



UNIVERSITY OF
FLORIDA

E X T E N S I O N

Institute of Food and Agricultural Sciences

Hendry County Extension

PO Box 68 LaBelle, Florida 33975-0068

Phone (863) 674-4092

SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

October 27, 2006

The first strong cold front of the season pushed through the area on October 24th bringing cooler temperatures to South Florida. The front dropped daytime highs into the 70's and pushed over night lows into 40's and 50's with a few spots reaching the low 40's. Before this, daytime temperatures averaged a few degrees above normal with highs in most locations reaching into the upper 80's and nights dipping in the 60's and 70's with a few normally cooler areas dropping in to the upper 50's a few nights.

Most areas reported no rainfall for the period. Homestead reported a few sprinkles as the front pushed through with the UF/IFAS FAWN weather station in Homestead reporting only 0.01 inch for the period.

Harvesting in central and southern Peninsula areas continues to gain momentum as the season progress. Fieldwork and planting is continuing on schedule and most early crops look good – as one grower noted, “one of the best looking fall crops he has seen in years”. Reports indicate that cold winds associated with the recent front caused some crop damage in places. Crops coming to market include cucumbers, eggplant, okra, peppers, snap beans, squash, sweet corn, tomatoes and specialty items. Volumes have been light.

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
Balm											
10/13 – 10/27/06	42.9	85.2	0.00	0.0	3.2	13.7	11.7	12.1	16.7	18.0	3.4
Ft Lauderdale											
10/13 – 10/27/06	58.2	89.5	0.00	0.0	0.0	0.0	0.0	3.0	6.6	2.3	5.9
Fort Pierce											
10/13 – 10/27/06	49.4	90.8	0.00	0.0	0.0	1.1	0.1	2.0	10.8	5.2	31.9
Homestead											
10/13 – 10/27/06	56.6	88.8	0.01	0.0	0.0	0.0	0.0	10.4	1.7	14.4	51.6
Immokalee											
10/13 – 10/27/06	45.5	90.9	0.00	0.0	0.0	14.5	3.1	12.1	3.3	3.4	49.3

The Institute of Food and Agricultural Sciences is an Equal Employment Opportunity – Affirmative Action Employer authorized to provide research, educational, information, and other services only to individuals and institutions that function without regard to race, color, sex, age, handicap or national origin.
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 indicates a low-pressure system will move across the state to the northeast tonight dragging a cold front into the eastern Gulf of Mexico. The cold front will continue to move southeast through our area on Saturday allowing for the deep tropical moisture to continue to move over South Florida bringing a chance of showers and thunderstorms to the region.

The front will move slowly south into the Florida Straits before stalling out on Sunday allowing the showers to slowly come to an end. By mid week an easterly wind flow over the area will again bring some low level moisture to the area and the possible chance of showers. For additional information, visit the National Weather Service in Miami website at <http://www.srh.noaa.gov/mfl/newpage/index.html>

Insects

Worms

Respondents on the East Coast indicate seeing an increase in looper numbers in cucurbits, eggplant, pepper and tomato over the past two weeks. Armyworms are also present with mostly southern armyworms in moderate numbers along with a few beet armyworms mixed in. Melon worm pressure has fallen off in cucurbits.

Around Immokalee, worm pressure has been building over the past week or so with a mix of species present including beet, southern and fall armyworms, loopers and fruitworms, hornworms, melonworms, and a few diamond backs depending on the crop and location. Numbers have been moderate but pressure has been consistent. Growers report getting good control and are experiencing little damage.

Growers and scouts in Manatee County report that worms are around and are seeing mostly loopers, southern and beet armyworm in moderate numbers.

Around Hillsborough County, respondents report a few armyworms mostly in pepper and are finding budworms in newly planted strawberries as the water comes off. A few leaf rollers are also present in strawberries.

In the Glades respondents indicate that the major problem in sweet corn is the high levels of fall armyworms hammering the crop. Reports indicate that Lannate/Larvin sprays at maximum rates for several days in a row seems to help and indicate that hatches persist despite sprays every two days. Persistent treatments with Lannate and Avaunt tank mixes have also been effective in turning the tide in younger corn. Trap counts for fall armyworm at the UF/IFAS EREC for the past week skyrocketed reaching levels nearly double any week in October and nearly 6 times higher than the week before.

Broad Mites

Growers and scouts around SW Florida indicate that broadmite are widely present and increasing in a number of locations. Reports indicate that a number of fields have required treatment over the past two weeks.

Reports from Palm Beach and other east Coast Counties indicate that broadmites are “everywhere” in pepper and eggplant. Some folks have noted that seem to have come on earlier and are present in higher numbers than usual.

Around Ruskin, broadmites continue to be reported in pepper.

Reports from Hillsborough County indicate that a few broadmites are still lingering in pepper.

As with most pests, scouting to detect early infestation is important.

Broadmites are so small that they are may be hard to see even with a good hand lens. Symptoms of broad mite feeding include distortion of plants growth causing leaves to become thickened and narrow resulting in a “strappy” appearance. Leaves curl downward and may turn coppery or purplish. Internodes shorten and lateral buds break more than normal. Mites tend to crowd into crevices and buds and feed on the growing tips. This new growth may also be stunted or killed which forces out additional shoots. Flowers are distorted and fail to open normally.

It is important to note that chili thrips can also cause similar damage on pepper.

Heavy feeding can cause flower abortion and russetting of fruit. Unless controlled, broad mites can destroy the commercial value of infested crops. Their toxic saliva causes twisted, hardened and distorted growth in the terminal of the plant. The effects of their feeding may persist long after the mites have been eradicated.

Chemical control is not difficult. Kelthane or dicofol, micronized sulfur (i.e. Thiolux) and AgriMek have all given good results locally. It should be noted that none of these materials kills eggs or seems to have enough residual to kill all hatching larvae. Therefore, to achieve control it is necessary to make at least two applications about 5 days apart to allow time for eggs to hatch and target emerging larvae.

Oberon has also provided good control. It should be applied twice at 7-day intervals and will provide some ovicidal activity.

Whiteflies

Reports from Manatee County indicate that whitefly numbers are building with scouts starting to see high numbers (~5 adults per plant) in some locations. Nymphs and pupae are also becoming more frequent in older plantings. Whiteflies are also present in moderate levels on young cabbage plants.

Respondents on the East Coast continue to report mostly low whitefly numbers. Growers are starting to treat for nymphs in some older plantings.

Around Southwest Florida whitefly pressure seems to have leveled off and numbers continue to bounce around at mostly low levels. Nymphs are starting to be found in a few fields around Immokalee and growers have begun to apply IGR's as necessary.

To review the revised UF/IFAS Recommendations for Management of Whiteflies, Begomovirus, and Insecticide Resistance for Florida Vegetable Production and the New Tomato Burn-Down Rule, visit the Manatee County Extension website at <http://manatee.ifas.ufl.edu/vegetable.htm>

Leafminer

Reports from East Coast producers indicate that leafminers are starting to build in some places and a few growers are starting to treat as threshold levels are reached.

Around Immokalee, leafminers are starting to increase. Scouts report seeing stippling as well as finding both larvae and adults in numbers requiring treatment in some fields.

Respondents in the Manatee County area note that leafminer numbers continue to increase with most fields being sprayed fro leafminers at this point.

The two major species of leafminer that cause problems in vegetables in Florida are the vegetable leafminer (*L. sativae*) and most commonly (*Liriomyza trifolii*) - sometimes referred to as the celery leafminer but which has no approved common name. The adults are small yellow and black flies about the

size of a gnat. The female punctures or "stipples" the leaves with her ovipositor to lay eggs in the leaf tissue or to feed on sap.

Leafminer damage is easily recognized by the irregular serpentine mines in leaves, which are caused by feeding larvae. Heavy leafmining damage can reduce photosynthesis and cause leaf desiccation and abscission. The yellow maggots with black, sickle-shaped mouthparts feed on the mesophyll or chlorophyll tissue between upper and lower leaf surface leaving a winding trail or pattern through the leaf. The tunnel is clear with the exception of a trail of black fecal material left behind as the maggot feeds.

There are three larval stages. Each larval instar is completed in 2 - 3 days. The maggots feed approximately 7 days growing to about 1/10 to inch in length prior to exiting the leaf to pupate on the ground or mulch under infested plants.

Leafminer injury is readily visible to the grower but healthy plants can tolerate considerable damage without excessive loss of vigor and yield. The Florida Tomato Scouting Guide sets action thresholds at 0.7 larva per plant for young plants with less than 2 true leaves and 0.7 larva per 3 terminal leaflets for larger plants. Heavily damaged leaves will often drop, due in part to entry of pathogenic organisms into old mines.

An integrated pest management program that stresses conservation of natural enemies is the primary tactic for the successful control of leafminer. In scouting fields, growers should be careful to note the number of parasitized mines before deciding to apply insecticides.

Cyromazine (Trigard) alternated with abamectin (Agrimek) are effective against leafminer in tomato. Both of these products have limited crop registrations and must not be used on unregistered crops. Spinosad (Spintor) has also given good results and is labeled on a wide range of crops. Some other materials that may be used to conserve beneficials include azadirachtin (Neemix) and insecticidal oils. Both products are approved for use by organic growers.

Field sanitation is an important control tactic that is overlooked. When crops are not present in the fields, leafminers can survive on a variety of broad-leaf weeds. These plants serve as reservoirs for pest.

Aphids

Winged aphids are beginning to show up widely in low number in a number of fields around Immokalee. No buildup has been noted.

Respondents on the East Coast indicate that a few aphids are beginning to show up here and there.

Aphids are also present in low numbers around Ruskin.

Strawberry producers in Hillsborough County report finding moderate levels of aphids in strawberry on the first scout as the water is taken off.

Pepper Weevil

A few pepper weevils are starting to show up in isolated planting around Southwest Florida.

Spider mites

Spider mites are mostly low to absent across the area with a few showing up on cucumbers and eggplants.

Diseases

Bacterial Spot

Reports from Manatee County indicate that bacterial spot is still creeping around in some fields aided by foggy mornings.

In Hillsborough County, bacterial spot continues to spread slowly in the lower canopy of affected plantings.

Around Immokalee, most fields are clean. Bacterial spot is around in some pepper and tomato fields and with heavy dews and foggy mornings; there has been some movement. Overall pressure is low and incidence and occurrence spotty.

Around Homestead, growers and scouts report bacteria is still around but not causing much trouble.

Growers and scouts on the East Coast producers report that bacterial spot remains low in pepper and tomato and is mostly present in the oldest plantings. Some problems have been reported in heirloom varieties where no resistance is present.

TYLCV

Growers and scouts in around Manatee County report that the incidence of new TYLCV infections has slowed but new infections continue to show up indicating the presence of viruliferous whiteflies.

Reports from Hillsborough County indicate variable incidence and occurrence of TYLCV but not that virus will reduce yields in some areas.

Around Immokalee TYLCV has been detected in a few scattered locations but remains at very low levels but growers and scouts note it is still fairly early in the season and they remain concerned and vigilant. Overall incidence remains less than 1% but there are reports of a few isolated field edges and corners where higher levels are being seen.

Respondents on the East Coast continue to report mostly very low TYLCV levels.

Reports from Homestead indicate that TYLCV is present in several fields. Occurrence is spotty.

TYLCV update from Dr Jane Polston, Pathologist UF/IFAS

TYLCV has been reported from tomatoes in Sinaloa Mexico. Symptoms were first seen in fall of 2005 and were widespread in Culiacan, Guasave, and Los Mochis. The sequence is very slightly different from the one we have which suggests that it was not introduced into Mexico from Florida or the Caribbean. (Introduction of the Exotic Monopartite *Tomato yellow leaf curl virus* into West Coast Mexico. J. K. Brown and A. M. Idris, Plant Dis. 90:1360, 2006.)

TYLCV was also reported to infect tomatoes in Shanghai China coincidentally in the same issue of Plant Disease. They report incidences of 90% in their tomato plants in March 2006. (First Report of *Tomato yellow leaf curl virus* in China. J. B. Wu, F. M. Dai, Institute, and X. P. Zhou. Plant Dis. 90:1359, 2006;)

Target Spot

Growers and scouts in Manatee County report that target spot is present on tomato in a number of locations and has affected fruit quality in places.

Around Southwest Florida, very low levels of target spot and early blight is starting to show up in the lower canopy of older plantings.

Fusarium Crown Rot

Around Immokalee, some problems with fusarium crown rot in tomato have been reported. Incidence and occurrence is low and mainly associated with plants that root damage from salts or mole crickets earlier in the season.

Scattered problems with fusarium crown rot on tomato have also been noted on the East Coast.

In Manatee County reports indicate some increasing problems with fusarium Race 3.

Southern Blight

Southern blight continues to wilt down plants in a number of locations around South Florida. While there is no solid evidence, several growers and scouts have indicated that incidence seems to be higher where reduced rates of methyl bromide were used under metalized mulch.

Downy Mildew

Downy mildew is becoming more widespread on cucumbers, squash and watermelon around southwest Florida. Incidence and occurrence is mostly low although some isolated plantings have been hit hard. In squash, powdery mildew is more prevalent than downy mildew.

Around Palm Beach County, downy mildew has been reported on calabaza, cucumbers and squash. Occurrence is sporadic and incidence and severity low to moderate where present.

In Hillsborough County some downy mildew has been reported on squash despite dry conditions.

Powdery Mildew

Around Southwest Florida there are a number of reports of increasing problems with powdery mildew on squash and cucumbers. Powdery mildew is more wide spread and a bigger problem in squash.

Gummy Stem Blight

Some reports of gummy stem blight on watermelons have been received from the Manatee area.

Gummy stem blight is also present in scattered locations around Immokalee.

Rhizoctonia

Respondents in Belle Glade, Devil's Garden and Homestead report problems unexpectedly high rates of Rhizoctonia infection in beans in some places. Growers have reported good success with Ridomil Gold applied at planting.

Choanephora

A few scattered problems with **Choanephora blight** have been reported on beans in Homestead and around southwest Florida. Incidence is low and occurrence scattered.

Blossom End Rot

East Coast growers have noted a few problems with blossom end rot on tomato. Problems are being seen, mainly in areas that had high salts earlier in the season.

News You Can Use

Tomato Postharvest Disease Alert

As many of you are aware, there have been serious problems in other parts of the SE this summer and fall with post harvest fruit rot problems on round tomatoes. Since we have begun harvesting in this area, now is the time to review with your packinghouse staff and your growers, agricultural practices, which can help minimize problems. Due to the seriousness of this problem, a task force has recently been formed by IFAS Administration and is headed by Dr. Jerry Bartz, UF/IFAS Postharvest Plant Pathologist. While this task force will address problems as they occur and coordinate research that is needed, any solutions will also require the cooperation of all the packinghouses. This is not a problem for one or two packinghouses.....this is an industry-wide problem which affects the reputation and marketability of Florida tomatoes. While some of this information may be familiar to many of you, a review never hurts.

What are the major postharvest diseases?

Bacterial soft rot is a common and aggressive disease caused by *Erwinia carotovora*. These bacteria are everywhere. They grow on the surfaces of plants and cause a soft rot, particularly during wet weather. Rainstorms, insect feeding, harvest crews, picking containers and packinghouse equipment, can spread them. While they cannot penetrate the waxy tomato skin, small wounds and even abrasion from sand enable infection. Suckering, rough handling, sunscald, and tying plants are other means by which soft rot bacteria enter tissue. Soft rot bacteria readily disperse in solution and they are quickly moved in water and even from one 'disease soaked' carton to the dry one next to it. High humidity (90-95%) promotes survival and infection potential. Free water on wounds or stem scars promotes infection. High fruit temperatures (86-95°F) are associated with rapid decay development and the period between inoculation and visible soft rot symptoms may be as little as 12 hours. Secondary spread in boxes can easily occur by 48 to 72 hours after packing if a few fruit were inoculated during harvest. Affected fruit have a very putrid odor as compared to the pungent, pickled odor of those infected with sour rot.

Sour rot is caused by a fungus, *Geotrichum candidum*, which is actually a type of yeast. Sour rot lesions have a sour or pungent odor, do not rapidly engulf the entire fruit, but rather lead to a liquefying of the gel in affected locules. Older lesions are usually covered by whitish mycelial growth. Sour rot lesions can occur within 24 hours after inoculation but they don't develop very rapidly. The fruit may remain recognizable for days, not becoming 'watery sacks' as with soft rot. The fruit surface over the lesions often peels back. Juices from the young lesions are clear (meaning very few yeast cells) thus, spread among fruit within boxes does not occur readily. Some packers have noticed clear liquid in the bottom of a carton, with only one rotted fruit, and even the fruit sitting in the liquid were not affected. This was likely sour rot. Eventually, spores are produced and secondary spread will occur. The spread of decay is correlated with fruit temperature, with optimum growth at 86°F.

What can be done in the field to prevent or lessen problems?

The first step in reducing the potential for contamination is to wait until plants and fruit are completely dry before harvesting. Periods of persistent rainfall or chilling temperatures can increase decay losses despite good practices. Even though plants may appear dry, check the plant interior. If soft rot is observed in the field, the crew may get the inoculum all over the fruit and there will be post harvest losses because chlorinated water cannot clean the bacteria out of inoculated wounds. Even without dew or fog, under high soil moisture conditions, guttation can occur. Droplets of water appear at the edge of the leaf, which may also increase the chance for spread of soft rot pathogens.

In addition to harvesting truly dry plants, instruct crews to avoid grabbing obviously decayed or partially decayed fruit. One other strategy may be to schedule harvests around copper/mancozeb sprays for bacterial spot control--harvest as soon as the label allows. Research in the mid-80s on preharvest sprays showed some evidence that there was a reduction in the potential for postharvest decay when fruit were picked as soon as possible after a copper-mancozeb spray. It should reduce bacteria and maybe Geotrichum on the plant and may provide a residue on the fruit that would help reduce inoculation of wounds. Whether it will result in a biologically significant reduction will require further research. Until then, there are no guarantees.....this is just a suggestion to try.

Be very conscious about worm control. For every fruit that is a 'sack' or has a noticeable lesion, there are likely several others where the decay is behind the fruit or has just started, particularly if there's worm damage. Make sure baskets, field boxes, etc. are clean and have been sanitized. Avoid throwing fruit from buckets into bins to reduce mechanical injury or bruising. Wounds from fingernails are often found in fruit that is succumbing to rot. Anything that can be done in the field or packinghouse to reduce damage to fruit should help.

As the task force begins addressing this problem, we ask the help of the industry by notifying us immediately when problems are seen in the field or packinghouse so that we can begin working on it. We'd like to know about your observations of crops in the morning. For example, if you are checking your fields periodically, at what approximate time do the last traces of dew disappear? If the dew is gone, do you still see a few water droplets on the leaf edges in the canopy? Most growers already keep good records of rainfall and pesticide applications, but any weather information we can get would be invaluable.....noting things like fog, wind, heavy dew periods, cold fronts, etc. On fruit that have problems, we will need to know the sequence and timing of events from the field through the packing process. Any and all information will be helpful. (Prepared by Phyllis Gilreath, Manatee County Extension; Jerry Bartz, UF/IFAS, Plant Pathology Dept.; Steve Sargent, UF/IFAS Horticultural Sciences Dept.)

Additional information on packinghouse sanitation and management can be found in the following IFAS publications:

Identifying and Controlling Postharvest Tomato Diseases in Florida <http://edis.ifas.ufl.edu/HS131>

Chlorine Use in Produce Packing Lines - <http://edis.ifas.ufl.edu/ch160>

General Overview of the Causative Agents of Foodborne Illness - <http://edis.ifas.ufl.edu/fs099>

Implementation of Tomato Good Agricultural Practices (T-GAP) and Tomato Best Management Practices (T-BMP) for the Fresh Tomato Industry in Florida

Food safety is important for everyone. It is the goal of the entire tomato industry to enhance the safety of tomatoes to the consuming public by the implementation of safer production, handling, and packing practices that will prevent or minimize contamination and will provide the necessary education and training on food safety practices for all levels of the industry.

Over the past two years, the Florida Tomato Exchange has been working with the industry, with the University of Florida, Institute of Food and Agricultural Sciences (IFAS), with the Florida Department of Agriculture and

Consumer Services (FDACS), and with the U.S. Food and Drug Administration (FDA) to capture the food safety practices that many are performing daily and to work to have consistent food safety practices for all. The document listing these food safety enhancement practices was completed in August 2006 and is a living document that will change, as more knowledge is available.

The Florida Tomato Exchange voted on September 7, 2006 to immediately implement the Tomato Good Agricultural Practices (T-GAP) and Tomato Best Management Practices (T-BMP) for the fresh tomato industry in Florida. The only exception is that the prohibition of field packing without a microbial reduction treatment will be delayed until the fall of 2007.

This action by the Florida Tomato Industry is to be commended certainly in light of the long-term objective of protecting human health and with the recent events of illnesses and deaths involving spinach and lettuce from California.

1) What does this mean for my operation?

Food safety is important for everyone. If you are a grower you should obtain a copy of the Tomato Good Agricultural Practices (T-GAP) for field and greenhouse production and follow the recommendations and requirements as closely as possible. The Department of Agriculture and IFAS can assist in this regard. If you are a packer or involved in any postharvest operations, obtain a copy of the Tomato Best Management Practices (T-BMP) and follow the recommendations and requirements as closely as possible.

2) Where can I get a copy of the T-GAPs or T-BMPs?

Call the Florida Tomato Exchange at 407-660-1949 and they will provide you a copy.

3) I see that the prohibition of field packing without a microbial reduction step has been delayed. Does that mean if I am field packing that I don't have to apply any of the recommendations at this time?

No, you should carefully read and apply all of the recommendations to the degree possible. For instance, your liability and chance of causing foodborne illness is greatly increased if you harvest from any field adjacent to an animal operation such as pasture with cattle, a dairy, etc. You are responsible for knowing the conditions in the field where you are harvesting. You are also responsible for ensuring that all sanitary provisions on facilities, handwashing, cleanliness of harvesting containers, etc. are followed. Although you may not be the grower, you are responsible for ensuring that the actual grower has records of analysis for the irrigation waters and has used properly registered pesticides, etc. Read the document carefully and question the growers in whose fields you are packing the tomatoes.

Yes, you are correct in that you can continue to field pack this year while we are working with the scientists and regulators to determine a procedure that you can use in the field to reduce the microbial levels on the tomatoes.

4) Am I required to use properly sanitized harvesting containers?

Yes, this issue was not postponed, only the prohibition of field packing until a microbial reduction step was approved. Carefully review the equipment requirements, which state that any surfaces or equipment that touches fresh produce is a food contact surface and must be cleaned and sanitized as such. You should establish routine cleaning and sanitizing procedures and maintain these standard operating procedures in writing. You should maintain all equipment and surfaces in such a way as to minimize contamination of and injury to tomatoes. You need to remove debris from the field and prevent injury to tomatoes you are harvesting in the field.

5) What other procedures are required of me if I am field-packing tomatoes currently?

Carefully review the sections in the T-GAP document about crews, harvesting, water and equipment. You need to instruct your work crews on food safety practices. You cannot use any surface water on the tomatoes you are packing. Do not pack in used, dirty containers. Do not wipe the tomatoes with a dirty rag before packing. This merely spreads more bacteria on the surface and from tomato to tomato. Prevention of contamination and foodborne illnesses is the goal.

6) How can I prove that I am making a good faith effort to comply?

Record all that you are doing. Be certain to write down in a notebook, that you keep with you, all the procedures you are using. Write down when you have verified with the grower that he/she is following proper procedures on irrigation water, fertilizer and pesticide use, and animal control.

7) Where can I go for help?

Everyone in the industry is working together this first year along with IFAS and FDACS to make certain we are enhancing the safety of our tomatoes. We are doing all we can do to prevent foodborne illness, yet we are doing this in a common sense way that we can accomplish. Give the Florida Tomato Exchange a call and they can refer someone to you to help you with your operations. A longer Q & A document is being prepared for the entire T-GAP and T-BMP document. Contact your County Extension office for availability. Check the new EDIS document on "Farm Safety on the Farm" which will soon be available from your Extension Office or on the UF/IFAS publication website at <http://edis.ifas.ufl.edu/>.

Florida Ag Expo - the Florida Vegetable industry's only seminar and trade show!

December 8-9, 2006

UF/IFAS Gulf Coast Research and Education Center
Balm, FL

Thanks to a partnership between the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS), the Florida Fruit & Vegetable Association, the Florida Tomato Committee, the Florida Strawberry Growers Association, and *Florida Grower* magazine, this first-ever event will mark the beginning of a series of educational and entertaining seminar experiences.

The UF/IFAS Gulf Coast Research and Education Center in Balm will host the Florida Ag Expo. This new facility symbolizes the innovative nature of the state's fruit and vegetable growers. The Florida Ag Expo will feature seminars, demonstrations, variety trials, and exhibits designed to help growers increase sales, lower costs, and maximize productivity.

Two days of seminars by leading industry experts will inform and educate you on the latest production trends and techniques. Some of the biggest names in the industry and beyond will be on hand to discuss issues that matter to you. Don't miss Commissioner of Agriculture Charles Bronson, U.S. Rep. Adam Putnam, and many more of Florida's most influential decision makers.

Equipment and field products will be on display and in use during the many Florida Ag Expo demonstration periods. See the latest in tractors, sprayers, plastic applicators, irrigation products, and much, much more.

More than 30 of the hottest new tomato and strawberry varieties will be available for inspection and taste testing at the Florida Ag Expo field trial area. See first-hand how these varieties grow in the field and how they stack up against some of the old favorites.

More than 60 exhibitors will be available to discuss their latest products and services and how they can help you more profitably run your business. You will be able to tour vendors from nearly every sector of the industry to help provide the edge you need to beat the competition.

Advanced Building Concepts will have a prototype of the latest in affordable and durable farmworker housing for you to tour. The design features of the ICS Solution include Category 4 hurricane loadings, savings of up to 50% on annual energy costs, moisture and mildew barriers, and non-combustible walls and roof.

Look for your official Florida Ag Expo Show Guide in your November issue of *Florida Grower* magazine. Registration is free and can be done online at www.floridagrower.net/agexpo/. You can also register at the seminar, or avoid the lines and preregister by visiting www.floridagrower.net or by calling 407-539-6552

For reservation information on rooms near the UF/IFAS GCREC in Balm, contact our host hotel:
The Inn At Little Harbor, Ruskin, FL
800-327-2773
www.staylittleharbor.com

If you have any questions about exhibiting at the 2007 Florida Ag Expo, please contact *Florida Grower* magazine's Marc Stockwell at 407-539-6552, or by e-mail at mlstockwell@meistermedia.com.

The UF/IFAS Gulf Coast Research and Education Center is located at 14625 County Road 672, Wimauma, FL 33598. Telephone 813-634-0000. Website <http://gcrec.ifas.ufl.edu/>

Honeybee and Pollination Future Is Uncertain

With the emergence of the Africanized honeybee (the "killer bee") and the increasingly destructive presence of parasitic Varroa mites, the future of Florida's food and ornamental pollinators is uncertain at best. In the late 1980s, feral bees were almost exclusively responsible for pollination; now, Florida's feral bee population has been wiped out.

"Unfortunately, America's honeybee population is not very healthy," says Gerald Hayes, Chief Apiary Inspector for DOACS' Division of Plant Industry. "Without effective pollinators one-third of the food and an enormous percentage of ornamentals that we produce in Florida are at risk: watermelons, blueberries, strawberries and at least two-thirds of our citrus."

According to Hayes, the Varroa mite's bite activates viruses that kill bees. Although the mite is endemic in the United States, many factors have allowed it to proliferate dangerously: other natural bacteria, chemicals actually introduced as mite controls, and other chemical influences now present in the environment.

Africanized bees mate aggressively with our relatively placid, but superior pollinating European bees, producing hybrids. From the Tampa Bay area south, these Africanized and hybrid bees are dominant and, while no human deaths have been recorded, there have been numerous fatal livestock and pet incidents. Perhaps because their genetic code is principally tropical (bees in temperate climates must store food for winter), Africanized and hybrid bees are poor pollinators.

The effect of spreading Africanized hives has consequences not only for our food supply, but for hundreds of thousands of agricultural workers, outdoor enthusiasts – campers, hikers, hunters, fishermen, birdwatchers – and schools, homes and businesses which may unwittingly harbor a colony.

Today, Hayes is working with an international coalition, beginning with IFAS of the University of Florida, to find solutions for our pressing pollination deficits. The long-term question, he says is how much food we

ourselves want to supply and how much we want turn over to foreign growers ... similar to what we have done with our oil supply. Thus, the humble bee becomes a significant international player.

FARM FRESH CHARITIES

Farm Fresh Charities is a Florida based corporation. It's purpose to provide a much needed service to the fundraising industry. Recognizing that most fundraisers require the consumer to purchase something that he or she does not really want; at a price much higher than they would pay at retail; is the current model in which funds are raised.

Farm Fresh Charities will provide an opportunity for the consumer to purchase FARM FRESH fruits and vegetables at or below the price of their local grocery chain. By simply ordering FARM FRESH produce from their local charity representative, they will automatically contribute a significant financial portion of each item back to that charity. So without paying a penny more, they made dollars of a difference to their charity! Now they can support their own health and immune system while contributing dollars to help others in need! FARM FRESH fruits and vegetables is nature's way to keep your body healthy and your mind fresh and alert!

It's no secret that the margins at the chain store levels are extremely high. For decades farmers have worked hard toiling day and night to reap a modest reward for their efforts. They do so while the grocery chain makes the "lions share" of the profits! FARM FRESH is also dedicated to provide the local farmers with higher margins for their top quality produce. Farm Fresh can make a difference. Farm Fresh is committed to pay the farmer top of the USDA market report for their crop. Not only will this support the local farmer in growing, but it will allow them to grow "BETTER" assuring you the best possible FARM FRESH produce every time. As Farm Fresh grows in helping others, farmers will also grow in helping you stay healthy. FARM FRESH was founded by Tony Tolar, a third generation farmer. Tony knows the health benefits of top quality FARM FRESH produce!

FARM FRESH CHARITIES will provide your organization with all the print materials to launch this fundraiser with class. A trained professional will be your contact through out this campaign. Once you have committed to our fundraiser, Farm Fresh will work with you to set a target delivery date. With materials in hand, your group can hit the streets with confidence receiving orders for FARM FRESH produce. All items will be priced at or below retail costs in your local chain store. Better still, all produce will be less than 3 days old! THAT'S FARM FRESH!

For more info visit <http://farmfreshcharities.org/zipentered.asp>

Up Coming Meetings

Manatee County

November 27, 2006

WPS Train-the-Trainer Workshop

10:00 AM.

Manatee County Extension Service
Palmetto, Florida

Review of WPS guidelines for those wishing to become certified to train workers and handlers. Two CEUs are also offered in Private and other categories (**NO CORE CEUs**)

Contact Phyllis Gilreath at 941-721-4524 for more information.

December 6, 2006

Labor/ Migrant and Seasonal Workers Protection Act Seminar

Manatee Convention Center (Civic Center) 5:30 PM
Palmetto, Florida

For registration and additional information please contact - Mike Rios US DOL at
13-288-1400 ext.28 or 813-245-9055

December 12, 2006

Private Pesticide Applicator Training and Testing. 9:00 AM.

Manatee County Extension Service
Palmetto, Florida
2 CORE CEUs offered for those who have a current license.

Contact Phyllis Gilreath at 941-721-4524 for more information.

Miami Dade County

November 9, 2006

Agricultural Labor Compliance Workshop 7:00 - 8:45 PM
sponsored by the US Department of Labor.

John D. Campbell Ag Center
18710 SW 288th Street
Homestead, Florida.

Palm Beach County

November 6, 2006

Pesticide Applicator Testing
West Palm Beach, Florida

General Standards/Core Training (4 CEUs) 8:00 am - 12:00 AM
Ornamental and Turf Test Review (2 CEUs) 1:00 pm - 3:00 PM

November 8, 2006

Pesticide Applicator Testing
Belle Glade, Florida

General Standards/Core Training (4 CEUs) 8:00 am - 12:00 AM
Private Applicator Test Review (2 CEUs) 1:00 pm - 3:00 PM

Southwest Florida

November 14, 2006

Farm Bureau Legislative Luncheon Noon

Captain Hendry House
512 Fraser Street
LaBelle, Florida

Contact Hendry-Glades Farm Bureau at 863-675-2535 for details

November 22, 2006

Worker Protection Standard Handler Training

Hendry County Extension Office
1085 Pratt Boulevard
LaBelle, Florida

Spanish 9:00 AM
English 1:00PM

Contact Gene McAvoy at 863-674-4092 for details

December 4, 2006

Labor/ Migrant and Seasonal Workers Protection Act Seminar

Turner Agri-Civic Center
Arcadia, Florida

5:30 PM

For registration and additional information please contact - Mike Rios US DOL at 13-288-1400 ext.28 or 813-245-9055

December 15, 2005

Fall Vegetable Field Day 10 AM - Noon

UF/IFAS - SW Florida Research and Education Center
Hwy 29 N
Immokalee, Florida

Contact Gene McAvoy at 863-674-4092

Other Meetings

November 14 - 15, 2006

Watermelon Growers Symposium

Scottish Rite Auditorium
San Antonio, Texas

For more information contact Champion Seed Co at 956- 618-5574

November 29, 2006

Certified Crop Advisor's Fall Continuing Education Seminar

South Florida Community College
600 West College Drive
Avon Park, Florida

For information on cost and registration contact Lorrie Key at 863-784-7033 or Julie Baker at 863-784-7034

December 3-6, 2006

4th International Bemisia Workshop

December 6-8, 2006

International Whitefly Genomic Workshop

Hawk's Cay Resort
Duck Key, Florida

For more information, go to <http://conference.ifas.ufl.edu/bemisia>

December 8 –9, 2006

Florida Ag Expo

UF/IFAS Gulfcoast Research and Education Center
14625 County Road 672
Wimauma, Florida 33598

Featuring educational sessions, equipment displays, demonstrations and field trials, see article above for more details.

Websites

Worker Protection Standard - The EPA offers a variety of free materials to help growers comply with the Worker Protection Standard and to help protect workers against pesticide injuries. Many are available in multiple languages. Materials for growers and states about compliance, personal protective equipment and other WPS-related issues can be downloaded at <http://www.epa.gov/agriculture/awor.html>.

Africanized honeybees are here. For information, check out “African Honey Bee: What You Need To Know” at <http://edis.ifas.ufl.edu/MG113> and [Http://solutionsforyourlife.ufl.edu/hot_topics/environment/africanized_honey_bees.html](http://solutionsforyourlife.ufl.edu/hot_topics/environment/africanized_honey_bees.html)

Farm Fresh Charities – you can make the difference locally <http://farmfreshcharities.org/zipentered.asp>

Quotable Quotes

Wise men profit more from fools than fools from wise men; for the wise men shun the mistakes of fools, but fools do not imitate the successes of the wise. - Cato the Elder

If a man can write a better book, preach a better sermon, or make a better mousetrap than his neighbor, though he build his house in the woods, the world will make a beaten path to his door. – Ralph Waldo Emerson

Love and kindness are never wasted. They always make a difference. They bless the one who receives them, and they bless you, the giver. - Barbara De Angelis

People usually consider walking on water or in thin air a miracle. But I think the real miracle is not to walk either on water or in thin air, but to walk on earth. Every day we are engaged in a miracle which we don't even recognize: a blue sky, white clouds, green leaves, the black, curious eyes of a child -- our own two eyes. All is a miracle. - Thich Nhat Hanh

When people keep telling you that you can't do a thing, you kind of like to try it. - Margaret Chase Smith

On the Lighter Side

The GI

You alarm goes off, you hit the snooze and sleep for another 10 minutes.
He stays up for days on end.

You take a warm shower to help you wake up.
He goes days or weeks without running water.

You complain of a "headache", and call in sick.
He gets shot at as others are hit, and keeps moving forward.

You put on your anti war/don't support the troops shirt, and go meet up with your friends.
He still fights for your right to wear that shirt.

You make sure you're cell phone is in your pocket.
He clutches the cross hanging on his chain next to his dog tags.

You talk trash about your "buddies" that aren't with you.
He knows he may not see some of his buddies again.

You walk down the beach, staring at all the pretty girls.
He walks the streets, searching for insurgents and terrorists.

You complain about how hot it is.
He wears his heavy gear, not daring to take off his helmet to wipe his brow.

You go out to lunch, and complain because the restaurant got your order wrong.
He doesn't get to eat today.

Your maid makes your bed and washes your clothes.
He wears the same things for weeks, but makes sure his weapons are clean.

You go to the mall and get your hair redone.
He doesn't have time to brush his teeth today.

You're angry because your meeting ran 5 minutes over.
He's told he will be held over an extra 2 months.

You call your girlfriend and set a date for tonight.
He waits for the mail to see if there is a letter from home.

You hug and kiss your girlfriend, like you do everyday.
He holds his letter close and smells his love's perfume.

You roll your eyes as a baby cries.
He gets a letter with pictures of his new child, and wonders if they'll ever meet

You criticize your government, and say that war never solves anything.
He sees the innocent tortured and killed and remembers why he is fighting.

You hear the jokes about the war, and make fun of men like him.

He hears the gunfire, bombs and screams of the wounded.

You see only what the media wants you to see.
He sees the broken bodies lying around him.

You stay at home and watch TV.
He takes whatever time he is given to call, write home, sleep, and eat.

You crawl into your soft bed, with down pillows, and get comfortable.
He crawls under a tank for shade and a 5-minute nap, only to be woken by gunfire.

Do you sit there and judge him, saying the world is probably a worse place because of men like him.
If only there were more men like him!

Only two defining forces have ever offered to die for you, Jesus Christ and the American G. I.
One died for your soul, the other for your freedom

Paint My Porch

A blonde who's down on her luck is walking through a luxurious neighborhood looking for odd jobs to do when she approaches a large house. She goes up to the house, rings the bell and the owner comes to the door.

He asks the lady what he can do for her. The blonde tells him of her situation, that she is down on her luck and wants to know if he has any odd jobs that she could do. The man thinks about it for a second and then remembers that he wanted to get his porch painted. He asks the blonde if she paints?

The blonde says, "Sure anything."

"Well, I've been wanting my porch painted, how much would you charge?" the man replies.

"I don't know, say \$50 bucks."

"Sounds good. Go ahead and get started." He closes the door and walks back inside.

His wife asks him, "Who was at the door?" He tells her of the blonde and her situation and then told his wife that the blonde agreed to paint the porch for \$50 bucks.

The astonished wife says, "\$50 bucks, but that porch goes the full length of our house and then some. It will be at least a few hours job. You really should pay her more."

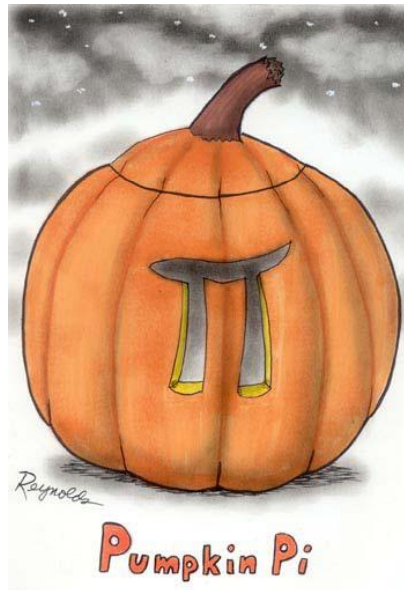
"But that's all she said she wanted, and anyway she's a dumb blonde!"

10 minutes later, they get a knock on the door. The man answers the door and the blonde stands there and says, "All done."

With a surprised look on his face, "I can't believe it, you're already done painting the entire porch."

"Yes, and by the way it's not a porch it's a Ferrari."

Happy Halloween



Contributors include: Joel Allingham/AgriCare, Inc, Karen Armbruster/SWFREC, Kathy Smith/Agricultural Pest Management, Bruce Corbitt/West Coast Tomato Growers, Dr. Kent Cushman/SWFREC, Dr. Phyllis Gilreath/Manatee County Extension, Michael Hare/Drip Tape Solutions, Fred Heald/Farmers Supply, Sarah Hornsby/AgCropCon, Cecil Howell/Taylor & Fulton, Loren Horsman/Glades Crop Care, Keith Jackson/SWFREC, Bruce Johnson/General Crop Management, Dr. Mary Lamberts/Miami-Dade County Extension, Leon Lucas/Glades Crop Care, Bob Mathews, Glades Crop Care, Mark Mossler/UF/IFAS Pesticide Information Office, Gene McAvoy/Hendry County Extension, Alice McGhee/Thomas Produce, Jimmy Morales/Pro Source One, Chuck Obern/C&B Farm, Teresa Olczyk/ Miami-Dade County Extension, Dr. Aaron Palmateer/TREC, 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/ C&B Farm, Ken Shuler/Stephen's Produce, Ed Skvarch/St Lucie County Extension, John Stanford/Thomas Produce, Mike Stanford/MED Farms, Dr. Phil Stansly/SWFREC, Eugene Tolar/Bright Star Farms, Mark 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.

Gene McAvoy
County Extension Director / Extension Agent III
Regional Specialized Agent - Vegetables/Ornamental Horticulture

Hendry County Extension Office
PO Box 68
LaBelle, Florida 33975
Web: <http://hchort.ifas.ufl.edu/>

863-674-4092 phone
2863-673-5939 mobile - Nextel 159*114449*
863-674-4097 fax
GmcAvoy@ifas.ufl.edu

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

Thomas Produce Company
Of South Florida
Grower and Shippers of Quality Vegetables
9905 Clint Moore Road

Robert Murray
Wedgworth's Inc
Big W Brand Fertilizer

Wes Mathis
Triangle Chemical Company
PO Box 537
Groveland, Florida 34736
Toll Free 877-724-8787 Cell 863-673-2892

Fred Heald
Farmers Supply Inc
710 Broward Street
Immokalee, FL 34142
Phone 239-657-8254 Fax 239-657-2005

Gargiulo
Growers Shippers Importers Exporters
David Pensabene: Production Manager
Naples Operations
Phone 239-353-0300 Fax 239-353-3407

Damon Shelor
ProSource One
Immokalee, Florida
Office 239-657-8374 Cell 239-707-6142
E-mail: dshelor@ProSourceOne.com

Dr. Nancy Roe
Farming Systems Research
5609 Lakeview Mews Drive
Boynton Beach, Florida 33437
Phone 561-638-2755

Ed Early
Dupont Agricultural Products
5100 South Cleveland Avenue
Fort Myers, Florida 33907
Phone 239-332-1467 Mobile 239-994-8594

Glades Crop Care, Inc.
Leaders in Crop Health
Management
Charlie Mellinger, Ph.D.
Phone 561-746-3740 Fax 561-746-3775

Rachel Walters
Bayer CropScience
32871 Washington Loop Road
Punta Gorda, FL 33982
Phone 941-575-5149 Cell 239-707-1198

Glen Kaufman
Paramount Seeds, Inc.
PO Box 1866
Palm City, Florida 34991
Phone 772-221-0653 Fax 772-221-0102

Walter Preston
Manatee Fruit Company
PO Box 128
Palmetto, Florida 34220-0128
Phone 941-722-3279 Fax 941-729-5151

Supporting the growers who support our sponsors

Robert F. Gregg
Syngenta Crop Protection
11051 Championship Drive
Fort Myers, FL 33913

OmniLytics - AgriPhage

Safe Natural Effective
Vegetable Bacteria Control
Brett Jackman 801-541-4244
Aaron Johnson 801-746-2461

PRODUCTION SOILS LLC

A Superior Alternative To Compost

Sam Hipp 954-296-9203

Scott Allison
DIAMOND R FERTILIZER

1155 Commerce Drive
LaBelle, Florida 33935
Phone 863-675-3700 Cell 239-851-0613

John Frieden
Abacus (Abemectin)
Rotam USA LLC

Valdosta, Georgia 31602
Office 229-253-1646 johnfr@rotam.com

Linda Lindenberg
Dow AgroSciences LLC

Phone 706-473-9229
AgNet 158*17*29723

Bobby Hopkins
SIPCAM AGRO USA

Phone 1-800-295-0733 or 770-587-1032
Cell 678-576-4549
www.sipcamagrousa.com
Lrhopkins3@aol.com

Steve Mike Dave
Jamerson Farms

Growers, Packers and Shippers of
Florida's Finest Vegetables
Phone 239-229-5734 Fax 239-368-0969

Sarah Hornsby, CCA
Agricultural Crop Consulting, Inc
Scouting: Manatee, Hillsborough, Collier
Office/Fax 941-776-1122
Cell 941-713-6116
Email: AgCropCon@aol.com

Donald Allen
AGLIME SALES INC

1375 Thornburg Road
Babson Park, Florida 33827-9549
Office 863-638-1481 Fax 863-638-2312
Mobil 863-287-2925

OxiDate® BioSafe Systems LLC
TerraClean® Luis Hansen
StorOx® Sim NiFong
info@biosafesystems.com 863.441.1057

Valent USA

"Products That Work
From People Who Care"

Sarah Hatton 863-673-8699

Gaylon Pfeiffer
BASF Corporation

11806 Marblehead Drive
Tampa, Florida 33913

PREV AM

Vegetable Pest/Disease Control
Darrell Thorpe 352-483-6569
Jerry Dukes 941-524-1312

Special thanks to the generous support of our sponsors, who make this publication possible.

Mike Seese
KeyPlex Products
Morse Enterprises Limited Inc
151 SE 15th Road
Miami, Florida 33129
800-433-7017 Mike Cell 439-910-4837

Jack E Kilgore II
Chemical Dynamics
“Our business is to help you grow”
7150 E Brentwood Road
Fort Myers, Florida 33919
Cell 239-707-7677 Nextel: 158*17*24422

Chuck Obern
C & B Farm
CR 835
Clewiston, FL 33415
Office 863-983-8269 Fax 863-983-8030
Cell 239-250-0551

Bart Hoopingarner
Cerexagri-Nisso LLC
3605 162 Ave E
Parrish, FL 34219
Cell 941-737-7444 Fax 941-776-1844
bart.hoopingarner@cerexagri.com

Jay Hallaron
Chemtura Corporation
321-231-2277 cell 407-256-4667 cell
jay_hallaron@cromptoncorp.com

Jared Revell
United Agri Products
116 Jerome Drive
Immokalee, Florida
239-657-3168 office 239-253-0585 cell

Dr. Henry Yonce
KAC Agricultural Research
Scouting, Consulting
Research
386-736-0098 work 386-527-1124 cell
HDYONCE@msn.com

Ted Holmes
Southern Regional Sales Manager
CDMS
ChemCheck -FoodCheck
Phone 941-746-6087 ted@cdms.net

PUT YOUR NAME HERE

PUT YOUR NAME HERE

NOTE: The acknowledgement of sponsorship in no way constitutes or reflects an official endorsement of these businesses or their products or services by either the University of Florida, IFAS, the Florida Cooperative Extension Service, or the Hendry County Extension Office. Sponsors have no control over the content of this publication