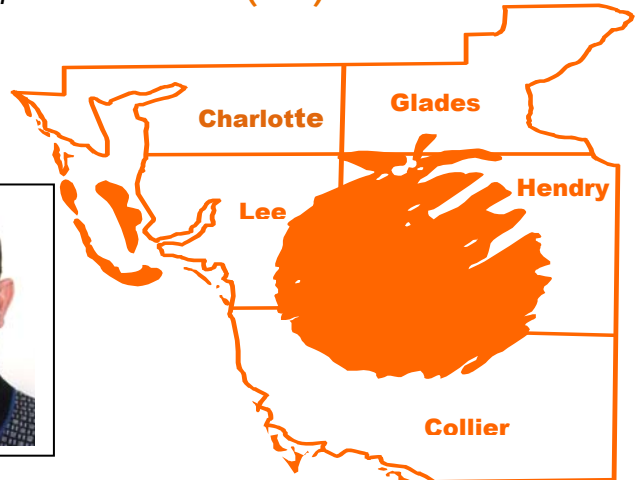


Hendry County Extension, P.O. Box 68, LaBelle, FL 33975 (863) 674 4092

Flatwoods Citrus



Vol. 11, No. 12 December 2008

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



U P C O M I N G E V E N T S

--Scouting for citrus psyllid, citrus leafminer, and rust mite
--Current recommendations for psyllid, leafminer, and rust mite control/management

Date: Tuesday, January 27, 2009, Time: 10:00 AM – 12:00 Noon

Location: Southwest Florida REC (Immokalee)

Speakers: Mr. Barry Kostyk and Drs. Phil Stansly, Jawwad Qureshi, and Alejandro Arevalo

2 CEUs for Pesticide License Renewal

2 CEUs for Certified Crop Advisors

Attendance & lunch are free, but **pre-registration is required.**

RSVP is required. To RSVP, call 863 674 4092 or send an e-mail to maz@ifas.ufl.edu

If you want to print a color copy of the **Flatwoods Citrus Newsletter, get to the **Florida Citrus Resources Site** at <http://flcitrus.ifas.ufl.edu/>**

THE INDIAN RIVER CITRUS SEMINAR

January 28-29, 2009

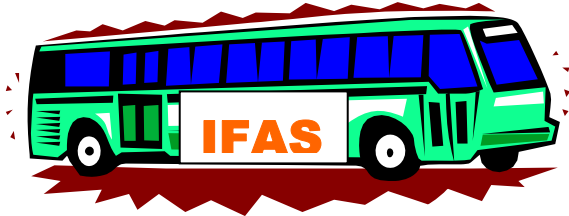
St. Lucie County Fairgrounds, Ft. Pierce, FL

For information and registration, visit

<http://floridagrower.net/flgevents/>



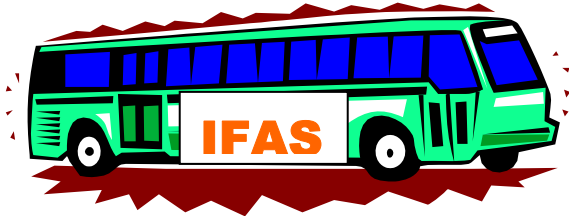
HENDRY COUNTY EXTENSION AG TOUR



Saturday, 7 February 2009

For more information or to sign up,
call 863 674 4092

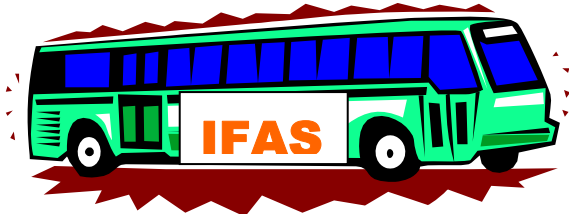
COLLIER COUNTY EXTENSION AG TOUR



Wednesday, 11 March 2009

For more information or to sign up,
call Robert D. Halman at 239-353-4244

CHARLOTTE COUNTY EXTENSION AG TOUR



Tuesday, 17 March 2009

For more information or to sign up,
call Holly Shackelford at 941/764-4352

Special Thanks to the following sponsors (on pages 2, 3, and 4) 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@ifas.ufl.edu

The logo for Wellmark Extinguish Professional Fire Ant Bait features the word "Wellmark" in a serif font at the top, flanked by two ants. Below it, the word "EXTINGUISH" is written in a bold, sans-serif font with a red underline, and "Professional Fire Ant Bait" is written in a smaller font below that. To the right, the word "Extinguish" is written in a stylized, italicized font with a red underline.

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Susan Wright

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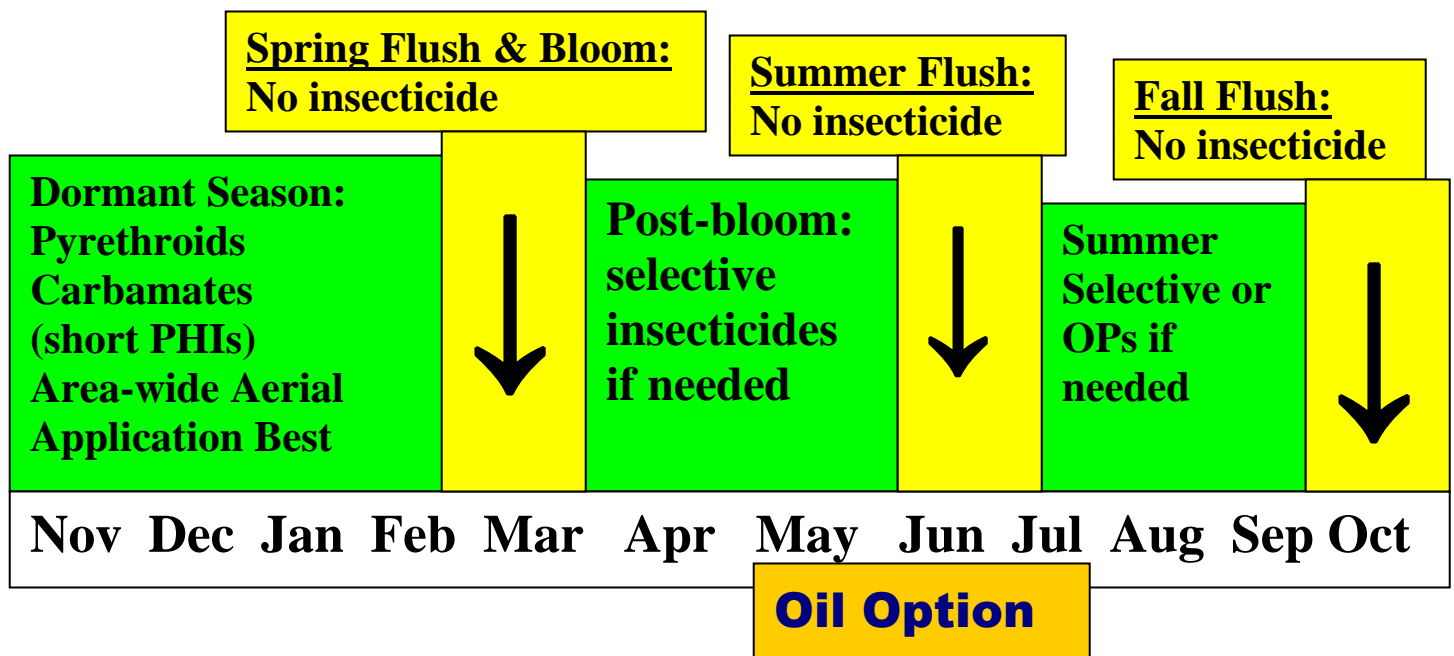
The Role of Area-Wide Sprays in a Comprehensive Psyllid IPM Strategy

Phil Stansly, UF/IFAS—Immokalee



Year-Round Management Plan

- Monitor populations regularly
- Apply dormant spray
- Subsequent sprays based on scouting results
 - Apply soft chemistry post bloom if needed
 - Avoid spraying flushes
 - Apply OPs or other insecticide in summer and before fall flush, if necessary
 - Frequent oil applications may also work



Why area-wide dormant sprays?

1. Area-wide sprays will allow fewer escapes and reduce the movement of psyllids back into treated areas
2. Dormant sprays target adults when they are most vulnerable
 - Lowest numbers
 - Open canopy
3. Dormant sprays best way to protect spring flush
 - Reduce populations to manageable size during the growing season
4. Dormant sprays are least damaging to beneficials
 - Ladybeetles and others attracted to flush largely absent
 - Parasitoids for scales, aphids, etc. are dormant inside hosts

What insecticide to spray during dormancy?

- Anything effective against adults: pyrethroids (Danitol, Mustang) OPs (dimethoate, chlorpyrifos), carbamates (carbaryl, Vydate).
- Pyrethroids have shortest PHI and are less effective later in the season due to inactivation by heat and UV
- Most harmful to beneficials if used later during the growing season

Base additional sprays on psyllid counts

- Spray before next anticipated flush
- Spray when numbers go up based on scouting



How to Scout Psyllids

- Tap sample for adults
 - Adults are the target of most sprays
 - Taps are quick, easy, reproducible, recordable
 - 10 stops per block, 10 trees per stop, 1 tap per tree
- Then check 10 flushes
 - Record number of infested flushes (any stage) out of the 10 observed
 - Note number of trees observed to find 10 flushes (flush density)

Check website: <http://swfrec.ifas.ufl.edu/entlab/programs/index.htm>
for more information, datasheets and field guides for psyllid sampling

UF/IFAS Polk County Cooperative Extension Service

The 2008-09 version of the Winter Weather Watch will begin on Saturday, November 1, 2008 with a free trial offer for growers interested in winter weather forecast information. Call 863-904-0268 for the forecasts.



The 2008-09 edition of the Polk County Winter Weather Watch program will begin on November 15, 2008. The program provides growers with winter weather forecast information specifically geared toward agricultural interests in West Central and South Florida. The program provides subscribers with an unlisted phone number for (24 hour/7 days a week) access to daily weather forecasts. The zone forecasts are from the National Weather Service (NWS) and are listed on the automated phone menu, so you can select the products you are interested in. Forecasts include the zone forecasts, 6-10 and 8-14 day outlook forecasts. In addition to the forecasts we have special weather narratives provided as needed in

the event of freezing temperatures and a weekly outlook. When freezing temperatures are predicted in our area additional updates will include the afternoon zone forecast and the modified sunset brunt minimum temperature equation. If this is not enough we will also provide the weekly citrus leaf freezing temperatures and the 2008-09 Winter Weather Watch manual.

Subscriptions for the Winter Weather Watch program are only \$100.00 for the entire 4 month period (Nov 15 to Mar 15). The cost is about the same as one tank of gas for your pickup truck. **You can subscribe to the Winter Weather Watch at this webpage:**
http://citrusagents.ifas.ufl.edu/info/Weather_Watch.htm

Free Trial Offer for Interested Growers



This year we will be offering a free trial offer for growers interested in trying-out the Winter Weather Watch. From November 1, to November 14, 2008 growers will be able to call in and get the scheduled weather forecasts. After the trial period growers must subscribe for continued uninterrupted access.

2008 - 2009 WINTER WEATHER WATCH PROGRAM

NOVEMBER 15, 2008 TO MARCH 15, 2009
REGISTRATION FEE: \$100.00



It's once again time to register for the upcoming 2008 - 2009 Winter Weather Watch Program. Upon receiving your \$100.00 registration payment, you will be sent an unlisted telephone number with which you can retrieve the latest **Ag Forecasts**,



24 hours a day. **Please do not give this number to others.** The *Winter Weather Watch Program* is funded by the registration fees to pay for telephone equipment rentals, long distance calls, repairs and meteorologist.



2008 - 2009 Winter Weather Watch Program

NAME: _____ Phone Number: _____

COMPANY: _____

MAILING ADDRESS: _____

CITY: _____ ZIP CODE: _____

REGISTRATION FEE \$100.00

PLEASE RETURN THIS REGISTRATION FORM AND YOUR CHECK PAYABLE TO:

**POLK COUNTY CITRUS ADVISORY COMMITTEE
PO BOX 9005, DRAWER HS03
BARTOW, FL 33831-9005**

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. 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. Growers are recommended to use the information at the FAWN website (<http://fawn.ifas.ufl.edu>) 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>, <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.

HLB off select agent list!

From the information contained in the Federal Register published at this website <http://edocket.access.gpo.gov/2008/E8-23887.htm>, Candidatus Liberibacter species were off the select agent list effective November 17, 2008.

[Federal Register: October 16, 2008 (Volume 73, Number 201)]

[Rules and Regulations]

[Page 61325-61332]

From the Federal Register Online via GPO

Access [wais.access.gpo.gov]

[DOCID:fr16oc08-1]

DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service

7 CFR Part 331

9 CFR Part 121

[Docket No. APHIS-2007-0033]

RIN 0579-AC53

Agricultural Bioterrorism Protection Act of 2002; Biennial Review
and Republication of the Select Agent and Toxin List

AGENCY: Animal and Plant Health Inspection Service, USDA.



ACTION: Final rule.

SUMMARY: In accordance with the Agricultural Bioterrorism Protection Act of 2002, we are amending and republishing the list of select agents and toxins that have the potential to pose a severe threat to animal or plant health, or to animal or plant products. The Act requires the biennial review and republication of the list of select agents and toxins and the revision of the list as necessary. This action implements the findings of the second biennial review of the list.

DATES: Effective Date: November 17, 2008.

In response to the points raised by these commenters, we have reevaluated the available science. We agree with the commenters that it is difficult to distinguish between the three plant pathogens. In fact, in the Citrus Health Response Program developed by APHIS and Florida regulatory officials in consultation with the Florida citrus industry and other stakeholders, the management responses for the three bacterial species are identical. Further, we agree that the presence of citrus greening disease in Florida makes them unlikely agents of bioterrorism, as does the long latency period of the disease. **Therefore, in this final rule, in addition to delisting Candidatus Liberobacter asiaticus as proposed, we are also removing Candidatus Liberobacter africanus from the list of PPQ select agent and toxins and have decided not to list Candidatus Liberobacter americanus as we had originally proposed.**

CURRENT FLOWER BUD INDUCTION OVERVIEW and ADVISORY #1 for 2008-2009

11/10/08

<http://www.lal.ufl.edu/extension/flowerbud/index.htm>

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



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 ENSO-neutral year, average temperatures and rainfall. Under these conditions, enough hours of low temperatures below 68 F usually accumulate to induce a reasonable 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 or other causes (canker) was excessive and tree recovery was not complete. Two or three lead to low carbohydrate levels in developing buds which reduce their ability to become flower buds. None of these adverse conditions appear to be in play for the coming season flower bud 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 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 F, can trigger growth (bud swelling) if a minimum total hours of low temperatures have accumulated (400-500 hours below 68 F). Later in the winter when the accumulated cool temperature induction hours are high, fewer days and lower daytime highs (75 F) are required in a warm period to stimulate growth of buds. Some flower buds will be induced in the range of 350 to 450 accumulated hrs < 68 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. 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 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. Much of what has been stated above has now been incorporated into a 'Flowering Expert System for Florida Citrus'. 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 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.

Current status for 2008-09 Winter - The light to medium crops and general tree recovery without a hurricane should lead to a flowering response next spring more typical of citrus in Florida, unless an unusual event occurs. This is supposed to be an **ENSO-neutral** winter with average cool temperature accumulation if warm periods do not interrupt the accumulation process. Currently, citrus locations have accumulated low temperatures < 68 F of 225 to 400 hours from southern to northern areas, respectively. The next 8 days will be below average cool temperatures and another 140 to 168 hours should accumulate. Continued accumulation of cool temperatures and prevention of growth during a winter warm spell are important for a good start for 2008-9 citrus production. Therefore, start to monitor irrigation amounts so drought stress can occur if a warm period occurs between November 15 and Christmas, depending on the rate of cool temperature accumulation and reaching an acceptable level of over 750-800 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.

If you have any questions, please contact albrigo@ufl.edu or phone 863-956-1151.

AERIAL APPLICATION OF PESTICIDES

Aerial application of pesticides can be done using various types of fixed wing aircraft or helicopters. The selection of aircraft depends on the size of the application area, application window, budgets and terrain. The objective is to use aircraft that apply the insecticide in the safest and most efficient manner.



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Steve Fletcher
**Fletcher Flying
Service, Inc.**
Phone: 239 860 2028
Fax: 863 675 3725

Fixed wing aircraft are used when there are large, continuous areas that may be sprayed with the minimum number of turns. Helicopters are useful for treating discrete or isolated patches of host material. Fixed wing treatment is less costly than by helicopter. Monitoring of the spray operation will be done by project team members from both the ground and the air. Airborne observers will be using small twin-engine aircraft or helicopters. These personnel relay on-site information back to the project team leaders and the pilots to ensure that the spray is carried out as planned.

Weather Monitoring

The weather is the most crucial factor in determining if a spray will occur on a particular day. Successful control of pests requires at least 1 hour without precipitation to allow the insecticide to adequately dry and stick to foliage and pest.

Wind speed is also a critical factor to the actual delivery of the spray from aircraft. The morning is usually the most calm period of the day; however, spraying can be done with some wind. Application is halted when sustained wind speeds exceed 10

km/hr to prevent unnecessary drift of the pesticide. Specific weather conditions are required to allow the delivery of the insecticide at the desired concentration.

Because of the uncertainty of weather, planned aerial spraying for any particular day may be cancelled at the last minute.

Determining the Aircraft Flight Paths

Aircraft apply insecticides in a series of parallel swaths over a spray zone. Well before spraying actually occurs, the route and pattern taken by the spray aircraft will be determined to ensure that the shortest time is spent over the spray zones. Optimal patterns will be designed to minimize the number of times the aircraft has to turn. Each turn wastes time in re-orienting the aircraft as it lines up for its run through the zone.

Safety considerations also play a large role in determining the aircraft's flight pattern.

Identifying the Spray Boundaries


Spray aircraft use sophisticated Global Positioning System-based navigational aids to pin-point their precise location. The GPS system also provides a record of the exact time and location the aircraft were over the spray area and also records the precise moment when the spray equipment was on or off.

Monitoring the Spray Pattern

Even though spray equipment onboard the aircraft are calibrated well before the time of spraying, ground monitoring of spray pattern and deposits are done to ensure that the pesticide was delivered to the target foliage at the desired concentration and distribution. Deposit monitoring is also done to insure that the application does not drift beyond the spray boundaries. Even application is critical to the performance of most herbicides and insecticides. Uneven application results in under-dosing and poor control of the target pest in some areas and over-dosing and wasted pesticide in other areas.

Some pesticide labels say the pesticide can be applied by either fixed-wing aircraft or by helicopters. The main advantage of aerial spraying is that it can be carried out quickly and at times when ground equipment cannot operate. The main disadvantage is the increased possibility of pesticide drift onto neighboring areas and decreased spray coverage. Even when properly calibrated and operated, aircraft sprayers are often not as thorough in applying material as ground rigs, especially to the lower surfaces of the leaves and to the lower portions of the trees.


Aerial applications should not be used for small acreages or in residential areas, and should be done only by properly trained individuals who hold a valid pesticide applicator's certificate and have licenses.



UNIVERSITY OF FLORIDA
EXTENSION
Institute of Food and Agricultural Sciences

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Flatwoods Citrus



**TOPICS DISCUSSED IN
THE FLATWOODS
CITRUS NEWSLETTER
-YEAR 2008-**

Month	Topic
January	hedging and topping citrus trees, citrus psyllid, questions and answers: USDA’s revised regulations for the movement of citrus fruit from quarantined areas, flower bud induction, urea, shipping dooryard fruit out of Florida
February	USDA further expands citrus greening quarantine in Florida, flower bud induction overview and advisory, nutrition of citrus trees, boron (b), assessing freeze damage, pesticide spray coverage, management strategies to reduce drift, fungicide effectiveness, pesticides management, pesticide resistance management, fertigation, microirrigation and fertigation, HLB laboratory at the Immokalee IFAS center
March	Alternaria brown spot, citrus scab, living with citrus canker, CEU requirements for pesticide licenses, prioritizing citrus nutrient management decisions, irrigation, scale insects, citrus health response program (CHRP) updates February 2008
April	fertilizer prices are skyrocketing, United Nations: biofuels are starving the poor by driving up food prices, increasing efficiency and reducing cost of nutritional programs, foliar feeding, chemical culprit in grapefruit-drug interactions identified
May	plant growth regulators, greasy spot, spring climate outlook, Africanized honeybees, new biodiesel crop jatropha taking off in SW Florida, annual farm safety day
June	NOAA predicts near normal or above normal Atlantic hurricane season, citrus psyllid and greening management, citrus rust mites, weed control, acidification to remove mineral deposits and chlorination to control algae and bacteria in irrigation systems
July	leaf and soil sampling and analyses to adjust fertilizer programs, calcareous soils, summary of citrus nutrition on calcareous soils, Florida gulf citrus growers association,
August	pesticide resistance & resistance management, CHRP compliance for 2008-2009, citrus brown rot, magnesium nutrition, flooding injury, water table measurement and monitoring, nitrogen management and water quality
September	preparing for a hurricane, Huanglongbing (citrus greening), the citrus psyllid, how to reduce drift, citrus canker, the citrus leafminer, phytophthora foot rot and root rot,
October	citrus report from the national agricultural statistics service, save money by adapting mechanical harvesting, fire ants, take windbreaks seriously, understanding degreening of Florida fresh citrus fruit, fertigation, IFAS research reports & extension tools
November	Bronson announces that 59 counties eligible for disaster assistance from tropical storm Fay, increasing efficiency and reducing cost of nutritional programs, biosolids, citrus canker is still a major problem in Florida, growers, packers, processors, buyers, marketers are needed to cut-peel-eat-drink juice and evaluate new citrus varieties, Florida citrus industry research coordinating council, UF officials dedicate ethanol plant, 2 Florida professors, sugar producer team up on ethanol plant, citrus economics
December	the role of area-wide sprays in a comprehensive psyllid IPM strategy, winter weather watch program, HLB off select agent list, current flower bud induction overview and advisory, aerial application of pesticides, cold hardiness and cold protection

GOOD NEWS FOR GROWERS AND FARMERS ABOUT FERTILIZER PRICES



Fertilizer prices are down.

The significant drop in fertilizer prices is good for the farmers, especially at a time when many of them did not apply or reduced their fall rate application and are ordering fertilizer for late winter early spring application.

High fertilizer prices reduced demand. As less product was pulled through the chain, it stacked up at the distributor level. Furthermore, during the last a few months, aside from increased fertilizer inventory, coal, sulfur, natural gas, and other raw materials needed to make fertilizers have been leading the downward trend by becoming less expensive. Since fertilizer is an oil by-product, any fluctuation in the prices of oil affects the prices of fertilizers.

Fertilizer prices increased due to high world oil prices in the market, but currently oil prices have gone down

dramatically and fertilizer prices are following the same route. However, volatility remains.

Lower sulfur and natural gas prices have allowed manufacturers of phosphate and nitrogen fertilizers to decrease their prices. Speculation has been blamed for the surge and fall of commodity prices. In the past a couple of months, urea prices have fallen from about \$800 a ton to \$400 a ton, and ammonia prices have decreased from \$800 to \$500. However, the price remains highly volatile.

It is too early to tell what the price will do next. The financial crisis has suppressed activity in the global fertilizer market. There are rumors that the Chinese may relax some of their N-P-K fertilizer tariffs. China has imposed high tariffs on domestically produced fertilizers containing nitrogen, phosphorus and potassium to prevent it from leaving the country, thus maintaining lower prices for its farmers. Now, there is a rumor that China is loosening or eliminating those tariffs, which would put more supply on the world market.

There are still good reasons why fertilizer prices will eventually rise in the future because the long-term fundamentals remain strong for fertilizer demand. Regardless of the current global economic crisis, the human population will continue rising, and people are going to continue eating more protein-rich, fertilizer-dependent foods.

Florida Gulf Citrus



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 **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.

P. O. Box 1319, LaBelle, Florida 33975 (863) 675-2180 / Fax: (863) 675-8087 / 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 a BS degree; **3.0** for MS and PhD degrees.
- A demonstrated **commitment** to complete the degree at a state college, community 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@embarqmail.com

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? _____

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