

Citrus Notes

Polk County Extension ServicePO Box 9005, Drawer HS03 • Bartow, FL 33831-9005
(863) 519-8677, Ext. 109 • wcoswalt@ufl.edu**Hillsborough County Extension Service**5339 County Road 579 • Seffner, FL 33584-3334
(813) 744-5519, Ext. 131**January 2009****Inside this Issue:**

Vol. 09-01

January Citrus Roundtable	2
Indian River Citrus Seminar	2
Field Observations on Citrus Tree Condition	2
Citrus Leaf Freezing Temperatures 2008-09	2 - 3
Potential Consequences of Pesticide Applications on other Citrus Pests	3 - 6
Pesticide News and Information	6

Dear Growers,

This month we will be holding our monthly grower meeting the “Citrus Roundtable” in Seffner on Wednesday, January 7, 2009. The Indian River Seminar will take place January 28 and 29, 2009 in their new location in Ft. Pierce. We put together a collection of timely information related to citrus tree condition, citrus cold acclimation and leaf freezing temperatures along with a brief overview of some of the consequences of psyllid management and/or high spray oil prices. We have a number of “Citrus Pest Posters” available from the office in Bartow. The set of 5 citrus posters cover everything from aphids to zinc deficiency. In the “Pesticide News and Information section” there is a reminder of our annual Citrus Pest Management Guide OJ Break to be held in Bartow on Thursday, February 12, 2009.

*Enjoy the issue,*Chris Oswalt
Citrus Extension Agent
Polk/Hillsborough Counties
863-519-8677 extension 108
P.O. Box 9005, Drawer HS03
Bartow, FL 33831-9005

**January 2009
Citrus
Roundtable**

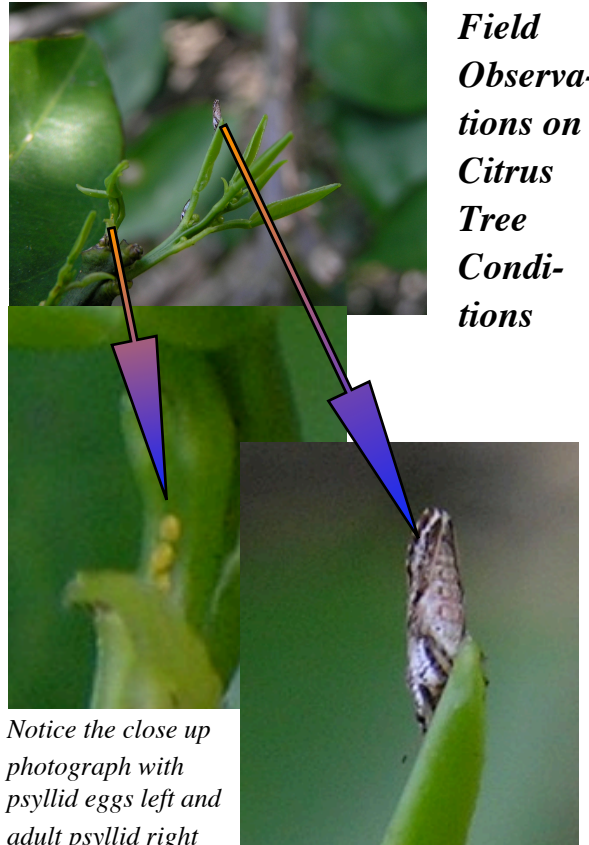
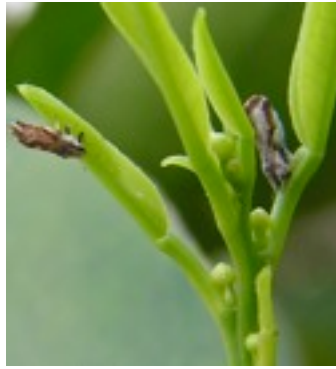
Our January 2009 Citrus Roundtable will begin at 10:00 a.m. on Wednesday, January 7, 2009. The Roundtable will be conducted in the large conference room at the Hillsborough County Cooperative Extension Service Office at 5339 CR 579 in Seffner. This month Dr. Tim Spann, Horticulturalist from the Citrus Research and Education Center in Lake Alfred, will be presenting our program. Dr. Spann will bring us an update on citrus production practices to enhance the insecticidal control of Asian citrus psyllid populations.

One CEU for your Restricted Pesticide License has been requested in the private and agricultural tree crop categories. So, plan to join us for some OJ, coffee and donuts on Wednesday, January 7, 2009 in Seffner.



**Indian River
Citrus Seminar**

The Indian River Citrus Seminar is scheduled for Wednesday, January 28 and Thursday, January 29, 2009 at the Havert L. Fenn Center in Ft. Pierce. I have enclosed program information in the newsletter if you are interested in attending (www.flgevents.com on the web).



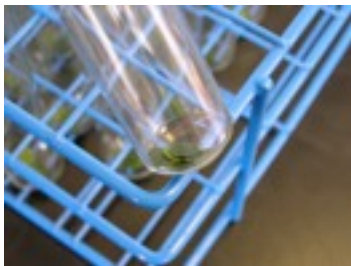
Notice the close up photograph with psyllid eggs left and adult psyllid right

In the last couple of weeks, there has been some visual evidence of tree growth in local groves in response to our current spell of warm weather. The above photographs demonstrate the stage of citrus growth at which psyllid adult females will begin to lay eggs in newly emerging citrus flush. Growers should be aware of this and begin scouting programs in search of adult psyllid and eggs in the early stages of the spring flush. This year, due to low temperatures experienced in the fall, citrus bud induction (for more information see the article on citrus flower bud induction) has progressed rapidly and any significant warm weather with adequate soil moisture may stimulate trees into a growth and flowering flush.

To date these warm temperatures have resulted in the stimulation of bud swell in many local groves. It appears that the lack of soil moisture in many of these areas has sup-

pressed the rapid expansion of these buds. If you have not decided on the timing of your dormant psyllid spray, don't get surprised by unexpected populations of psyllids. Recent research on psyllid control has demonstrated the importance of reducing psyllid populations early in the year.

Citrus Leaf Freezing Temperatures 2008-09



The 2008-09 citrus leaf freezing temperatures are available on the Florida Automated Weather Network (FAWN) at http://fawn.ifas.ufl.edu/tools/coldp/crit_temp_select_guide_citrus.php. This information has been made available through a grant from the Southwest Florida Water Management District. Citrus acclimation continued quickly this year with the cooler temperatures this fall. To date maximum acclimation (or lowest citrus leaf freezing temperature) occurred the week of December 1, 2008. Leaf freezing temperatures ranged from 20^o at the Green Swamp to 22^o F in Balm and Frostproof. Normally leaf freezing temperatures will drop through the fall and winter with the lowest values occurring around Christmas time to the middle of January. This year the lowest values to date have occurred about 3 weeks earlier than in past years. Although the leaf freezing temperatures have bottomed out to date, they are still running in the low 20's as of this newsletter.

Check the FAWN website weekly to get the latest information on the current status of citrus tree acclimation during the winter.



Citrus Flower Bud Induction 2009

From: Dr. Gene Albrigo UF/IFAS, CREC Lake Alfred.

Please review Advisory #1 for this year if you have not done so. Be-

sides background, it provides web sites to run the Flowering Monitor System on-line and other related links for weather data at: http://www.lal.ufl.edu/extension/flowerbud/2008/11_10_08.htm.

Current status for 2008-09 fall-winter – Cool weather accumulation has continued at a good rate to the point that the induced buds are now very easy to stimulate into flower bud growth and differentiation. The flowering monitor program indicates that the easy to induce buds have started to differentiate in the more northern locations (Avalon at 800 hours and Umatilla at 820 hours). Other areas of the state may follow suit if temperature highs stay at 80 degrees F or higher for several days this week. Through December 16th, citrus locations had accumulated low temperatures (< 68 degrees F) of 720 to 1000 hours from southern to the most northern areas, respectively. The next 8 day forecast from NOAA calls for relatively cool temperatures and another 80 to 100 hours below 68 degrees F should accumulate. The current values are acceptable for commercial crops in all areas except Ft. Pierce and more southern East Coast locations. In another 8 days, the East Coast area should have an acceptable level of cool temperature accumulation also.

The northern areas have projected first bloom wave dates of February 2nd (Avalon) and February 6th (Umatilla) which, if correct, are very early and would put the flowers at risk to a potential frost. Since the accumulated cool

temperatures are in the 800s, the first wave of flowers should be the major wave for all of the citrus production areas. During the past 3 years, the trees have not responded by having their major bloom from this many hours of cool temperature accumulation. If they do respond this year with the major bloom from the first initiation-differentiation wave, then the trees have probably finally returned to normal after the 2004-05 hurricanes.

The cool temperature accumulation is so good that I would advise trying to minimize growth through moderate drought maintenance rather than applying urea or phosphorous acid sprays to enhance flowering. This is the most economical option as it saves spray and materials cost as well as some irrigation costs. In all cases where the current crop is low to moderate, the return flowering should be very good without help. Even if the current crop is fairly heavy another two weeks should put induction levels at a high level, exceeding 1000 hours.

It is not advisable to start pushing growth of the trees as 1. An early February bloom is not desirable, and 2. Irrigating might reduce the cold hardiness level which should still be fairly good with the consistent cool temperatures experienced so far this fall and winter.

Potential Consequences of Pesticide Applications on other Citrus Pests



Over the past year, I have on many occasions had the opportunity to make some casual observations on the apparent increases in citrus pest populations. To be honest with you, it is becoming harder to

find citrus psyllids than scale insects in many of the groves under an aggressive citrus psyllid management program. These grower initiated control measures have come at more than a monetary cost. This cost has been in the form of increases in previously considered non-economical pests of Florida citrus. This is not an attempt to change effective psyllid management programs, but to increase your awareness of potential problems seen in Florida groves over the past year.

Scale insects are on the rise. Snow, purple and Florida red scale can be found in many Florida groves. In most observed cases, these pests have not reached high enough levels that would warrant chemical control. It is however, something to be monitoring for the potential of rapid increases in current populations. I believe that as spray oil prices rose this past year (hitting historical highs), a re-evaluation of citrus spray programs lead to a reduction or elimination of spray oil in the citrus pest management program (at least at the higher rates). The reduction in spray oil use in favor of other materials that had more specific pesticidal activity probably reduced the typical broad spectrum insect control seen in the past when using oil. In some cases this was exacerbated with the use of pesticides that reduced the populations of predatory scale insects in the grove.

Last month we mentioned the Woolly whitefly and the increase in some groves this winter. This increase could also coincide with the reduction in spray oil used this past summer. Current recommendations list Temik, Guthion and oil as effective for whitefly control. Many of the more noticeable populations appeared this winter. In cases where Temik is applied this winter one would expect these populations to be reduced. Although recommended, Guthion is known to cause increases in spider mite populations and applications should be carefully considered when environmental

conditions are favorable for naturally occurring populations of spider mites. Oil is effective in controlling populations of whiteflies at the 5 gallon per acre rate.

There have been some limited instances of spider mites causing firing and defoliation in some local groves. Spider mite populations normally increase during periods of dry weather and we have had our share of these conditions over the past month. In groves with a history of foliar carbaryl and/or micro-nutrient applications, spider mites can reach damaging levels in a short period of time. This may be especially true in groves using repeated carbaryl applications.

Growers should carefully review their pest management program for changes in pest pressure and act accordingly. This re-evaluation should reflect the selection of materials to not only control the targeted pest, but address the recently realized unintended consequences of your selections.

Pesticide News and Information



Pesticide Concentrations Decreasing

The results of a new study show that samples taken from over 300 wells across the U.S. have not retained a high

concentration of pesticide contamination. The news is a result of a decade-long study to assess the extent of the impact of contaminants on the nation's water supply. Over the years, studies have detected pesticides in groundwater around the country, including in aquifers used for drinking-water supply. Over

the past few decades, the use of some pesticides has been restricted or banned, while new pesticides have been introduced. One goal of the study was to track the retention of various types of contaminants that would be found in the different pesticides used over the years.

Results for one of the first national studies on the presence of pesticides in groundwater were recently published by the U.S. Geological Survey in the September-October issue of the *Journal of Environmental Quality*. The study is a part of that agency's federally-funded National Water-Quality Assessment (NAWQA) Program. "The results of this study are encouraging for the future state of the nation's groundwater quality with respect to pesticides," said Laura Bexfield, who conducted the data analysis. "Despite sustained use of many popular pesticides and the introduction of new ones, results as a whole did not indicate increasing detection rates or concentrations in shallow or drinking-water resources over the 10 years studied."

Original samples were taken from the wells from 1993-1995, and compared with samples taken from 2001-2003. Laboratory analysis was performed using methods that allowed detection of pesticide compounds at concentrations as small as 1,000 times below EPA drinking-water standards. Of the 80 compounds studied, only six were detected in groundwater from at least 10 wells during both of those sample periods. Concentrations of these compounds generally were less than 0.12 parts per billion, or more than 10 times lower than applicable EPA drinking-water standards.

Characterization of trends in pesticide occurrence and concentrations through time is important in determining how quickly groundwater systems respond to changes in chemical use and in identifying compounds that may

pose a threat to water quality before large-scale problems occur. Continuing research is planned to track and understand changes in both ground and surface-water quality across the United States. The NAWQA is an ongoing USGS program that provides an understanding of water-quality conditions and how those conditions may vary locally, regionally, and nationally; whether conditions are getting better or worse over time; and how natural features and human activities affect those conditions (American Society of Agronomy, 10/20/08).



Cow Tax?

The EPA is seeking comment on whether it is appropriate to regulate greenhouse gas emissions from automobiles under the Clean Air Act. In order to do this, the Agency would first have to make a finding that all greenhouse gases (e.g. carbon dioxide, methane, and nitrous oxide) endanger public health and safety and should be classified as pollutants. If this endangerment finding is made, it would trigger much broader regulation that would include the agricultural sector. Based on information released by the Florida Farm Bureau Federation, this would equate to a tax of \$175 per dairy cow and \$87.50 per beef cow. Any Florida farm with 500 acres of corn, 250 acres of soybean, 350 acres of potato or only 35 acres of rice would be forced to obtain Clean Air Act permits. Please contact the FFBF about this issue. (FFBF Florida Agricultural Policy Bulletin, 11/14/08).



Did He or She Really Do That?

In Sargent, GA, a single-story home was set on fire when the homeowner used a blow-torch to remove cobwebs from the eaves around the exterior of the house. The

fire investigator responding to the fire advised against using a blow torch to rid a home of cobwebs. (Newnan, GA Times-Herald, 11/5/08).



February 2009 Polk County OJ Break

Mark your calendars for Thursday, February 12, 2009. This OJ Break is our annual “Citrus Pest Management Update” program. To date we have scheduled Drs. Michael Rogers and Megan Dewdney, from the Citrus Research and Education Center, to make presentations.

More information including the program agenda, additional speakers and CEU information will be included in the February, 2009 issue of “Citrus Notes”.