



UNIVERSITY OF
FLORIDA

E X T E N S I O N

Institute of Food and Agricultural Sciences

Hendry County Extension

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SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

September 1, 2004

Fortunately Hurricane Charley spared most major vegetable production regions in South Florida with only some minor damage reported to vegetables in association with the storm. Most areas have seen above average rainfall following the storm and wet weather following Hurricane Charley has caused some delays in land preparation and planting schedules in a number of locations along with a few problems attributed to soluble salt damage. Growers are anxiously watching Hurricane Francis, which may affect the area by weekend.

Temperatures have been near normal with daytime high in the upper 80's and lower 90's. Nighttime temperatures have been mostly in the low to mid 70's.

Fall planting and land preparation is going strong across all south Florida growing areas and planting will peak in the next few weeks. Okra harvesting remains active in Dade County.

FAWN Weather Summary

Date	Air Temp (°F)		Rainfall (Inches)	Hours Below Certain Temperature (hours)							
	Min	Max		40°F	45°F	50°F	55°F	60°F	65°F	70°F	75°F
Bradenton											
8/1 – 8/31/04	71.8	91.5	11.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.7
Ft Lauderdale											
8/1 – 8/31/04	73.1	94.3	9.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
Fort Pierce											
8/1 – 8/31/04	71.5	93.0	8.95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.7
Homestead											
8/1 – 8/31/04	71.2	92.7	9.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.3
Immokalee											
8/1 – 8/31/04	70.1	94.8	10.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8

Welcome back and best wishes for a great season!

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COOPERATIVE EXTENSION WORK IN AGRICULTURE, FAMILY AND CONSUMER SCIENCES, SEA GRANT AND 4-H YOUTH, STATE OF FLORIDA, IFAS, UNIVERSITY OF FLORIDA, U.S. DEPARTMENT OF AGRICULTURE, AND BOARDS OF COUNTY COMMISSIONERS COOPERATING

The short-term forecast from the National Weather Service in Miami calls for a normal summer pattern with a chance of afternoon thunderstorms daily over the next two days. Current forecast models suggest Hurricane Francis will veer to the northwest and make possible landfall in east central to north Florida – Georgia. Winds and rain chances will increase on Friday and may become heavy and persist through the weekend depending on the path Francis chooses.

For additional information, visit the National Weather Service in Miami website at <http://www.srh.noaa.gov/mfl/newpage/index.html>

Special Disease Report

Tomato Yellow Leaf Curl Virus

Phyllis Gilreath reports that growers have reported finding Tomato Yellow Leaf Curl virus in at least 2 local fields in the Manatee/Ruskin area, on plants that have been in the ground anywhere from 14 to 30 days. This is very early and may be cause for concern.

Phyllis reports that there were some spring tomatoes still alive and in the ground in early July, and transplanting began in this area in late July. Such practices do not provide the 6-8 week crop free period needed for whitefly to ‘lose’ the virus. While many growers did an admirable job of clean up after the spring crop, obviously not everyone got the message. Perhaps in spite of the high virus levels this spring, the low whitefly numbers led to some complacency about the potential for problems this fall.

Growers and scouts around Immokalee also report finding TYLCV on young tomatoes in several early-planted locations around Immokalee. At present it appears that the plants were obtained from several different plant houses, which may rule out infected transplants. Scouts report finding infected volunteers in a couple of locations that were allowed to grow up and become weedy over the summer. As in West Central Florida, finding virus this early is cause for concern.

Since the Tomato Yellow Leaf Curl is spread by whiteflies, management primarily consists of managing whitefly populations. Growers should to monitor whitefly populations closely and implement the following measures to manage the whitefly vector.

Use virus-free transplants. Transplants should be treated with Pymetrozine (Fulfill) to help suppress possible virus transmission. Note the Fulfill label has been amended to increase the number of Fulfill applications from 2 to 4. Transplant houses should use nicotinoid insecticides (Admire or Platinum) at least 7 days before shipping (for protection during the first week in the field).

Imidacloprid (Admire) or thiamethoxam (Platinum) should be used in the setting water at transplanting or through the drip irrigation system for whitefly control. Monitor whitefly populations by scouts throughout the season. Combinations of the following insecticides could be applied if migrating whitefly populations are high: a pyrethroid with an organophosphate, Thiodan, or soap with a pyrethroid or Thiodan.

Growers are strongly encouraged to practice good resistance management and avoid applying a second application of imidacloprid (Provado) or thiamethoxam (Actara) or products with similar chemistry if plants have been treated with Admire or Platinum. See resistance management suggestions below.

After the efficacy of the soil-applied insecticides begins to decline, whiteflies can be controlled with an insect growth regulator like Knack and Applaud or the insecticides listed above. Since growth regulators interfere with normal growth and development of whiteflies, do not expect immediate response from these

materials. They are not toxic on contact with the insect but do cause treated female adults to lay infertile eggs or adversely affect the development of nymphs.

Sanitation is extremely important. Growers should learn to identify early symptoms of TYLCV and rogue infected and infected-looking plants from field especially at the beginning of the season. This is especially important early in the season when few infected plants are present. All tomato fields should be cleaned up immediately after harvest to prevent the spread of infected whiteflies to subsequent tomato crops.

Growers should inspect fallow fields and field margins for the presence of volunteer tomato plants, which may host whiteflies and act as a source of inoculum.

Plantings of tomatoes should be separated in time and space from plantings of hosts (such as beans, cucurbits, tomatoes and weeds) that are good sources of whiteflies.

Seminis and Hazera have both introduced TYLCV resistant tomato cultivars that may be useful in some situations.

Whiteflies

Respondents in the Manatee/Ruskin area report that this season whitefly adults appeared much quicker and in greater numbers in some fields than expected. It was hoped the late summer rains, almost daily in some fields, would have kept numbers at lower levels, especially considering how low the whitefly numbers were last season. Whitefly numbers are quite variable and averages are generally low, but in some fields numbers have been close to 1 - 1.5 or higher per plant in spots, especially on those planted prior to Hurricane Charley. Numbers seem slightly lower on younger plants. In some cases, they disappear following either a pesticide application or a heavy rain, only to rebound within 24 hours of dry weather. Although growers had hoped that these early whitefly were 'clean' it appears that some a viruliferous.

Around Southwest Florida growers and scouts report seeing a few silverleaf whiteflies but are not reporting high numbers in any location.

Around Homestead, growers are preparing land for fall plantings but scouts note that due to a significant amount of okra planted in the area which is huge whitefly host and is rarely sprayed that it will be interesting to see how tomato/bean planting fare next to old okra.

On a positive note, Dr Dave Schuster, Entomologist, UF/IFAS GCREC reports that in his spring 2004 nicotinoid resistance monitoring work, that although the number of populations tested were lower due to lower whitefly numbers, only 9% of the populations collected had RS₅₀ values of 10 or greater, compared to 80% in 2003, indicating an increase in susceptibility over 2003.

While we would like to think this was in part due to intensive efforts on the part of all parties to improve whitefly and resistance management strategies, growers should not get complacent, as this may only represent periodic fluctuations in whitefly susceptibility. Only long-term monitoring can tell us for sure.

Nicotinoid Resistance Management Recommendations

- Reduce overall whitefly populations by strictly adhering to cultural practices including:
 - Plant whitefly-free transplants
 - Delay planting new crops as long as possible and destroy old crops immediately after harvest to create or lengthen a tomato free period

- Do not plant new crops near or adjacent to infested weeds or crops, abandoned fields awaiting destruction or areas with volunteer plants
- Use UV-reflective (aluminum) plastic soil mulch
- Control weeds on field edges if scouting indicates whiteflies are present and natural enemies are absent
- Manage weeds within crops to minimize interference with spraying;
- Avoid u-pick or pin-hooking operations unless effective control measures are continued
- Do not use a nicotinoid like Admire on transplants or apply only once 7-10 days before transplanting; use other products in other chemical classes, including Fulfill, before this time;
- Apply a nicotinoid like Admire (16 ozs/acre) or Platinum (8ozs/acre) at transplanting and use products of other chemical classes (such as the insect growth regulators Courier® or Knack® as the control with the nicotinoid diminishes. Note: Courier and Applaud are the same active: buprofezin. Courier is labeled for whitefly on tomato and snap bean. The mode of action is chitinase inhibitor. Dimilin and Knack is a juvenile hormone mimic labeled for whitefly control on fruiting vegetables.
- Never follow an application (soil or foliar) of a nicotinoid with another application (soil or foliar) of the same or different nicotinoid on the same crop or in the same field within the same season (i.e. do not treat a double crop with a nicotinoid if the main crop had been treated previously);
- Save applications of nicotinoids for crops threatened by whitefly-transmitted plant viruses or whitefly-inflicted disorders (i.e. tomato, beans or squash) and consider the use of chemicals of other classes for whitefly control on other crops.

Additional suggestions for breaking the cycle can be found in an article by Dr. Jane Polston in last years Tomato Institute Proceedings, available online at the SWFREC website at http://www.imok.ufl.edu/veghort/docs/tom_inst_2002_091202.pdf

Other Pests and Diseases

Reports from Manatee County indicate that the most prevalent diseases at this time are pythium in tomatoes and squash and bacterial leaf spot. Respondents note that steady rains following Hurricane Charley helped increase bacteria levels. Heat stress has also been noted in some fields.

As far as other insects are concerned, growers and scouts in West Central Florida note that beet armyworms are active with numerous egg masses being detected and a few worms being seen. Some looper and hornworm eggs have also been noted and leafminer is present at low levels in a few places.

Around the Immokalee area, respondents report that bacterial spot is very low for this time of year but is present at low levels in a number of places. Scouts report finding some armyworms in a number of locations and note that beet armyworm egg deposition has been quite high for the past two weeks. They also report finding some fairly high numbers of hornworm eggs in the oldest plantings.

Pythium

Abundant soil moisture and elevated temperatures conspire to make the fall planting season a prime time for vegetable growers in Florida to encounter problems with *Pythium* spp. on a variety of vegetables. Pythium typically attacks roots causing damping off, seedling blights, root rots and wilting of affected crops. In some instances, Pythium may affect the above ground portions of crops.

***Pythium myriotylum* and *P. aphanidermatum* are generally most abundant in Florida because they are adapted to high soil temperature.** The optimum temperatures for their growth and infection of plants range between 86 and 98 °F.

The host range for *Pythium* spp. is extremely wide. Vegetable crops commonly infected include beans cucurbits, peppers, southern peas, strawberries, and tomatoes. A number of broadleaf and grassy weeds may host *Pythium* spp. and serve as important sources of inocula.

Pythium is one of the “water molds.” It thrives in moist soils and multiplies and spreads rapidly under wet conditions. Although *Pythium* is capable of producing several spore types, zoospores and oospores are most important. Zoospores are mobile. They are produced rapidly and in great numbers and contribute to the organism’s ability to cause disease almost “over night.” Zoospores may be detected within half an hour after a site is flooded and can “swim” for up to 30 hours and move three or more inches through soil.

Pythium is often associated with root rots and pre emergent and post emergent damping off. One of the characteristics of tissue infected with *Pythium* spp. is the presence of water-soaked or greasy appearing tissue. This is distinct from the orange to red to dark, sunken lesions caused by *Rhizocoinia solani*.

Infection with *Pythium* spp. also causes wilting of numerous crop species. Plants affected by *Pythium* root and stem rots commonly exhibit yellowing of the lower leaves.

Excess fertilizer, flooded soils, insect feeding, and nematode feeding may also contribute to dysfunctional roots. For accurate diagnosis, it is best to submit samples to a reputable diagnostic laboratory.

Resistant cultivars do not exist so control of *Pythium* depends on a variety of tactics. Crops should be planted on raised beds in well-drained soils.

Pre-plant soil fumigation is effective if applied correctly. A number of chemical treatments are available for the control of damping off. Seed treatments containing mefenoxam (Apron) work best. Mefenoxam should be used in combination with a broad-spectrum fungicide to avoid the development of resistance.

Fungicidal drenches such as Ridomil Gold (mefenoxam) are effective for the suppression of seedling blights and root rots if applied before infection occurs.

Several biological control agents, including actinomycetes and other bacteria and fungi, are available commercially for suppression of *Pythium* and other soil borne pathogens. Their success rate has been variable.

Some soils are naturally suppressive to diseases caused by *Pythium* or may become suppressive by increasing organic matter or manipulating soil pH. Incorporation of cover crops prior to planting may support competing organisms in the field, but in some cases may result in increased populations of the pathogen. Sunn hemp has been implicated in this regard.

The 17th International Pepper Conference Comes to Naples on November 14 –16, 2004

Hope you are making plans to join us for this premier event. For the past 25 years, the International Pepper Conference has attracted prominent scientists, researchers, breeders, horticulturists, pathologists, entomologists, geneticists, physiologists, virologists, extension agents, seed and chemical company representatives, major processors, growers, and chile aficionados from around the world and is now recognized as the premier venue for the dissemination and exchange of information on Capsicum. All pepper types including bell, long green/red chile, high color paprika, ancho, pimiento, cayenne, tabasco, jalapeno, yellow pickling, serrano, and cherry peppers will be a focus of the conference.

The conference is scheduled November 14-16, 2004 at the Naples Beach Hotel and Golf Club in Naples, Florida USA. We hope you will take a moment to review the conference web site where you will find everything you need to know about this event, including online registration and links to information about the

Naples area. <http://conference.ifas.ufl.edu/pepper>

The EARLY registration deadline has been extended to Wednesday, September 8, 2004 and you will find detailed registration instructions posted on the conference web site under Registration Information. We would also like to encourage you to make your guest room reservation as soon as possible. The Naples Beach Hotel and Golf Club is offering participants of the 17th International Peppers Conference a very special guest room rate of \$99.00 (plus nine percent tax) with one or two people in a room. This is an EXCELLENT rate for the Naples area, and we encourage you to stay in the host hotel. The group rate will be honored three days prior and three days following the conference, based on availability. The most convenient method to make a reservation is to go to the conference web site, click on Hotel Accommodations and print out the PDF of the Hotel Reservation Form. If you prefer to contact the hotel by telephone, they can be reached by calling 1-239-261-2222. Be sure to specify you are attending the Pepper Conference when making your reservation and obtain a confirmation number verifying your reservation was recorded. Reservations must be made by Friday, October 1st, 2004 to qualify for the reduced rate and to assure availability in the host hotel.

We look forward to your participation in the conference, and if you have any questions, please don't hesitate to contact me personally. Meanwhile, stay tuned to the web site for updated information at:

<http://conference.ifas.ufl.edu/pepper>

For more information,

<p><u>Conference Organizer</u> <i>Mr. Gene McAvoy</i>, Extension Agent III Regional Vegetable/Horticulture UF/IFAS Hendry County Cooperative Extension PO Box 68 Labelle, FL 33975 USA PHONE: 1-863-674-4092 MOBILE: 1-239-860-8811 FAX: 1-863-674-4097 EMAIL: gmcavoy@ifas.ufl.edu</p>	<p><u>Conference Coordinator</u> <i>Ms. Beth Miller-Tipton</i> Office of Conferences and Institutes (OCI) UF/IFAS PO Box 110750 Gainesville, FL 32611 USA PHONE: 1-352-392-5930 FAX: 1-352-392-9734 EMAIL: bmiller-tipton@ifas.ufl.edu</p>
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For Immediate Distribution:

On August 23, 2004, a shipment of Scotch Bonnet Habaneros manifested from the Netherlands was inspected at the Miami Port by USDA/PPQ Officers and found to be infested with fruit fly larvae, *Ceratitis sp.* Tentative ID of the larva is *Ceratitis rosa*, Natal Fruit Fly which attacks a wide host range of fruits, vegetables, nuts, and flowers similar to that of the Mediterranean Fruit Fly.

This shipment, which consisted of four boxes of Habaneros and other host fruits, were confiscated and destroyed. Trace forwards by SITC revealed that six total shipments from the same importer entered Miami during the month of August and all but a small amount have been accounted for. One shipment consisting of 220 boxes of peppers was being delivered to a produce dealer in Jacksonville, Florida, which was returned to the warehouse for safeguarding. The peppers were all manifested from the Netherlands but their origin has now been determined to be Africa.

Habanero Peppers, *Capsicum sp.* or Chile Peppers, are currently imported into Florida but are prohibited from several countries, including Africa.

At this time we do not have information on other stores in Florida which may have received this product. FDACS is instructing its inspectors conduct inspections at all produce markets and distributors that may be selling Habanero peppers. Telltale signs include signs of oviposition punctures and soft areas on the fruit.

Up Coming Meetings

Palm Beach County

September 8, 2004	General Standards/Core Test Review	8 AM - 10 AM	2 CEUs
	Private Applicator Test Review	1 PM - 3 PM	2 CEUs

Belle Glade Extension Office
976 State Road 15
Belle Glade, Florida

Contact Laura Powell at 561-996-1655.

September 13, 2004	General Standards/Core Test Review	8 AM - 12 AM	4 CEUs
	Aquatic Weed Control Test Review	1 PM - 3 PM	2 CEUs

Clayton E Hutchinson Agricultural Center
559 North Military Trail
West Palm Beach, Florida

Contact Laura Powell at 561-996-1655.

Southwest Florida

September 9, 2004	WPS Handler Training	9:00 AM – Spanish
		1:00 PM – English

Hendry County Extension Office
1085 Pratt Boulevard
LaBelle, Florida 33935

Contact 863-674-4092 for details

September 14, 2004	Whitefly Control Strategies and Bayer Product Update 6 PM
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UF/IFAS - SW Florida Research and Education Center
Hwy 29 N, Immokalee, FL
Contact 863-674-4092

September 27, 28, 2004	Spanish Language Pesticide Applicator Training and Testing 8 AM
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Hendry County Extension Office
1085 Pratt Boulevard Sept. 27 – CORE
LaBelle, Florida 33935 Sept. 28 – Private

Contact 863-674-4092 for details (Note: test is in English)

September 29, 30, 2004 Pesticide Applicator Training and Testing

Hendry County Extension Office
1085 Pratt Boulevard Sept. 29 – CORE, Private, Row Crop
LaBelle, Florida 33935 Sept 31– Tree Crop, Aquatic

Contact 863-674-4092 for details

Other Meetings

**September 7 –12, 2004 Florida Tomato Committee and the Florida Tomato Exchange
Joint Conference**

The Ritz-Carlton Hotel
Naples, Florida

Contact 407-894-3071 – see educational program below

November 14 –16, 2004 17th International Pepper Conference

Naples Beach Hotel and Golf Resort
Naples, Florida

For more information, contact Gene McAvoy at 863-674-4092 or visit
<http://conference.ifas.ufl.edu/pepper> for details

2004 Florida Tomato Institute Program Agenda - September 8, 2004

Ritz-Carlton, Naples, Florida

Moderator: Ed Skvarch, St. Lucie County Extension Service, Ft. Pierce

- 9:00 **Welcome and Opening Remarks** - Jack Recheigl, Director, GCREC, Bradenton
- 9:10 **The “State of the Florida Tomato” Address** - Reggie Brown, Florida Tomato Committee, Orlando
- 9:20 **Outlook for Florida Tomatoes under FTAA and Future Marketing Issues** - John VanSickle, UF , Food & Resource Economics Department, Gainesville
- 9:40 **Methyl Bromide CUE : What Did We Get and What’s Next?** - Mike Aerts , FFVA, Orlando
- 10:00 **Results of Preliminary Fertilization Rate Trials in SW Florida** - Gene McAvoy, UF, Hendry County Extension Service, LaBelle
- 10:20 **Drip Irrigation Management for Tomatoes** - Eric Simonne, UF, Horticultural Sciences Department, Gainesville
- 10:35 **Tomato Soilborne Diseases and Florida Plant Diagnostic Network (FPDN)** - Tim Momol , UF, NFREC, Quincy
- 10:55 **TYLCV Resistant Varieties Available Now and Future Outlook from the IFAS Breeding Program** - Jay Scott, UF, GCREC, Bradenton
- 11:15 **SWF Resistance Management Update** - Dave Schuster, UF, GCREC, Bradenton
- 11:35 **Lunch and Visit Sponsor Information Tables**

Moderator: Darrin Parmenter, Palm Beach County Extension Service, West Palm Beach

- 1:00 **Status of Vegetable and Agronomic Crop Best Management Practices Manual** - Rich Budell, FDACS, Tallahassee
- 1:20 **Use of “Soft” Pesticides in a Pest Management Program for Tomatoes and Peppers** - Phil Stansly, UF, SWFREC, Immokalee
- 1:40 **Emerging Viral Diseases of Tomato** - Jane Polston , UF, Plant Pathology Department, Gainesville
- 2:00 **New Product Updates** - Industry Representatives
- 3:00 **Adjourn**

Four (4) CEUs for pesticide applicators have been approved. CCA CEUs have been applied for.

Websites

Do you have questions about Florida Agriculture? Go to the **Florida Agricultural Statistics website** - <http://www.nass.usda.gov/fl/>

Need information on HACCP or food safety education training materials? Check out the **USDA/FDA Foodborne Illness Education Information website** - <http://www.nal.usda.gov/foodborne/>

Quotable Quotes

The mind is not a vessel to be filled but a fire to be kindled. – Plutarch

If you knew what life was worth, you would look for yours on earth. - Bob Marley

Sacred cows make the best hamburger. - Mark Twain

Sometimes I lie awake at night, and I ask, "Where have I gone wrong?" Then a voice says to me, "This is going to take more than one night." -- Charlie Brown

I never gave anybody hell, I only told the truth and it seemed like hell. -- Harry Truman

On the Lighter Side

Spell Check???

THE PAOMNNEHAL PWEOR OF THE HMUAN MNID

I cdnuolt blveiee taht I cluod aulacly uesdnatnrd waht I was rdgnieg

Aoccdrnig to a rscheearch at Cmabrigde Uinervtisy, it deosn't mtttaer in waht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is taht the frist and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it wouthit porbelm.

Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe. Amzanig huh?

Big Shot

After years of being blasted into a net, the human cannonball went to the circus owner and told him he was going to retire. "But you can't!" shouted the cigar-chomping boss. "Where am I going to find a man of your caliber?"

As it turned out, the human cannonball that replaced him was hired and fired the same night.

Fish Tale

A Cajun was stopped by a game warden in South Louisiana recently with two ice chests of fish, leaving a bayou well known for its fishing. The game warden asked the man, "Do you have a license to catch those fish?"

"Naw, ma fren, I ain't got none of dem, no. Dese here are my pet fish."

"Pet fish?"

"Ya. Avery night I take dese here fish down to de bayou and let dem swim'round for a while. Den I whistle and dey jump rat back inta dis here ice chest and I take dem home."

"That's a bunch of hooley! Fish can't do that!"

The Cajun looked at the game warden for a moment and then said, "It's de truth ma' fren. I'll show you. It really works."

"Okay, I've GOT to see this!"

The Cajun poured the fish into the bayou and stood and waited. After several minutes, the game warden turned to him and said, "Well?"

"Well, what?" Said the Cajun. "When are you going to call them back?"

"Call who back?"

"The FISH!"

"What fish?"

Contributors include: Joel Allingham/AgriCare, Inc, Karen Armbruster/SWFREC, Kathy Carbiener /Agricultural Pest Management, Jim Connor/SWFREC, Bruce Corbitt/West Coast Tomato Growers, Dr. Phyllis Gilreath/Manatee County Extension, Fred Heald/Farmers Supply, Sarah Hornsby/AgCropCon, Cecil Howell/H&R Farm, Loren Horsman/Glades Crop Care, Bruce Johnson/General Crop Management, Dr. Mary Lamberts/Miami-Dade County Extension, Leon Lucas/Glades Crop Care, Gene McAvoy/Hendry County Extension, Alice McGhee/Thomas Produce, Jimmy Morales/Pro Source One, Tim Nychk/Nychk Bros. Farm, Chuck Obern/C+B Farm, Teresa Olczyk/ Miami-Dade County Extension, Darrin Parmenter/Palm Beach County Extension, Dr. Ken Pernezny/EREC, Dr. Pam Roberts/SWFREC, Dr. Nancy Roe/Farming Systems Research, Wes Roan/6 L's, Kevin Seitzinger/Gargiulo, Jay Shivler/ F& F Farm, Ken Shuler/Stephen's Produce, Ed Skvarch/St Lucie County Extension, John Stanford/LNA Farm, Mike Stanford/MED Farms, Dr. Phil Stansly/SWFREC, Eugene Tolar/Red Star Farms, Dr. Charles Vavrina/SWFREC, Mark Verbeck and Donna Verbeck/GulfCoast Ag, and Alicia Whidden/Hillsborough County Extension.

The **South Florida Pest and Disease Hotline** is compiled by **Gene McAvoy** and is issued on a biweekly basis by the **Hendry County Cooperative Extension Office** as a service to the vegetable industry.

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Special Thanks to the **generous support** of our **sponsors**; who make this publication possible.

Thomas Produce Company

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Grower and Shippers of Quality Vegetables
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Scott Smith: Vice President
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Glades Crop Care, Inc.
**Leaders in Crop Health
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Palm City, Florida 34991
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PO Box 128
Palmetto, Florida 34220-0128
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Special Thanks to the **generous support** of our **sponsors**; who make this publication possible.

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