

Hendry County Extension, P.O. Box 68, LaBelle, FL 33975 (863) 674 4092

Flatwoods Citrus



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December 2012

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Multi-County Citrus Agent, SW Florida



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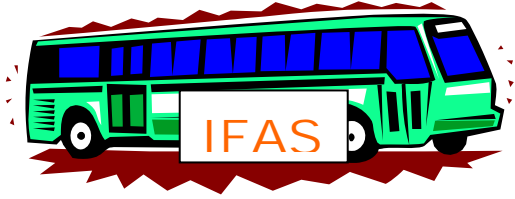
Previous issues of the Flatwoods Citrus newsletter can be found at:

<http://citrusagents.ifas.ufl.edu/agents/zekri/index.htm>

<http://irrec.ifas.ufl.edu/flcitrus/>

IMPORTANT EVENTS

HENDRY COUNTY EXTENSION AG TOURS



Saturday, 2 February 2013
Saturday, 9 March 2013
For more information or to sign up,
call Debra at 863 674 4092

Getting prepared for freezes

Immokalee IFAS Center, Tuesday, January 8th, 2013

Program Coordinator: Dr. Mongi Zekri, UF-IFAS

1. **Winter weather watch for citrus growers, climate, cold hardiness and freeze protection-- Chris Oswalt**
2. **FAWN and FAWN tools for freeze protection-- Rick Lusher**

2 CEUs for Certified Crop Advisors (CCAs)

Pre-registration is required. To reserve a seat, call 863 674 4092, or send an e-mail to: maz@ufl.edu

The Florida Citrus Show in Fort Pierce, January 23-24 2013

Havert L. Fenn Center, Ft. Pierce, FL

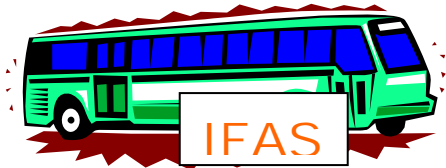
For more information and registration, go to: <http://www.citrusshow.com/>

3rd International Research Conference on HLB

February 4-8, 2013, Caribe Royale Orlando All-Suites Hotel and

Convention Center. **For more information, visit** <http://irchlb.org>

COLLIER COUNTY EXTENSION AG TOUR



Wednesday, 20 March 2013
For more information or to sign up,
call Robert Halman at 239 353 4244

ANNUAL FLORIDA CITRUS GROWERS' INSTITUTE

Date & Time: Tuesday, 2 April 2013, 8:00 AM – 3:30 PM

Location: Avon Park Campus of South Florida Community College

Special Thanks to sponsors of the "Flatwoods Citrus" newsletter for their generous contribution and support. If you would like to be among them, please contact me at 863 674 4092 or maz@ufl.edu



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United States Department of Agriculture
National Agricultural Statistics Service



CITRUS DECEMBER FORECAST MATURITY TEST RESULTS AND FRUIT SIZE

Cooperating with the Florida Department of Agriculture & Consumer Services
2290 Lucien Way, Suite 300, Maitland, FL 32751
(407) 648-6013 · (407) 648-6029 FAX · www.nass.usda.gov/fl

December 11, 2012

All Oranges Down 5 Percent from October
Non-Valencia Oranges Production Down 9 Percent
Valencia Orange Production Down 1 Percent
All Grapefruit Production Down 11 Percent
All Tangerine Production Down 14 Percent
Tangelo Production Down 8 Percent
FCOJ Yield Unchanged at 1.61 Gallons per Box (42° Brix)

FORECAST DATES	–	2012-2013 SEASON
[Beginning January 2013 release time will be 12:00 p.m. EDT]		
January 11, 2013		April 10, 2013
February 8, 2013		May 10, 2013
March 8, 2013		June 12, 2013
		July 11, 2013

All Oranges 146.0 Million Boxes

The 2012-2013 Florida all orange forecast released today by the USDA Agricultural Statistics Board is 146.0 million boxes, down 5 percent from October and 600,000 boxes fewer than last season's production. The forecast is comprised of 67.0 million boxes of the non-Valencia oranges (early, midseason, Navel, and Temple varieties) and 79.0 million boxes of the Valencia oranges. The hurricane seasons of 2004-2005 and 2005-2006 have been excluded from the usual 10-year regression analysis and from comparisons of the current season to previous seasons. For those previous 8 seasons, the December forecast has deviated from final production by an average of 3 percent with 6 seasons above and 2 below, with differences ranging from 3 percent below to 4 percent above. All references to "average", "minimum", and "maximum" refer to the previous 8 non-hurricane seasons unless noted.

Non-Valencia Oranges 67.0 Million Boxes

The forecast of non-Valencia production is lowered by 7.0 million boxes to 67.0 million boxes. Current size is near the minimum and projected to remain close to minimum at harvest. Current droppage is steadily increasing and is projected to be highest since the 1969-1970 season. The Navel forecast, included in the non-Valencia forecast, is reduced by 300,000 boxes to 1.9 million boxes. If realized, this utilization will be the lowest since 1984-1985. Final Navel size is near average but final droppage is the highest in any season since 1990-1991.

Valencia Oranges 79.0 Million Boxes

The forecast of Valencia production is lowered by 1.0 million boxes to 79.0 million boxes. Current fruit size is slightly above the minimum and is projected to remain below average. Current droppage is slightly above average and projected to remain near average.

All Grapefruit 18.0 Million Boxes

The forecast of all grapefruit production is reduced by 2.3 million boxes to 18.0 million boxes. The white grapefruit forecast is reduced by 800,000 boxes to 5.0 million boxes. The colored grapefruit forecast is reduced 1.5 million boxes to 13.0 million boxes. White grapefruit current fruit size is below the minimum and droppage is above the maximum. Colored grapefruit fruit size is also below the minimum and droppage is above the maximum. Droppage is projected to be above average at harvest for all varieties.

All Tangerines 3.8 Million Boxes

The forecast of all tangerine production is reduced 600,000 boxes to 3.8 million boxes. The early tangerine forecast (Fallglo and Sunburst) is reduced 400,000 boxes to 2.0 million boxes. The forecast of the later maturing Honey variety is reduced 200,000 boxes to 1.8 million boxes. The decrease in early tangerines is based on record high droppage and record low sizes for the Sunburst variety. Projected Honey fruit size is below average while the droppage rate is above average.

Tangelos 1.1 Million Boxes

The forecast of tangelo production is reduced 100,000 boxes to 1.1 million boxes. Tangelo sizes are below average and droppage is above the maximum and final for the season. Approximately 281 pieces of fruit are required to fill a 1 3/5 bushel box.

FCOJ Yield 1.61 Gallons per Box

The projection for frozen concentrated orange juice (FCOJ) remains 1.61 gallons per box of 42° Brix concentrate. Last season's final yield for all oranges was 1.628480 gallons per box, as reported by the Florida Department of Citrus. Yield projections for the early-midseason and late components will be published in January. All projections of yield assume the processing relationships this season will be similar to those of the past several seasons.



NUMERIC NUTRIENT CRITERIA IN THE STATE OF FLORIDA

Status and Meaning of November 30, 2012 Action by EPA

Summary: On November 30, 2012, the U.S. Environmental Protection Agency (EPA) approved State standards for the prevention of nutrient pollution in Florida's waterways applicable to 100% of Florida's rivers, streams, lakes and to estuaries from Tampa Bay to Biscayne Bay, including the Florida Keys. These standards are called numeric nutrient criteria (NNC) and establish levels for nitrogen and phosphorus as well as biological conditions that must be met to protect healthy waterways.

Simultaneously, EPA proposed draft federal NNC pursuant to a federal consent decree for waters not yet covered by State rules which include:

- Remaining estuaries;
- Open ocean waters;
- The location where South Florida canals enter estuaries;
- Scientifically challenging areas like tidal creeks, headwaters that are dry for portions of the year (excluding drought conditions), and managed water conveyances.

As part of the November 30 action, EPA also amended its previous January 2009 determination concluding that the Department's rules provided sufficient quantitative procedures upstream to ensure the protection of water quality standards in downstream waters as required by the Clean Water Act.

At this time, the only NNC that have taken full effect are the estuaries located in south Florida. The effective dates of the remainder of the Florida and EPA rules vary. In the interim, applicable narrative goals contained in State rules continue to apply to these waters, as well as any established restoration goals in the form of Total Maximum Daily Loads.

The Department is continuing its development of criteria for the rest of the estuaries in the State. In November 2012, in advance of the 2013 deadline in our rules, the Department adopted NNC for additional estuaries, expanding coverage to 72% of our estuaries. The Department has committed to adopting criteria for the remaining estuaries in 2015 after data collection and analysis. These will require EPA approval.

The Department will quickly review EPA's proposed rules and consider how information or proposed approaches can be folded into State adopted water quality criteria. Both EPA and the Department have committed to working together quickly to identify necessary State actions that would eliminate the need for more federal rules to be set and enable the withdrawal of federal rules promulgated in 2010.

2012 WATER WATCH

Keeping an Eye on Water Resources

District-Wide Conditions for November 26, 2012

The South Florida Water Management District (SFWMD) is issuing the following briefing:

South Florida has transitioned into the dry season with water levels throughout most of the region at ideal levels. Water levels have started the seasonal decline, but resources are adequate for South Florida's water needs in the coming months. With a forecast for an average dry season, water managers are maintaining canals at seasonally appropriate levels.

The District continues to monitor water levels and operate the system to maintain flood control while capturing as much water as possible for the dry season.

For more information:

- [SFWMD Weather/Rainfall Data](#)
- [National Weather Service Dry Season Forecast](#)
- [Climate Prediction Center Precipitation Forecast](#)

Lake Okeechobee Levels

Today	15.23 feet
Historical Average for Today	14.87 feet
This Date One Year Ago	13.84 feet
One Month Ago	15.81 feet
One Week Ago	15.38 feet

Water Levels in Key Locations

LOCATION	CURRENT WATER LEVEL	ONE MONTH AGO	HISTORICAL AVERAGE FOR TODAY
Lake Istokpoga	39.48 feet	39.39 feet	39.18 feet
WCA-1	16.88 feet	17.29 feet	16.32 feet
WCA-2	12.97 feet	13.47 feet	12.89 feet
WCA-3	10.79 feet	11.45 feet	10.32 feet
Lake Kissimmee	51.09 feet	51.49 feet	51.18 feet

For a map of recent rainfall totals in all District basins, [click here](#).

Other Actions

Navigation

- All Kissimmee River navigation locks are open.
- The S-193 Lock, located on Taylor Creek on the north shore of Lake Okeechobee, is closed due to ongoing renovation work to refurbish the lock and ensure decades of reliable service.
- Lock operations have resumed at the S-310 Lock, located near Clewiston on the south shore of the lake. Boaters must now “lock through” to navigate between the lake and the Clewiston Canal.

Water Conservation Measures

- South Florida is under the District’s Year-Round Landscape Irrigation Rule that limits residential and business landscape irrigation to two or three days per week based on location.
 - To determine watering days and times in your area, contact your local government or visit www.sfwmd.gov/2days.
- Permitted water users such as nurseries, agriculture, golf courses and utilities should continue following the water use conditions in their permits.
 - Permit details can be found in the Application/Permit records search online at www.sfwmd.gov/ePermitting.
- For information about water conservation, visit www.savewaterfl.com.

FAWN (Florida Automated Weather Network)

Go to <http://fawn.ifas.ufl.edu/>

Click on Tools, then click on Cold Protection Toolkit or go directly to <http://fawn.ifas.ufl.edu/tools/coldp/> Then Select a Tool.

New! Graphic Forecast data for FAWN sites

National Weather Service (NWS) forecast data for next 96 hours. Updated hourly.

Minimum Overnight Temperature

Estimates based on the Brunt equation and the air & dew point temperatures at sunset.

Evaporative cooling potential

Determining the risk of using irrigation for cold protection, and see the risk calculated at FAWN stations.

There is always a risk when using water systems, micro-sprinkler or conventional sprinkler, for cold and/or frost protection. Low humidity and wind can produce evaporative cooling which can chill plant surfaces to the wet bulb temperature. Dry and windy conditions can result in wet bulb temperatures 5F to 6F degrees lower than air temperature. Therefore, wetted plant surfaces that experience evaporation would be 5F to 6F degrees cooler than air temperature. Evaporative cooling may result in plant damage when water is used for cold protection during dry windy conditions. Evaporative cooling should always be taken into consideration.

It is possible that, on nights when temperatures are close to critical levels, introduction of water could produce more damage than would result if no action was taken!

Wet-Bulb Based Irrigation Cutoff Temperature

The safe cutoff temperature based on current FAWN conditions.



NEWS RELEASE

December 3, 2012

CONTACTS:

Gabe Margasak

South Florida Water Management District
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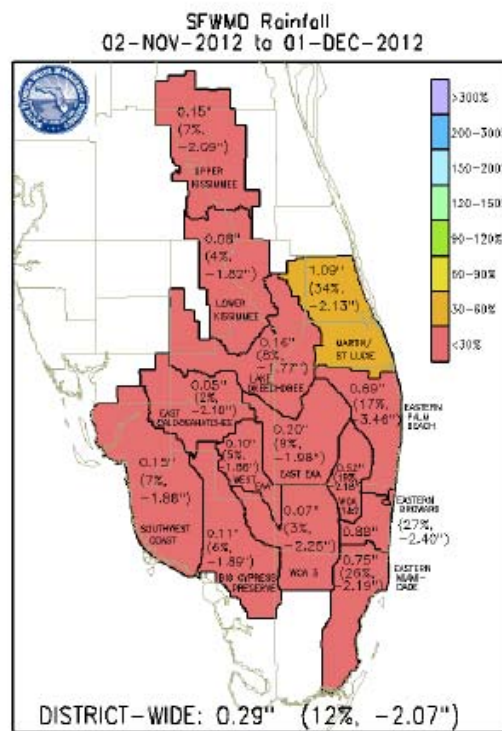
Randy Smith

South Florida Water Management District
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www.sfwmd.gov/news

follow us on

November Edges All-Time Dry Record for the Month *Despite scant rainfall, regional water supplies remain adequate*



(Click on the map for a larger version.)

West Palm Beach, FL – The first month of South Florida’s dry season edged out the long-standing record rainfall low for November, South Florida Water Management District (SFWMD) meteorologists reported today.

The District-wide rainfall average of 0.29 inches in November was just 0.01 below the previous record low of 0.30 inches in both 1940 and 1944, based on District records since

1932. All 16 counties in the District were more than 1.5 inches below average for November, which is typically one of the driest months in South Florida.

“With the benefit of above-average wet season rainfall, regional groundwater and surface water levels fortunately were in a position to ‘weather’ a record dry month,” said Susan Sylvester, SFWMD Chief of the Water Control Operations Bureau. “It is too early to assess the impact this record dry period will have on conditions and water levels.”

Eastern Palm Beach County had the largest rainfall deficit in the District, with 0.69 inches of rain, representing a deficit of 3.46 inches, or 17 percent of average. The Upper Kissimmee Basin and Martin, St. Lucie and eastern Miami-Dade counties all recorded rainfall deficits of more than 2 inches for the month. The East Caloosahatchee Basin also recorded more than a 2-inch rainfall deficit while the Southwest Coast recorded a 1.88-inch deficit.

Lake Okeechobee stood at 15.10 feet NGVD today, which is 0.30 feet above the historic average for this time of year.

2012-2013 Dry Season Forecast

South Florida is forecast to experience one of the few dry seasons having near-average rainfall in the past 14 years. Only two dry seasons, 1998-1999 and 2003-2004, have actually been about the historical average in that timeframe, with two above average and 10 below average dry seasons. The National Oceanic and Atmospheric Administration’s Climate Prediction Center forecast calls for equal chances of slightly above or slightly below average rainfall for the first three months of the upcoming dry season.

Among the official forecast highlights for the 2012-2013 South Florida dry season:

- Near normal precipitation is mostly likely during the first part of the dry season, from November to February
- A drier-than-normal trend may characterize March and April
- Average dry season precipitation: 12 to 15 inches in the interior and west to 15 to 21 inches in the east
- Long-term average winter temperature: 64 to 66 F in the interior and west to 67 to 69 F in the east

For more information:

- [SFWMD Weather/Rainfall Data](#)
- [National Weather Service Dry Season Forecast](#)

Just the Facts: South Florida’s Dry Season

- *November – May*
- *About 18 inches of rain is the average*
- *May and October are important transition months*
- *March, April and May have the highest evaporation rates and lowest rainfall*

Flower Bud Induction Overview and Advisory

<http://www.crec.ifas.ufl.edu/extension/lowerbud/index.htm>



Gene Albrigo, Horticulturist Emeritus
Citrus Research & Education Center, Lake Alfred, FL

FLOWER BUD INDUCTION

ADVISORY #1 for 2012-2013-11/13/12

NOTICE FOR CITRUS EXTENSION
AGENTS & SPECIALISTS AND
GROWER NEWSLETTERS

The following information has been developed as part of the Decision Information System for Citrus.

L. Gene Albrigo, Horticulturist Emeritus
Citrus Research & Education Center,
Lake Alfred, FL

This is a service to our citrus growers posted on the CREC website. The indicated Expert System on intensity and time of bloom can be accessed at the designated Web Site:

<http://disc.ifas.ufl.edu/bloom> If you are not familiar with the website and flower bud induction in citrus you should read the overview section below the current status paragraph.

Current status for 2012-13 Fall-Winter -

The previous medium crop and general tree recovery without a hurricane led to more typical flowering responses in

Florida. The crop per tree is therefore above moderate in most groves and will make higher amounts of induction necessary for higher flowering levels next spring. This is supposed to be an ENSO-Neutral winter with average cool temperature accumulation and rainfall. October was warm until late, but November has been reasonably cool. Currently, citrus locations have accumulated low temperatures, < 68 degrees F, of 230 to 400 hours from southern to northern areas, respectively. The next 7 days will be intermediate for cool temperature accumulation with about 70 hours in the Indian River and more in other areas. Continued accumulation of cool temperatures and prevention of growth during a winter warm spell is more important for good 2012-13 citrus production. Trees will have enough cool temperature accumulation by next week to be stimulated to grow by a week to 10 days of warm weather (mid 80s). Therefore, start to monitor irrigation amounts so drought stress can quickly occur by stopping irrigation if a warm period is projected between now and Christmas or warm temperatures occur before reaching an acceptable level of over 750-800 hours of cool temperatures. Prepare to make groves relatively dry by withholding irrigation if a warm period is predicted. Keep track of induction hours in your area and watch for the next advisory after December 3rd. Remember drought stress adds to flower bud induction, just avoid excessive drought to maintain adequate condition of the current crop.

Overview of flower bud induction in Florida – Citrus flower bud induction starts in the fall and usually is completed by early January. Low temperatures first stop growth and then promote induction of flower buds as more hours of low

temperatures accumulate (below 68 degrees F, 19 0C). Periods of high temperatures in winter can then initiate bud differentiation which after sufficient days of warm springtime temperatures leads to bloom. The meteorologists predict that this winter in Florida will be an ENSO-La Niña year, above average temperatures and lower than average rainfall. Under these conditions, enough hours of low temperatures below 68 degrees F. still usually accumulate to induce an economic level of flower buds. Conditions that can interfere with good flower bud induction include: 1) several warm periods interrupting the induction process or 2) the previous crop was exceptionally high or 3) leaf loss from hurricanes, freezes or other causes (canker) were excessive and tree recovery was not complete. Excessive leaf loss leads to low carbohydrate levels in developing buds which reduces their ability to become flower buds. None of these adverse conditions appear to be in play for the coming season's flower bud induction. The biggest concern should be too many warm periods causing early initiation of bud growth before good flower induction.

Under normal Florida weather conditions but with a moderate to heavy previous crop, sufficient flower bud induction should be achieved when total accumulated hours of low temperatures exceed 800 hours below 68 degrees F. If the crop load is light, sufficient flower bud induction may occur after 700-750 hours of accumulated low temperatures. A warm period of 7 to 12 days, with maximum temperatures > 80 to 85 degrees F., can trigger growth (bud swelling) if a minimum total hours of low temperatures have accumulated (300-400 hours below 68 degrees F). Later in the winter when the accumulated cool

temperature induction hours are high, fewer days and lower daytime highs (75 degrees F.) are required in a warm period to stimulate growth of buds. Weather information relative to Florida citrus flower bud development for the current and several previous years (back to 1998) can be obtained from the Florida Automated Weather System (fawn.ifas.ufl.edu) for locations near you. An 8 day forecast from the National Weather Service predicts Florida weather for several sites around the citrus belt for the next week. Find this information at:

<http://www.nws.noaa.gov/mdl/forecast/text/state/FL.MRF.htm>. This is an easy way to see if a warm period, which could trigger flower bud growth, is predicted for your specific area in Florida.

Some flower buds will be induced in the range of 300 to 450 accumulated hrs < 68 degrees F. Warm events just after these levels of induction result in weak flowering intensity, and therefore many buds remain that can be induced by later cool periods, or these buds may sprout as vegetative shoots if warm weather continues and the trees are well watered. The first situation results in multiple cohorts of flower buds developing to different bloom dates. The second condition leads to low flowering-fruit set and excessive early spring vegetative growth. During the years from 1963 to 2003, multiple blooms occurred in over half of the years. Historically, the time period in which an early warm period (7-12 day) can lead to an initial low number of buds growing and flowering is roughly mid-November to mid-December. Then after more cool temperatures additional flower buds are induced and a later warm period starts their growth and repeats of this process result in multiple blooms. Presently, the only management tool available to eliminate or reduce the

chance of multiple blooms is sufficient drought stress to stop growth. This water stress may be provided by stopping irrigation well before these predicted warm periods occur. If the warm periods(s) are of the typical 7 to 10 day duration, a coincident short period of drought stress will have little impact on current crop development or quality. Sufficient drought stress may be interpreted as leaf wilt observed by 10 or 11 am, but leaves recovering by early the next morning. If no rains interrupt a drought stress condition in citrus trees, buds will not grow in response to high temperatures. If a warm period has passed, trees again can be irrigated to minimize current crop stress. Although no weather prediction is guaranteed, rains in the winter usually come on the fronts for cool periods. Sufficiently cool temperatures after a cold front rain will usually prevent growth even though soil moisture is adequate for growth. Since winter rains usually occur just before cool temperatures, the chances that drought stress will prevent an early flower bud differentiation event are reasonably good for many warm periods. Even so, growers in some growing districts have often found it difficult to maintain winter drought stress.

In the shallow soils of bedded groves, it is relatively easy to create sufficient water stress to suppress growth by withholding irrigation for a few days if no rains occur. In deeper, sandy soils, 2 or more weeks without irrigation or rainfall may be required. To minimize the time required for soil to dry sufficiently to initiate water stress, the soil should be allowed to dry out by mid-November so that trees show wilt by mid-day. For bedded groves, minimum irrigation can then be applied at low rates as needed until a weather prediction indicates a warm period is

expected. At this time, irrigation should be shut down. For deep sands, the soil needs to be dried out and kept nearly dry below 6 to 8 inches of depth until at least Christmas so that no growth can occur. Minimum irrigations that re-wet perhaps the top 6 to 8 inches of the root zone may minimize excessive drought, while allowing quick return to a water stress condition if a high temperature period is forecast. Soil moisture monitoring can help to achieve these goals. Prolonged late-fall, early-winter drought may be risky for 'Hamlin' or other early maturing cultivars not yet harvested that tend to drop fruit near harvest. In recent studies, Valencia trees in Central Florida have had good flowering and no apparent impact on current crop when irrigation was stopped in early December and resumed in the Spring. Much of what has been stated above has now been incorporated into a 'Flowering Expert System for Florida Citrus'. Figure 1 represents the different aspects of flower induction as depicted by the software program. The program gives an average bloom situation represented by the shades of green to white, vegetative to heavy flowering, respectively. If the current crop is very heavy, then more cool induction is needed to compensate for the crop load effect. If the current crop is lighter or tree condition better, then fewer total cool temperature hours are needed for an equal level of flowering. Recommendations (bottom text) do consider the current crop level in assessing when action should be taken to try to prevent or to promote initiation of the flower bud growth process. The system is available on-line: <http://disc.ifas.ufl.edu/bloom>

Additional advisories will follow this preliminary one, roughly bi-weekly) and

update the reader on accumulating hours of related cool or warm temperatures and other weather effects on flower bud induction. Methods for enhancing (urea or PO3 sprays) or reducing (GA3 sprays) flowering intensity as conditions and cultivars dictate will be discussed in later advisories. Read the archived advisories from previous years (link at top of this page) for more background.

Previous responses – In the winter of 2001-2002 following a good crop, cool temperature accumulation was very slow and few hours accumulated (640 hours), warm temperatures persisted and most buds started to grow by 20 December, particularly in well irrigated blocks, leading to excessive vegetative buds. This resulted in few buds remaining for a second flowering wave and a relatively small crop occurred in the 2002-03 harvest season. By late December in the winter of 2002-2003, 850 hours of uninterrupted cool inductive temperatures had accumulated with a low current crop on the trees. The subsequent warm period initiated growth of almost all the buds on all of the spring and summer flush with bloom in early March. We had a fairly leafy bloom of very short duration (slightly more than 2 weeks). In spite of the high temperatures during and following bloom, an excellent fruit set occurred in all round oranges resulting in the highest Florida citrus crop forecast by the Florida Agric. Statistical Service (2003-04 crop). In the winter of 2003-2004, there was good flower bud induction and reasonably good fruit setting conditions, although the heavy previous crop probably reduced flowering levels and set. Even though fruit size was small, it looked like we were headed for a

220 million box orange yield before the 2004 hurricanes significantly reduced the 2004-05 yield. Since then, we have had Hurricane Wilma in 2005 and a long period of tree recovery from the 2004 and 2005 hurricanes. Since the hurricanes, flowering levels have been lower and appeared to require more hours to get adequate bloom. This has usually resulted in the main bloom occurring later (late March). There is some indication that tree recovery after the multiple hurricanes took several years. For the 2008-2009 crop season, accumulated hours below 68 degrees F were more than acceptable by the second warm period (over 1000 hours) but flowering and crop per tree was still low resulting in an estimate of only 134 million boxes of oranges. This low yield probably indicates that the trees still were not fully recovered from hurricane effects. Some details of the hurricane effects can be reviewed in the 11/01/2006 summary-introduction for the previous year's flower induction cycle. New insight- Recent studies from our lab have shown that cool temperatures and drought additively increase flower bud induction. They both up-regulate the flowering signal gene (CsFT) from the leaves. The signal protein produced by this gene travels to the bud to signal other genes to be up-regulated for flowering to commence as soon as warm temperatures and soil moisture are available. Continued drought inhibits these genes to be up-regulated until the drought stress is relieved by irrigation or rainfall.

If you have any questions, please contact me (albrigo@ufl.edu).

FLOWER BUD INDUCTION ADVISORY #2 for 2012-2013-12/03/12

[L. Gene Albrigo](#), Horticulturist Emeritus
Citrus Research & Education Center, Lake Alfred, FL

Current Status: The projection is for a Neutral ENSO winter and moderate cool temperature accumulation. The accumulated hours below the threshold for induction, <68 °F, through December 1 were 500 to 750 from southern to northern citrus areas. Another 80 to 90 hours are predicted for the next week. The minimum hours in southern areas will be about 270 less than the desired 850 after next week.

In order to improve the induction level beyond a minimum, trees should remain at rest at least through Christmas. Three more weeks of induction may add another 300 hours, which would bring the East Coast growing areas to near 850 hours, a good level of flowering for an economic crop. A level of near 800 hours should be reached in most growing areas north of Palmdale in two more weeks if current temperatures persist.

Particularly in southern growing areas remember to watch the weather reports. If daytime high temperatures are projected to be in the mid-80 degree range in the next 3 weeks, before Christmas, be sure that soil moisture is low to avoid initiation of bud growth. This can allow later cool weather to still influence bud induction, but if buds start to grow in a warm period their flowering potential is set at the level they had reached when the warm weather started. Induction levels are now high enough that a warm period will easily initiate bud growth in the 1st or 2nd terminal buds.

If cool temperatures continue for 3 weeks, flower enhancing sprays may not be needed in southern areas. The exceptions could be trees with a heavy crop and/or weak root systems due to high water levels this past summer and fall. If with additional cool temperatures 800 hours below <68 °F is not reached, a flower bud induction enhancement spray of urea or a phosphorous acid product sprayed during the early part of the warm period probably will be effective. Growers can consider applying either 53 to 60 lbs of foliar urea/acre or a PO₃ product at 3 pints to 2 quarts per acre depending on which product is used (60 % P (3 pts) or if 26 % P (2 qts)). The chosen material should be applied in 80 to 125 gal of water early in a warm period. These products apparently increase the stress level and enhance the amount of flowering induced by the cool temperatures. We have not tested these sprays on HLB affected trees, but these trees, if not severely declined, may also respond.

Don't forget that winter freezes occur most often between Christmas and 15 January. Moderate drought stress increases cold hardiness on healthy trees, also increase flower bud induction and prevents bud growth in warm weather. Again follow the weather for cold and warm periods.

I will post an advisory before 14 December, earlier if a major change in weather is predicted. If you have any questions, please contact me (albrigo@ufl.edu).

Information for the next Certified Pile Burners Course:

The Florida Division of Forestry and University of Florida Cooperative Extension Service will be conducting a Certified Pile Burners Course on Tuesday, **12 February 2013**. This course will show you how to burn piles *legally, safely and efficiently*. Most importantly, it could save a life. If you burn piles regularly, don't put off registering for this training. When the weather is dry, certified pile burners will receive priority for authorization to burn. Also, certified pile burners are allowed to burn up to two hours longer per day and get multiple day authorizations. Don't wait. The number of trainings offered and attendance at each training is LIMITED. This training will be held from 8:00 am till 5:00 pm at the Southwest Florida Research and Education Center located in Immokalee, Florida. Included are a registration form and program agenda. See <http://www.imok.ufl.edu/> for directions to facility.

Registration is required to attend and class size is limited to the first 50 people. To attend please send the following information (see form on next page):

1. Your full name (as wanted on your pile burning certificate).
2. Your mailing address (where you want the certificate mailed).
3. Your Division of Forestry Customer Number (It is the number that you are required to give the DOF when you call in for your burn permits. If you do not know it please call the local DOF office and ask them for it).
4. Your email address (if you have one) and/or contact phone number.
5. A check for **\$50.00** made out to **Hendry County 4-H**.

The first fifty individuals to provide these five requirements will be registered; there will be a 7-day non refundable fee limit. If you do not make the training and did not contact our office at least one week before the class, you will not receive a refund. There will be a test at the end of the session. You must receive a grade of 70% or higher on the exam and demonstrate a proper pile burn with your local DOF office to become certified. Once you are certified it will be noted with your customer number, thus it is important for us to have the proper number. If you do not have a customer number the DOF office will set one up for you. Fill out the registration form on the next page and return as directed.

Sincerely,

Dr. Mongi Zekri
Multi County Citrus Agent
Office phone: 863 674 4092
Cell: 239 595 5494
maz@ufl.edu

REGISTRATION FORM

Florida's Certified Pile Burner Program

Tuesday, February 12th, 2013

c/o Dr. Mongi Zekri

UF-IFAS Hendry County Extension Office

P.O. Box 68

LaBelle, FL 33975-0068

Registration is required to attend and class size is limited to the first 50 people.

Registration fee: \$50

The \$50 fee covers the training sessions, a booklet with all the presentations in color, other handouts, refreshments, and lunch

Please send this form and a check for **\$50.00**, payable to **Hendry County 4-H** to:

Dr. Mongi Zekri
University of Florida IFAS
Hendry County Extension Office
P.O. Box 68
LaBelle, FL 33975-0068

Name

Mailing address

Email address

Phone Number

DOF Customer Number

Florida's Certified Pile Burner Training
Tuesday, February 12th, 2013
UF-IFAS Southwest Florida Research and Education Center
2685 SR 29, Immokalee, FL 34142
See: <http://www.imok.ufl.edu/> for directions

1. Registration	08:00 – 08:30
2. Opening Comments and Introduction	08:30 – 09:10
3. Fire Weather	09:10 – 09:50
4. BREAK	09:50 – 10:00
5. Smoke Management	10:00 – 11:20
6. Open Burning Regulations	11:20 – 12:15
7. LUNCH	12:15 – 01:15
8. Planning and Implementation	01:15 – 02:30
9. Safety	02:30 – 03:10
10. BREAK	03:10 – 03:20
11. Public Relations	03:20 – 04:00
12. Wrap Up and Final Test	04:00 – 05:00

Please bring a Pencil for the Exam!



Florida's Certified Pile Burner Training

Frequently Asked Questions



Q: Why should I be a certified pile burner?

A: Certified pile burners are trained to burn piles **legally, safely and efficiently**. Most importantly, it could save a life. Also, when the weather is dry, certified pile burners will receive priority for authorization to burn by the Florida Division of Forestry (DOF). Also, certified pile burners are allowed to burn up to two hours longer per day and get multiple day authorizations.

Q: What is a Pile Burner Customer Number?

A: When you call the DOF for an authorization to burn, you will be assigned a personal customer number. This number references your information so it doesn't need to be gathered each time you call for an authorization. You must have your individual DOF customer number in order to be certified.

Q: Is there a test?

A: Yes, the test is 20 questions and open-book. You must receive a score of at least 70% to pass.

Q: What if I don't pass?

A: Very few people fail the test but if you do, you will be provided another opportunity to take the test at a later date. If you fail the second time, you must re-register and take the training again.

Q: Why do you ask for my email on the application form?

A: Email is the fastest and most convenient method to inform registrants of their registration status. If no email address is provided then all correspondence will be sent through the federal mail. This can take several days to relay messages and this may not be practical if changes are made to the course schedule or for last minute registrations.

Q: How much does it cost to register for the training?

A: Registration for the training is \$50 per person and includes lunch, training materials and testing.

Q: How long does my certification last?

A: As long as the person with the certification uses their number at least 5 times in a period of 5 years their certification will not expire under the current program. You **MUST** complete the certification burn within a year of taking the class.

Q: Will certified burners be notified if their certification expires?

A: Yes, notification will be sent out to them to let them know of their upcoming certification expiration date.

Q: Will I be certified at the end of the one day training?

A: No, you will need to follow the written instructions that you will receive from the Division to become certified. You will need to complete a simple burn plan, have it reviewed and approved locally by the DOF and also have the burn itself reviewed and approved by the DOF. From that point, the local DOF office will send the expected documentation to Tallahassee to recommend certification for you.

Q: Is there a minimum age to be a certified pile burner?

A: Yes, you must be at least 18 years old to take the test and be a certified pile burner.

Florida Gulf Citrus Growers Association



Florida Gulf Citrus Growers are good neighbors and good stewards of the land. They are keenly aware that they must carefully balance the needs of the environment and the needs of citrus growing. This delicate balance starts in the basic design

of the groves, and then to the use of the latest technology and the most progressive management practices. All these factors enable Florida Citrus Growers to be sustainable in this region. Growers carefully manage the water resources through state-of-the-art low volume computerized irrigation systems, spraying water directly to the root zone. There are many other positive impacts that citrus groves have on the environment. Go to <http://www.gulfcitrus.org/> and become a member or an associate member.

GULF CITRUS GROWERS ASSOCIATION SCHOLARSHIP FOUNDATION, INC.



Membership:

Membership in the Scholarship Foundation is open to all Gulf Citrus Growers Association (GCGA) members for just \$25 per year. Members are able to vote for and serve on the Board of Directors for the Foundation.

Donations:

Donations are a crucial source of funding for scholarship awards and may be made to the Foundation at any time during the year in any denomination, **regardless of membership status**. Checks should be made payable to the Foundation. For more details, please call the GCGA office at **(239) 690-0281**.

The GCGA Scholarship Foundation is a non-profit corporation operating under Section 501 © (3) of the Internal Revenue Code. Contributions are tax deductible as allowed by law.



Gulf Citrus Growers Association Scholarship Foundation, Inc.

11741 Palm Beach Blvd., #202, Fort Myers, FL 33905
(239) 690-0281 / Fax: (239) 690-0857 / Email: gulfcitrus@embarqmail.com

About the Gulf Citrus Growers Association

The citrus growers of southwest Florida are committed to supporting education as a long-term investment in the future of our industry. The first Gulf Citrus scholarship was awarded in 1992 through the Gulf Citrus Growers Association, a trade organization representing growers in Charlotte, Collier, Glades, Hendry and Lee Counties.

The Gulf Citrus Growers Association Scholarship Foundation was established in 2000 as a non-profit entity to oversee the distribution of these awards. Scholarship applications are accepted throughout the year and are reviewed semi-annually by a Scholarship Selection Committee comprised of academic and industry members. The number and amount of awards vary depending upon the number of applications received and available funds.

Applicants who are not selected may submit a new application for consideration in the next selection cycle. Previous award winners may also reapply.

Scholarship Criteria

Preferred requirements for scholarships are as follows:

AA, BS, MS and PhD Degrees:

- Completion of all placement testing and a **declared major** in agriculture or related major.
- Completion of **12 credit hours** towards agriculture or related degree.
- Minimum overall grade point average of **2.5** for AA and BS degrees; **3.0** for MS and PhD degrees.
- A demonstrated **commitment** to complete the degree at a state college, community college or university.

Applicants must send their transcripts including grades for the courses taken the previous semester and complete the attached application, which includes a statement of release giving the selection committee permission to verify information submitted.

*****APPLICATION DEADLINES ARE JULY 31 AND DECEMBER 31*****



Gulf Citrus Growers Association Scholarship Foundation, Inc.

11741 Palm Beach Blvd., #202, Fort Myers, FL 33905
(239) 690-0281 / Fax: (239) 690-0857 / Email: gulfcitrus@embarqmail.com

Scholarship Application

Personal Data

Name: _____ Date of Birth: _____

Home Address: _____

City/State: _____ Zip: _____ Phone: _____

Mailing Address: _____

City/State: _____ Zip: _____ Phone: _____

E-mail: _____

Employer: _____

Address: _____

City/State: _____ Zip: _____ Phone: _____

Does your employer reimburse you for tuition or other expenses incurred toward your degree? Yes ___ No ___

Educational Information

College or University in which you are enrolled: _____

Department / Degree Program: _____

I am working toward the following: AA ___ BS ___ MS ___ PhD ___ Other ___

Courses Taken in Major (completed):

Courses (in which you are currently enrolled):

Total Credit Hours Toward Degree: _____ Cumulative Grade Point Average (GPA): _____

Expected Date of Graduation: _____

Please answer the following questions in complete sentences with as much detail as possible.

What are your career goals? _____

What is the potential value of your education to the citrus industry *in southwest Florida*?

I authorize the release of this application and any relevant supporting information to persons involved in the selection of recipients for Gulf Citrus Growers Association scholarships.

Applicant's Signature

Date

*****APPLICATION DEADLINES ARE DECEMBER 31 AND JULY 31*****

Please return this application with your official transcripts to:

Gulf Citrus Growers Association Scholarship Foundation, Inc.

Dr. Mongi Zekri, Application Coordinator

Hendry County Extension Office

P. O. Box 68

LaBelle, FL 33975

(863) 674-4092 / Fax: (863) 674-4636

E-mail: maz@ifas.ufl.edu

Flatwoods Citrus

If you did not receive the *Flatwoods Citrus* newsletter and would like to be on our mailing list, please check this box and complete the information requested below.

If you wish to be removed from our mailing list, please check this box and complete the information requested below.

Please send: Dr. Mongi Zekri
Multi-County Citrus Agent
Hendry County Extension Office
P.O. Box 68
LaBelle, FL 33975

Subscriber's Name: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

Fax: _____

E-mail: _____

Racial-Ethnic Background

__ American Indian or native Alaskan

__ Asian American

__ Hispanic

__ White, non-Hispanic

__ Black, non-Hispanic

Gender

__ Female

__ Male