



UNIVERSITY OF  
FLORIDA

IFAS EXTENSION

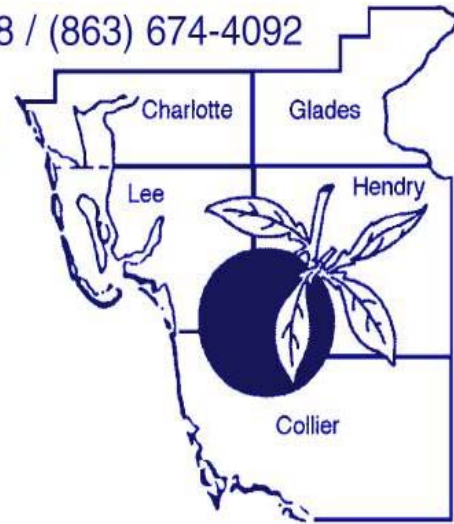
Henry County Extension / P.O. Box 68 / LaBelle, Florida 33875-0068 / (863) 674-4092

# Flatwoods Citrus

Vol. 9, No. 11

November 2006

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



## U P C O M I N G      E V E N T S

### MANAGEMENT OF THE CITRUS PSYLLID—

The researcher experience and the grower experience

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

Location: Immokalee IFAS Center

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

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

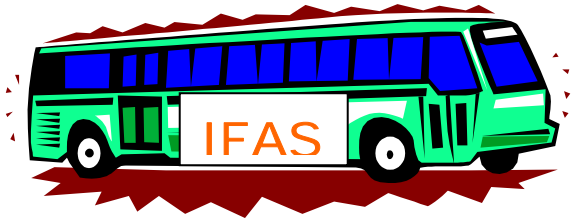
#### Dear “Flatwoods Citrus” newsletter subscriber:

Last month, I enclosed a survey from and an evaluation form (pages 19 & 20).

If you have not filled them out and sent them back to me in the postage-paid envelope, **please do so as soon as possible.** Thank you!

**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/> You can also find all you need and all links to the University of Florida Citrus Extension and the Florida Citrus Industry**

# HENDRY COUNTY EXTENSION AG TOUR



**Saturday, 2 December 2006**  
**For more information or to sign up,**  
**call 863 674 4092**

## WORKSHOPS ON SCOUTING FOR CITRUS PESTS AND DISEASES

### in Spanish

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

Location: LaBelle Extension Office

Speakers: **Drs. Stansly & Timmer**

3 CEUs for Pesticide License Renewal

3 CEUs for Certified Crop Advisors

### in English

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

Location: Immokalee IFAS Center

Speakers: **Drs. Stansly & Timmer**

3 CEUs for Pesticide License Renewal

3 CEUs for Certified Crop Advisors



## EXOTIC CITRUS DISEASES NOT HERE YET IN FLORIDA

**Citrus variegated Chlorosis (CVC)**

**Leprosis**

**Stem Pitting Tristeza**

**Black spot**

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

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

Location: Immokalee IFAS Center.

2 CEUs for Pesticide License Renewal

2 CEUs for Certified Crop Advisors

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

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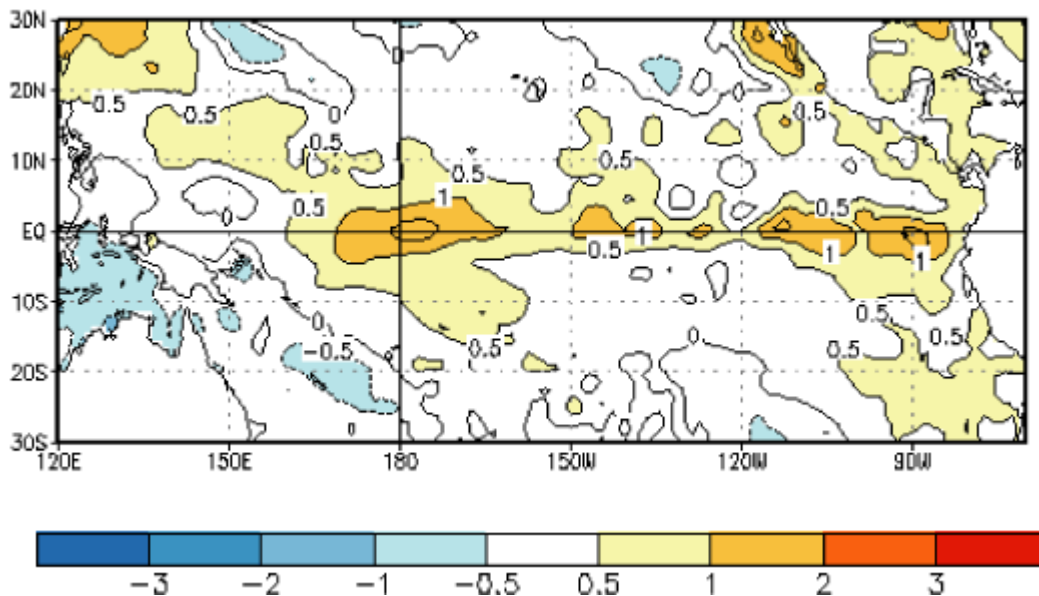
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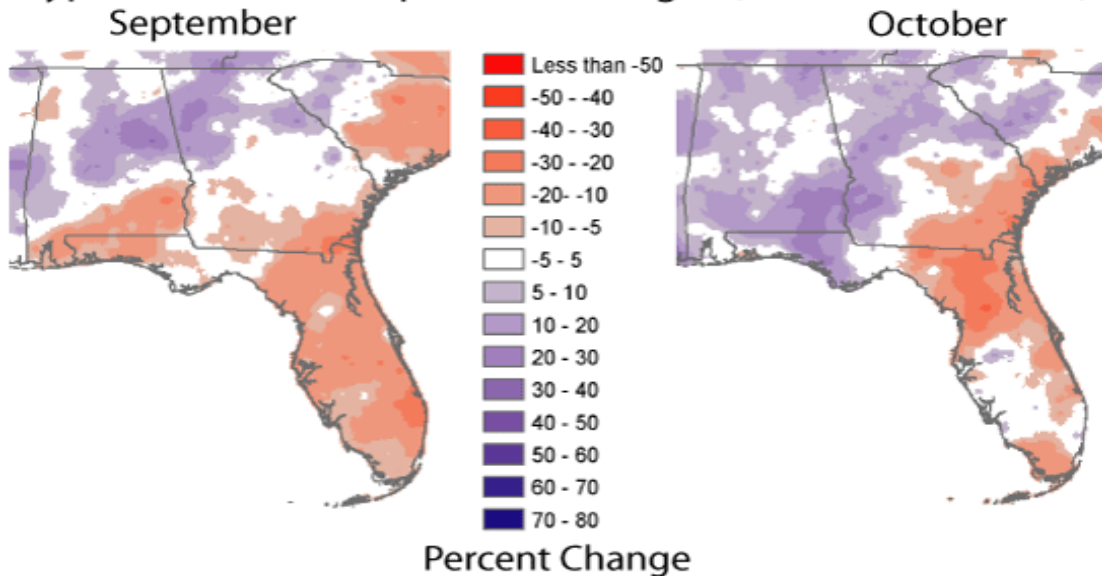
**El Niño has returned for the first time since 2003 and will have substantial impacts on our climate for the next 3-6 months.** It appears that El Niño has returned for the first time since the weak event of 2002-2003. Unusually warm sea surface temperatures began to appear along the equator around the International Date Line in July and have since spread all the way to the coast of South America. The spread of unusually warm water has taken on the traditional El Niño pattern in the last two weeks. It is very likely that the current El Niño will intensify further and last through the winter of 2007.



**Sea surface temperature anomalies averaged over the last month (C). (Courtesy NOAA CPC)**

**What does El Niño mean for the Southeast in the near future?** While this El Niño event began a little later in the year than most warm events, summer/fall is the usual development season when sea surface temperatures may rise and spread across the Pacific. El Niño normally reaches peak intensity and coverage in the winter months. Because of this seasonality of El Niño, the first impact felt in the Southeast U.S. is the relative inactivity of the hurricane season. In spite of predictions to the contrary, 2006 has so far been a quiet tropical season and many are blaming the developing El Niño. El Niño is known to create an environment of high shear (winds changing with height) over hurricane formation regions in the Atlantic, Caribbean, and Gulf of Mexico that hinders hurricane development. With El Niño continuing to grow and with the hurricane season over half over, we expect the remainder of the hurricane season to continue below average activity.

## Typical El Niño Precipitation Changes (El Niño vs. Neutral)



### ***Typical El Niño precipitation patterns for Sept. and Oct. in percent change (%)***

Partially due to the expected decrease in tropical activity, El Niño actually brings drier than normal conditions (20% - 30% less rain than normal) to the Florida, southern Alabama, and southern Georgia in the months of September and October. Rainfall from tropical systems is an integral component of the climate of the Southeast in the fall, which is otherwise fairly dry without the impact of a tropical system. The maps above show the average rainfall departures from normal (neutral) for the months of September and October. El Niño does not have much influence on temperatures during these months.

**El Niño and our winter climate:** Once the colder months arrive (November - March), the classic El Niño climate patterns that we are familiar with should establish themselves and control our weather over that time. El Niño is known to bring more frequent storms, excessive rainfall, and cooler temperatures to Florida and coastal Alabama and Georgia. The graphic below shows that Florida can expect 40% - 60% more rainfall than normal in the winter months. It is believed that the increase in rain and cloudiness associated with El Niño causes average temperatures to be cooler than normal during the winter months. These cooler temperatures result in greater chill accumulations over the course of the season. While average temperatures are often cooler, El Niño actually reduces the risk of severe cold outbreaks in Florida and the Southeast. The strong subtropical jet stream that is typical of El Niño acts to "block" the intrusions of cold arctic air masses.

**Current Conditions:** After a very dry spring and early summer for most of the area, more plentiful rainfall has returned to the Southeast in August and September. As is the usual case for summer precipitation, coverage and accumulations have been highly variable throughout the region. Southwest Florida has received soaking rains from tropical storms Alberto and Ernesto along with frequent thundershowers, resulting in a surplus of summer rain. Other areas, the western Panhandle of Florida and southeast Alabama in particular, have remained rather dry. While not offering immediate relief, El Niño should help these areas catch up in the coming winter.

# LOVEBUGS IN FLORIDA

By D. E. Short, Entomologist, UF, IFAS

'Lovebugs' are small black flies with red thoraxes. Males are 1/4 inch, and females are 1/3 inch in length. These flies are members of the family Bibionidae and are known as March flies. Several species of March flies are native to Florida, however, Lovebugs, *Plecia nearctica* Hardy are recent invaders from the west.



Southern Louisiana experienced flights of lovebugs during the 1920's. The species was described by Hardy in 1940 from specimens collected in Mississippi. First reports of their presence in Florida were made in 1947 from Escambia County. Subsequent reports indicate their presence in Leon County in 1955-56 and Alachua - Marion Counties in 1964-65. Since that time, flights have progressively moved southward. In 1974, specimens were collected in Homestead. Lovebugs also have moved northward and have been reported from Georgia and Charleston, South Carolina. Two flights of lovebugs occur each year. The spring flight occurs during late April and May. A second flight occurs during late August and September. Flights extend over periods of 4 to 5 weeks. Mating takes place almost immediately after emergence of the females. Adult females live only 2-3 days.

## Larvae Aid Growing Plants



Female lovebugs lay from 100 to 350 eggs which are deposited beneath decaying vegetation. Larvae (immature stage) feed on decaying plant material and live on the soil surface just beneath the decaying organic matter. Larvae perform a beneficial function by converting the plant material into organic components which can again be used by the growing plants. After larvae mature, they transform into pupae. The pupal stage requires about 7 to 10 days.

Adult lovebugs are harmless and do not sting or bite. They feed on the nectar of various plants, especially sweet clover, goldenrod and brazilian pepper. Usually, lovebug flights are restricted to daylight hours and temperatures above 68°F. At night lovebugs rest on low growing vegetation.

## Lovebugs Hinder Motorists

Lovebugs are a considerable nuisance to motorists. They congregate in unbelievable numbers along highways and the insects spatter on the windshields and grills of moving trucks and automobiles. Windshields become covered with the

fatty remains, and vision is obscured. During flights, the flies clog radiator fins causing cars to overheat. They also get into refrigeration equipment on trucks causing them to malfunction. The fatty tissue will cause pitting of the car's finish if it is not removed within a few days. Flies enter cars and sometimes drivers and passengers soil their clothing by sitting on lovebugs. They are also a considerable nuisance to fresh paint. The flies enter houses under construction in such numbers that carpenters refuse to work. Beekeepers complain because worker bees do not visit flowers that have been infested with the flies.

A number of insecticides have been evaluated for effectiveness in controlling lovebug larvae and adults. Most of them kill lovebugs but are impractical because high populations of the insects occur over vast areas of the state. A vacuum cleaner can be used to remove adults from confined areas, such as in buildings and vehicles.

### **Predators Reduce Lovebug Flights**

During the past several years, both the April-May and August-September lovebug flights have been substantially reduced in North Central Florida. This reduction in the population is partly attributed to predators. Larvae aggregate in extremely high numbers in pastures and other grassy habitats. This makes them vulnerable to foraging birds. Lovebug larvae have been found in the gizzards of robins and quail. Although examinations of the stomach contents of armadillos have been negative, observations suggest that

they, too, may be excellent predators of the larvae.

Laboratory studies using invertebrate predators found in lovebug infested pastures indicated they were voracious predators too. These included earwigs, two species of beetle larvae and a centipede.

There are several things that can be done to lessen the problem facing motorists. By traveling at night motorists can avoid the insects; lovebugs reach peak activity at 10:00 am and stop flying at dusk.

Traveling at slower speeds will reduce the number of bugs that will be spattered. A large screen placed in the front of the grill will keep the radiator fins from clogging, and will protect the finish on the front of the car. If a large screen is not used in front of the grill, at least place a small screen behind the grill in front of the radiator.

Spattered bugs should be washed off the car as soon as possible. Lovebugs are more easily removed, and the chance of damaging the car's finish is lessened if the car has been waxed recently. When the remains are left on an unwaxed car for several days, the finish will often be permanently damaged. Soaking for several minutes with water aids in their removal. When lovebugs are numerous, some motorists spread a light film of baby oil over the front of the hood, above the windshield and on the grill and bumper. This practice will make their removal a simpler task.



## BIOSOLIDS

Biosolids are nutrient-rich organic materials. Although classified as a waste material, biosolids can be beneficial to agriculture because they contain many essential plant nutrients and organic matter. Following proper treatment and processing, biosolids can be recycled as fertilizers or soil amendments to improve soil chemical and physical properties with negligible negative impacts.

Application of organic wastes like biosolids to agricultural land provides several benefits, including: 1) Reduction of the chemical fertilizer requirement, since biosolids are sources of many plant nutrients; 2) Improvement of soil chemical properties by increasing the nutrient pool, promoting an increase in pH of acid soils, and increasing soil buffering capacity; 3) Improvement of soil physical properties, such as structure and particle aggregation, aeration and drainage, and water retention; 4) Enhancement of biological properties by increasing microbial communities and soil fauna and contributing to disease suppression.

Biosolids are generated when solids, accumulated during domestic sewage processing, undergo pathogen control treatment that meets federal and state sewage sludge regulatory requirements before being applied to the soil. The biosolids of today are cleaner and of better quality than those that were produced one to two decades ago.

Agricultural uses of biosolids that meet strict quality criteria have been shown to produce improvements in crop growth and yield when applied at recommended rates. Nutrients found in biosolids, including nitrogen, phosphorus, sulfur, calcium, magnesium and micronutrients, are necessary for crop growth and production. Most biosolids contain micronutrients in a natural organically-chelated form. Crops use nutrients from biosolids efficiently because they are released slowly as the biosolids

break down. Biosolids application does not necessarily replace inorganic fertilization. Organic wastes lack the proper balance of nutrients necessary to fully meet crop requirements. They can, however, be used in conjunction with fertilizers to reduce chemical fertilizer inputs. At high rates, the organic matter in biosolids can improve water and nutrient holding capacities of the soil.

Decades of worldwide research have demonstrated that biosolids can be safely used in agriculture. Biosolids are land-applied across most of the state of Florida without restriction beyond the basic federal and state guidelines. However, since biosolids contain considerable amounts of phosphorus, application has recently been limited or banned outright in phosphorus-sensitive regions (e.g. the area adjacent to Lake Okeechobee) due to water quality concerns.

Economic values of biosolids are determined by the marketplace of goods and services for which people are willing and able to pay. Grower should be willing to pay for biosolids only if the product increases overall net returns. An increase in net returns can be achieved by reducing production costs and/or increasing crop yield or quality. Growers and farmers purchase fertilizers and liming materials, and the extent to which biosolids provide plant nutrients and/or liming capacity provides a basis for valuing biosolids.



**This is a summary of three publications written by Obreza, Muchovej, and Roka.**

## DEGREENING FLORIDA FRESH CITRUS FRUIT

In Florida, early maturing citrus cultivars usually meet legal maturity standards before the peel becomes yellow or orange and therefore require degreening. Degreening involves the use of ethylene gas in packinghouses to destroy the chlorophyll and allow the yellow or orange color to predominate on the peel.

### *Recommended Degreening Conditions*

Temperature. Temperatures of 82 to 85°F (28 to 29°C) are recommended for degreening. Both higher and lower temperatures tend to slow the degreening process.

Ethylene. Five parts per million (5 ppm) ethylene is adequate for the maximum degreening rate when using recommended conditions. Some packers are successfully using 3 ppm ethylene.

Humidity. Relative humidity (RH) of 90%-95% is recommended for degreening and can be maintained by steam or pneumatic atomizing nozzles, which mix water with air.

Ventilation. Fresh air should enter the room at the rate of one air change per hour, based on the volume of the empty room. Fresh air will prevent accumulation of carbon dioxide (CO<sub>2</sub>), which is given off by the fruit. The rate of degreening is reduced if the CO<sub>2</sub> concentration reaches 0.1% and will nearly stop at 1.0% or above.

Air circulation. Air movement should be a minimum of 10 cubic feet per minute (CFM) per field box or 100 CFM per pallet box. This air flow rate is necessary to maintain uniform temperature, ethylene concentration, and humidity at the surface of each fruit in the degreening room.

### *Operational Considerations*

Degreening with ethylene increases decay. Fruit should not be exposed to concentrations greater than the 5 ppm needed for degreening. Furthermore, fruit should not be exposed to ethylene longer than necessary to obtain degreening.

Degreening tests should be made with sample pickings of fruit early in the season to determine if the peel is mature enough to degreen properly. This is especially important with early-maturing, mandarin-type fruits. If mandarins require longer than 36 hours to degreen, decay will be excessive.

### *Safe Handling of Ethylene*

Ethylene gas used for degreening is sold in compressed gas cylinders containing slightly less than 100% ethylene and has a mild sweetish smell. Some packers use ethylene generators. Although non-toxic, ethylene can cause asphyxiation under very high concentrations as the gas displaces oxygen in the atmosphere. Ethylene is explosive at concentrations between 3.1% (31,000 ppm) and 32% (by volume) in air. These concentrations are extremely high compared to normal citrus degreening concentrations of 5 ppm but may occur through accidental increases in ethylene flow or leaks in ethylene lines or regulators. Be sure to follow these safety rules when working with ethylene:

- Do not move compressed gas cylinders without the cover cap in place (it protects the valve). Only remove the cap when the cylinder is in place and ready to be used. There are vivid stories of cylinders, turned into a rocket when the valve stem breaks.
  - Securely fasten cylinders to walls, holding cages or other non-tip structures.
  - Check for gas leaks using a solution of soapy water. If the cylinder is leaking, contact your service provider and have it replaced.
  - Verify that ethylene flow regulators are operating correctly.
  - Keep flames or spark producing equipment away from degreening rooms and ethylene cylinders. Post and observe no smoking signs in these areas. All piping should be grounded to prevent electrostatic discharge.
  - Check ethylene flow often to ensure safe concentrations are maintained. Some ethylene monitoring equipment will sound an alarm if concentrations become too high.
- This is a summary of a publication written by Ritenour, Miller and Wardowski.

# FERTIGATION

It is the application of soluble fertilizers through irrigation systems.

Some advantages of fertigation:

- ◆ Fertilizer is placed in the wetted area where feeder roots are extensive,
- ◆ Fertilizer may be applied more frequently in small amounts so that it is available when the tree needs it,
- ◆ Increased fertilizer application frequency can increase fertilizer efficiency and reduce leaching,
- ◆ Application cost is much lower than that of dry or foliar fertilizer application.

*For microirrigation to be most effective, water and nutrients should be applied simultaneously.*

*Fertilizer efficiency and fertilizer cost savings of fertigation are greatest for young trees.*

*Fertigation is not recommended with non-uniform, poorly designed irrigation systems.*

*It should be kept in mind that fertilizer and water is wasted when fertigating a very wet soil to keep up with a programmed fertigation schedule because water and nutrient uptake are drastically reduced under waterlogged soil conditions.*

*It is a must that backflow prevention devices be used to prevent fertilizers to contaminate the water supply.*

Growers must determine: (1) which fertilizer formulations are most suitable for injection, (2) the most appropriate fertilizer analysis for different age trees and specific stages of growth, (3) the amount to apply during a given fertigation event, and (4) the timing and frequency of applications.

## Liquid Fertilizer Formulations

Commercially prepared liquid fertilizer solutions (true solutions, not suspensions) that are completely water-soluble should

be used. Although transportation costs make liquid formulations a little more expensive, they save time and labor and help prevent problems associated with poorly made "home mixes." Even with liquid formulations, growers should be careful when injecting fertilizers containing phosphorus or sulfur (S) into microirrigation systems. Phosphorus and S may react with calcium and/or magnesium in the irrigation water to form mineral precipitates that could clog emitters.



To avoid emitter plugging, a properly designed microirrigation system should include:

- ◆ A method of filtering irrigation water,
- ◆ A means of injecting chemicals into the water,
- ◆ Equipment for flushing the system,
- ◆ And in some cases a settling basin to allow aeration and the removal of solids.

## Injection Duration

*It is very important to determine how long it takes for the fertilizer to travel to the farthest emitter because the system has to be flushed for at least that length of time.*

A minimum injection time of 45 to 60 minutes is recommended. This time is sufficient for uniform distribution of nutrients throughout the fertigation zone. Limit injection time to prevent the application of too much water. Excessive water leaches plant nutrients below the root zone. As a general rule, a "reasonable" maximum duration of injection should not exceed two hours per zone.



**FROM: Ron Hamel, Executive Vice President**

**SUBJECT: GULF CITRUS GROWERS BMP IMPLEMENTATION  
GULF CITRUS COST/SHARE PROGRAMS**

Citrus BMPs

<http://citrusbmp.ifas.ufl.edu/>

Gulf Citrus BMPs

<http://citrusbmp.ifas.ufl.edu/gulfcoast/index.html>

The Gulf Citrus Growers Association, with the cooperation and assistance of the Florida Department of Agriculture's Office of Water Policy (FDACS) and the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) is in the process of implementing the Best Management Practices (BMPs) Manual here in Southwest Florida. "Gulf Citrus" members are encouraged to participate in this extremely valuable program to achieve water quality and quantity benefits in the region. In addition, state and federal funds have been made available to growers to implement many of the BMPs outlined in the manual. The FDACS has reported that \$227,700 has been appropriated in state funds in conjunction with this program, and those funds must be utilized here in our region! We have also been working through the recently formed Southwest Florida Resource Conservation and Development Council (SWFRC&D) here in the region to facilitate the cost/share program and simplify the process.

To get a copy of "Gulf Citrus Cost/Share Procedures" booklet, go to:

<http://citrusbmp.ifas.ufl.edu/website%20docs/Gulf%20Citrus%20Cost%20Share%20Handbk.pdf>

For cost share application, go to:

<http://citrusbmp.ifas.ufl.edu/website%20docs/Gulf%20Citrus%20Cost%20Share%20Application.pdf>

or go to your UF-IFAS Extension Office. The booklet outlines the details of participation in the program. It provides all the information you need to enroll in the program, and sign-up for cost/share funding. Also, our "BMP" team has arranged for assistance in helping growers to complete the "paperwork" and navigate through the process! Our goal is to implement the best citrus BMP program in the state!

**NOW IS THE TIME TO TAKE ACTION! PLEASE TAKE ADVANTAGE OF THIS PROGRAM!**

## NRCS OFFERS COST SHARE ON WINDBREAKS FOR CITRUS



The USDA Natural Resources Conservation Service (NRCS) is offering a new cost share initiative under the Environmental Quality Incentive Program (EQIP) for windbreaks to assist with control of windborne diseases. FL NRCS is working with the National Office to be able to provide up to 75% cost share for windbreaks. The following is a list of species that NRCS will assist with providing cost share on:

- Slash & Sand Pine
- Eucalyptus
- Red Cedar
- Bamboo
- Walter's & Sweet Viburnum
- Saw Palmetto
- Crepe & Wax Myrtle
- Simpson's Stopper

If interested contact your local NRCS Office prior to December 15 2006, the end of the batching period for Fiscal Year 2007.

## 2005-2006 Florida Citrus Prices (\$)

<b>Cultivar</b>	<b>Average On-Tree Prices &amp; Returns/Box</b>		
	<b>Fresh</b>	<b>Processing</b>	<b>All</b>
Early/Mid orange	6.20	4.41	<b>4.53</b>
Valencia orange	5.00	6.47	<b>6.42</b>
White grapefruit	16.09	7.28	<b>9.22</b>
Colored grapefruit	13.40	5.56	<b>8.92</b>
Early tangerines	15.70	-0.42	<b>10.40</b>
Honey tangerine	11.30	3.39	<b>8.45</b>
Temples	6.60	1.70	<b>3.16</b>
Tangelos	12.50	0.79	<b>5.37</b>



## Florida Citrus Production (Million Boxes)

<b>Cultivar</b>	<b>Production</b>				<b>Forecast</b>
	<b>1997-98</b>	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>
Early/Mid orange	140.0	126.0	79.1	75.0	72.0*
Valencia orange	104.0	116.0	70.5	72.9	63.0
All oranges	244.0	242.0	149.6	147.9	135.0
All grapefruit	49.55	40.9	12.8	19.3	26.0
Temples	2.25	1.40	0.65	0.70	*
Tangelos	2.85	1.00	1.55	1.40	1.1
All tangerines	5.2	6.5	4.45	5.5	4.6
Limes	0.44				
Lemons	0.12				
<b><i>Total</i></b>	<b>304.450</b>	<b>291.800</b>	<b>169.05</b>	<b>174.8</b>	<b>166.7</b>

\*The early-midseason-Navel forecast of 72.0 million boxes includes Temples.



United States Department of Agriculture

National Agricultural Statistics Service

From the Florida Agricultural  
Statistics Service  
**CITRUS, OCTOBER FORECAST**

**ALL ORANGES 135.0 MILLION  
BOXES**

The 2006-07 Florida all orange forecast released today by the USDA Agricultural Statistics Board is 135.0 million boxes. This is nine percent less than the final utilization of last season. The total is divided into the early-midseason-Navel forecast of 72.0 million boxes, including Temples for the first time, and the late season (Valencia) forecast of 63.0 million boxes.

All forecasts are based on tree inventory, fruit counts, and fruit measurements made by the National Agricultural Statistics Service (NASS), Florida Field Office. Analysis of these factors projects the quantity of fruit to be utilized during the season, including slightly over one percent for non-certified use.

Weather conditions have been atypical this year, with amounts of rainfall well below average, in conjunction with many hot days over the past few months. Growers are irrigating on a regular basis in order to keep trees and fruit quality in overall good condition.

Non-regular bloom fruit counted during the limb count survey averaged slightly over 1.5 per tree. Of the non-regular bloom, July or later bloom fruit averaged less than one per tree, and is not used for expansion purposes in determining the forecast.

Current fruit sizes of oranges are slightly less than the 10-season average, with the exception of Navels. The average fruit per tree, from the summer limb count survey, is the lowest on record for Valencia and midseason oranges reflecting the light

bloom period in the spring of this year. Cold temperatures in mid-February interrupted and adversely affected the bloom cycle, especially in the Southern growing area. Stress to trees and root systems from last year's hurricane may have contributed to the low fruit set.

The fruit population is 28 percent less than last season as a result of the fruit per tree and bearing trees. A shift among age groups brings the majority of the Valencia orange fruit population into age group 4 (14-23 years old), 56 percent this season compared to 49 percent last season.

**EARLY-MIDSEASON-NAVEL 72.0  
MILLION BOXES**

The early-midseason-Navel forecast is 72.0 million boxes, including Temples. Of this total, 3.3 million are of the Navel variety. If realized, the 72.0 million boxes (including Temples for the 2006-07 season only) would be four percent less than utilized last season, 43 percent less than the disaster-free 2003-04 season, and 49 percent below the high of 140.0 million boxes recorded in 1997-98.

**NAVEL ORANGES 3.3 MILLION  
BOXES**

The Navel forecast at 3.3 million boxes is down 13 percent from 2005-06 and up 32 percent from the prior season. Except for the hurricane-affected crop of 2004-05, this forecast is below the utilization for all seasons since 1989-90 and just 52 percent of the record production of 6.4 million boxes attained in 1996-97. Average fruit per tree at 342 is down 21 percent from last season and 40 fewer pieces than the mean of the past 10 non-hurricane seasons. Fruit size is slightly above average and the projected fruit per box at harvest is 132. Current loss from droppage is low and it is anticipated

that 90 percent of the initial fruit population will be available for harvest. Limited quantities are being harvested.

### **VALENCIA ORANGES 63.0 MILLION BOXES**

The Valencia forecast of 63.0 million boxes is 14 percent less than last season and the lowest since the 1991-92 season. If realized, this forecast would equal 54 percent of the record 116.0 million boxes utilized in 2003-04. At 37.1 million bearing trees, the total used in the forecast is less than one percent fewer than the adjusted trees that produced last season's crop and eight percent less than two seasons ago.

Average fruit per tree at 428 is the lowest on record dating back to the 1964-65 season. The previous low record of 524 fruit per tree set in 2002-03 is 96 pieces of fruit higher than this season.

### **TANGELOS 1.1 MILLION BOXES**

The tangelo forecast of 1.1 million boxes is 21 percent less than the 1.4 million boxes utilized last season and 29 percent below the 1.55 million boxes harvested in 2004-05. Objective surveys indicate the fruit size is smaller than average and project that 246 pieces will be required to fill a 90-pound equivalent box, almost 43 pieces less than last season.

### **ALL GRAPEFRUIT 26.0 MILLION BOXES**

The total Florida all grapefruit crop is forecast at 26.0 million boxes, 35 percent more than last season's utilization of 19.3 million boxes. With the exception of the last two seasons' hurricane-reduced crops, this grapefruit crop is forecast to be the lowest since the 24.2 million boxes in 1949-50. The total is comprised of 9.0 million boxes of white grapefruit and 17.0 million boxes of colored varieties.

Except for the two previous seasons, the **white** category, including seedy, at 9.0 million boxes is projected to be the lowest in over 75 years. White grapefruit bearing trees used in this forecast are estimated to

have declined by three percent from last season's revised bearing tree numbers and 21 percent from two seasons ago. The average fruit per tree is slightly less than the mean in the 10-season series from 1994-95 through 2003-04.

Current fruit sizes are slightly below average, and the rate of growth measured in last month's survey indicates that final sizes will be about average. The forecast of **colored** varieties at 17.0 million boxes is 33 percent more than last season.

### **ALL TANGERINES 4.6 MILLION BOXES**

The forecast of all tangerines is 4.6 million boxes, down 16 percent from last season, but three percent more than in 2004-05. The record crop of 7.0 million boxes was produced in 1999-00. Comprising this forecast are 2.4 million boxes of the **early** varieties (**Fallglo** and **Sunburst**) and 2.2 million boxes of the later maturing **Honey** variety.

**Fallglo** bearing trees are down almost six percent from last season to 249 thousand. Fruit per tree at 696 is down six percent, but above the average of recent seasons. Fruit sizes are below the minimum of the past 10 non-hurricane seasons. Fruit per box is projected at 281 pieces per box or 36 more than last season. Current droppage is near minimum and is expected to finalize below the level of the past six seasons.

**Sunburst** bearing trees, which account for 80 percent of the early tangerine bearing trees, are down almost five percent to 990 thousand. Although fruit per tree is down 408 pieces from last season's record 1043, the 635 is above the mean for non-hurricane seasons. Fruit per box at 306 is close to the non-hurricane season average.

**Honey** tangerines are forecast at 2.2 million boxes, 17 percent below last season and 24 percent below the record 2.9 million boxes of 2003-04. Fruit size is below average but following a normal growth curve.





From the Florida Agricultural Statistics Service

*Florida Citrus Production (Million Boxes)*

Cultivar	Production					
	1997-98	1999-00	2002-03	2003-04	2004-05	2005-06
Early/Mid orange	140.0	134.0	112.0	126.0	79.1	75.0
Valencia orange	104.0	99.0	91.0	116.0	70.5	72.9
All oranges	244.0	233.0	203.0	242.0	149.6	147.9
All grapefruit	49.55	53.4	38.7	40.9	12.8	19.3
Temples	2.25	1.95	1.30	1.40	0.65	0.70
Tangelos	2.85	2.2	2.35	1.00	1.55	1.40
All tangerines	5.2	7.0	5.5	6.5	4.45	5.5
Limes	0.44	0.60				
Lemons	0.12					
<b><u>Total</u></b>	<b>304.450</b>	<b>298.15</b>	<b>250.850</b>	<b>291.800</b>	<b>169.05</b>	<b>174.8</b>

Production of Florida citrus in the 2005-06 season was 174.8 million boxes, up three percent from the 2004-05 season, and down 40 percent from the 291.8 million boxes in the 2003-04 season. The primary reason for the reduced crop is fruit loss due to Hurricane Wilma. Production is five percent lower for early-midseason-Navel oranges and three percent higher for Valencia oranges. The all orange crop production, at 147.9 million boxes, is the lowest since the 139.8 million boxes in 1991-92. Navel production, at 3.8 million boxes, is 52 percent higher than in 2004-05. Navels, primarily a fresh use crop, comprised 58 percent of the total early midseason-Navel fresh shipments. Other than 2004-05, all grapefruit production at 19.3 million boxes is the lowest since the 1941-42 season's 19.2 million boxes. Increases in production of specialty fruit were recorded for all types except tangelos. The \$1,043.3 million preliminary value of the 2005-06 citrus crop is up 38 percent from the 2004-05 season's revised value of \$754.2 million, and the highest since the 1999-00 season value of \$1,108.5 million. On-tree values are higher for all varieties of citrus except colored grapefruit and Honey tangerines. Price-per-box is higher for all varieties except white and colored grapefruit and Honey tangerines.

## Southwest Florida Citrus Production (Boxes)

SEASON	Charlotte	Collier	Glades	Hendry	Lee	Total
2002-2003	6,066,000	10,159,000	3,398,000	29,290,000	3,238,000	52,151,000
2003-2004	7,214,000	11,413,000	3,806,000	33,852,000	3,511,000	59,796,000
2004-2005	6,119,000	10,478,000	3,517,000	29,607,000	2,861,000	52,582,000
2005-2006	2,246,000	6,134,000	1,740,000	15,752,000	1,806,000	27,678,000
% Reduction from 2005-06 compared with 2004-05	<b>63.3</b>	<b>41.5</b>	<b>50.5</b>	<b>46.8</b>	<b>36.9</b>	<b>47.4</b>

Production of SW Florida citrus in the 2005-06 season was 27.678 million boxes, down 47.4 percent from the 52.582 million boxes in the previous season (2004-05). The primary reason for the reduced crop is acreage loss due to citrus canker and urbanization and fruit loss due to Hurricane Wilma.



## Southwest Florida Citrus Acreage and Tree Numbers

	<b>1970</b>	<b>1990</b>	<b>2000</b>		<b>2004</b>		<b>2006</b>	
	Acres	Acres	Acres	Trees (million)	Acres	Trees (million)	Acres	Trees (million)
Charlotte	6,734	11,718	21,756	3.201	20,183	2.999	11,883	1.709
Collier	5,052	23,565	35,302	5.209	34,878	5.101	33,394	4.882
Glades	1,572	7,523	10,506	1.692	10,103	1.641	8,555	1.390
Hendry	22,447	73,754	99,437	15.325	93,155	14.298	79,726	12.281
Lee	7,439	9,692	11,594	1.626	11,067	1.549	10,658	1.489
<b>SW FL Total</b>	<b>43,244</b>	<b>126,252</b>	<b>178,595</b>	<b>27.053</b>	<b>169,386</b>	<b>25.588</b>	<b>144,216</b>	<b>21,751</b>
State of Florida	941,471	732,767	832,275	106.679	748,555	97.945	621,373	81,909
<b>SW FL (%)</b>	<b>4.6</b>	<b>17.2</b>	<b>21.5</b>	<b>25.4</b>	<b>22.6</b>	<b>26.1</b>	<b>23.2</b>	<b>26.6</b>

In **1970**, the Southwest Florida Citrus Acreage was 43,244 (**less than 5%** of the State of Florida Total Citrus Acreage ‘941,471’).

Since **1998**, in Southwest Florida, Citrus Acreage has been **over 20%** of the State of Florida Total Citrus Acreage and the Number of Citrus Trees is **over 25%** of all Citrus Trees in the State.

# Flatwoods Citrus

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Multi-County Citrus Agent  
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P.O. Box 68  
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## **Racial-Ethnic Background**

\_\_ American Indian or native Alaskan

\_\_ Asian American

\_\_ Hispanic

\_\_ White, non-Hispanic

\_\_ Black, non-Hispanic

## **Gender**

\_\_ Female

\_\_ Male