

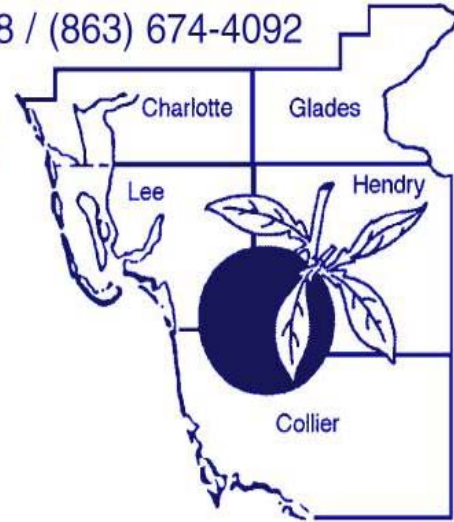


UNIVERSITY OF  
FLORIDA

IFAS EXTENSION

Hendry County Extension / P.O. Box 68 / LaBelle, Florida 33875-0068 / (863) 674-4092

# Flatwoods Citrus



Vol. 9, No. 12

December 2006

Dr. Mongi Zekri  
Multi-County Citrus Agent, SW Florida



## U P C O M I N G    E V E N T S

### MANAGEMENT OF THE CITRUS PSYLLID—

The researcher experience and the grower experience

Speakers: Phil Stansly, Tim Gast, Kyle Register, and others

Location: Immokalee IFAS Center

**Date: Tuesday, 12 December 2006, Time: 10:00 AM – 12:00 Noon**

2 CEUs for Pesticide License Renewal

2 CEUs for Certified Crop Advisors

**If you want to print a color copy of the Flatwoods Citrus Newsletter, get to the Florida Citrus Resources Site at <http://flicitrus.ifas.ufl.edu/> You can also find all you need and all links to the University of Florida Citrus Extension and the Florida Citrus Industry**

## **WORKSHOPS ON SCOUTING IN LABELLE & IMMOKALEE**

Speakers: **Drs. Stansly & Timmer**

3 CEUs for Pesticide License Renewal, 3 CEUs for Certified Crop Advisors

**Registration is required. Registration form is enclosed.**

### **SCOUTING FOR PESTS AND DISEASES**

Florida citrus industry uses sustainable production practices. Florida citrus growers help preserve environmental quality by using many sound cultural practices including integrated pest management (IPM) strategies. IPM depends on grove scouting and close observations to determine the need and timing for pesticide applications as well as modification of cultural practices to minimize damage. Scouting for early warnings of pests and diseases is becoming very important in citrus operation. Scouting not only helps growers control pests more efficiently, but also lowers the use of pesticides and the chances of pesticide resistance. In most cases, there is no way to predict on a seasonal basis the incidence and severity of pests. However, based on grove history and frequent observations, many situations can be reasonably assessed. There are several techniques and procedures for scouting and there are many things to know before scouting. To learn more, you need to attend one of these workshops:

### **WORKSHOPS ON SCOUTING FOR CITRUS PESTS AND DISEASES**

in Spanish

Date & time: January 9, 2007, 9 AM- 12:00

Location: LaBelle Extension Office

in English

Date & time: January 16, 2007, 9 AM- 12:00

Location: Immokalee IFAS Center



### **MECHANICAL HARVESTING WORKSHOP AND FIELD DAY**

**January 17, 2007, Polk County Extension Office, Bartow, FL.**

**Details & agenda on page 15**

**THE INDIAN RIVER CITRUS SEMINAR** on January 24-25 at the St. Lucie County Fairgrounds, will focus on production trends and techniques and issues impacting the citrus market. For information, visit [www.floridagrower.net](http://www.floridagrower.net)

### **EXOTIC CITRUS DISEASES NOT HERE YET IN FLORIDA**

**Citrus variegated Chlorosis (CVC), Leprosis, Stem Pitting Tristeza, & Black spot**

Speakers: **Drs. Ron Brlansky, Carl Childers, and Pam Roberts**

Date & time: February 20, 2007, 10 AM- 12:00 Noon

Location: Immokalee IFAS Center.

2 CEUs for Pesticide License Renewal, 2 CEUs for Certified Crop Advisors

Special Thanks to all the 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.

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Special Thanks to all the 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.

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# FLOWER BUD INDUCTION OVERVIEW AND ADVISORY

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

[L. Gene Albrigo](#), Horticulturist

Citrus Research & Education Center, Lake Alfred



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). A period 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 El Niño year, lower than average temperatures and higher than average rainfall. Usually under these conditions, enough hours of low temperatures below 68 degrees F. accumulate to induce a good level of flower buds. Conditions that can interfere with good flower bud induction include: 1) several warm periods interrupt the induction process or 2) the previous crop was exceptionally high or 3) leaf loss from hurricanes was excessive and tree recovery was not complete. Two or three lead to low carbohydrate levels in developing buds which reduced their ability to become flower buds.

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 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 (400-500

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 year's (back to 1998) can be obtained from the Florida Automated Weather System ([fawn.ifas.ufl.edu](http://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 the easiest way to see if a warm period, which could trigger flower bud growth, is predicted.

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 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 is roughly mid-November to mid-December. Then additional flower buds develop later resulting 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 period(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 of cool periods. Sufficiently cool temperatures will 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. Much of what has been stated above has now been incorporated into a 'Flowering Expert System for Florida Citrus'. The system is available on-line and may be accessed at: <http://orb.at.ufl.edu/DISC/bloom>

Weekly or bi-weekly advisories will follow this preliminary one 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 PO<sub>3</sub> sprays) or reducing (GA<sub>3</sub> 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.

Current status for 2006-07 winter - The light crop and general tree recovery without a hurricane should be promising for good flowering next spring. Although this is supposed to be an El Niño winter with cooler and wetter than normal weather, better than average cool temperature accumulation can occur only if warm periods do not interrupt the accumulation process. Currently, citrus locations have accumulated low temperatures < 68 degrees F of 150 to 300 hours from southern to northern areas, respectively. The next 8 days will be average for cool temperatures and another 80 to 100 hours should accumulate. Continued accumulation of cool temperatures and prevention of growth during a winter warm spell are important for a good start for the 2007-08 citrus production. Therefore, start to monitor irrigation amounts so drought stress can occur if a warm period occurs between November 15 and December 15 or Christmas, depending on the rate of cool temperature accumulation and reaching an acceptable level of 800 hours. 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.

(Request for potential cooperators) – Although rains in past winters often negated attempts to use drought stress to delay bloom in many areas, last winter was a good year to obtain this effect and growers that applied prolonged drought stress in late winter delayed bloom and avoided the damage to open buds caused by the February freeze. We are still interested in tests to delay bloom by managing irrigation to delay initiation of flower bud growth. This may be accomplished by withholding or restricting irrigation to prevent growth during warm winter periods until mid-January has passed. If you are interested in putting a block or a few rows of grapefruit, 'Hamlin' or 'Valencia' trees under this protocol, please contact me ([albrigo@crec.ifas.ufl.edu](mailto:albrigo@crec.ifas.ufl.edu)) or at 863-956-1151.

## COLD HARDINESS AND COLD PROTECTION

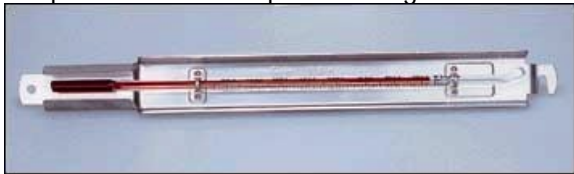
Two major environmental factors in Florida citrus that regulate cold hardiness are temperature and water.

At 55° F, citrus plant growth slows. As temperatures remain below 55° F, citrus trees will continue to acquire acclimation to these cooler temperatures. This process is reversible during warm winter periods, and de-acclimation (loss of acclimation) can occur. The greatest amount of citrus acclimation occurs during consistently cool fall and winters. Once de-acclimation occurs citrus trees will generally not re-acclimate to the same level prior to the onset of de-acclimation.

Irrigation and fall/winter rainfall can have a pronounced effect on the citrus acclimation process. Drought induced stress has been shown to increase the tolerance of citrus trees to freezing temperatures when compared to well watered or over watered citrus trees in Florida. However, excessively drought stressed trees are more susceptible to freeze damage.

### Critical Temperatures for Florida Citrus

It is very important to know the critical temperature at which freezing temperatures can damage citrus. Minimum temperature indicating thermometers are a wise investment for any grower concerned with freeze/frost protection. Thermometers should be installed in the coldest grove locations. They should be placed at a height of 42 inches (4.5 ft) on a stand, sheltered at the top, and facing north. In citrus trees, there can be a great deal of variation in the minimum temperature at which plant damage will occur.



The reference temperature and duration for the initiation of the freezing process in round oranges is 28° F for four hours. Tangerines and fruit with smaller mass would receive freeze damage after shorter durations, while grapefruit would require longer durations.

Minimum temperatures of 26° F will damage fully mature, harden-off leaves that have not received any acclimation. Minimum temperatures of 30° F can significantly damage unhardened new flush leaves. Leaves that have received extensive acclimation have been shown to survive temperatures as low as 20° F in Florida.

### Protecting citrus trees from cold damage

Cultural practices can have a major influence on the cold hardiness of citrus trees. A clean, hard-packed soil surface intercepts and stores more solar radiation during the day and releases more heat at night than a surface covered with vegetation or a newly tilled area. Irrigation should be applied minimally during the fall and winter. Reducing irrigation results in an increase in the cold tolerance of citrus trees and enhances tree stress resulting in an increase in the formation of flower buds. Excessive application of nutrients should be avoided late in the fall especially with young citrus trees. Heavy hedging or topping during the winter can reduce citrus cold hardiness by reducing canopy integrity that would trap heat released by the soil. This should be avoided.

Water from micro sprinkler irrigation protects young trees by transferring heat to the tree and the environment. The heat provided is from two sources, sensible heat and the latent heat of fusion. Most irrigation water comes out of the ground at 68° to 72° F, depending on the depth of the well. The major source of heat from irrigation is provided when the water in the liquid form changes to ice (latent heat of fusion).



As long as water is constantly changing to ice, the temperature of the ice-water mixture

will remain at 32°F. The higher the rate of water application to a given area, the greater is the amount of heat energy that is applied.

The major problem in the use of irrigation for cold protection occurs when inadequate amounts of water are applied or when windy (advective) conditions occur. Evaporative cooling, which removes 7.5 times the energy added by heat of fusion, may cause severe reductions in temperature under windy conditions, particularly when inadequate amounts of water are used.

It is generally advisable to place the emitter northwest of the tree, about 1 to 2 feet away from the trunk for young trees. A 90° to 180° spray pattern, which is angled upwards into the lower branches, will concentrate the water on the trunk and lower limbs, providing greater protection than a 360° pattern. For mature trees, the irrigation pattern is not as critical as it is with young trees. When expecting a freeze, turn on the water early before the air temperature reaches 32°F. Remember that in cold pockets, the ground surface can be colder than the air temperature reading in a thermometer shelter. Once irrigation has begun, the system must run for the duration of the time plant temperatures are below the critical temperature. For more details, go to

<http://edis.ifas.ufl.edu/CH182>

<http://edis.ifas.ufl.edu/CH054>

In bedded groves to provide additional cold protection, water should also be pumped high in the ditches the day before and during the time of freezing weather. This water should be removed within 2-3 days after the freeze to avoid root damage.

#### Sources of weather information

##### ***Winter Weather Watch.***

A decision by the NWS administrators in 1996 eliminated the agricultural weather program, which has forced the Extension Service to move to private weather forecasting sources for information on freeze forecasts for rural agricultural areas. Since the 1996/97 winter, the Extension Service has utilized several private agricultural meteorologists to obtain accurate

and reliable weather information. For more information, call Chris Oswalt (863-519-8677 ext. 108) in Polk County. The Winter Weather Watch starts in mid-November and continues through mid-March. There is a subscription fee to get telephone access to the daily weather recordings. This service provides timely information to help growers and farmers minimize their damage from frosts and freezes. An unlisted telephone number is available to subscribers to obtain recorded weather forecasts.

##### ***The Florida Automated Weather Network (FAWN)***

FAWN is another tool to provide a reliable source of real-time agricultural weather information from over 30 automated weather stations in the state. Data are collected every 15 minutes and available through the Internet (<http://fawn.ifas.ufl.edu>) or toll free by calling (866) 754-5732. FAWN has three management tools to assist growers that utilize cold protection methods. The first is the [Brunt Minimum Temperature](#) guide that can be helpful in determining if critical temperatures could be reached on a given night. The Brunt minimum temperature calculator uses the temperatures at sunset to estimate the lowest temperature for any given night. The "tool" should be used by every grower using water for cold protection. FAWN also provides a safe cut off temperature tool based on the moisture content of the air. This tool can save growers millions of dollars and reduce water demand by billions of gallons. For citrus growers, an additional tool provides growers with the citrus leaf freezing temperature during the winter. The leaf freezing temperatures are determined weekly from a variety of locations throughout the state. Growers use this information to determine when it would be safe to turn off or on their micro-sprinkler irrigation system.

For more details, go to

<http://edis.ifas.ufl.edu/HS179>



## HEDGING AND TOPPING CITRUS TREES

Hedging and topping is another important cultural grove practice during late fall and winter. Severe hedging or topping of citrus trees during the winter can reduce cold hardiness. Trees with exposed internal scaffold wood and new tender growth are more susceptible to cold injury.

In general, tree response to hedging and topping depends on several factors including variety, tree age, vigor, growing conditions, and production practices. No one system or set of rules is adequate for the numerous situations encountered in the field. Growers are encouraged to gain a clear understanding of the principles involved in hedging, topping, and to take advantage of research results as well as consulting knowledgeable colleagues and custom operators for their observations.



Hedging should be started before canopy crowding becomes a problem that would cause cutting of small branches. Removal of a significant portion of the tree will result in

excessive vegetative growth and a drastic reduction in subsequent yield. Hedging is usually done at an angle, with the boom tilted inward toward the treetops so that the hedged row middles are wider at the top than at the bottom. This angled hedging allows more light to reach the lower skirts of the tree. Hedging angles being used vary from 0 to 25 degrees from vertical, with 10 to 15 degrees being more commonly used.



Topping should be done before trees have become excessively tall and should be an integral part of a tree size maintenance program. Long intervals between topplings increases the cost of the operation due to heavy cutting and more brush disposal. Excessively tall trees are more difficult and expensive to harvest and spray. Topping trees will increase fruit quality and size. Some common topping heights are 12 to 14 ft at the shoulder and 15 to 16 ft at the peak.



Excessive nitrogen after severe hedging or topping will produce vigorous vegetative growth at the expense of fruit production. Therefore, nitrogen applications should be adjusted to the severity of hedging and/or topping. Reducing nitrogen applications avoids an imbalance when heavy pruning is done. Reducing or omitting a nitrogen application before and possibly after heavy hedging will reduce both costs and excessive vegetative growth. However, light maintenance hedging should not affect fertilizer requirements.

Large crops tend to deplete carbohydrates and results in a reduced crop and increased vegetative growth the following year. Pruning after a heavy crop additionally stimulates vegetative growth and reduces fruit yield the following year. Pruning after a light crop and before an expected heavy crop is recommended because it can help reduce alternate bearing which can be a significant problem in Valencia production.



Severe hedging stimulates vigorous new vegetative growth, especially when done before a major growth flush. This happens because an undisturbed root system is providing

water and nutrients to a reduced leaf area. The larger the wood that is cut, the larger is the subsequent shoot growth. Severe pruning reduces fruiting and increases fruit size.

The best time of year to hedge and/or top depends on variety, location, severity of pruning, and availability of equipment. Since pruning is usually done after removal of the crop, early maturing varieties are generally hedged before later maturing varieties. Many prefer to hedge early before bloom, but they may also get more vegetative regrowth, which may not be desirable. Pruning could begin as early as November in warmer areas. Valencia trees may be hedged in the late fall with only minimal crop reduction when the hedging process removes only a small amount of vegetative growth. In cases where excessive growth is to be removed, the trees are usually harvested before hedging is conducted. Light maintenance pruning can be done throughout the summer and until early fall with little or no loss in fruit production. Moderate pruning should not continue late into the fall in freeze-prone areas, as trees with tender regrowth are more susceptible to cold injury. With the finding of citrus greening disease, selecting the best time for hedging and topping is becoming more complicated. New growth flushes promoted by hedging and topping in late spring, during the summer, and early fall can increase the population of psyllids and aggravate the spread of citrus greening. For more details, go to <http://edis.ifas.ufl.edu/HS290>

# Florida Gulf Citrus

Celebrating 20 years of service to SW Florida Growers!



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/index.html> 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 **863 675 2180**.

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.

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P. O. Box 1319, LaBelle, Florida 33975 (863) 675-2180 / Fax: (863) 675-8087 / Email: [gulfcitrus@earthlink.net](mailto:gulfcitrus@earthlink.net)

### *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:

#### **Edison Community College / AA Degree:**

- Completion of all placement testing.
- Completion of **12 credit hours** with continuous enrollment.
- Minimum overall grade point average of **2.5**.
- A demonstrated **commitment** to complete an AA degree.

#### **BS, MS and PhD Degrees:**

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

Applicants must complete the attached application, which includes a statement of release giving the selection committee permission to verify information submitted.

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



## Gulf Citrus Growers Association Scholarship Foundation, Inc.

P. O. Box 1319, LaBelle, Florida 33975 (863) 675-2180 / Fax: (863) 675-8087 / Email: [gulfcitrus@earthlink.net](mailto:gulfcitrus@earthlink.net)

### Scholarship Application

#### Personal Data

Name: \_\_\_\_\_ Student # or SS #: \_\_\_\_\_

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?** \_\_\_\_\_

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

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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.

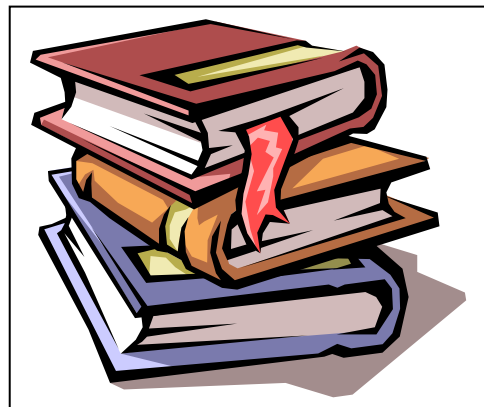
\_\_\_\_\_  
Applicant's Signature

\_\_\_\_\_  
Date

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

**Please return this application 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



# Updates on Mechanical Harvesting Research

**Mechanical Harvesting Workshop and Field Day  
January 17, 2007  
Polk County Extension Office  
Bartow, FL**

- 7:30 – 7:45 am      **Registration and Refreshments**
- 7:45 – 8:00 pm      **Welcome and Plan for the Morning**  
Moderator: Chris Oswalt, UF-Polk Co. Ext.
- 8:00 – 8:30 am      **Mechanical Harvesting & Tree Health-**  
Compensating Physiology- Jim Syvertsen, UF-CREC  
Postharvest Recovery- Steve Futch, UF-CREC
- 8:30 – 9:15 am      **Enhancing Mechanical Harvesting Systems**  
Increasing Fruit Recovery– Reza Ehsani, UF-CREC  
Abscission- Jackie Burns, UF-CREC  
Cost of Gleaning- Fritz Roka, UF-SWFREC
- 9:15 – 10:30 am      Break and Travel to Grove Site
- 10:30 – Noon      **Field Demonstrations**  
  
Demonstration of Tractor Drawn Canopy Shaker and Pick-Up  
Machine- Reza Ehsani, UF-CREC and Tylor Cain, OXBO Intl. Corp.  
  
Discussion of Grove/Tree Preparation- Bob Rouse, UF- SWFREC,  
and Mongi Zekri, UF-Hendry Co. Ext.
- Noon                      Adjourn**

**For further information or to rsvp, please contact Barbara Hyman at  
(239) 657-8219 or email [brh@ifas.ufl.edu](mailto:brh@ifas.ufl.edu)**



UNIVERSITY OF  
FLORIDA

EXTENSION

Institute of Food and Agricultural Sciences

Hendry County Extension • P.O. Box 68 • LaBelle, Florida 33975-0068 • (941) 674-4092

Flatwoods Citrus



TOPICS DISCUSSED IN  
THE FLATWOODS  
CITRUS NEWSLETTER  
-YEAR 2006-

<u>Month</u>	<u>Topic</u>
<b>January</b>	Flower bud induction, pesticide resistance, hurricanes have made the eradication of citrus canker difficult and complicated, citrus tree pruning, citrus greening, the citrus psyllid
<b>February</b>	Summary of 2004-2005 citrus budgets, canker questions from the field, decision information system for citrus, flower bud induction, nutrition of citrus trees, pesticide spray coverage for citrus trees, management options for citrus growers, postbloom fruit drop (pfd), fungicide effectiveness, flowering, yield, and fruit quality of citrus trees
<b>March</b>	Irrigation, basic irrigation scheduling, plant growth regulators, controlling alternaria brown spot & citrus scab, the effect of water ph on the efficacy of pesticides, the effect of water ph on the efficacy of pesticides
<b>April</b>	Foliar feeding, weed control in citrus groves, the gulf citrus growers association, gulf citrus growers association scholarships, micronutrients in citrus nutrition, gulf citrus best management practices manual, bmp development
<b>May</b>	Greasy spot, microirrigation and fertigation, citrus rust mites, spider mites, the sixteenth annual farm safety day
<b>June</b>	Hurricane season, new canker control program, homeowners to receive payments for lost citrus trees, hurricane aid signup, hurricane damage tips for tree recovery, increasing efficiency and reducing cost of nutritional programs, gulf citrus cost share procedures
<b>July</b>	Preparing for a hurricane, leaf and soil sampling and analyses to adjust fertilizer programs, drainage, citrus greening, the citrus psyllid, canker compensation for growers and nurserymen, USDA imposes statewide quarantine, magnesium nutrition, canker
<b>August</b>	The European union won't ban Florida citrus, the 2006 citrus expo, citrus brown rot, flooding injury, water table measurement and monitoring, nitrogen management and water quality, citrus health response program updates, living with citrus canker and citrus greening, BMP development
<b>September</b>	Algae, important requirements for 2006-07 season, AgClimate, SE climate consortium late summer climate outlook, phytophthora foot rot and root rot, soil acidity and liming
<b>October</b>	Citrus greening management, windbreaks, mechanical harvesting, orange juice best at stopping kidney stones, benefits of plant biotechnology, spray drift of pesticides, Africanized honeybees, EQIP application deadline, from the Florida agricultural statistics, SW Florida citrus production, SW Florida citrus acreage and tree numbers
<b>November</b>	El Niño has returned, lovebugs, biosolids, degreening Florida fresh citrus fruit, fertigation, gulf citrus growers bmp implementation gulf citrus cost/share programs, NRCS offers cost share on windbreaks for citrus, 2005-2006 Florida citrus prices, Florida citrus production, from the Florida agricultural statistics service
<b>December</b>	Flower bud induction, cold hardiness and cold protection, hedging and topping, Florida gulf citrus, gulf citrus growers association scholarship foundation, inc.



# SCOUTING WORKSHOPS

Scouting for PFD, canker, greening, mites, leafminer, and psyllid



## **REGISTRATION FORM (Registration is required)**

Registration Deadline: Tuesday, January 2, 2007

Please mark your choice Spanish or English

**In Spanish**

**Location:** Hendry County Extension Office, LaBelle

**Date:** Tuesday, January 9, 2007

**In English**

**Location:** SW Florida Research & Education Center, Immokalee

**Date:** Tuesday, January 16, 2007

Diseases (9:00 AM - 10:30 AM)

By **Dr. Pete Timmer**

- Scouting Tips and Techniques
- Postbloom Fruit Drop (PFD)
- Citrus Canker & Greening

Mites & Insects (10:30 AM - 12:00 Noon)

By **Dr. Phil Stansly**

- Mite Pests of Citrus
- Citrus Leafminer & Citrus Psyllid

***12:00 Noon - 1:00 PM: Lunch***

Name(s): .....

Company: .....

Address: .....

Phone: .....

**Mail completed registration form and check for \$10.00\* per person to:**

Dr. Mongi Zekri, Hendry County Extension Office, P.O. Box 68, LaBelle, FL 33975-0068. Checks should be made payable to: Hendry County 4-H

\*The registration fee of \$10.00 includes refreshments, lunch, and handouts.

**Registration fee at the door, the day of the meeting, is \$15.00.**

Please note: 2 different dates at 2 different locations in 2 languages.

**FOR IMMEDIATE RELEASE:  
November 20, 2006**

**FOR INFORMATION:  
Denise Feiber, APR  
(352) 372-3505 x102  
(352) 235-0036**

## **Florida Department of Agriculture & Consumer Services *Citrus Health Response Program Updates***

The Florida Department of Agriculture and Consumer Services in cooperation with the University of Florida Institute of Food and Agricultural Sciences announces the availability of online training materials for the citrus industry.

### **Citrus Harvester Decontamination Video**

- A harvesting decontamination video is now available in Spanish and English versions at [www.doacs.state.fl.us/pi/videos.html](http://www.doacs.state.fl.us/pi/videos.html)
- Download the videos to your computer by right clicking on the video name and choosing "Save Target As."
- DVD and VHS copies are available by calling 800-282-5153.
- On-site training is available by IFAS and Department personnel by calling 800-282-5153.
- Harvester decontamination training is a required part of compliance agreement regulations.
- If you received a certified trainer card last season, your training is still valid for the 2006-2007 season.

### **Citrus Canker Identification Program**

- Citrus disease identification training is now underway to help graders at packinghouses identify citrus canker and other diseases.
- Post-harvest resources may be found at <http://postharvest.ifas.ufl.edu/>
- Citrus packers who would like additional information about citrus disease identification can contact 800-282-5153.
- Certified Citrus Disease Identification cards will be issued once ID training is complete.

The state, working with UF/IFAS and industry representatives, continues to develop materials to assist growers as they implement elements of the Citrus Health Response Program in their operations.

# 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

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Subscriber's Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

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## *Racial-Ethnic Background*

American Indian or native Alaskan

Asian American

Hispanic

White, non-Hispanic

Black, non-Hispanic

## *Gender*

Female

Male