

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.

Summer 2007

July, August, &
September

UF UNIVERSITY of
FLORIDA

IFAS Extension

Lake County Extension



Upcoming Events

Certified Pile Burner Training	Tavares	July 11th
Grape Day	Tavares	August 11th
Citrus Expo	Ft. Meyers	August 22nd & 23rd
Citrus Packinghouse Day	Lake Alfred	September 6th
Everything You Need to Know for a Worker Protection Standards Inspection	Apopka	September 11th

As this summer swings into full gear, the last of the citrus crop is harvested, giving the opportunity to reflect on this past years season. Fruit prices helped citrus producers make record profits a big change from just three years ago, this coupled with real estates stagnation and disease pressures in south Florida have renewed central Florida citrus production. Also having a renewal of design is *Citruslines* with its new format. My hope is that you will find it full of the same great information that you have been receiving over the years. Included with this newsletter is a survey and evaluation form for **our** extension program. Please fill it out and return to my office. This is your opportunity to influence what type of extension activities are offered. I value your feedback and look forward to your comments. Best of all, those who **return their surveys** will be entered into a drawing to win a **“free”** season of our **Weather Watch** subscription service!

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.

Greening Update

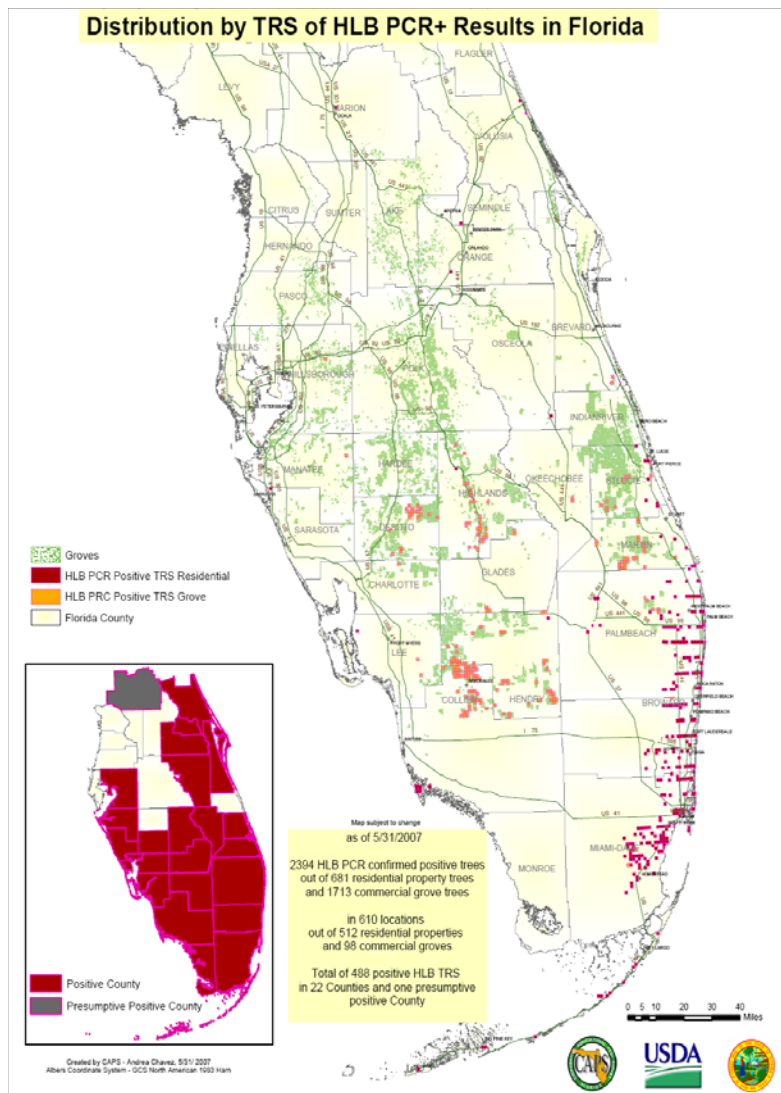
HLB or Citrus greening disease is being found more and more throughout the state. The latest counties with at least one positive find are Orange, Osceola, Seminole, and Volusia with a suspected find in Marion. What does this mean for you? Surveying your groves for detection of possible greening infected trees is important.

Steve Futch an extension agent working in citrus shared his observation from a trip that Florida growers recently took to Brazil. This trips purpose was to observe how Brazilian growers are combating citrus greening disease. Dr. Futch mentions that growers are using a three pronged approach and liken it to that of a three legged stool. Take any of the legs away and the stool (or approach) does not work. The three approaches are:

1. Survey groves to identify greening infected trees.
2. Eradiation of greening positive trees
3. Aggressively managing the vector of the disease- the psyllid.

It was told by many Brazilian growers that psyllid suppression alone would fail, there needs to be routine identification and removal of diseased trees for a successful greening management program.

Proper tree removal consists of removing the tree just above the soil line and applying a herbicide to kill the trunk. Not treating the trunk will allow for sprouting and these sprouts would still be greening positive.



Most recent copy of map can be found online at http://www.doacs.state.fl.us/pi/chrp/greening/maps/cgsit_map.pdf

"If we don't control this disease now - today - we will have no citrus industry,"

"The survival of your groves depends on how well your inspectors are trained to detect HLB."

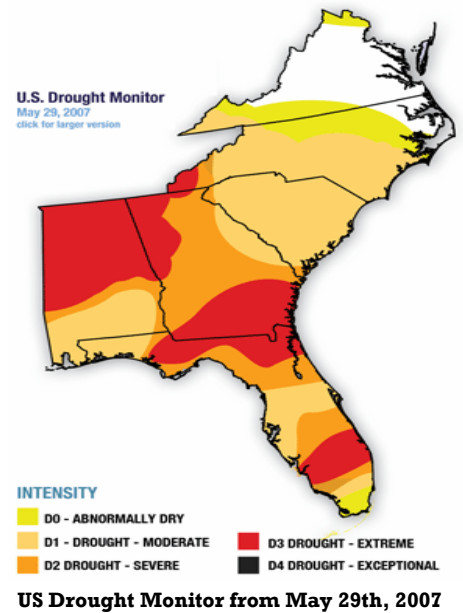
-Joseph Bové, professor of microbiology at the University of Bordeaux 2 in France

Quotes from the Lakeland Ledger 6/8/07

2006-07 Drought

As we head into the 2007 summer season we finally have received some much needed rain with tropical storm Barry. As of the beginning of June, Florida has been in an eighteen month drought, the third worst for the state since weather data has been recorded. There is a renewed awareness of how precious and limited a resource water is becoming in our state.

Proper irrigation scheduling can help ensure your trees health and maintain our natural resources. The Florida Automated Weather Network (F.A.W.N) has an irrigation tool based on weather conditions in your area and your specific grove characteristics (soil, spacing, emitter, etc.) that can help you optimize your irrigation schedule. The tool can be found at <http://fawn.ifas.ufl.edu/>



Hurricane Outlook

2007 Season Predictions			
	Named Storms	Hurricanes	Major Hurricanes
Dr. Gray	17	9	5
NOAA	13-17	7-10	3-5

Experts at the National Ocean and Atmospheric Administration (NOAA) are predicting above normal hurricane season this year—showing the ongoing active hurricane era remains strong. With the start of the hurricane season upon us, NOAA recommends those in hurricane-prone regions to begin their preparation plans.



“For the 2007 Atlantic hurricane season, NOAA scientists predict 13 to 17 named storms, with 7 to 10 becoming hurricanes, of which three to five could become major hurricanes of Category 3 strength or higher.”

-retired Navy Vice Adm. Conrad C. Lautenbacher Ph.D.,
undersecretary of commerce for oceans and atmosphere and
NOAA administrator



Certified Pile Burner Tavares July 11th 8:30-4:30 register please

This class is for those who burn more than 20 days a year. Certified Pile Burners can burn on days when the general public cannot. With district foresters approval certified pile burners can start burning earlier and finish later than non-certified burners. Southwest Florida citrus growers have been conducting a

lot of burning with their greening management programs, as is it is suggested to remove greening positive trees from your groves. With the recent wildfire activity the Division of Forestry has been restricting burn permits, the certified pile burner designation provides the opportunity to burn more frequently.



Call Maggie or Ryan at 352-343-4101 to register. Cost \$50

Grape Day Tavares August 11th 9:00-1:00

Are you interested in growing grapes at home or for a commercial enterprise? Come learn about the different types of Florida grown grapes. Dr. Grey from the Mid Florida Research and Education Center in Apopka will be discussing

the latest happenings in the grape industry. Industry you say? Yes a small one that is growing steadily there are currently 17 wineries in Florida and the numbers look to be increasing. The Florida Department of Agriculture and

Consumer Sciences co-sponsoring a program aimed at increasing commercial grape acreage by giving potential or current growers \$1,000 for every acre they plant in grapes.

Packinghouse Day Lake Alfred September 6th starts at 9:30

This years program will again focus on presentations, discussions, and workshops of how to successfully ship fresh citrus under changing citrus canker regulations. Presentations include:

- Changing regulations for the new season
- The latest research results from leading pathologists
- Update on work to improve electronic grading of canker
- Argentine trip report on canker-related pre- and postharvest practices

Training sessions, with certificates of completions, will also be available covering:

- Canker identification on fresh fruit
- Good worker health and hygiene practices



Everything you need to know for a Worker Protection Standards inspection & Train the Trainer Certification.

Mid Florida Research Center, Apopka September 11th 9:00-11:00

There will be Work Protection Standards (WPS) training for all agricultural producers at the MFRC in Apopka. We will be holding a Train the Trainer for those looking to become certified. Also, we will do a

walk through of the MREC with an compliance monitoring inspector who will give us their instruction and insight as to what inspectors look for when they come to visit your operation.

Two CEU's for pesticide applicator license have been applied for. The registration fee is \$10. Please call Maggie Jarrell or Ryan Atwood to register.

Money trickling in for Citrus Greening Research

Many citrus organizations around the state have been working hard to find funding for research that is needed to combat citrus greening disease. Currently there is \$4 million in the FDACS budget for the upcoming fiscal year for working with citrus diseases (canker and greening). Of this money \$250K is for a diagnostic lab at Immokalee (UF's SWFRECC). The remaining \$3.75M is available to the research box tax council to distribute. However there is a matching requirement for the \$3.75 M. Also, the all the monies must be spent during the current fiscal year, any unused monies will be lost. It is estimated that there will be from \$1.5 M to \$1.7 M gener-

ated from the production research tax next year. This leaves \$2 M to \$2.25 M to be raised in order to take full advantage of the state funds. The Florida Citrus Commission had included one cent per box for next year's tax to provide some of the matching funds (once again \$1.5 to \$1.7 M). We do not know if they will approve this penny at their meeting June 20th. If they do not, then there will be a scramble to find matching dollars. In addition IFAS has received a one time non-recurring \$500,000 from the state for disease tolerant plant development. There is also work being done by industry groups in Washington D.C. trying to get some federal funding.

"We are pleased to get some funding from the state but when you compare the 4 million dollars for greening research to the 50 million dollars for ethanol research it seems a bit low. The citrus industry is here today and brings in a billion dollars to Florida's economy whereas an ethanol industry is just a theoretical idea for the future"

-Peter McClure, Chairman of the Florida Citrus Production Research Advisory Council

USDA Releases two new citrus rootstocks US-897 & US-802

The agricultural research service, U.S.D.A. has released two new citrus rootstocks US-897 & US-802. The US-897 originated from a cross of Cleopatra mandarin and Flying Dragon Trifoliate Orange. In all field evaluations US-897 produced dwarf trees that had good fruit productivity on a canopy volume basis and yielded good fruit quality. Positive characteristics of this new rootstock is resistance or tolerance to tristeza virus, phytophthora palmivora, and diaprepes root weevil. A notable negative of this rootstock may be a relative high rate of tree loss after ten years of age to citrus blight or a similar disease. The US-802 originated from a cross of Siamese pumelo and Gotha Road Trifoliate Orange. In all field evaluations US-802 produced vigorous and productive trees that were tolerant of disease and pest problems and exhibited excellent survival. Positive characteristics of this new

rootstock is resistance or tolerance to citrus tristeza virus, citrus blight, Phytophthora palmivora, and diaprepes root weevil. Also it induces high vigor and good fruit productivity on grafted scions. Some negative characteristics of this rootstock are the tendency for large trees and the production of fruit with low to intermediate soluble solids concentration.

Tables are reproduced from official USDA rootstock announcements.

Table 4. Juice brix/acid ratio at harvest of ‘Hamlin’ sweet orange on US-897 and selected rootstocks in cooperative trial with Mr. Orie Lee in Osceola County.

Rootstock	Juice brix/acid ratio		
	Years 4-7	Years 15-17	Average
US-897	12.7 b	15.1 a	13.9
US-896	12.6 bc	15.1 a	13.8
US-801	13.1 a	14.4 a	13.7
US-852	12.2 bc	15.1 a	13.6
Swingle	12.1 c	13.3 b	12.7
US-802	12.3 bc	13.0 b	12.6

Mean separations for significant ANOVA within columns were by Duncan’s multiple range test at P<0.05

Table 6. Tree size of ‘Hamlin’ sweet orange on US-802 and selected rootstocks in cooperative trial with Mr. Orie Lee in Osceola County.

Rootstock	Tree height 8 yrs (m)	Canopy volume 8 yrs (m ³)	Tree height 18 yrs (m)
US-802	4.0 a	17.7 a	6.1 a
Swingle	3.0 b	9.1 c	4.8 b
US-801	2.5 c	6.8 c	4.4 b
US-852	3.0 b	11.4 b	3.7 c
US-896	2.6 c	8.4 c	3.3 c
US-897	2.4 c	6.6 c	2.7 d

Mean separations for significant ANOVA within columns were by Duncan’s multiple range test at P<0.05





Whole Foods Market Announces Low-Interest Loan Program For Local Food Producers

Whole Foods Market, the leading organic and natural foods supermarket, is seeking local farmers and other food producers who are interested in participating in its new Local Producer Loan Program. As part of a company-wide initiative supporting local agricultural producers and food artisans, the company plans to provide up to \$10 million annually in low-interest loans to small producers in the U.S.

At five to nine percent, the interest rates currently offered through Whole Foods Market's pilot program to small agricultural producers can be extremely attractive. The program has other attributes geared to small producers: loan application paperwork is minimized; there are no penalties for early repayment;

and loan terms may be from a few months to ten years.

The Local Producer Loan Program is part of Whole Foods Market's renewed commitment to local agriculture. This includes hosting farmers markets at stand-alone stores, refocusing in-store marketing to highlight locally-produced products, and hiring regional staff focused specifically on sourcing local products.

Producers throughout the U.S. are invited to participate in the program. Those interested can find more information and a loan application at the website,


www.wholefoodsmarket.com/products/locallygrown/lplp/index.html. They can also contact the program coordinators at lplp@wholefoods.com.

"It is Whole Foods Market's intention to help finance local food production all over the United States. We are going to 'walk our talk' with financial support for local, small-scale agriculture. We believe this financial assistance of up to \$10 million per year can make a very significant difference in helping local food production grow and flourish across the United States."

John Mackey, co-founder and CEO of Whole Foods

Revised Agri-mek Label

There is a new label for Agri-mek. The major changes for citrus are:

- The use of 5 - 20 oz./A for the control of citrus leafminer & citrus rust mite
 - A maximum of 3 applications per season
 - A minimum application interval of 30 days
 - A maximum seasonal use amount of 40 oz./A
- 

Colony Collapse Disorder (CCD) in Honey Bees

Over the years, the beekeeping industry in the United States has faced a number of obstacles. Now a new problem threatens the beekeeping industry, and it may eclipse altogether the bee maladies of old. Termed "colony collapse disorder" (CCD), the disorder has gained considerable national and international attention.

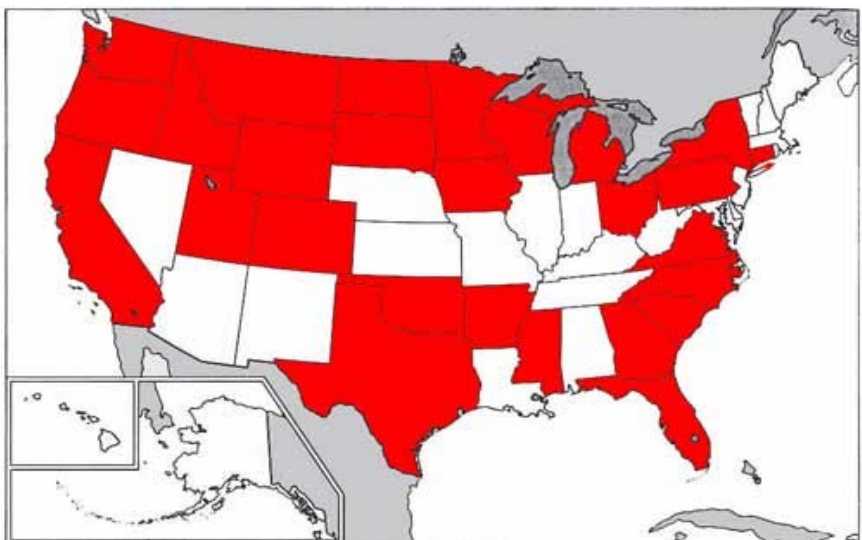
Beekeepers around the United States have reported higher-than-usual colony losses since the fall of 2006. Some beekeepers in states reporting CCD have lost fifty to ninety percent of their colonies, often within a matter of weeks. In a country where honey bees contribute billions of dollars in added revenue to the agriculture industry, these bee losses cannot be taken lightly.

Symptomatically, colonies with CCD can appear healthy as few as three weeks prior to collapse. However, the adult bees soon "disappear" (hence its historic nickname "disappearing disease") from the colonies, leaving behind a box full of honey, pollen, capped brood, a queen, and

maybe a few worker bees. Beekeepers report that colonies with CCD do not contain any dead bees, neither are there dead bees on the ground outside of the colonies. The adult bees simply vanish. The final symptom is that small hive beetles, wax moths, and other nearby honey bees ignore the empty hives even though the hives contain foodstuffs on which they ordinarily feed.

The cause of CCD is under investigation. At this point, almost every conceivable and realistic cause remains a possibility. The leading candidates and a brief explanation of their potential role are listed as:

1. Traditional bee pests and diseases.
2. Style of feeding bees and type of bee food.
3. Bee management.
4. Queen source.
5. Chemical use in bee colonies.
6. Chemical toxins in the environment.
7. Genetically modified crops.
8. Varroa mites and associated pathogens.
9. Nutritional fitness.
10. Undiscovered or new pests and diseases.



States (in red) where beekeepers are reporting significant honey bee losses to CCD.

Agricultural Theft

Has your agricultural operation ever been a victim of theft? No matter how small the theft you are encouraged to report the crime to the local authorities. Once a crime such as agricultural theft is conducted across county lines, such as a theft ring carrying equipment, commodities/products, chemicals, etc.,

then the Florida Attorney General's office gets involved. There are unlawful organizations that move tractors and other agricultural equipment and/or products out of the country. Law enforcement offices around the state are working together to make sure these crimes don't go unpunished.

Here is a list of numbers to call if you have a theft to report.

Lake Co. 352-343-2101
 Orange Co. 407-836-4357
 Seminole Co. 407-665-6650
 Marion Co. 352-732-9111
 Osceola Co. 407-348-2222
 Brevard Co. 321-264-5100
 Volusia Co. 386-248-1777

Bee Aware -Africanized Honey Bees

African Honey Bees (AHB) often referred to as "killer bees" continue to spread thru Florida. AHBs breed and compete with the European strains of honey bees that normally inhabit our state. Because Florida's AHB population is increasing, it is important to become familiar with AHBs and their behavior.

Africanized honey bees can interbreed with European bees, which means that all wild colonies of bees are at risk of being European/African crosses. The Florida Department of Agriculture and Consumer Services currently recommends that all wild bee

hives be exterminated by certified pest control operators.

If you are stung by any type of bee, do not stay in one place and swat the bees. Remember, AHBs are trying to defend their nest. When a stinging event happens, you are too close to the nest, and you need to leave the area immediately. If you stand still, the bees may become more agitated. Cover your nose and mouth with your shirt as you run. This restricts bee access to your airways.

Furthermore, do not hide in thick underbrush or water. It may take the bees thirty minutes or longer to leave an

area. Finally, seek shelter in a building or vehicle. Some bees will probably enter the shelter with you, but not as many as will remain outside.

If you witness an attack, do not go to the victim and try to help. It is better to stand at a safe distance and yell to the person to leave the area as quickly as possible.

"Floridians are used to living among dangerous animals and insects – education is the key to staying safe."

-Charles Bronson,
 Commissioner of FDACS

Summer 2007

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Our webpage is currently under construction

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.

Greening symptoms are most visible in fall and winter months. However, some greening symptoms have been observed this summer such as small yellow leaves with green islands. These leaves are found are typically found on new flush occurring near the outer canopy of the tree. Extreme zinc deficient leaves show this same characteristic. Maintaining tree health with a proper fertilization program helps eliminate confusion when scouting for greening symptoms in your grove.



Green island symptoms



<http://www.citrusexpo.net/>



The 16th annual Citrus Expo will be held on August 22nd and 23rd at the Lee Civic Center in Fort Meyers, Florida. The expo includes two days of seminars with experts from around the world speaking on citrus greening research and management. Speakers will also be presenting information on advance production systems for citrus around the

world and for here in Florida. Both days of the seminar offer the chance at for certified crop advisors to earn CCA's and licensed pesticide applicators to earn CEU's. The event includes 150 plus exhibitors. Complimentary breakfast and lunch on both days are provided. Registration for the event be done online or by calling 352-671-

1909. All attendees who register by August 15th, 2007 will qualify for a grand prize drawing at the Expo. Hotel information, exhibitors list, sponsorship information, and a tentative schedule will be in the summer issue of citrus industry magazine or can be found online at www.citrusexpo.net.



Summer 2007 Survey

Please mail back completed survey to 1951 Woodlea Rd. Tavares, FL 32778

How many acres of citrus do you actively own/manage?

1-20 Acres _____ 20-50 Acres _____ 50-100 Acres _____ 100+ Acres _____

How long have you been growing citrus?

1-5 Years _____ 5-10 Years _____ 10-20 Years _____ 20+ Years _____

Have you attended any of the extension programs this past year?

Yes _____ Approximately how many? _____ No _____

If yes, which was the most useful program? _____

If No, why not? _____

Please give the following topics a ranking between 1 (most interesting) and 5 (least interesting) .

HLB/Greening	_____	Pesticide Training	_____
Canker	_____	Weather/Cold Protection	_____
Weed Management	_____	Taxes	_____
Nutrition	_____	Farm Safety	_____
Economics	_____	Small Farm Opportunities	_____
Pest Management	_____	Organic Production	_____
Exotic Diseases	_____	Plant Improvement	_____
Other Fruit Crops	_____		

What kinds of programs would you like to attend in the future if offered?

What do you find most useful?

Newsletter _____ Workshops _____ Internet _____ OJ meetings _____

Field trips _____ Other (please give example) _____

Are you currently growing or considering growing any other fruit crop?

Yes _____ If yes what type _____ No _____

Contact Number for Weather Watch Drawing Notification Only: _____

**REVIEW AND EXAMS FOR RESTRICTED USE ORNAMENTAL & TURF OR
 PRIVATE AGRICULTURE APPLICATOR PESTICIDE LICENSES**

ORANGE COUNTY EXTENSION SERVICE, ORLANDO, FL. – AUGUST 30, 2007

\$20 NON-REFUNDABLE FEE FOR THE CLASS

Private Applicator Agricultural - This license will be issued to persons who apply or supervise the application of restricted use pesticides for agricultural production such as vegetable, fruit, or cattle farm, sod farm or nursery and greenhouse. You will need to take **both** the General Standards exam and the Private Agricultural Applicator exam.

Ornamental and Turf – This license is for persons employed on a golf course, park, athletic field, or cemetery. You will need to take **both** the General Standards exam and the Ornamental and Turf exam.

Training manuals cover exam questions SM1-Core/General Standards, SM7 & SM38-Ornamental and Turf, SM53-Private Ag. They can be ordered at 800-226-1764 or <http://ifasbooks.ufl.edu> *If you plan to take an exam, you should study the training manuals.*

8:00 - 8:30 AM	Registration
8:30 – 11:00 AM	Review for the General Standards Exam
11:00 - NOON	IPM and Pests
NOON – 1:00 PM	<i>Lunch on your own</i>
1:00 - 2:00 PM	Calibration/Equipment Review
2:00 PM	All Exams Administered



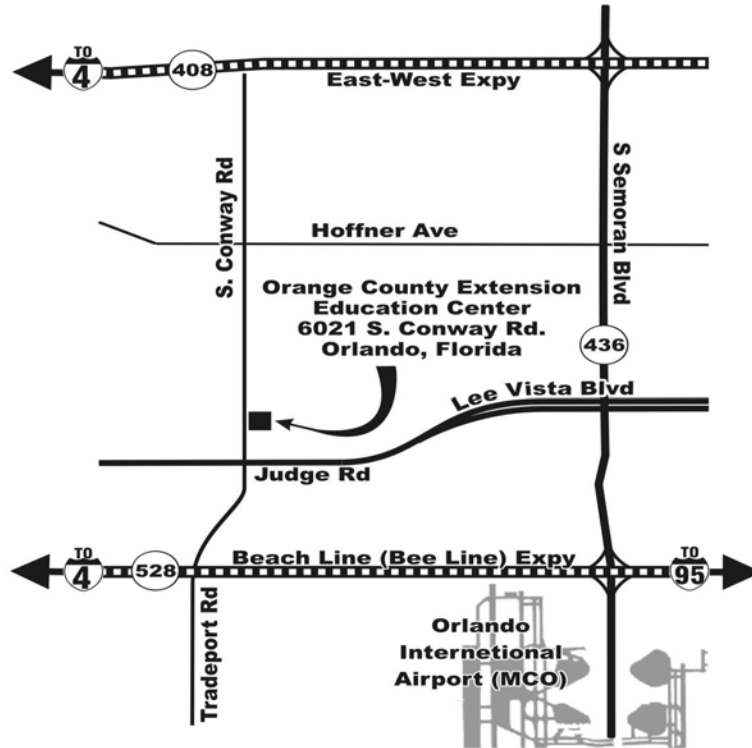
**REGISTRATION REQUIRED - \$20 NON-REFUNDABLE
 PESTICIDE APPLICATOR TRAINING & TESTING
 AUGUST 30, 2007**

Name _____	CHECK WHICH CLASS YOU WILL BE ATTENDING		
Business _____	General Standards (CORE)	Review	<input type="checkbox"/>
Address _____		Exam	<input type="checkbox"/>
_____	Private Applicator Agricultural	Review	<input type="checkbox"/>
City/State/Zip _____		Exam	<input type="checkbox"/>
Phone (____) _____ Fax _____	Ornamental/Turf	Review	<input type="checkbox"/>
Email _____		Exam	<input type="checkbox"/>

Confirmation of registrations by: Fax Email

Deadline to register: August 24, 2007. Make check payable to "Orange County Extension Fund" and send to Celeste White, at 6021 S. Conway Rd. Orlando, FL 32812. **Special accommodations: Persons with disabilities needing assistance to attend should contact the County Extension Office at least 5 working days in advance of the meeting.**

Orange County/UF/IFAS Extension Education Center
6021 South Conway Road
Orlando, FL 32812-3604
Office: (407) 254-9200
Fax: (407) 850-5125
<http://landscape.ifas.ufl.edu>



From north Orange County: Take I-4 west to E. Michigan Street and turn left. Continue to Bumby Avenue and turn right. Turn left on Lake Margaret Drive, then turn right on Conway Road. Continue south approximately 3 miles to the Extension Education Center at 6021 S. Conway Road.

From west Orange County: Take Colonial Drive to I-4 West. Exit at E. Michigan Street and turn left. Continue to Bumby Avenue and turn right. Turn left on Lake Margaret Drive, then turn right on Conway Road. Continue south approximately 3 miles to the Extension Education Center at 6021 S. Conway Rd.

From east Orange County: Take Colonial Drive west to Semoran Blvd / 436 and turn left. Continue south for approximately 5 miles, then turn right on Hoffner Road. Turn left onto S. Conway Road. Continue south approximately 0.8 miles to the Extension Education Center at 6021 S. Conway Rd.

From south Orange County: Take Sand Lake Road to Jetport Drive (near Boggy Creek Road). Go straight on Jetport Drive, then turn left onto Tradeport Drive. Tradeport Drive becomes S. Conway Road. Continue north approximately 0.9 miles to the Extension Education Center at 6021 S. Conway Road.