



Citruslines

The Mission of UF/IFAS is to develop knowledge in agricultural, human and natural resources and to make that knowledge accessible to sustain and enhance the quality of human life.

Spring 2011

April, May & June

UF UNIVERSITY of
FLORIDA

IFAS Extension

Lake County Extension



Upcoming Events

<http://cfextension.ifas.ufl.edu/calendar.shtml>

The Florida Citrus Grower's Institute	Avon Park	April 6th
Lake County Farm Tour	Lake County	April 8th
Certified Crop Advisor CEU Day	Tavares	April 13th
South Lake/West Orange CHMA Meeting	Winter Garden	May 4th
Mid Florida Citrus Foundation Field Day	Winter Garden	May 10th
Private Applicator Licenses	Kissimmee	May 19th
CEU Day and Worker Protection Standards (WPS)	Kissimmee	June 9th

Well we have made it through another cold winter. As always I personally am glad that it is coming to an end. Spring time weather is beautiful and it is the best of the year in my opinion. As Valencia harvest starts gaining steam, market prices are sky high. It is good to be in the citrus business as long as you have got fruit. One major push of my extension program recently has been the formation of Citrus Health Management Areas or CHMA's. We currently have eight established, the coordination of Asian citrus psyllid control measures are very important in the protection of your investment. Please try and participate in these efforts.

COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF FLORIDA, INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES, Larry R. Arrington, Director, in cooperation with the United States Department of Agriculture, publishes this information to further the purpose of the May 8 and June 30, 1914 Acts of Congress; and is authorized to provide research, educational information, and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions, or affiliations. Single copies of extension publications (excluding 4-H and youth publications) are available free to Florida residents from county extension offices. Information about alternate formats is available from IFAS Communication Services, University of Florida, PO Box 110810, Gainesville, FL 32611-0810.

Other events of possible interest

Mechanical Harvesting Field Day (flyer in back)	Immokalee	April 20th
Florida State Horticulture Society Annual Meeting	St. Petersburg	June 5-7th
Florida Citrus Mutual Annual Meeting	Bonita Springs	June 15-17

http://www.flcitrusmutual.com/about/2011_conference.aspx

2011 Citrus Pest Management Guide now available

Introduction -M.E. Rogers, M.M. Dewdney and T.M. Spann

The objective of the Florida Citrus Pest Management Guide is to assist citrus growers in the identification of pest management options and the selection of appropriate control measures. This publication should serve as a reference once it has been determined that control measures might be warranted. It is not intended to replace pesticide product labels which contain important usage information and should be immediately accessible for reference. Violations of directions for use printed on the label are against State and Federal laws. Care should be taken to select only those treatments best suited for control of the specific pest(s) identified as requiring suppression. Products listed in all tables have been shown to be efficacious, non-phytotoxic to citrus, and relatively safe on non-target arthropods and microorganisms when used as directed. However, it is important to realize that results may not be consistent under different environmental, application, and tank mix conditions.

As a supplement to each table of recommendations, we have provided information on which to base a management decision specific to the target pest, weed or disorder. This information will assist the producer in developing management strategies for a particular set of conditions and possibly identify circumstances under which chemical intervention may not be necessary.

For specific information on pest identification, biology, damage or non-chemical management techniques, refer to Extension Digital Information System (EDIS) and other IFAS, USDA, and Florida Department of Agriculture and Consumer Services (FDACS) publications. In addition to the authors listed throughout the Pest Management Guide, the citrus specialists and agents listed below can provide assistance with pest management information.

You can access the most recent version anytime at:

<http://www.crec.ifas.ufl.edu/extension/pest/>

For those wanting a hard copy, they can be purchased from the IFAS bookstore:

<http://ifasbooks.ifas.ufl.edu/p-138-florida-citrus-pest-management-guide.aspx>





Demonstration of a sustainable approach to citriculture within a national wildlife refuge in the Indian River Area. Robert C. Adair, Jr, B.A. Norquist and G.K. Ross. Proc. Fla. State Hort. Soc. 122:90–107. 2009.

Well every year I try to generate some grower interest in attending the Florida State Horticulture Society annual meeting by reviewing the citrus section best paper award winner. This year's winner was Bob Adair for his paper on a sustainable approach to citriculture. Bob works for the Florida research center for agricultural sustainability (FLaRes) located in Vero Beach. FLaRes entered into a 10 year agreement with the U.S. government to manage the groves located in the Merritt Island national wildlife refuge in 1999. The groves had been previously managed by private caretakers and run for a few years by the Kennedy Space Center. Due to its location, the government wanted a "reduction of deleterious inputs" and more sustainable practices implemented to minimize the impact of fertilizers and pesticides. Working with the confines of the federal agencies requirements the FLaRes created their own "Sustainable Citrus Program" or SCP. They evaluated a number of different practices individually and on a holistic approach.

In addition, FLaRes utilized and created their own GIS tools to maximize management decisions. The authors attributed these tools in "enabling informed and timely responses to changing tree health, bureaucratic, meteorological, biological and market conditions". Another emphasis was the culling of marginal land was critically important to profitability and sustainability. They redirected focus on fresh fruit production versus juice fruit production. When utilizing their SCP, yields decreased 26% but net revenue increased 56% versus previous decade when groves were managed in a more conventional manner.

The SCP utilized foliar fertilization to reduce the amount of ground applied fertilizer. When applying ground applications, the material utilized was calcium nitrate. Calcium nitrate is expensive but is very efficient because it does not suffer losses due to volatilization and is all nitrate nitrogen which is absorbed by roots rapidly. FLaRes utilized low salt content source fertilizer materials for N-P-K which tend to be more expensive but foster soil biology. The foliar fertilizer program was also cited as a biopesticide and was given credit for suppression of multiple diseases in the grove while minimizing potential environmental pollutants such as copper.

This was a flatwoods grove in which root zones are very shallow, the authors stated that managing water drainage was critical. They stated that tidal variations had a significant impact on ground water table, which was most noticeable during a full or new moon phase. Additionally the authors also evaluated compost materials, used shuttle waste as fertilizer and implemented a low rate herbicide program. They concluded after twelve years of implementing the SCP program that they had reduced chemical and fertilizer inputs, improved soil productivity and increased beneficial insect communities.

This is just one example of the type of great information that you can access when you are a member of the Florida State Horticultural Society. The annual meeting is packed full of good information on citrus related research projects from around the state. The reason that the society has been around since 1888 and is the oldest horticultural society in the nation; good info!



New and revised publications from UF/IFAS

Citrus Black Spot: No Longer an Exotic Disease (PP281)

Citrus black spot is an emerging fungal disease that affects Florida citrus. Various symptom types occur about a month before harvest. Black spot has the potential to cause major economic damage to the fresh fruit industry and significant yield loss on processing varieties. <http://edis.ifas.ufl.edu/pp281>

Citrus BMP Implementation in Florida's Gulf Citrus Production Area: Nutrients (AE474)

In 2005 we conducted a survey in cooperation with Gulf Citrus Growers Association and FDACS to quantify the current level of Best Management Practices (BMP) implementation and to identify BMPs that might be adopted if a cost-share program was available. This publication describes the survey and discusses the findings regarding nutrient BMPs. <http://edis.ifas.ufl.edu/ae474>

Exotic Citrus Diseases: Early Detection is the Solution to Protecting Florida Citrus (CH202)

This revised illustrated trifold brochure provides key information about *Pseudocercospora* fruit and leaf spot, sweet orange scab, citrus leprosis virus, citrus variegated chlorosis (CVC), and citrus tristeza virus (CTV) stem pitting. Includes contact information for UF/IFAS Extension citrus experts. <http://edis.ifas.ufl.edu/ch202>

Sampling for Asian citrus psyllid (ACP) in Florida (ENY857/IN867)

Three techniques are currently in use to sample adult Asian citrus psyllids (ACP). This 7-page illustrated fact sheet by H. A. Arevalo and P. A. Stansly discusses the strengths and weaknesses of each and makes recommendations for routine monitoring of ACP for management purposes. Includes references <http://edis.ifas.ufl.edu/in867>

Citrus Economic information

All of the latest citrus economic and production numbers can be found on the Citrus Research and Education Centers website under the extension section. Here you will find the summary production practices, caretaker rates, packing charges and estimated harvesting costs for Florida citrus. Also included is the cost for resetting and planting new trees in a grove. As you know citrus production has been changing rapidly the last few years and that has led to increased costs. How does your production numbers run compared to the IFAS's budget? Might be wise to review the latest numbers and compare. You can find everything you could ever want to know about citrus prices (with the exception of future fruit prices) here:

www.crec.ifas.ufl.edu/extension/economics

If you need a printed copy please contact Maggie.

Citrus Economics

Indian River Summary Budget Costs 2009-2010	Southwest Florida Summary Budget Costs 2009-2010	Central Florida (Ridge) Summary Budget Costs 2009-2010
Archives of past IR summaries	Archives of past SWF summaries	Archives of past CF (Ridge) summaries
Select summary...	Select summary...	Select summary...

Average Packing Charges

- Average Packing Charges for Florida Fresh Citrus, 2009-2010

Archives of Past Average Packing Charges

Estimated Average Harvesting Charges

- Estimated Average Harvesting Charges, 2009-2010

Archives of Past Estimated Average Picking Charges

Citrus Custom Rate Charges

- Ridge and Indian River South Florida Caretaker Rates 2010

Archives of Past Caretaker Summaries

Annual Cultural Maintenance Costs

- Planting and Annual Cultural Maintenance Costs for Reset Placement Trees in a Florida Citrus Grove 2010

Archives of Annual Maintenance Costs for Reset-Replacement Trees

Florida Pile Burner Status

In 2005 and 2006 the Florida Division of Forestry in cooperation with the University of Florida IFAS program developed a certification program for Florida Pile Burners. The first class was held in Bartow at the Bob Crawford Building in October of 2006. The second session was held at the same location in November of 2006. Many of you were participants in these first classes, due to this fact, many of you need to be aware that the Certified Pile Burner designation has a use it or lose it rule in the Florida Administrative Code.

In 2009 the Florida Department of Agriculture amended the open burning rules and regulations to include the pile burner certification program. Florida Administrative Code (FAC) 5I-2 outlines the steps necessary to become certified and also what is necessary to keep that certification. **The rule states that a pile burner maintains their certification if they can show that they have used their certified burn number at least 5 times in the previous five years.**

The purpose behind the development and implementation of the Certified Pile Burner program was to raise the overall quality of the open burning program in Florida. Any regulatory agency has two possible paths to follow in order to carry out their legislative responsibilities to the people of the state of Florida. They can act to enforce the law to the letter and in this way improve the program's activities or they can work to educate and enforce where the education fails. The Florida Division of Forestry feels that we serve all of our customers best by improving the overall quality of the program through education, and only using the "stick" of enforcement when absolutely necessary.

At this time the Department of Agriculture, Division of Forestry is in the process of sending out notifications to all of those certified pile burners who received their certification in 2006, letting them know if their certification is current or if there is a need for them to complete additional burns before the end of this year to maintain their certification. They are asked to contact Jim Brenner, Fire Management Administrator with the Florida Division of Forestry, if their certification is in jeopardy so that they can find out what must be done to maintain their certification. Jim Brenner can be reached by email at Jim.Brenner@freshfromflorida.com or by phone at 850/488-6480.

This process will be repeated every year at about this time for those that have had their Pile Burner Certification for at least 5 years.

Florida State Horticulture Society Annual Meeting June 5-7

The Florida State Horticultural Society (FSHS) Annual Meeting will be held in St. Petersburg between June 5-7th. The 2011 Meeting of FSHS will feature presentations of applied research pertaining to horticultural and agronomic crops and products, and new developments and practices that have been put into use by growers, processors, allied industries, and other horticultural interests in Florida. **Growers, processors and those in allied industries are encouraged to present papers.** I am the sectional vice president this year, so if you have an interest in sharing some citrus related information please contact me ASAP at raatwood@ufl.edu.



Citrus Health Management Area's –CHMA's Spray Efforts

Recently there were a number of CHMA meetings held in our area. Turn out was not great but growers are talking with one another about these efforts and survey results indicate there is growing interest and momentum to participate. You can find out more about CHMA's at this website: <http://www.crec.ifas.ufl.edu/extension/chmas/index.shtml>

Remember we are trying to spray plus or minus one week. The closer to the actual week the better. Upcoming spray dates for different CHMA's are as follows:

<u>South Lake / West Orange CHMA</u>	April 4-8th
<u>Green Swamp CHMA</u>	April 11-15th
<u>Central Lake / North Orange CHMA</u>	April 18-22nd
<u>North Lake / South Marion CHMA</u>	April 25-29th
<u>Brevard CHMA</u>	April 4-8th
<u>Osceola CHMA</u>	April 11th-15th
<u>Volusia CHMA</u>	April 4-8th
Seminole/East Orange (no map yet)	April 11th-15th

The material to spray is an organophosphate. The compounds have an IRAC MOA number of 1B. They also tend to have long PHI, so if you will have Valencia fruit on trees you may want to consider using a different pesticide. For current recommendations from UF please see the Pest Management Guide, be sure to read the comments section as some pesticides may produce negative effects on other pest populations.

South Lake/West Orange CHMA Meeting to discuss aerial application

Helena Chemical Company, growers and I are interested in trying to coordinate aerial application for CHMA's in our area. So far the South Lake/West Orange CHMA has had the most support in terms of growers working together, so we are going to try to coordinate this CHMA to utilize aerial applications. If you own grove acreage in this CHMA (see map at chma website above) please plan on joining us to discuss and coordinate these efforts. Also please call your neighbors and encourage them to attend the meeting. Helena will be providing a lunch on **May 4th at the Orange County Country Club**, it is important that you call me and let me know that you are planning on attending, so I have an accurate head count. Our hope is that if this is successful we could try utilize aerial application in other CHMA's as well. Eventually we may be able to combine CHMA efforts to cover a larger area in a shorter period of time which would be beneficial in lower ACP populations of the entire region. Updates on this effort to follow.



The Florida Citrus Grower's Institute Avon Park April 6th

For the last few years the citrus extension agents have held the Florida Citrus Grower's Institute. This year's program is packed full of great speakers and topics. In my opinion it is the most important program of the year, due to the fact it covers a wide range of topics with the latest research based information.

Avon Park is centrally located for the entire state's citrus growing region. Most growers in our area should be able to travel 2 hours or less to this venue. A free lunch will be provided. Registration is required.

Check in begins at 8AM and the presentations are from 8:30-3:45. Please see the flyer enclosed with the newsletter for more details or call my office at 352-343-4101.

For those that have never attended or are interested in view past talks. All presentations have been videotaped and are available to viewers at the citrus agents website: <http://citrusagents.ifas.ufl.edu/>

Private Agricultural License Review & Exam May 19th 8:30-4:00

A pesticide license is required by any persons who apply or supervise the application of restricted use pesticides for agricultural production. This certification requires a passing grade of 70% on the General Standards and Private exam. This certification must be renewed every 4 years either by testing or by 8 CEU's. There will be a review and exam in Kissimmee on May 19th. The review starts at 8:30 AM. There is a \$20 charge for the class. CEU's are available for the training session.

It is advisable to purchase the "Applying pesticides correctly" and "The private applicator training manual" from the IFAS bookstore on-line at www.ifasbooks.ufl.edu or by calling 800-226-1764. The private agricultural license itself cost \$100 which does not have to be paid until after you pass the exam. To register please send in sign up sheet located at the back of the newsletter or sign up online at: http://osceola.ifas.ufl.edu/comm_hort.shtml

Mid Florida Citrus Foundation Field Day Winter Garden May 10th

Please plan on joining us for a field day at the MFCF in Winter Garden. Flyer provide at back of newsletter with form, make sure to sign up.

9:00-9:45 Welcome and discussion of Nutritional demonstration areas-Ryan Atwood

10:00-10:20 Herbicide Trial results-Dr. Steve Futch

10:25-10:50 ACP & Leafminer management: biological pesticide alternatives and resistance management. -Dr. Lukasz Stelinski

10:50-11:15 Citrus Health Management Area efforts and Results-Dr. Michael Rogers 30 min.

11:25-11:50 Midsweet and Valencia field trial and new upcoming Valencia release-Dr. Jude Grosser 30

11:55-12:15 Wind speeds within a grove what you need to know for successful spray applications-Chris Oswalt

12:30-1:15 Lunch sponsored by Dow Agrosiences, Syngenta and Bayer Cropscience. Lunch speaker Dr. Jim Graham

1:20-1:45 Peach varieties for Florida-Dr. Jose Chaparro

1:45-2:10 Thinning Florida Peaches-Gary England

2:10-2:35 Proper pruning and Economics of peaches-Dr. Mercy Olmstead

2:45-3:15 Pomegranates for Florida? -Dr. Bill Castle

3:15-3:35 Olives for Florida? - Richard Williams

CEU Day and WPS Training Kissimmee June 9th

If you are in need of a lot of CEU's for your pesticide license you are in luck. Every year in June we offer a CEU Day. This year the CEU Day will be held at the Osceola County Extension office in Kissimmee. Registration is required. 321-697-3000

I will also be conducting Worker Protection Standards (WPS) train the trainer on that date. WPS is required training for all agricultural employees (unless related to you or ranch worker). This training must be conducted usually soon after the hire date. If you are a licensed pesticide applicator you qualify to conduct the training. If you do not have a pesticide license but use unrestricted pesticide in your operation you must have a train the trainer card. This WPS training qualifies for the card and can help those with pesticide licenses understand what type of information needs to be presented.

1:00 – 3:00 p.m. Worker Protection Standards/
Train the Trainer -Ryan Atwood

Private Applicator CEU's will also be available in AM sessions.

Certified Crop Advisor CEU Day Wednesday April 13th

For the second time Lake County will be a host site for the Certified Crop Advisor CEU Day which is broadcasted via polycom all over the state. We will be meeting in the conference room which is directly adjacent to my office at the Agricultural Center in Tavares.

7:30 AM to 5:30 PM

Nutrient Management (5 CEUs) & Pest Management (5 CEUs)

On-site host: UF/IFAS Citrus Research and Education Center in Lake Alfred, and offered by videoconference.

Speakers will deliver their presentation from the site in their respective area.

Regular registration is \$100

Lunch will be provided at all sites.

Visit the CCA Seminar website at:

http://www.crec.ifas.ufl.edu/crec_websites/cca/
for the specific program information and registration form as it becomes available.

Lake County Farm Day April 8th 8:00 AM - 3:00 PM

Last year we held a Farm Day to increase Lake County citizens awareness of agricultures importance to our community. This year we will be having this program on April 8th starting at the Agricultural Center at 8AM. Please help spread the word to members of our community who may not be involved with agriculture themselves but would benefit from participating.

Lake County Extension Office/HLC.....8:00 – 8:30 am <http://lake.ifas.ufl.edu>
Wilson Training Center.....8:45 – 9:30 am <http://www.wilsontrainingcenter.com/index.htm>
Uncle Matt's Organics.....9:45 – 10:45 am <http://www.unclematts.com>
Silver Springs Citrus.....11:00 –12:30 pm <http://silverspringscitrus.com>
Lunch Break on your own.....12:30 – 1:45pm
Cherry Lake Tree Farm..... 2:00 – 3:00 pm <http://cherrylake.com>

Please visit the Lake County Extension website for more information: <http://lake.ifas.ufl.edu>

Pictures of recent Extension Activities

I included pictures of recent activities to your extension program. If you have not been coming, I wanted to show you what you have been missing!

Below: Lake County Commissioner Sean Parks spent a day visiting with agricultural operations in Lake Co. In the picture below Nick Faryna shows him the Sunsational Packinghouse operation, the picture below that is at Florida Naturals Umatilla packaging facility.



Above: 4H youth participated in the 4H Citrus Tree Project at the Central Florida Fair. Thanks to all those who volunteered and donated money to help educate the kids.



Above: Blueberry field day attracts a large crowd (90 people) as the blueberry industry continues to grow in Central Florida.



Below: Pictures from recent W. Murcott thinning trial. Pictures from two different treatments. Results to be presented at 2011 F.S.H.S. annual meeting. Thanks to Chris Sutton, Frank



Rodgers, Nick Faryna, Tim Lind and Dr. Ed Stover for all their help with this project!



Lake CEO/IFAS/UF

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FIFRA
 Section 2(ee) Recommendation

Date: January 5, 2011
 Product: Quadris Top™
 EPA Registration No. 100-1313
 Uses: Addition of sweet orange scab (*Elsinoe australis*) as a disease controlled in citrus
 States: Florida, Louisiana

Directions for Use

Crop	Target Disease	Use Rate Fl. oz. Product/A	Remarks
Citrus Grapefruit Lemon Lime Orange (sour and sweet) Tangerine Including all cultivars and/or hybrids of these	Sweet Orange Scab (<i>Elsinoe australis</i>)	10 - 15.4	Quadris Top applications should begin prior to disease development and continue throughout the season on 7-21 day intervals following the resistance management guidelines. Applications may be made by ground or air. An adjuvant may be added at recommended rates. A horticultural spray oil should be used to improve control of greasy spot. If disease pressure is high, use the shortest interval and highest rate. Make no more than 2 sequential applications before alternating to another fungicide with a non-001 (Group 11) different mode of action. Do not make more than 4 applications of Quadris Top or other Group 11 fungicides per season.

Application: For best results, sufficient water volume must be used to provide thorough coverage. Quadris Top can be applied by either ground or aerial application. Minimum of 15 gals./A for ground applications is recommended. For aerial applications a minimum of 10 gals./A of water is recommended.

Complete list of citrus fruits: Calamondin; citrus citron; citrus hybrids (includes chironja, tangelo, tangor); grapefruit; kumquat; lemon; lime; mandarin (tangerine); orange; sour orange; sweet pummelo; Satsuma mandarin

Specific Use Restrictions:

- Do not use Quadris Top in citrus plant propagation nurseries.
- Do not apply more than 0.15 fl. oz./A of Quadris Top per season.
- Do not apply more than 0.5 lb. a.i./A per crop of difenoconazole containing products.
- Do not apply more than 1.5 lbs. a.i./A per crop of azoxystrobin containing products.
- May be applied the day of harvest (0 day PHI).

The user must refer to the federally approved Quadris Top label and read and follow all directions for use, restrictions, and precautions. It is a violation of federal law to use this product in a manner inconsistent with its labeling. The user should have this recommendation in their possession at the time of use.

This recommendation is made as permitted by Section 2(ee) of FIFRA, as amended, and has not been submitted to or approved by the EPA.

Syngenta Crop Protection, Inc.
 Greensboro, NC 27419

Quadris Top™ - Trademark of a Syngenta group company

FL1313051 AC0111

Sweet orange scab has not officially been found in Florida. If or when it is there are some 2(ee) labels available for Syngenta's Abound and Qaudris Top fungicide products.

Think you haven't received my quarterly newsletter lately or just want to look something up but misplaced an older copy. Archived copies can be found at:

<http://citrusagents.ifas.ufl.edu/newsletters/>

The Vision for the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) is to increase and strengthen the knowledge base and technology for:

- Expanding the profitability of global competitiveness and sustainability of the food, fiber, and agricultural industries of Florida.
- Protecting and sustaining natural resource and environmental systems.
- Enhancing the development of human resources.
- Improving the quality of human life.

The 2010 Florida Citrus Industry Research Coordinating Council's Annual Report has been released and posted. The document can be found on the FDOC Grower web page, the address is <http://www.fdocgrower.com/>.

**Florida Citrus Industry
 Research Coordinating Council
 Priorities for 2010**

Issue	Rank	Status
Greening	1	Critical
Genetics	2	Critical
Canker	3	Critical
Plant Improvement	4	Essential
Abscission	5	Essential
Health Benefits	6	Essential
Food Safety	7	Essential
Mechanical Harvesting	8	Essential
Pest Management	9	Essential
Fertilization/Irrigation	10	Essential
High Value By Products	11	Essential
Grove Production System	12	Important
Off Flavor	13	Important
Processing Techniques	14	Important
Fruit Quality/Decay Control	15	Important
Lab Testing Methods	16	Important
Fresh Squeezed Juice	17	Important
Health/Nutrition Fresh Juice	18	Important
Caribbean Fruit Fly	19	Important

www.fcircc.org