



# Berry/Vegetable Times

November 2011



## Calendar of Events

Nov. 8 & Dec. 13  
Pesticide Testing at  
Hillsborough Co. Extension  
office. 9:00 a.m. For more  
information contact Susan  
Haddock at 813-744-5519  
ext. 54103.

Nov. 9  
Florida Ag Expo at Gulf  
Coast Research and  
Education Center. Register  
onsite - \$10 fee for lunch.

## From Your Agent...The New Specialty Fruit and Nut Crop BMP Manual

The Florida Department of Agriculture and Consumer Services has released the Water Quality/Quantity Best Management Practices for Florida Specialty Fruit and Nut Crops manual. This BMP manual is for the tropical fruit, blueberry, stone fruit (peaches, plums and nectarines), grape, bramble ( blackberry and raspberry), and pecan industries. Any other fruit crop that is not covered by another manual would come under this manual.

Best Management Practices (BMPs) are defined in the manual as the individual practices or combinations of practices that are based on research, field-testing, and expert review and have been found to be the most effective and doable means for maintaining or improving water quality.

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## Details on Page 5-6 Wednesday Nov. 9 GULF COAST RESEARCH AND EDUCATION CENTER

A University of Florida/IFAS and  
Florida Cooperative Extension  
Service Newsletter  
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<http://gcrec.ifas.ufl.edu>

## Non-crop Plants Affect Spotted Wing Drosophila Activity

James F. Price and Curtis Nagle

Funding by the Florida Strawberry Growers Association has allowed entomology folks at UF GCREC to monitor spotted wing drosophila, *Drosophila suzukii* (SWD: <http://edis.ifas.ufl.edu/in839>) through more than 2 years and to identify local host plants that may sustain the fly into vulnerable strawberry and blueberry production.

The 2010 and 2011 trapping data at UF GCREC reveal the only period of significant SWD activity occurred on our farm June though September, although this is not the case elsewhere in this region. It is a bit puzzling that this activity coincides with Florida's hottest weeks and that SWD is known to thrive best at much cooler temperatures.

Our laboratory experiments reveal several landscape and wild hosts to be added to the list already known from the literature. It seems to us that the key summertime host at the UF GCREC farm must be the American elderberry (= sweet

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The goal of implementing BMPs is to prevent polluted runoff, to reduce it, or to find a way to treat the polluted discharge. All practices are to protect water quality but there can also be water saving benefits.

The BMP program at this time is a voluntary program. With the Numeric Nutrient Criteria coming our way it becomes even more critical that ALL of Agriculture show they are doing their part to protect the water bodies of Florida. If it can be shown that Ag is doing its part to protect the quality of the water bodies in the state then hopefully no harsh and costly mandated testing will be implemented. Signing up for the program is your best insurance that your farming operation will not be looked at as a water polluting source. It is not difficult to comply with the program as most of you in your current operation are already practicing many BMPs. Also in some areas there can be cost share funds to implement certain BMPs.

We are very lucky in the Central Florida area to have a UF/IFAS BMP Team person located in our district. Jemy Hinton is our BMP Team member. Jemy can answer your questions on the program and go through the program check list with you. For more information or to sign up you can contact Jemy at 813-478-6630 or at [jwh@ufl.edu](mailto:jwh@ufl.edu).

Happy Fall and Welcome to a New Season!

*Alicia Whidden*

*Please remember...*

The use of trade names in this publication is solely for the purpose of providing specific information. It is not a guarantee or warranty of the products named and does not signify that they are approved to the exclusion of others of suitable composition. Use pesticides safely. Read and follow directions on the manufacturer's label.

elderberry) (*Sambucus nigra* L. ssp. *canadensis*: <http://plants.usda.gov/java/profile?symbol=SANIC4> ; <http://en.wikipedia.org/wiki/Sambucus> ) that grows so abundantly head high in ditches and swampy areas here and throughout the eastern USA. We easily find SWD from elderberries collected on our farm during this period.

While elderberry continues to flower and produce berries at the end of the summer, a new host discovered by Deborah Farr in our entomology laboratory, begins to fruit and attract SWD. This is the wild, cucumber-like, spiny, orange-colored balsam apple possessing red "seeds" that are exposed as the small fruits split open into three sections. Botanically the plant is known as *Momordica charantia* (<http://edis.ifas.ufl.edu/fw028>) and is sometimes confused with the related balsam pear or bitter melon. Balsam apple is the exotic, invasive, problematic vine that covers fences, citrus trees, upturned roots of pushed citrus orchards, and almost any material in disturbed soil that offers vertical structure for the vine to climb. This plant has been implicated in the persistence of a viral watermelon disease in our area.

Balsam apple clearly can be a major problem to berry growers when SWD reproduces on the fruit. However, again it is puzzling that SWD numbers taper off to about zero in our UF GCREC traps when the favored balsam apple fruit appears.

But there is more to the story. We have learned from earlier FSGA-sponsored work here that SWD larvae are taken away quickly by the red imported fire ant, *Solenopsis invicta*, when the two species share the same area. We also have observed on our farm recently that fire ants are attracted strongly to the sweet, red, gelatinous, coating (called an aril, the enjoyable part of a pomegranate) of balsam apple seeds after the fruit splits open.

We now wonder that since the balsam apple attracts both SWD and red imported fire ants, and since these ants take away SWD

larvae where the two species share the same area, is the balsam apple acting on our fire ant-infested farm as a naturally managed trap crop to attract and destroy SWD? If so, then the SWD's favored balsam apple host may be contributing to the fly's puzzling disappearance here just as we transplant strawberries and temperatures decline to a level more suitable for SWD development.

So, at the moment we do not know the best approach to balsam apple management as far as the SWD problem is concerned. Work must continue to understand the ecology of this fly and to determine the action to take on balsam apple in the strawberry and blueberry environment.



**Figure 1.** Balsam apple fruit soon after it opened naturally into three sections and displayed its fire ant-attracting red arils that cover the seeds



**Figure 2.** Familiar balsam apple vines enveloping citrus trees

## The Strawberry Breeding Program's Summery Nursery

Vance Whitaker



At an elevation of greater than 7,500 ft, the San Luis Valley of Colorado is rimmed by the Rocky Mountains. This dry and isolated region is the home of the UF strawberry breeding program summer nursery. Here, approximately 9,000 strawberry seedlings as well as 2<sup>nd</sup> stage selections are being propagated for the upcoming season.

Without the summer nursery, selection in the fruiting field would have to be performed on seedlings propagated directly from seed, which retain some juvenility and are physiologically very different from commercial transplants. But by operating a summer nursery, multiple bare-root daughter plants can be produced from each seedling for evaluation. This makes evaluation more accurate since the plants are similar to commercial transplants used by Florida growers, and multiple plants per genotype are evaluated at one time. Those seedlings that produce few or no runners are not planted in Florida, allowing early selection for the ability to produce sufficient runners. In addition, material can be held over the winter in the nursery and re-propagated from the original

plant the next year. This helps to preserve the cleanliness of the stock.

In past years, the nursery has been operated on the land of a private potato grower. This year, the UF strawberry breeding program has entered into a cooperative land use agreement with the Colorado State University potato research center. This was facilitated by generous support from the Florida Strawberry Research and Education Foundation that was used by the potato research center to install irrigation on four acres of land.

Jim Sumler, who recently retired from his position as biological scientist for the breeding program, was rehired during the summer to run the nursery. This year's nursery thrived under his care at our new location. His plants were dug in late-September and the subsequent evaluations will begin here during the regular strawberry season.

As always, all strawberry growers are welcome to visit our research fields at the GCREC. If you would like to tour the center and the strawberry research fields, contact Vance Whitaker to set up an appointment at 813-633-4136.



## Ag Expo Pre-Registration is Closed - But You Can Still Attend

Christine Cooley

There is a \$10 fee if you register onsite next week at the 2011 Florida Ag Expo to cover lunch costs. And that is a small price to pay for everything at this year's event. Highlights include Ag

Commissioner Adam Putnam, Hillsborough County Commissioner Al Higginbotham, who will be presenting a commendation to GCREC for its contributions to Florida agriculture.

This year there will be two roundtable sessions. The first, moderated by Dr. Martha Roberts, is Lessons Hopefully Learned: Can we prevent a food safety crisis in Florida and will the new FSMA requirement help? This discussion is scheduled for 8:50 a.m. The second session is a grower panel - Problems and Needs for Vegetable and Small Fruit Production and starts at 10:30 a.m.

The vendor show has sold out and there will be over 70 vendors onsite with ag related products, information, etc. for your use and information. There will also be a citrus taste panel and information regarding the newest citrus varieties available from UF.

Other highlights include field tours and walking tours of the facility and grounds. CEU's are available in several categories for the afternoon sessions.

For more information and program details go to [www.floridaagexpo.com](http://www.floridaagexpo.com) or call 813-634-0000.

## Tasti-Lee Tomatoes are GCREC's new Media Darling

Christine Cooley

If you haven't had the pleasure of eating one of our newest tomato varieties, don't despair, they will be back on the market in a matter of weeks at Publix. Tasti-Lee, distributed by Bejo Seeds, has become so popular that people are asking for it by name. St. Pete Times and Tampa Tribune have both done new features on it and Monday, Nov. 7th, Fox News (Channel 13) will have a live broadcast from GCREC featuring what else but Tasti-Lee. Bejo Seeds will have a booth at the 2011 Florida Ag Expo offering samples, so get your taste of Tasti-Lee and find out what you've been missing from Florida tomatoes.



## 2011 Florida Ag Expo Program & Speakers\* Nov. 9, 2011

### UF/IFAS Gulf Coast Research and Education Center (GCREC)

- 7:30 - 8:15 a.m. Registration and Complimentary Breakfast/Vendor Booths Open
- 8:15 - 8:20 a.m. Welcome and Overview of the 2011 Florida Ag Expo  
Dr. Jack Rechcigl, Director, UF/IFAS, GCREC
- 8:20 - 8:30 a.m. Proclamation Presentation to GCREC  
Al Higginbotham, Chairman of Hillsborough County Commission
- 8:30 - 8:50 a.m. Welcome  
Adam Putnam, Commissioner of Agriculture  
(Introduced by Dr. Jack Payne, Sr. Vice President, UF/IFAS)
- 8:50 - 10:00 a.m. Stakeholders' Roundtable: Lessons Hopefully Learned: Can we prevent a food safety crisis in Florida and will the new FSMA requirements help?  
Moderator - Dr. Martha Roberts, Office of Dean for Research, UF/IFAS  
Panelists:  
Jim Gorny, Senior Advisor on Produce Safety, U.S. FDA  
Marion Aller, Deputy Commissioner, FDACS  
Tony DiMare, DiMare Fresh  
Kent Shoemaker, Lipman Produce  
Keith Mixon, Sunnyridge
- 10:00 - 10:30 a.m. Refreshments/Vendor Booths Open
- 10:30 - 11:30 a.m. Grower Panel: Problems and Needs for Vegetable and Small Fruit Production  
Moderator – Ms. Alicia Whidden, County Vegetable Agent, Hillsborough County Extension  
Panelists:  
Kenny Foy, Turner Farms  
Nancy Roe, Farming Systems Research  
Tony Piedimonte, Hearne Produce  
Joel Connell, President, Florida Strawberry Growers Association  
Bill Braswell, President, Florida Blueberry Growers Association
- 11:30 a.m. - 1:00 p.m. Lunch/Vendor Booths Open -

### Issues and Challenges for Growers

Moderator – Crystal Snodgrass, County Vegetable Agent, Manatee County Extension

- 1:00 - 1:20 p.m. How to Make a Profit in a Challenging Environment  
Dr. John Van Sickle, UF/IFAS, Food and Resource Economics Department
- 1:20 - 1:40 p.m. Labor Today? And What about Tomorrow?  
Mike Carlton, Director of Labor Relations, FFVA
- 1:40 - 2:00 p.m. Food Safety Issues on the Eastern Shore of Virginia  
Dr. Steve Rideout, East Shore AREC, Virginia Tech
- 2:00 - 2:20 p.m. Getting the Most Out Of Cooling Your Crops  
Dr. Steve Sargent, UF/IFAS, Horticultural Sciences Department
- 2:20 - 2:40 p.m. Refreshments/Vendor Booths Open

## Horticultural Crop Protection

Moderator - Gene McAvoy, Regional Vegetable Agent, Hendry County Extension

- 2:40 - 3:00 p.m. Advances in Freeze Protection for Small Fruits and Vegetables  
Dr. Bielinski Santos, UF/IFAS, GCREC
- 3:00 - 3:20 p.m. Grafting Work for Control Bacterial Wilt of Tomato  
Dr. Mathews Paret, UF/IFAS, NFREC
- 3:20 - 3:40 p.m. Foliar Fungal Disease Management for Fruiting Vegetables  
Dr. Gary Vallad, UF/IFAS, GCREC
- 3:40 - 3:50 p.m. Current Fumigation Practices among Tomato, Strawberry, and Pepper Growers:  
Survey Results  
Crystal Snodgrass, Manatee Co. Extension
- 3:50 - 4:10 p.m. Weed Control to Improve Methyl Bromide Alternatives  
Dr. Andrew MacRae, UF/IFAS, GCREC
- 4:10 - 4:20 p.m. Managing Sweet Potato Whitefly and Tomato Yellow Leaf Curl Virus in Southern  
Florida Tomato  
Dr. Shine Taylor, UF/IFAS, GCREC
- \*(CEUs in several categories available during afternoon sessions)\*

## Field Tours

Dr. Bielinski Santos, Vegetable and Small Fruit Horticulture  
Alternative cultural management practices for horticultural crop production

Dr. Gary Vallad, Plant Pathology  
Demonstration trials evaluating various chemistries for the management of:  
Tomato early blight and target spot  
Tomato and pepper bacterial spot  
Cucumber downy mildew  
Squash powdery mildew

Dr. Hugh Smith, Entomology  
Chemical and biological control of whiteflies

Dr. Andrew MacRae and Dr. Joe Noling, Weed Science and Nematology  
Weed management and effective soil fumigation alternatives

Dr. Jay Scott and Dr. Sam Hutton, Tomato Breeding and Genetics  
Tomato breeding and cultivar improvement  
Tomato variety trials

Walking tours of the greenhouses and horticultural crop research areas tour stops include:  
Caladium variety trials  
Plant diagnostic laboratory operations  
Greenhouse studies for insect management on strawberry plants  
Greenhouse studies for whitefly management on tomato plants  
On-site wastewater (septic system) for passive removal of N  
Soilless culture for strawberry and vegetable production  
Demonstration of Fruit and Vegetable Cooling Methods  
\*Subject to change