial in Manatee County, FL.

Tomatoes: Seed companies and growers surveyed indicated that the expansion in the adoption of varieties resistant to Tomato Yellow Leaf Curl Virus (TYLCV) was regional with approximately 60 percent (8,400 acres) and 32 percent (3,800 acres) in Manatee and Collier counties, respectively, as compared to 500 acres planted in both counties combined in 2007.

Heirloom tomatoes: Since heirloom tomato fruit types are diverse, the top-performing varieties were identified based on yield, color, shape, and flavor. Most interest in growing heirloom tomato varieties is from small specialty growers. Based on an informal survey conducted in three counties in south Florida, heirloom varieties identified in these trials are being produced and sold in eleven farmers markets.

Peppers: The rate of new variety adoption was measured by surveying growers and seed companies in Palm Beach County during 2014. The results of this survey confirm the shift from Bacterial leaf spot (BLS) 1-3 resistant varieties, predomi-

nant since 2009, to BLS 1-6 in 2014. Where most pepper growers have typically applied copper sprays up to 40 times per growing season to control BLS in susceptible pepper varieties, my extension program has resulted in significant reduc-

winter and spring production.

The adoption and interest is coming from large bean and pepper growers considering alternative crops and small niche-market growers.

Radish: Results from the variety evaluation indicated that hybrid



Participants check results at a pepper variety trial field day (above) and a broccoli variety trial field day (right) in Palm Beach County.



tions (<10 sprays) in the use of copper for the control of BLS and related diseases. By using varieties BLS races 1-6 resistant (rather than the BLS races 1-3 resistant), pepper growers have reduced copper applications by 50 percent.

Broccoli: In 2010, two among the seven broccoli varieties tested were suitable for Florida

varieties can increase yield and quality more than non-hybrid, open-pollinated varieties; therefore, growers are rapidly adopting these varieties.

For more information, contact Dr. Ozores-Hampton at ozores@ufl.edu.

Staff News

- ◆ Three interns who visited the SWFREC for four weeks to work with the entomology program made presentations about their research before returning to Hunter College in New York City to resume their studies. Miranda Trapani presented “Volatility of host mark by *Tamaraxia radiata*, parasitoid of Asian citrus psyllid,” Ying Xie presented “Lethal effects of imidacloprid on Asian citrus psyllid, *Diaphorina citri*,” and Sarah Eldiasty presented “Behaviors of female *Tamaraxia radiata* on probed hosts of Asian citrus psyllid.” The students were mentored by Xulin Chen, a graduate student studying under SWFREC entomologist Dr. Phil Stansly.

- ◆ Twenty growers from Austria visited SWFREC in January as part of a day-long tour of agriculture in southwest Florida. Post doctoral research associate Dr. Francesco DiGioia joined the group in the field (see photo) to explain to-

mato production on sandy soils, as well as



his research with SWFREC vegetable horticulturist Dr. Monica Ozores-Hampton on the principles of anaerobic soil disinfection. The tour was guided by Vanessa Bielema, an agent with the UF/IFAS Collier County Extension office.

- ◆ Tim Gast, formerly with Southern Gardens Citrus, has begun working as a senior biological scientist for SWFREC citrus horticulturist Dr. Gurreet Brar.
- ◆ Twenty-five growers from Honduras toured SWFREC this month to learn about vegetable production in Florida. Dr. Ozores-Hampton welcomed the group and provided education in the field and greenhouse about production practices,

transplants, and drip irrigation,

- ◆ Twenty students from Florida Gulf Coast University visited SWFREC last month as part of the school’s science colloquium. They toured the plant diagnostic lab with biological scientist Dr. Katherine Hendricks and the citrus greening lab with manager Shea Teems (see photo). The group also learned about wa-



ter resource issues and different vegetable bed geometries from three students who study under water resource engineer Dr. Sanjay Shukla: Niroj Shreshtha, Rajendra Shishodia, and Vincent Wu. And entomology research associate professor Dr. Jawwad Qureshi presented ways to manage the Asian citrus psyllid.

Introducing New Plant Physiologist

Dr. Ute Albrecht started her appointment as plant physiologist at SWFREC in January.

Before coming to the center, she worked at the USDA Horticultural Research Laboratory in Fort Pierce, where she acquired more than thirteen years of experience in citrus, particularly in the area of rootstock development and the HLB disease complex.

Dr. Albrecht grew up in a small town on the Rhine River in Germany in an area famous for its viticulture and medieval castles. She earned her Ph.D in the biological sciences at the Johannes Gutenberg University

in Mainz, Germany. Besides studying different physiological aspects of forest trees, her research involved other biological systems, such as the respiratory proteins of mollusks and arthropods.

Her research program at SWFREC will focus on the physiology of citrus and vegetables, particularly in relation to more sustainable production systems, such as the use of biostimulants and different rootstocks to improve crop yield and tolerance to diseases and different environmental stresses.

Dr. Albrecht is very excited to

be at the research center and have the opportunity to build her own research program and directly collaborate with growers and other people throughout the industry.

Welcome, Dr. Albrecht!



Spotlight On . . . Educational Seminars

Here is a wrap-up of several educational meetings for growers that have been offered at and included SWFREC speakers during the last two months:

Vegetable Nutrition Update Seminar—"Vegetable nutrient budget and controlled release fertilizers," vegetable horticulturist Dr. Monica Ozores-Hampton; "Drip irrigation management using smart phone apps," graduate student Timothy Ayankojo; "A guide to vegetable BMPs," soil scientist and state BMP coordinator

Dr. Kelly Morgan.

Scouting and Managing Citrus Fungal Diseases—"Citrus black spot and Phytophthora management," biological scientist Dr. Katherine Hendricks.

All You Need to Know about Scouting and Management of Citrus Insect Pests—"Scouting citrus for pests and beneficials," entomologist Dr. Phil Stansly; "Biological control of Asian citrus psyllid," research associate professor Dr. Jawwad Qureshi; "Scouting and insecticidal control of citrus rust

mites," senior biological scientist Barry Kostyk.



Dr. Stansly is interviewed by Ernie Neff with Southeast AgNET.

Coming Events

March 8: *Vegetable Disease Management.* 9:45am-1pm, SWFREC, Immokalee. For more info and agenda, click here and scroll down to "Upcoming Events": <http://swfrec.ifas.ufl.edu/>.

March 16: *Best Management Practices for Citrus Nutrition.* 10am-1pm, SWFREC, Immokalee. For more info and agenda, click here and scroll down to "Upcoming Events": <http://swfrec.ifas.ufl.edu/>.

March 31: *Cucurbits Scouting Workshop and In-service Training.* 9am-12pm, SWFREC, Immokalee. For more info and agenda, click here and scroll down to

"Upcoming Events": <http://swfrec.ifas.ufl.edu/>.

April 13: *Certified Crop Adviser (CCA) Training.* For CCAs only (not for test preparation).

May 5: *UF/IFAS Spring Vegetable Field Day.* 9am-1pm, SWFREC, Immokalee. Agenda and registration information coming soon at <http://swfrec.ifas.ufl.edu/>.

May 6 & 7 (select the date you want at time of registration): *25th Annual UF/IFAS Farm Safety Day.* 7:30am-1pm, SWFREC, Immokalee. For more info and agenda, click here and advance to the May calendar of events: <http://swfrec.ifas.ufl.edu/about-us/calendar/>.

swfrec.ifas.ufl.edu/about-us/calendar/.

May 30: *Memorial Day Holiday.* SWFREC will be closed and will reopen on May 31.



A microgreens project conducted by post doctoral research associate Dr. Francesco DiGioia and vegetable horticulturist Dr. Monica Ozoresh-Hampton is ready for harvesting.