

# Citrus Notes



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## IMPORTANT DATES

**FEBRUARY 7, 2017**  
**OJ BREAK MEETING**  
Bartow

**MARCH 7, 2017**  
**OJ BREAK MEETING**  
Lake Alfred

**APRIL 4, 2017**  
**FLORIDA CITRUS GROWERS' INSTITUTE**  
Avon Park

## CONTACT INFO

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## February

### OJ Break Meeting



Our February OJ Break Meeting will be held on Tuesday, February 7, 2017, at the Stuart Conference Center, 1710 US Hwy 17 S in Bartow. This month Dr. Kelly Morgan, from the UF/IFAS Southwest Florida Research and Education Center, will be making a presentation titled "Effect of Foliar Nutrients and Soil pH on HLB Affected Trees". The meeting will begin at 11:00 am and will conclude prior to lunch at noon. Our lunch sponsor is G.P. Solutions and we need you to **pre-register by Friday, February 3<sup>rd</sup>** so we can order lunch. Registration can be done by calling Gail Crawford at 863-519-1042 or email her at: [dorothy@ufl.edu](mailto:dorothy@ufl.edu), online registration can be done at the following eventbrite link: <https://february2017ojbreak.eventbrite.com/>. Hope to see you all next week.

## March



### OJ Break

Just so you can add this on your calendar, we will be holding our March 2017 OJ Break on March 7, 2017, at the UF/IFAS Citrus Research and Education Center. We will have more details and registration information in next month's newsletter.

## 2017 Florida Citrus Growers' Institute



The 2017 Florida Citrus Growers' Institute will be held on Tuesday, April 4, 2017, at the South

Florida State College, Alan Jay Wildstein Center for the Performing Arts. We are currently completing the program and will have additional information out in next month's newsletter.

## Exemption extended for FireLine™, FireWall™ and Mycoshield®

On January 10, 2017, the emergency exemption for the use of streptomycin and oxytetracycline to manage HLB disease in citrus trees was extended until December 31, 2017.

## Food Safety Recall Workshop

FFVA will be conducting this workshop on February 22, 2017, at the Gulf Coast Research and Education Center in Balm. Additional information is included in the attached program flyer.

**UF | IFAS Extension**  
UNIVERSITY OF FLORIDA

*The Foundation for the Gator Nation*

*An Equal Opportunity Institution*

# Q&A

## Postbloom Fruit Drop

**Where and when did post bloom fruit drop first appear?**

Post bloom fruit drop was first described in Belize in 1979, and from there it spread into Central and South America and the Caribbean.

**What causes post bloom fruit drop?**

Post bloom fruit drop is caused by a fungal disease named *Colletotrichum acutatum*. The disease infects citrus flowers during bloom.

**When did we first notice it in Florida?**

The first incidence of post bloom fruit drop in Florida was in 1983, and by 1988 it had spread throughout the state.

**Why is post bloom fruit drop becoming such a problem if it has been around since 1988?**

It has always been around, but conditions have not been favorable for disease development. There are certain environmental and physiological conditions that favor disease development, and these have not been favorable for major disease development since our last major outbreak in the 1990's and prior to 2014.

**What are the environmental and physiological conditions that would favor disease development?**

Favorable environmental conditions are humid subtropical climates. In addition, the disease needs rain-splash and wind-blow rain to infect additional flowers. Human activities that move flowers and infected petals on workers and equipment can add in dispersal of the disease. Multiple citrus blooms or extended bloom periods can also lead to increases in disease inoculum. Multiple and extended bloom has become more common with the increase in trees with HLB.

**What are the symptoms of the disease?**

During active disease infection, petals of the citrus flower will develop orange-rust colored lesions on the petals. In severe cases the flower cluster can become blighted. After petal fall the fruitlets drop leaving behind a distinct calyx or button where the fruitlet had been. These buttons serve as a source of infection for subsequent years.

**How fast does the disease spread during bloom?**

The disease overwinters in the buttons and when conditions become favorable during bloom, this source of inoculum will infect the flower petals. Rain-splash and wind-blown rain further move the disease in the tree canopy. This rain, coupled with extended periods of leaf wetness, lead to significantly severe populations of the disease. Infection under the right conditions can occur in 24 to 48 hours, with new symptoms developing in 4 to 5 days.

**How can one control this disease?**

Based on available information there are a number of fungicidal materials that are recommended in the 2016 Florida Citrus Pest Management Guide ([http://www.thepacker.com/sites/produce/files/2016\\_FLCitrus%20FINAL.pdf](http://www.thepacker.com/sites/produce/files/2016_FLCitrus%20FINAL.pdf)). Spray applications made by ground or by air are effective and **timing is critical**. A numerical model is provided in the spray guide and online at: <http://pfd.ifas.ufl.edu/> to help determine the optimum timing of spray applications.



*Orange-rust colored necrotic petals typical of disease infection.*



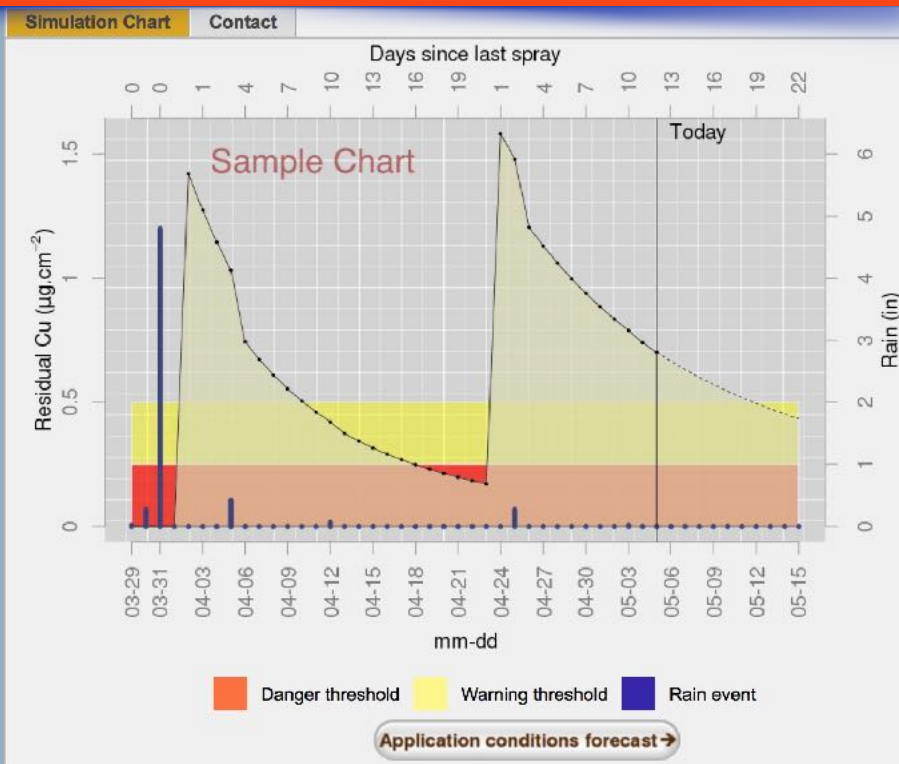
*Persistent calyx or buttons that can serve as a source of inoculum.*

## CITRUS COPPER

### SPRAY SCHEDULE MODEL

As we enter the spring flush season, citrus fungal diseases need to be controlled on fruit destined for the fresh fruit market. There is a model available on the Florida Automated Weather Network or FAWN that can help growers determine when it would be time to make a copper fungicide application.

This model uses data from the FAWN weathers stations to determine when copper residues drop below a protective residual level for citrus fruit.



One of the environmental parameters used in the model is rainfall. Rainfall data can be from one of the nearest FAWN weather stations or from a growers rain gauge located in the grove. Additional information used in the model would be the variety of citrus and bloom date. Once this information has been entered, the grower would then enter the dates of copper applications, rate of copper in pounds per acre and spray volume in gallons per acre.

The copper spray scheduling model could be of great benefit to citrus growers this season due to the predicted El Niño wet winter. The model can be accessed from FAWN at the following website: <http://fawn.ifas.ufl.edu/climate.php> under the new tools heading.

Additional information on timing of spray application can be found at the UF/IFAS PP 277, Citrus Black Spot Management Timing Schedule (<https://edis.ifas.ufl.edu/pdffiles/PP/PP27700.pdf>). It has a suggested foliar fungal management program for citrus diseases. Information on specific recommendations for fungicides and material rates can be found in the 2016 Florida Citrus Pest Management Guide. We have a few copies at the office or you can view it online at: [http://www.thepacker.com/sites/produce/files/2016\\_FLCitrus%20FINAL.pdf](http://www.thepacker.com/sites/produce/files/2016_FLCitrus%20FINAL.pdf). We should, in the near future, have available the 2017 version of the guide.

### Bayer CropScience Velum Prime

I recently received word that a new pesticide material is now labelled for Florida citrus. The product Velum Prime® is made by

Bayer CropScience and is intended for use on nematodes and alternaria brown spot. The active ingredient in Velum Prime® is Fluopyram. This is one of the two ingredients contained in Luna® Sensation. As such, there is an annual limit to the amount of this active ingredient that can be applied in any calendar year. Velum Prime® is soil applied though the irrigation system. Hopefully we will have additional efficacy information forthcoming from our researchers. The material is **not included** at this time in the UF/IFAS Citrus Integrated Pest Management Guide and therefore, this is not a recommendation for using the material. This information was intended to just inform you that this new product is on the market.

### Citrus Root Growth and Soil Applied Inputs

Just thought it would be worth reviewing some of the information on citrus root growth in the era of HLB. Dr. Evan Johnson has done numerous presentations on this topic. My take home messages from these are that citrus root systems still continue to function and grow in HLB infected trees. What is most effected by HLB is the longevity of these root flushes. This would lead one to consider the timing of soil applied inputs when root systems are growing and before they prematurely decline. Dr. Johnson indicates that normally a citrus root flush would remain functional for about a year. In HLB infected trees, this has been reduced to the length of time until the next root flush occurs. The first growth flush in the spring is vegetative and flowering, followed by the first seasonal root flush when soil temperatures increase. One might consider this when applying any soil inputs.



## Are You Ready for a Recall?

**Food Safety Workshop**  
9 a.m. - 4 p.m.  
Tuesday, Feb. 21

**Gulf Coast Research  
and Education Center**  
Wimauma

The Florida Fruit & Vegetable Association presents a comprehensive one-day workshop featuring experts who will equip you to successfully navigate a recall and communicate with customers and the public. What you learn will help you protect your company and the market.

Why attend? We're in a new world of food safety regulations. The FDA now can issue mandatory food recalls and inspect food production facilities. Rules are being implemented now that will increase the urgency for growers to be prepared for a recall.

The stakes are high. Even when a producer does all the right things, recall costs can be significant. If a recall is widespread, they can be catastrophic.

[Download the agenda here.](#)

Registration is required and lunch will be provided.  
Attendees will receive a binder of valuable resources.

[Click here to register.](#)

**Cost:** \$50 for Florida Fruit & Vegetable Association members  
\$75 for non-members  
(Fee added for online registration)

