

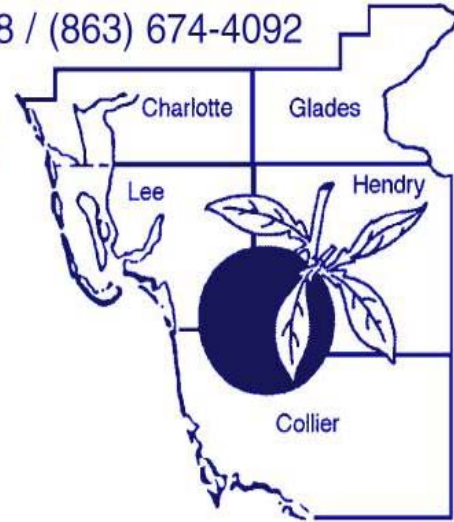


UNIVERSITY OF  
FLORIDA

IFAS EXTENSION

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

# Flatwoods Citrus



Vol. 8, No. 12

December 2005

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



E-mail: [maz@ifas.ufl.edu](mailto:maz@ifas.ufl.edu)

## U P C O M I N G    E V E N T S

### **BMPS FOR CITRUS NUTRIENT MANAGEMENT**

- Update on citrus fertilizer management & BMPs for citrus fertilizer programs by [Tom Obreza](#)
- Nutritional recommendations for calcareous soils and sand soaked areas by [Kelly Morgan](#)
- Nutrient Management BMPs checklist & cost share opportunities by [Holly Chamberlain](#)

Date: Tuesday, **December 20, 2005** 10:00 AM - 12:00 Noon

Location: SW Florida Research & Education Center, Immokalee

2 CEUs for Certified Crop Advisors (CCAs)

Sponsor: **Robert Murray, Florida Favorite Fertilizers**

Following the seminar, we are planning a free lunch (Compliments of **Florida Favorite Fertilizers**). To reserve lunch, call **Carol** at 863 674 4092 no later than 19 Dec. 2005 or send an e-mail to [maz@ifas.ufl.edu](mailto:maz@ifas.ufl.edu)

**If you want to print a color copy of the Flatwoods Citrus Newsletter, get to the [Florida Citrus Resources Site](http://flcitrus.ifas.ufl.edu/) 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 Office, LaBelle*

Workshop on scouting for citrus insect pests and diseases. **CEUs day!**

Date: Tuesday, January 10, 2006, 9:00 AM – 3:00 PM

Speakers: **Drs. Pete Timmer, Steven Rogers, and Phil Stansly**

5 CEUs for Pesticide License Renewal, 5 CEUs for Certified Crop Advisors

Sponsor: Craig Noll and Gary Simmons, Nufarm Agriculture USA

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

## SCOUTING FOR PESTS AND DISEASES

Florida citrus industry uses sustainable production practices. Florida citrus growers help preserve environmental quality by using many sound cultural practices including integrated pest management (IPM) strategies. IPM depends on grove scouting and close observations to determine the need and timing for pesticide applications as well as modification of cultural practices to minimize damage. Scouting for early warnings of pests and diseases is becoming very important in citrus operation. Scouting not only helps growers control pests more efficiently, but also lowers the use of pesticides and the chances of pesticide resistance. In most cases, there is no way to predict on a seasonal basis the incidence and severity of pests. However, based on grove history and frequent observations, many situations can be reasonably assessed. With most citrus pests, the pressure must be high before economic damage levels on the processing fruit crop are experienced. Pest populations should be suppressed only when high levels of infestation threaten tree vigor and productivity. There are several techniques and procedures for scouting and there are many things to know before scouting. To learn more, you need to attend the workshop on scouting for citrus insect pests and diseases scheduled on Tuesday, 10 January 2006.

THE WEATHER, FLOWER BUD  
INDUCTION, AND CURRENT  
STATUS AFTER THE  
HURRICANES AND  
NEXT YEAR'S FLOWERING,  
FRUIT SET, AND FRUIT YIELD

Date: Tuesday, January 17, 2006, 10:00  
AM – 12:00 Noon

Speaker: **Dr. Gene Albrigo**

2 CEUs for Certified Crop Advisors



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Special Thanks to 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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# FLORIDA CITRUS MUTUAL

PO Box 89 • Lakeland FL 33802 • Phone (863) 682-1111 • Fax (863) 682-1074 • [www.flcitrusmutual.com](http://www.flcitrusmutual.com)

## Update on citrus greening and citrus canker in Florida

### **Information on Greening and Canker, which was compiled at last month's Citrus and Greening Workshop in Orlando.**

The meeting assembled international researchers with specific expertise on canker and greening to discuss the current status of knowledge and to extract information relative to the current Florida situation.

“We have made significant progress this week in better understanding greening and how we must manage this disease,” said Andy LaVigne, Florida Citrus Mutual’s executive vice president/CEO. “We also gained additional scientific information on how other parts of the world suppress and/or eradicate citrus canker.”

#### **Results from the workshop conclude the following regarding greening:**

- Eradication of greening in Florida not likely; disease has spread too far
- Management options include:
  - Industry must have disease-free budwood sources
  - Citrus nurseries must be underscreen and away from groves
  - All nursery and young trees must be kept psyllid free by using insecticides
  - All fruit bearing trees will need to be sprayed to prevent psyllid infestations
- Short-term and long-term research priorities were designated:
  - Develop faster detection method
  - Determine full extent of greening in Florida
  - Determine full host range of non-citrus plants
  - Determine vector (psyllid) control measures and transmission
  - Research sources of resistance



**Results from the workshop conclude the following regarding canker:**

- Delays in program implementation imposed by residential litigation and a series of catastrophic storms during two seasons are unquestionably major setbacks.
- Management options include:
  - Develop a new citrus nursery industry away from citrus producing areas
  - Develop faster way to detect and remove infected and exposed trees needed
  - Increase monitoring of plant movement; new introductions of canker appear to be the result of illegal plant introductions in the private sector
  - Recommend better sanitation protocol to all components of industry
  - New management tool may be defoliation of exposed trees
- Short-term and long-term research priorities were designated:
  - Progress is being made on the early development of canker resistant varieties
  - Transition from eradication to suppression is being evaluated from a scientific perspective.
  - The exotic pest called Asian citrus leafminer has forever changed the epidemiology of canker in Florida for the worse. The situation is not the same as in 1912 and 1986 and is unprecedented.
  - The disease will dictate the use of resistant varieties, windbreaks, copper sprays, leafminer management, etc. as informed by ongoing research.

The purpose of this meeting was to disseminate information on research progress since the First International Canker Research Workshop, which was held in June of 2000, and renew priorities for research based on the current and future status of canker in the Florida and global citrus industry.



# WINTER WEATHER WATCH

From the winter 1970/71 through the winter 1995/96, citrus growers in central Florida used a system based on an electronic answering machine to obtain weather forecasts, extended outlooks, a collection of current conditions on freeze nights and educational information to assist them in coping with cold weather. The information obtained through the system was originated from the National Weather Service (NWS) and retrieved at the Lake County Extension Office by John Jackson and at the Polk County Extension Office by Tom Oswalt. A decision by the NWS administrators in 1996 eliminated the agricultural weather program, which has forced the Extension Service to move to private sources. Since the 1996/97 winter, the Extension Service has started utilizing several private agricultural meteorologists to obtain accurate and reliable weather information. For more information, call John Jackson (352 343 4101) in Lake County or Chris Oswalt (863 533 0765) in Polk County. The Winter Weather Watch starts in mid-November and continues through mid-March. There is a subscription fee of \$100 to get telephone access to the daily weather recordings. The fee for the program goes towards telephone lines rental fees, long distance calls, equipment, weather service fees, and repairs. Weather forecasts are updated daily, seven days a week throughout the winter season. If temperatures of 35F or lower are predicted, the afternoon forecast is recorded also. This service provides timely information to help growers and farmers minimize their damage from frosts and freezes. There is an unlisted telephone number available to subscribers. Subscribers are asked not to give out the telephone number to others outside of their organization. If willing to subscribe, fill out the attached form entitled weather watch to be sent to Bartow and enclose your check in the amount of \$100.

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

It is another tool to provide a reliable source of real-time agricultural weather information from the UF main campus in Gainesville, 10 UF/IFAS Research Centers including the Southwest Florida Research and Education Center in Immokalee, and over 20 more sites that are part of the Network.



Because of the importance of weather in agriculture, every effort is made to make the information available to the grower and other potential groups as soon as possible. Data are collected every 15 minutes and available through the Internet (<http://fawn.ifas.ufl.edu>) and a voice data system by calling the toll free number ((866) 754-5732). The FAWN management tools provide decision support functions to growers, using historical weather data and crop modeling technology to help in both short and long term planning. The Brunt minimum temperature calculator uses the temperatures at sunset to estimate the lowest temperature for any given night. Another tool for shutting down irrigation based on the wet bulb temperature can save a substantial amount of water and money. FAWN also offers several management tools for evapotranspiration calculations, irrigation management, and microirrigation scheduling for citrus. Learn more about them in the download area. FAWN will offer more management tools in the near future.

From

<http://www.agclimate.org>

**General Climate Outlook for the Fall** - The Forecast for the fall in the Southeast calls for the seasonal easing of summer rains, yet a continuing potential for flooding. With the Pacific Ocean in *Neutral* phase (neither El Niño nor La Niña) now and for the foreseeable future, there are no indications that the climate of the next few months will be either wetter, drier, warmer, or cooler than normal. The prediction for an active tropical season leads to the potential for heavy tropical rainfall events as the peak of the tropical season approaches, should one or more systems impact your area. Neutral conditions in the Pacific Ocean also increase the threat for damaging freezes, the extreme events that occur on average once every ten years. For detailed rainfall and temperature predictions for individual counties, see the *climate risk tool* at *AgClimate*:

### Freeze Forecast

**Damaging Freezes are up to three times more likely this winter (2005/2006) than during El Niño or La Niña.**

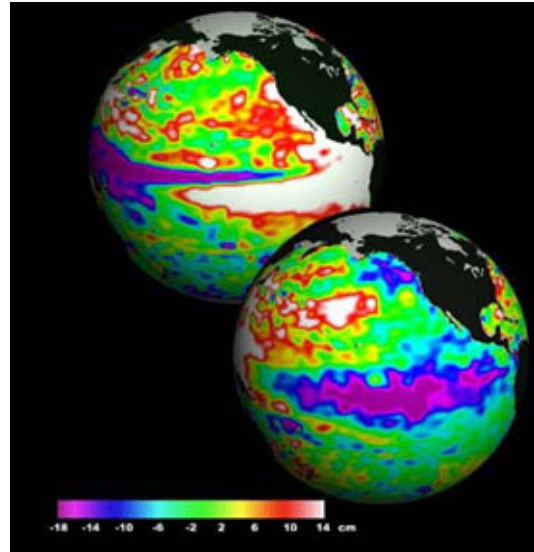
**Background** - Of the dozen or so devastating freezes that have impacted the citrus industry and other agriculture concerns over the last century or in the Southeast, nearly all of them occurred during times of Neutral conditions in the Pacific Ocean. The table below lists the impact freezes and the corresponding Phase of the Pacific Ocean.

#### Freeze Event

December 1894  
February 1899  
December 1934  
January 1940  
December 1962  
January 1977  
January 1981  
January 1982  
December 1983  
January 1985  
December 1989  
January 1997

#### Climate Phase

Neutral  
Neutral  
Neutral  
Neutral  
Neutral  
El Niño  
Neutral  
Neutral  
Neutral  
Neutral  
Neutral  
Neutral



## FAWN Focus: Cold Protection

Contributed by: **John Jackson, FAWN**

Winters in Florida are generally very pleasant with afternoon temperatures in the 70's and minimums ranging from the 40's to 60's. These temperatures are the reason Florida produces winter vegetables, citrus, strawberries, ornamental plants, ferns, and many other crops that cannot be grown in other states during this time of the year. However, Florida is not free from frosts and freezes and many growers must have a cold protection plan in place to deal with the sporadic arrival of cold air. Generally speaking, Central and South Florida growers are more concerned with freeze/frost events than those in the Northern or Western part of the state.

Several methods of cold protection are used in Florida. In a few isolated situations heaters are used to protect high cash crops. A few citrus growers use wind machines during calm nights to mix warm air with cold air that has settled next to the ground. More and more growers are using "heat blankets" to capture heat which has been stored in the ground during the day and is radiated back to the sky at night. This method of cold protection works well with low growing crops, but must



be removed in a relatively short period to avoid damaging the plants.

By far the most widely used method of cold protection is the application of water. Some crops such as ferns and strawberries utilize relatively large amounts of water to protect the entire crop, while citrus uses much smaller application rates per acre to protect the tree trunk and scaffold limbs. When using water the grower must determine what are the critical temperatures for the crop(s) and then turn systems on and off to keep from reaching damaging levels while at the same time minimizing water use.

FAWN has two management tools to assist growers that utilize cold protection methods. The first is the [Brunt Minimum Temperature](#) guide that can be helpful determining if critical temperatures could be reached on a given night. Read the background material to understand the limitations and rationale behind this tool. The second aid is for growers using water for cold protection. The [Wet Bulb Irrigation Cutoff Tool](#) should be used by every grower using water for cold protection.

It will provide a safe cut off temperature based on the moisture content of the air. This tool will save growers millions of dollars and reduce water demand by billions of gallons. Read more about this simple, but critical management tool.

FAWN is working on additional cold protection aids. The wet bulb tool will be tailored for individual crops this season. Forecast information from National Weather Service will be incorporated into the FAWN data package as we move to provide a complete and comprehensive cold protection program for Florida growers.

We have provided some valuable links below. They can help you better understand frost/freeze probabilities and how to deal with cold weather.

[http://fawn.ifas.ufl.edu/focus/cold\\_protection.asp](http://fawn.ifas.ufl.edu/focus/cold_protection.asp)

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## FAWN Station Sites Expansion

FAWN has received a state emergency management grant for expansion of the FAWN system to 34 stations. The additions will be placed primarily in the panhandle to give more complete coverage for the entire state. FAWN data is used by emergency management operations to assist in public safety decisions made by the staff.

### Management Tools

Potato Late Blight Predictor

given a location and "green row" date, the tool suggests a course of action based on FAWN data.

Post Bloom Fruit Drop Calculator

aids in timing of fungicide sprays.

Frost Protection Tool

predicts frost events.

### Database Tools

FAWN is implementing a method for software developers to access FAWN data. FAWN data is available via the web at <http://fawn.ifas.ufl.edu/scripts/FAWNDataServer.asp>. If you do not specify a sql string to execute, the data server returns the latest readings from all stations. Details of the format for the query string and for the data returned is available at [FAWN Data Server](#).

# Minimum Temperature Estimator based on the Brunt equation

<http://fawn.ifas.ufl.edu/scripts/brunt.asp>

## Minimum Temperature Estimator based on the Brunt equation

Sunset time for today, 11/5/2004, is 5:45pm EST.

After sunset, a table of minimum temperatures for all FAWN stations will be displayed here. Temperature information that FAWN uses is not available until sunset. You may use the manual calculator with data from your area.

Air Temperature  °F

Dew point Temperature  °F

**Minimum Temperature**  °F

**Minimum Temperature (muck soil)**  °F

To use the manual calculation method, enter air and dew point temperatures for your area and click on calculate.

# Safe Cutoff Temperature Estimator

<http://fawn.ifas.ufl.edu/scripts/wetbulb.asp>

Safe Cutoff Temperature Estimator  
for irrigation systems used in cold protection  
*all temperature in degrees Fahrenheit*

Critical Temperature

11/5/2004 4:32:36 PM		page automatically refreshes every five minutes because the values will change as air and wet bulb temps change.		
Station	SAFE CUTOFF TEMP	Airtemp	Wetbulb	Dewpoint
ALACHUA	44	66	56	48
APOPKA	45	70	59	52
AVALON	45	70	59	52
BALM	46	70	58	50
BELLE GLADE2	36	72	69	68
BRADENTON	45	70	59	52
BRONSON	44	68	58	50
BROOKSVILLE	44	68	58	50

CARRABELLE	<b>46</b>	68	56	46
CITRA	<b>46</b>	70	58	50
DOVER	<b>45</b>	70	59	52
FORT LAUDERDALE	<b>39</b>	75	70	68
FT PIERCE	<b>38</b>	68	64	63
HASTINGS	<b>42</b>	66	59	54
HOMESTEAD	<b>37</b>	73	71	70
IMMOKALEE	<b>42</b>	73	65	61
JAY	<b>46</b>	64	53	43
KENANSVILLE	<b>43</b>	72	63	57
LAKE ALFRED	<b>45</b>	70	59	52
LIVE OAK	<b>44</b>	66	56	48
MACCLENNY	<b>45</b>	68	57	48
MARIANNA	<b>50</b>	68	52	37
MONTICELLO	<b>44</b>	79	69	64
OCKLAWAHA	<b>44</b>	68	58	50
OKAHUMPKA	<b>45</b>	70	59	52
ONA	<b>46</b>	72	60	52
PALMDALE	<b>44</b>	73	63	57
PIERSON	<b>42</b>	66	58	52
PUTNAM HALL	<b>44</b>	68	58	50
QUINCY	<b>47</b>	66	54	43
SEBRING	<b>46</b>	73	61	54
TAVARES	<b>45</b>	70	59	52
UMATILLA	<b>45</b>	70	59	52

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



# FAWN Interactive Voice Response System

When you travel or are away from your computer, access to the FAWN data is available through your telephone. The Dial-up System is designed to provide you with the following weather information:

Air temperature (°F at 2 meters)

Dewpoint Temperature (°F at 2 meters)

Relative Humidity (percent)

Wind Speed (mph at 10 meters)

Wind Direction (N, NE, E, ... NW)

To use the FAWN Dial-up system:

- Dial the toll-free phone number,
- Press one (1) for the latest weather,
- Enter the three digit weather station number shown in the table to select a location,
- Listen to the latest weather data from FAWN.  
-- OR --
- Press two (2) for the complete station ID listing,

**In-State, Toll-Free Voice Response Phone Number  
(866) 754-5732**

Site	County	Station ID
ALACHUA	ALACHUA	260
APOPKA	ORANGE	320
AVALON	ORANGE	304
BALM	HILLSBOROUGH	350
BELLE GLADE2	PALM BEACH	410
BRADENTON	MANATEE	370
BRONSON	LEVY	230
BROOKSVILLE	HERNANDO	310
CARRABELLE	FRANKLIN	150
CITRA	MARION	250
DOVER	HILLSBOROUGH	360
FORT LAUDERDALE	BROWARD	420
FT PIERCE	ST LUCIE	430
HASTINGS	ST JOHNS	270
HOMESTEAD	DADE	440
IMMOKALEE	COLLIER	450
JAY	SANTA ROSA	110
KENANSVILLE	OSCEOLA	340
LAKE ALFRED	POLK	330
LIVE OAK	SUWANEE	170
MACCLENNY	BAKER	180
MARIANNA	JACKSON	130
MONTICELLO	JEFFERSON	160
OCKLAWAHA	MARION	280
OKAHUMPKA	LAKE	303
ONA	HARDEE	380
PALMDALE	GLADES	460
PIERSON	VOLUSIA	290
PUTNAM HALL	PUTNAM	240
QUINCY	GADSDEN	140
SEBRING	HIGHLANDS	470
TAVARES	LAKE	301
UMATILLA	LAKE	302

# FREEZE PROTECTION

As a means of cold protection, overhead, high-volume sprinklers have been used successfully in citrus nurseries and low-volume microsprinklers have been used to protect young trees in groves. However, success can vary with the type of system, application rates, type of freeze (advective vs. radiative), and severity of the freeze. An advective or windy freeze occurs when a cold air mass moves into an area bringing freezing temperatures.



A radiation frost occurs when a clear sky and calm conditions allow an inversion to develop and temperatures near the surface drop below freezing. Inversion occurs on a clear night during which heat continues to radiate out into the space. The temperature drops significantly and cool air collects at the surface. The temperature increases with altitude (height), which is the inverse of normal conditions.

Water protects young trees by transferring heat to the tree and the environment. The heat is provided from two sources, sensible heat and the latent heat of fusion. Most irrigation water comes out of the ground at 68° to 72°F, depending on the depth of the well. In fact, some artesian wells may provide water of 80°F or more. As the water is sprayed into the air, it releases this stored (sensible) heat. However, by the time the water reaches the tree it has lost most of its energy, particularly for low volume

microsprinkler systems. Consequently, the major source of heat from irrigation is provided when the water changes to ice (latent heat of fusion). As long as water is constantly changing to ice the temperature of the ice-water mixture will remain at 32°F. The higher the rate of water application to a given area, the greater is the amount of heat energy that is applied.



The major problems in the use of irrigation for cold protection occur when inadequate amounts of water are applied or under windy (advective) conditions. **Evaporative cooling, which removes 7.5 times the energy added by heat of fusion, may cause severe reductions in temperature under windy conditions, particularly when inadequate amounts of water are used.** It should be kept in mind that most irrigation systems will not protect the upper portion of tree canopies. Because water can provide protection in one situation and cause damage in another, it is important to know what principles are involved and understand the dew point and what can happen when using water during a freeze.

What's the "**Dew Point?**" It is the temperature at which dew begins to form or the temperature at which water vapor condenses to liquid water. It is also the temperature at which air reaches water vapor saturation. A common example of condensation is the water that forms on the outside of a glass of ice water. This happens because the temperature of the glass surface is lower than the dew point temperature of the ambient air in the room. Hence, some of the water vapor in the surrounding air condenses on the outside of the cold glass. When referring to cold protection, the dew point is one of the better ways to describe the humidity or amount of water vapor in the air. When the dew point is below 32°F, it is often called the frost point because frost can form when the temperature is below freezing. The dew point is important on freeze nights because water vapor in the air can slow the rate of temperature fall. With a relatively high dew point on a cool night, radiant heat losses from a grove are reduced, and the temperature may be expected to fall slowly. But if the dew point is quite low, the temperature may be expected to fall rapidly. Water vapor absorbs infrared radiation. Water droplets or fog are an even more effective radiation absorber than water vapor. Hence, fog can reduce the rate of temperature drop on a frost night. Dew point temperatures are commonly higher on the coasts than they are inland. In addition to affecting the rate of radiation loss, the dew point is often a "basement" temperature, and the air temperature will not go much below it unless drier air moves in. The reason for this is that when dew condenses or ice forms, heat is given off.

In the morning, when the temperature warms up, it is recommended to use the "**Safe Cutoff Temperature Estimator**" (see [page 10](#)) to turn off the irrigation

system safely and economically or when the wet bulb temperature is above 33°.

It is generally advisable to place the emitter northwest of the tree, about 1 to 2 feet away from the trunk. Emitters should be attached to risers for greatest tree trunk protection. Improper placement or inadequate spray coverage will greatly lessen the effectiveness of the irrigation. A 90° to 180° spray pattern, which concentrates the water on the trunk and lower limbs, gives more protection than a 360° pattern. Inverted cone sprinklers positioned above the wrap in the tree also give adequate protection. The volume of water applied depends on the amount of cold protection required. Generally, 10 gallons per hour applied directly to the trunk in a 90° pattern will provide adequate protection during most freezes.

**It is very important to know the critical temperature at which freezes can damage the grown crop.** Minimum-temperature-indicating thermometers are not expensive and are a wise investment for any grower concerned with freeze/frost protection. Several thermometers should be placed in several blocks. Placement and number of thermometers should depend on the area and grower's interest. Some factors to be considered include elevation, scion/rootstock cultivars, tree size, and irrigation systems. Some growers place one thermometer in the coldest spot and organize their protection strategy around the worst possible case. This is acceptable, but most of the area will receive more protection than it needs which will waste water and fuel and cost the grower money. **Thermometers should be placed at a height of 42 inches (4.5 ft) on a stand sheltered at the top and facing north.**

# 2005 - 2006 WINTER WEATHER WATCH PROGRAM

NOVEMBER 15, 2005 TO MARCH 15, 2006  
REGISTRATION FEE: \$100.00

It's once again time to register for the upcoming 2005 - 2006 Winter Weather Watch Program. Upon receiving your \$100.00 registration payment, you will be sent an unlisted telephone number with which you can retrieve the latest **Ag Forecasts**, 24 hours a day. **Please do not give this number to others.** The *Winter Weather Watch Program* is funded by the registration fees to pay for telephone equipment rentals, long distance calls, repairs and meteorologist.

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## **2005 - 2006 Winter Weather Watch Program**

NAME: \_\_\_\_\_ PHONE NUMBER: \_\_\_\_\_

COMPANY: \_\_\_\_\_

NEXTEL TEXT MESSAGING: RADIO NO. \_\_\_\_\_ NEXTEL PHONE NO. \_\_\_\_\_

MAILING ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

**REGISTRATION FEE \$100.00**

PLEASE RETURN THIS REGISTRATION FORM AND YOUR CHECK PAYABLE TO:

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

# Scouting for Citrus Insect Pests & Diseases Workshop

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

**Date:** Tuesday, January 10, 2006

**5 CEUs for Pesticide License Renewal**

**5 CEUs for Certified Crop Advisors**



Diseases (9:00 AM - 11:00 AM)

By **Dr. Pete Timmer**

Scouting Tips, Techniques, and Models

Alternaria Brown Spot

Greasy Spot

Citrus Scab

Melanose

Postbloom Fruit Drop

*Phytophthora* Brown Rot

*Phytophthora* Foot and Root Rot

Citrus Canker & Greening

"MSI: Mite Scene Investigations" (11:00 AM -12:00 Noon)

By **Dr. Steven Rogers**

Mites & Insect Pests (1:00 PM - 3:00 PM)

By **Dr. Phil Stansly**

Mite Pests of Citrus

Sucking Insect Pests of Citrus

Soil Inhabiting Pests

Citrus Leafminer and Misc. Insect

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

## **Program Sponsored by Nufarm Agriculture USA**

\*\*\*\*\* DETACH\*\*\*\*\*

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

Registration Deadline: Tuesday, January 3, 2006

Name: .....

Company: .....

Address: .....

Phone: .....

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

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

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

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





UNIVERSITY OF  
FLORIDA

EXTENSION

Institute of Food and Agricultural Sciences

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

Flatwoods Citrus



TOPICS DISCUSSED IN  
THE FLATWOODS  
CITRUS NEWSLETTER  
-YEAR 2005-

<u>Month</u>	<u>Topic</u>
<b>January</b>	pruning citrus trees, the worker protection standard (WPS), earning continuing education units (CEUs), citrus compounds fight child cancer cells, grapefruit juice may contain cancer-fighting compounds, orange juice everyday can keep cancer at bay, grapefruit may be easy weight loss remedy, cold hardiness and cold protection
<b>February</b>	fertilizer management, nutrition of citrus trees, nutrition of citrus trees, fertigation , microirrigation and fertigation, factors affecting bloom, fruit production and quality
<b>March</b>	postbloom fruit drop (pfd), alternaria brown spot, fungicide effectiveness, citrus scab, irrigation, sprayer calibration, importance of spreader calibration and maintenance
<b>April</b>	diaprepes, plant growth regulators (PGRs), chemical thinning of tangerines with NAA to increase fruit size and reduce branch breakage and alternate bearing, save your grove and nursery from citrus canker, importance of foliar feeding, precision agriculture
<b>May</b>	micronutrients in citrus production, weed control, greasy spot, the citrus leafminer, the fifteenth annual farm safety day
<b>June</b>	the citrus psyllid, citrus rust mites, citrus leprosis, summary of rule changes - “licensed pesticide applicators and dealers”, goal of the bmp program in Florida, the office of agricultural water policy
<b>July</b>	citrus variegated chlorosis (CVC), citrus greening, leaf and soil sampling and analyses to adjust fertilizer programs, drainage, save your grove and nursery from citrus canker, citrus canker eradication program, fifteenth annual farm safety day
<b>August</b>	the citrus expo, gulf citrus growers association scholarship foundation, gulf citrus growers association 2005-2006, citrus blight, some observations on citrus blight, magnesium nutrition, citrus brown rot, spray drift of pesticides, spray tank mixing, the use of adjuvants, grapefruit heals stomach ulcers, UF/IFAS: a brief overview
<b>September</b>	flooding injury, water table measurement and monitoring, fertigation, technology's sweet spot, citrus is a major focus of precision Ag practices in the sunshine state, folic acid linked to lower Alzheimer's risk, federal worker protection standard (wps), hurricane relief program sign-up will close September 9
<b>October</b>	soil acidity and liming, suggested facility security practices, irrigation, nutrition and fruit quality, quick overview of the federal worker protection standard (WPS), the institute for the advanced study of emerging pathogens (IASEP), citrus canker eradication program (CCEP) compliance agreement revisions and update, save your grove, and nursery from citrus canker, foliar feeding
<b>November</b>	hurricane Wilma, tips for tree recovery, post-hurricane grower questions, mechanical harvesting vs. hand picking, citrus reset management, aquatic weed management in citrus groves, fertigation for Florida citrus, from the Florida agricultural statistics service, gulf citrus growers association scholarship foundation
<b>December</b>	update on citrus greening and citrus canker, winter weather watch, , the Florida Automated Weather Network (FAWN), freeze protection

# FLATWOODS CITRUS NEWSLETTER

If you did not receive the *Flatwoods Citrus* newsletter and would like to be on our mailing list, please check this box and complete the information requested below.

If you wish to be removed from our mailing list, please check this box and complete the information requested below.

Please send: Dr. Mongi Zekri  
Multi-County Citrus Agent  
Hendry County Extension Office  
P.O. Box 68  
LaBelle, FL 33975

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

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

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

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

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

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

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

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## **Racial-Ethnic Background**

\_\_ American Indian or native Alaskan

\_\_ Asian American

\_\_ Hispanic

\_\_ White, non-Hispanic

\_\_ Black, non-Hispanic

## **Gender**

\_\_ Female

\_\_ Male