



UNIVERSITY OF
FLORIDA

E X T E N S I O N

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SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

January 31, 2006

After a cool start to the month, which saw temperatures in most areas dip into the 30's, the past few weeks have been unseasonably warm with many areas seeing several days with temperatures in the low 80's. Daytime highs have been mainly in the 70s and low 80s. Cooler temperatures at night ranged in the 40s 50s and 60s.

The low temps of January 8 brought scattered frost to some of the normally cooler interior locations with some crop damage being reported in some areas in the Glades.

The past few weeks have been dry with most areas receiving less than an inch of rain for the period. While lakes, canals remain generally above normal levels; surface soil moisture levels being maintained with irrigation in dry areas. Some mornings have brought foggy conditions and heavy dews.

Growers and scouts report seeing some injury to foliage along with fruit scarring resulting from cold windy weather earlier in the month.

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											
1/6 – 1/30/06	31.1	82.7	0.33	8.8	32.0	2.0	17.5	33.3	16.8	35.6	102.3
Ft Lauderdale											
1/6 – 1/30/06	41.6	81.0	0.67	0.0	4.7	2.6	0.9	2.8	7.5	14.2	75.5
Fort Pierce											
1/6 – 1/30/06	34.0	81.4	0.13	10.0	16.8	16.6	9.0	28.9	51.8	43.4	106.6
Homestead											
1/6 – 1/30/06	37.7	80.8	0.48	2.2	13.2	2.7	5.1	1.8	2.1	24.3	82.8
Immokalee											
1/6 – 1/30/06	32.7	82.7	0.15	13.3	21.9	12.6	8.1	3.3	16.4	17.0	93.9

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Favorable weather conditions allowed planting and harvesting to continue on schedule. Crops coming to market include of cabbage, cucumbers, eggplant, endive, escarole, Romaine lettuce, pickles, peppers, radishes, snap beans, squash, strawberries, tomatoes and specialty items. Only very light amounts of sweet corn and okra are available. Quality is good and volume is starting to return to normal levels as post-Wilma planted fields reach maturity. Reports indicate that prices for tomatoes has dropped precipitately to below break-even levels as volume has increased.

The short-term forecast from the National Weather Service in Miami indicates that a cold front across north-central Florida at this moment is moving southeast at a good clip and move across South Florida today. Winds will shift to north and dewpoints will drop falling to the low to mid 40s just behind the frontal boundary. This system should slow down once it gets to South Florida and will continue crawling slowly south and will be across the straits by Wednesday.

Forecast models have the low level flow rapidly shifting to east and then southeast by Wednesday night as another system begins to develop over the northern Gulf. This system will have little impact on the local area.

A rather strong short wave could have more significant impact on the weather over South Florida as it amplifies a long wave trough over the middle of the country by Friday. An equally amplifying ridge over western half of the country will force the polar jet to plunge south to east/central portions of the Gulf by Saturday bringing the possibility of isolated thunderstorms for that period. This system should move through and be east of the local area by Sunday night with rapid clearing and drier conditions through the early part of next week. For additional information, visit the National Weather Service in Miami website at <http://www.srh.noaa.gov/mfl/newpage/index.html>

Insects

Leafminers

Respondents from the Manatee/Ruskin area indicate that leafminer pressure remains a problem and indicate that adult leafminers and mines are present in newly planted tomatoes.

Reports from Homestead area indicate that leafminer pressure has been low in beans and has dropped off in tomato in recent days.

East Coast producers also report some moderation in leafminer activity although note that leafminers are still causing problems in new plantings especially in beans and tomatoes. Pressure is relatively light to moderate in most locations.

Growers and scouts in Southwest Florida report leafminers remain the major insect problem in a number of crops especially tomatoes but not that pressure has declined somewhat in places in recent days but remains a problem in others. Tomato growers continue to spray actively against the pest.

Worms

Growers and scouts in the Glades report some problems with fall armyworm numbers in scattered locations but note that overall pressure has been low.

Around southwest Florida, respondents report an increase in worm activity over the past few days. Scouts report finding tons of worm eggs and egg masses in the last couple of days. These have been mostly southern armyworms but also a few beet armyworms, fruitworms, loopers and even a few pinworms have been seen.

Reports from Manatee County indicate that worms continue to cause some problems in cabbage.

Correspondents from Palm Beach indicate that worm pressure has increased somewhat over the past few weeks with a number of new egg masses being reported. Reports indicate that growers are finding mainly beet and southern armyworms.

Reports from Homestead indicate that worm pressure has been sporadic in pepper and tomatoes but note increasing fall armyworm pressure in sweet corn as well as a some increase in loopers and beet armyworm in beans.

Whiteflies

Growers and scouts around Homestead indicate increased whitefly pressure in beans, cucurbits and tomato.

Reports from Ruskin indicate that whitefly activity is picking up, possibly moving out of old plantings left from fall, and report finding relatively high numbers on some plants in the field less than 2 weeks.

Growers are urged to completely destroy old plantings, including oil with their herbicide, as Mother Nature has not provided the cold temperatures this season to do it for us.

Respondents in Palm Beach and Martin Counties indicate that whiteflies are starting to increase in eggplant and tomato in some places and are also present in squash. With the exception of a few hotspots in scattered locations, numbers remain low to moderate in most places.

Around Immokalee, reports indicate whitefly numbers remain low in most locations although reports indicate that they are beginning to increase in older fields and note that whitefly adults are starting to move from older plantings to younger ones nearby.

As fall crops come off, it is important to practice good sanitation to avoid movement of whiteflies into later plantings and a buildup in populations that carry over to the spring crop.

Growers are urged to continue to practice the following recommendations

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 are juvenile hormone mimics 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.

Aphids

Growers and scouts around Immokalee report that aphid pressure has been sporadic and remains low in most places.

Reports from the Palm Beach and the Glades indicate a few winged aphids are widely present in low numbers in most places. Some colony formation has been noted in pepper and specialty crops especially Oriental crucifers.

Respondents in Homestead report finding aphids on beans and cucurbits and note that aphids have reached sprayable thresholds in eggplant in several locations.

Growers report some problems with aphids in cabbage in the Manatee/Ruskin area.

Pepper Weevils

Around Southwest Florida, pepper weevils are present at low levels in older fields in several locations but overall have shown little or no increase.

Growers and scouts around Homestead note that pepper weevils numbers are on the rise in several locations.

Thrips

Around Southwest Florida, thrips are beginning to be reported in several pepper fields at low levels. In most cases it looks like they are flower thrips (*Frankliniella bispinosa*).

Respondents in Homestead indicate that thrips are mostly low in beans but are starting to increase in pepper and eggplant.

Chili thrips have been identified on ornamentals in at least 7 counties ranging from Palm Beach to Marion. At a meeting held this week in Apopka, experts from around the state agreed that it was almost a given that this pest is now (unofficially) established in Florida.

According to FDACS, chili thrips have been detected on roses in the Naples area over the past few weeks.

Adult thrips are small about 0.5 – 1.2 mm long. It is difficult to recognize this thrips with the naked eye, and definitive identification is best accomplished at approximately 40 to 80 x magnification. Eggs are about 0.075 mm long and 0.070 mm wide, and are inserted inside plant tissue. The egg stage lasts for 6-8 days, which is

followed by has two larval stages (1st and 2nd instars) that last for 6-7 days. The prepupal period is short (~ 24 h) and the pupal period lasts 2-3 days. The larvae are off-white. The adults are pale grayish-white with incomplete dark stripes on the dorsal surface of each abdominal segment. The life cycle is completed in 14-20 days. The chili thrips female oviposits 60 to 200 eggs in her lifetime at the rate of 2-4 eggs per day.

Chili thrips attacks all above ground parts of its host plants, and prefers the young leaves, buds and fruits. It has been reported to attack a wide range of plants with more than 100 recorded hosts from 40 different families including beans, melons, peppers, strawberries, and tomato as well as wide range of ornamentals and fruits including citrus. Heavy feeding damage turns tender leaves, buds, and fruits bronze to black in color. Damage leaves curls upward and appear distorted. Infested plants become stunted or dwarfed, and leaves with petioles detach from the stem. The abundance of chili thrips is low in the rainy season, but becomes high during the dry season.

It is important to check plants with abnormal growth. At the initial stage of infestation, the underside surfaces of the leaves become shiny. These leaves soon become discolored and curly. Collect 5-20 leaves from the symptomatic plants and place them in a ziplock bag to prevent adults from escaping. Send these samples to an expert for further processing to establish or confirm their identity.

Go to <http://www.doacs.state.fl.us/pi/enpp/ento/chillithrips.html> and <http://www.mrec.ifas.ufl.edu/LSO/thripslinks.htm> for more information on this pest.

Silk Fly

Reports from Homestead indicate that silk fly activity has increased over the past few weeks.

Around the Glades, silk fly continue to cause problems.

Broad mites

Around Southwest Florida, reports indicate that broad mites remain low.

Growers in Palm Beach report that broad mites are around and can be found on peppers.

Reports from Homestead indicate that broad mites are increasing in pepper and eggplant.

Diseases

Late Blight

Growers and scouts in West Central Florida indicate that late blight has been diagnosed in both old and new tomato plantings. Phyllis Gilreath notes that with the recent warm weather, it is very important to keep that new growth protected. Twice weekly spraying with fungicides is needed as plants are growing rapidly.

She reports that they have been receiving a larger than usual number of late blight samples from home/backyard gardeners across Manatee County, indicating inoculum levels are high and widespread. Outbreaks in a couple of field plantings seem to be fairly aggressive. There is no word on the sensitivity of this current outbreak to Ridomil.

Late blight has been reported in several locations around Immokalee on both tomato and potato. To date incidence and occurrence is mostly low.

There have been no reports of late blight from Homestead or East Coast respondents at this time.

The disease can spread quickly and devastate a tomato or potato field within a few weeks if not properly controlled. Since the disease can spread so rapidly, growers should scout their fields thoroughly each day, especially when cool and wet conditions conducive to disease development prevails.

The disease thrives under cool and wet conditions. Temperatures between 50 and 80°F combined with moist conditions such as rain, fog, heavy dews, or relative humidity above 90 percent are conducive for disease development. Night temperatures in the mid-fifties with daytime temperatures from the mid-fifties to mid-seventies are ideal for this disease.

Late blight symptoms on leaves appear as irregularly shaped brown to purplish lesions with indefinite border lesions that can span veins. The lesions may be seen any time of day, on any stage of plant growth and on leaves of any age. Velvety, white fungal growth may appear on the lower surface of affected leaflets early in the morning before leaves dry and/or in the lower canopy.

On stems, purplish lesions may be found any where on the stem. Cottony, white growth of fungus on stems with lesions can often be seen early in the morning and/or in the lower canopy. Stems with lesions are brittle and break easily. Lesions are confined to epidermis and cortex. Leaf rolling and wilting is often associated with stem lesions and purpling of leaflets may occur in some varieties.

Several control measures plus observation are absolute necessities if late blight is to be properly controlled. Potato growers should purchase certified, disease-free seed pieces and store seed in a dry location before planting.

Other important cultural controls include destruction of cull piles and volunteer potato or tomato plants. Plant resistant varieties. Begin a spray program with fungicides if late blight is in your area or weather conditions are suitable for late blight development. After harvest, kill infected foliage to minimize tuber infection.

Tomato growers should purchase disease-free transplants. Observe your fields thoroughly each day, especially when cool and wet weather prevails.

Currently, fungicides are the most effective means of controlling late blight and will remain the primary tool until cultivars with resistance to this disease become available. Fungicides slow the rate at which the disease develops in the field by creating a protective barrier on the foliage. Just applying a chemical, however, does not necessarily equate with effective disease control. Relative effectiveness of a product, coverage, and timing must be factored into the equation for maximum benefit.

Numerous fungicide products are registered for late blight control. Protectants, as the name implies, protect foliage from infection by spores. Protectant chemicals must be well distributed over the leaf surface and must be applied before spores land on leaves. They are ineffective against established infections.

Systemic products become distributed locally within plant tissues and protect foliage from infection by spores. These products possess so-called “kickback” action, which may kill some established infections and can suppress production of new spores. However, even a short break in spray schedules, despite what is said regarding some of the newer fungicides, can result in a dramatic increase in blight under the conditions we have had during the past two weeks.

Some growers report good results and increased efficacy using contact materials such as Prev-AM in a tank mix with other fungicides.

Bacterial Leaf Spot

Growers and scouts on the East Coast indicate that bacterial spot is finally beginning to slow down with drier weather giving plants a chance to put out some clean new growth.

Growers and scouts indicate that bacterial spot has slowed down significantly but still continues to creep around in plantings where it is present.

Respondents in Homestead indicate that bacterial spot pressure has decline in recent days.

Target Spot

Growers and scouts around Southwest Florida report that target spot continues to defoliate tomatoes plants from the inside out and there are reports of some fruit infections.

Reports from the Bradenton area indicates that target spot is still a problem on tomato around the area.

Respondents around Homestead report active target spot in a number of locations.

Around Palm Beach, reports indicate that target spot is present in a number of scattered locations.

Remember that tank-mix sprays of copper fungicides and maneb do not provide acceptable levels of target spot control. Recommended fungicides include various chlorothalnil formulations (Bravo, Echo, Bravo Ultrex, Bravo Weather Stik and Ridomil Gold/Bravo).

Early Blight

Reports from growers indicate that early blight is widely present and increasing in a number of areas around South Florida. Incidence is low to moderate depending on the location.

Alternaria

Dr. Ken Pernezny, Plant Pathologist UF/IFAS EREC reports seeing “lots” of Alternaria on snap beans in the Glades. He notes due to replanting, it is primarily on the foliage. However, he expresses concern that once pods form on the plants, the fungus will jump to the pods and produce the unsightly black pimples that throw the pods out of grade. It is important that growers apply effective fungicides when pods are small in order to minimize Alternaria pod spot. Growers and scouts indicate that a single strobilurin spray when pods are about three inches long seem to be providing good control.

Fusarium Crown Rot

Reports from Southwest Florida indicate that fusarium crown rot has exploded in a number of tomato fields presumably the results of pumping water up for cold weather two weeks ago.

Growers and scouts in Palm Beach also report increasing incidence and occurrence of fusarium crown rot in both pepper and tomato.

Downy Mildew

Downy mildew is widely present on cucumber and squash in a number of locations around Palm Beach. Incidence and severity is moderate to high in some locations.

Growers and scouts should look at the underside of the leaves to help make the right diagnosis. Angular leaf spot will have some water-soaking at the edge of the lesions. The downy mildew lesions look uniformly dry.

Downy mildew is also causing problems on cucumbers and squash in several locations around Immokalee.

Respondents in Homestead report a noticeable increase in downy mildew on squash and cukes in recent days.

Strains of the cucurbit downy mildew fungus resistant to QoI (also known as strobilurin) fungicides were detected in GA and NC in fall 2004 and in FL in spring 2005. The genetic mutation detected is the same as that in QoI-resistant cucurbit powdery mildew fungal strains. These strains exhibit qualitative resistance, thus resistant strains are highly insensitive to QoIs. It is not possible to re-gain control by increasing the application rate or shortening the interval with this type of resistance.

Development of resistance was not surprising. The cucurbit downy mildew pathogen has developed resistance to other fungicides. Other pathogens have developed resistance to QoIs thus demonstrating that this fungicide group is at high risk for resistance development.

In fungicide efficacy experiments being conducted in Georgia and North Carolina where 2 of the tested pathogen isolates were collected, QoI fungicides were not as effective as expected based on previous results. However, this could have been due to high disease pressure resulting from downy mildew starting to develop earlier than usual, and conditions being very favorable for disease development.

Fortunately, there are additional management practices for cucurbit downy mildew control. These include making adjustments to fungicide and attention to other control methods.

1. Select cucumber and melons varieties with resistance to downy mildew when possible.
2. Minimize leaf wetness by selecting sites with good air movement and without shading.
3. Avoid overhead irrigation during early morning when leaves are wet from dew, and during late evening when leaves will not have an opportunity to dry before dew forms.
4. Non-QoI fungicides labeled for this disease must be combined and alternated with QoI fungicides (a) to reduce selection of resistant strains and (b) to protect against loss if resistance does occur and affect efficacy of the QoI fungicides.

It is critical to know what fungicides contain an active ingredient in the QoI fungicide group, which is Group 11 in the system being used by EPA and the Ag Chemical industry. Some of the products, plus their active ingredient(s) and Group number in parentheses that are registered for use on cucurbits include the following:

Amistar (azoxystrobin; Group 11),
Cabrio (pyraclostrobin; Group 11),
Flint (trifloxystrobin; Group 11),
Reason (fenamidone; Group 11),
Pristine (pyraclostrobin; Group 11 + boscalid; Group 7), and
Tanos (famoxadone; Group 11 + cymoxanil; Group 27).

Non-QoI fungicides that could be tank-mixed with QoI fungicides (Group 11) and applied in alternation with QoI fungicides are:

1. Translaminar fungicides with some ability to enter and/or move in leaves:

Curzate (cymoxanil; Group 27),
Acrobat (dimethomorph; Group 15),
Previcur Flex (propamocarb; Group 28),
Gavel (zoxamide; Group 22, and mancozeb; Group M2),
Phosphorus acid fungicides (Phostrol, ProPhyt, and Fosphite; Group 33),
Ridomil fungicides (mefenoxam; Group 4)

2. Protectant fungicides, which do not enter leaves:

Bravo (chlorothalonil; Group M4),
Maneb (maneb; Group M2),
Dithane (mancozeb; Group M2), and
copper fungicides (Group M1).

Curzate reportedly has good curative activity (about 3 day kickback), thus it is a good choice for the first application after downy mildew is detected. However, it has poor residual activity (only 1-2 days), thus it is critical to tank-mix it with a protectant fungicide and to follow-up with another systemic fungicide when disease pressure is high.

Lettuce Downy Mildew

Dr Rick Raid, Plant Pathologist UF/IFAS EREC reports that downy mildew of lettuce remains a problem in some areas of the Everglades Agricultural Area. Growers that have been on a preventative program using tank-mixtures of maneb with a phosphonic fungicide have reported good control, but the program must be started early in the crop. Rick notes that once downy becomes established, the tremendous spore-producing capacity of this fungus will overrun most spray programs. Growers are also advised to rotate a fungicide of a chemistry dissimilar to the phosphonics into the program for resistance management. Acrobat, Previcur, Tanos, and Reason have proven beneficial in some University tests and all have shorter pre-harvest intervals than maneb. However, growers should be alert for plant-back restrictions, which may limit the use of some of these. Check labels before using or buying.

Snap Bean Rust

Common bean rust has yet to rear itself on south Florida snap beans but growers and scouts should keep a sharp lookout for it. It typically starts showing up about this time of year and usually hangs on until the end of the spring season. In the Glades, rust usually starts up around the Pahokee area on late fall or early winter crops, then spreads outward from the lake as spring crops are planted. The hurricane and several frosts/freezes since then have wiped out much of the crops that could have been hosts. As a result, there are low inoculum levels available to infect the spring crop. The strobilurin and sterol inhibiting fungicides are very effective in its control. Maintenance sprays with just chlorothalonil are useful but not nearly as effective.

Sweet Corn Rust

Dr Rick Raid, Plant Pathologist UF/IFAS EREC, reports that disease pressure from common rust of corn has also been very light. However, like bean rust, it usually starts to pick up at about this time of year. Common rust likes young expanding tissue and typically subsides some once the plant is fully expanded. In the spring, that is when northern corn leaf blight takes over. Growers should be alert for both diseases and initiate a spray program on varieties of known susceptibility before the disease pressure gets out-of-hand. Again, the strobilurins and sterol inhibitors are effective against both of these diseases but the EBDCs should be worked in the program for resistance management.

Bean Powdery mildew

Dr Rick Raid, Plant Pathologist UF/IFAS EREC notes that bean powdery mildew has been observed recently and could become a problem if conditions remain dry. Powdery mildew can affect the pod, as well as infecting the foliage, so growers should keep this in mind when designing their spray program. A strobilurin or sterol inhibitor sprayed at bloom will help prevent losses due to this disease. Sulfur is also very effective against powdery mildew, but is not as effective as the aforementioned chemistries against bean rust.

Powdery mildew

Growers and scouts around Southwest Florida report increasing incidence of powdery mildew in squash with moderate to high incidence and severity in some places.

Respondents on the East Coast are reporting continuing problems with powdery mildew on squash.

Botrytis

Strawberry producers in the Hillsborough County area are reporting problems with botrytis.

Phytophthora

Growers and scouts on the East Coast report that phytophthora remains a problem on pepper and cucurbits in a number of locations.

Around Immokalee, reports indicate that phytophthora is still causing problems in some pepper fields.

Pythium

Growers around Immokalee report some losses from pythium on young g pepper and watermelon especially in fields where water levels were held high for cold protection.

Sclerotinia

Growers and scouts in the Homestead indicate they are beginning to find new cases of sclerotinia on eggplant and tomato. White mold incidence in beans remains low.

Respondents in the Palm Beach area report problems with sclerotinia on eggplant, pepper and tomato. Incidence is low to moderate in places.

Around Southwest Florida, reports indicate white mold is beginning to show up on beans and tomatoes in several locations.

Tomato Yellow Leaf Curl Virus

Reports from the Manatee/Ruskin area indicate that TYLCV is beginning to show up in new plantings coming with infected whiteflies from fall crops.

Tomato yellow leaf curl virus is present at low levels in scattered locations around Palm Beach and Martin counties.

Growers and scouts in Homestead report that many tomato fields are at 3-5 % infection rate with some hotspots reaching 10%.

Scouts around Immokalee indicate that TYLCV is starting to pop up in spring tomato. Incidence remains fairly low in most fields but note some plantings have reached 5 -10% infection rates.

News You Can Use

WPS Inspections Up in South Florida

Growers across South Florida report that WPS inspections have increased in number and frequency since the beginning of the year presumably in response to adverse publicity in the press last fall.

The U.S. Department of Labor and D.B.P.R. investigators have also been very active... and continue to focus on unregistered housing, transportation, registration, field sanitation, and field time keeping. Please remember that the investigators stated last season there will be no more "warnings" and that the cost of non-compliance has gone up drastically.

Reports indicate some 20 new WPS inspectors have been hired to handle the load and that the Legislature is looking at this issue seriously with indications that new legislation may be proposed.

Growers owe it to themselves and the greater agricultural community to police themselves and comply with existing regulations and to avoid providing activists with ammunition for increased regulation of the industry.

JOHANN'S ANNOUNCES \$2.8 BILLION IN HURRICANE DISASTER ASSISTANCE

USDA Hurricane Aid Totals More Than \$4.5 Billion to Date

WASHINGTON, Jan. 26, 2006 - Agriculture Secretary Mike Johann's today announced \$2.8 billion in aid to assist victims of the 2005 hurricane season. Agricultural producers will receive \$1.2 billion through various programs and \$1.6 billion will restore homes and rural communities.

"These funds will help producers of many different crops and livestock to recover from damage to their agricultural operations," Johann's said. "We're also pleased to assist rural residents who lost their homes and to help rebuild rural communities through grants and loans to restore water, electrical and telecommunications systems."

Johann's authorized the use of \$250 million from Section 32 funds in October 2005 for crop disaster, livestock, tree and aquaculture assistance. These funds will be distributed by way of five new programs; the Tree Indemnity Program (TIP), the Hurricane Indemnity Program (HIP), the Livestock Indemnity Program (LIP), and the Feed Indemnity Program (FIP); and an Aquaculture Block Grant program.

Producers in Alabama, Florida, Louisiana, Mississippi, North Carolina and Texas counties declared primary presidential or secretarial disaster areas in 2005 because of hurricanes are eligible to apply for assistance under the new programs. A complete list of these counties is posted online at: <http://www.usda.gov/HurricaneInfo.xml>

On Dec. 30, 2005, President Bush signed the 2006 Defense Appropriations Act, which provides \$900 million to address natural disaster damages from 2005 hurricanes. Of these funds, approximately \$200 million is designated for the Emergency Conservation Program, \$400 million for the Emergency Forestry Conservation Reserve Program, and \$300 million for the Emergency Watershed Protection Program (which is available to communities and landowners in Tennessee, in addition to those in the six previously mentioned states).

Sign-up dates for the new programs (LIP, TIP, HIP, and FIP), as well as the Emergency Forestry Conservation Reserve Program, will be announced as soon as new regulations and software are developed. Eligible producers can apply now at any USDA Service Center for Emergency Conservation Program funds to remove hurricane debris from farmland. Emergency Watershed Protection Program funds for eligible projects are available today. Aquaculture grants will be awarded to states and application procedures will be established by Governors or their designees. Aquaculture producers not covered by other disaster programs will be eligible for these funds.

In addition to the funds for farmers and ranchers, the Defense Appropriations Act of 2006 contains \$1.6 billion in Rural Development program assistance for the hurricane victims. Nearly \$1.5 billion is allocated to provide housing funds under the agency's direct and guaranteed loan programs. Additionally, nearly \$160 million will be dedicated to four areas; \$54 million for housing repair loans and grants for very low-income applicants; \$45 million in grants for hurricane damaged water and wastewater facilities; \$50 million for telecommunications program assistance, and \$8 million to restructure electrical loans in the hurricane-affected areas.

Prior to today's funding announcement, USDA has made available more than \$1.7 billion to hurricane victims since Sept. 2005, bringing USDA's total hurricane aid to more than \$4.5 billion. Previous assistance includes: \$22 million in Emergency Watershed Protection funds; \$31 million in Emergency Conservation Program funds; \$152 million in Emergency Loan funding; \$239 million in Rural Development funding; and \$1.3 billion in Food and Nutrition assistance.

USDA also made the following programs available to farmers and ranchers adversely affected by the 2005 hurricanes: the Emergency Conservation Program, Emergency Loan Program, Federal Crop Insurance and the Noninsured Crop Disaster Assistance Program.

USDA's assistance is part of a larger, comprehensive relief effort being coordinated by the Department of Homeland Security. Don Powell, Federal Coordinator for Gulf Coast Rebuilding, said, "This funding for farmers, ranchers, and rural communities is good news for those in the Gulf Coast region who are working to recover from the hurricanes.

To date, the federal government has committed \$85 billion towards recovery from the storm and rebuilding for the future. Housing needs have been a priority, which is why today's announcement of USDA rural housing loans, in addition to yesterday's announcement of \$11.5 billion in Community Development Block Grants from the Department of Housing and Urban Development, are critical to the long-term recovery and rebuilding of the region. The overall housing total is now more than \$40 billion."

Additional information about USDA hurricane assistance is available at USDA Service Centers nationwide and online at <http://www.usda.gov/HurricaneInfo.xml>.

OmniLytics Obtains Landmark EPA Registration for Bacteriophage Usage - AgriPhage products approved for use on tomato and pepper crops

OmniLytics, Inc., a biotech company focused on developing safe and natural solutions for infectious disease and pest control, today announced final EPA registration for its' AgriPhage bacteria-control product line.

"We are excited to be the first company to ever receive a commercial registration from a regulatory agency in the United States for a phage-based product", stated Justin Reber, OmniLytics' President and CEO. "For the first time, commercial vegetable growers have a safe and effective bacteria-control alternative to antibiotics and harsh chemicals. This is a great advantage for growers, and it significantly strengthens our position in the phage-based solutions market."

The revolutionary AgriPhage products can be used in the greenhouse and the field, and can be applied as a preventive or as a curative. AgriPhage is formulated based on grower's plant samples, and can be modified to address any changes or mutations in the bacteria. This overcomes any potential for bacterial resistance. AgriPhage not only provides superior bacterial control, its also completely safe, natural and bio-degradable. Dr. Jeff Jones, respected industry expert and plant pathologist at the University of Florida stated, "We conclusively demonstrated in greenhouse and field tests that applications of AgriPhage outperformed the standard bactericides in controlling bacterial spot of tomato and furthermore resulted in significantly greater fruit yields than the untreated control and the copper-treated plants."

Additionally, Carl Bergschneider of Plants of Ruskin greenhouses stated, "From the time we started using AgriPhage, we saw a complete turn around in bacterial control. I am completely convinced that the proper use of Agriphage, will control the spread of bacterial disease in overhead irrigated greenhouse crops."

OmniLytics' patented technology and proprietary processes, combined with over 50 years of lab research and nearly a decade of experience in fields and greenhouses, positions them as the leader in natural, phage-based products for use in all agricultural markets. This same advantage can be applied to control of bacterial microorganisms in other markets, such as Food & Water Safety, Industrial, Pharmaceutical and Defense.

AgriPhage is available immediately as a natural solution for growers' bacterial problems and provides a highly effective, crucial alternative that manifests none of the harmful side effects of copper and antibiotics. For more information, please visit our website at www.omnilytics.com, or call Toll Free in the U.S. +1.866.285.2644.

OmniLytics is a biotech company focused on developing safe, natural, effective solutions for infectious disease and pest control. OmniLytics is located in SLC, Utah. OmniLytics is pioneering research and development of bacteriophage solutions for control of microorganisms in agricultural, food & water, industrial, pharmaceutical, and defense markets. OmniLytics' proprietary formulas and processes optimize the use of natural bacteriophage for commercial applications. For more information about OmniLytics, visit www.omnilytics.com.

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La Niña could result in drought conditions

The latest Climate Prediction Center (CPC) long lead outlook for the spring months looks increasingly like a very dry period for the Florida peninsula, possibly even resulting in drought until the rains come again in late May. This is because of a weak La Niña (colder than normal water temperatures) over the Pacific Ocean that is expected to persist.

The dry period that is expected to develop through April across the Florida peninsula. Note that the March-April-May outlook reproduced in the last column shows equal chances for above/below precipitation, with May signaling the change to rainy season.

The Atlantic basin sea-surface temperatures remain above normal, except around the Florida peninsula and the Southeast U.S. coast.

Unfortunately, CPC's outlook for the wet season is for above normal rainfall and another active hurricane season.

http://www.cpc.ncep.noaa.gov/products/expert_assessment/drought_assessment.shtml

UF/IFAS SWFREC Plant Disease Clinic

Dr Roberts notes that the SWFREC Plant Disease clinic in Immokalee is equipped and prepared to run late blight race characterization testing and invites growers and scouts to submit samples if the disease shows up. The clinic in cooperation with Glades Crop Care has received a grant to work on characterization of late blight races in Florida and encourages growers to submit samples to contribute to the effort. Contact the clinic at 239-658-3400 or Glades Crop Care - 561-746-3740 to submit samples.

Job Opportunities

Fast-growing hydroponic farm in Loxahatchee, FL looking for dedicated help or interns. Please call Swank Specialty Produce for detailed information. 561-202-5648 or email at orders@swankspecialtyproduce.com

Extension Manpower Development Agent

Palm Beach County is looking for a Manpower Development Agent to develop and present educational materials and conduct workshops for agricultural employers and their staff. Educational efforts will address restricted use pesticides, farm machinery safety, agriculture regulatory information and other priority needs of targeted clientele. A bachelor's degree in Agriculture and Extension Education, Farm Management, agricultural subject matter area, general education, or closely related field is required. Excellent benefits through the University of Florida and Palm Beach County. For more information please contact Darrin Parmenter, Agricultural Program Leader, at 561-233-1725 or email: dmparmenter@ifas.ufl.edu

Bacteria Consultant: OmniLytics (AgriPhage) is looking for a qualified bacteria consultant/salesperson that can effectively communicate the value proposition of AgriPhage, visit commercial tomato and pepper growers as needed, and provide bacterial expertise for the growers. Requires travel throughout Florida.

For inquiries, please contact Randy Scott at 801-746-3600 x314 or rscott@omnilytics.com

Up Coming Meetings

Hillsborough County

February 6, 2006

Strawberry Field Day 2006 - Presentations and tour

1:30 to 4:00 PM

UF/IFAS GulfCoast Research and Education Center
Wimauma, Florida .

For information, contact Alicia Whidden, 813-744-5519, ext. 134.

February 14, 2006	Pesticide License Testing	9:00 AM
	Hillsborough County Extension Service Seffner, Florida	
	For information, contact Dave Palmer, 813-744-5519, ext. 103.	
Manatee County		
February 3, 2006	WPS Train the Trainer Workshop	9:00 AM.
	Manatee County Extension Service Palmetto	
	For information, contact Phyllis Gilreath at 941-722-4524.	
March 14, 2006	General Standards/Private Applicator Ag Pesticide License Training	9:00 – 11:00 AM
	Manatee County Extension Service Palmetto, Florida	
	2 CORE CEUs available. Tests given immediately following training.	
	For information, contact Phyllis Gilreath at 941-722-4524.	
Miami-Dade County		
February 15, 2006	2006 Dow Product Update	6:30 PM
	Dade County Extension Auditorium 18710 SW 288 th Street Homestead, Florida	
	Contact 305-248-3311 for information.	
Palm Beach County		
February 2, 2006	Spray Smart - Workshop for Sprayer Technology and Calibration	9:30 - 12:00 AM
	Everglades Research and Education Center Belle Glade	
	Contact Les Baucum at (863) 674-4092	
February 6, 2006	General Standards/CORE Test Review Private Applicator Test Review	8 AM – 10 AM 10 AM – 12 PM
	Clayton E. Hutchinson Agricultural Center 559 N Military Trail West Palm Beach	
	Contact 561-233-1700	

February 8, 2006 **General Standards/CORE Test Review** 8 AM – 10 AM
Private Applicator Test Review 1 PM – 3 PM

Belle Glade Extension Office
2976 State Road 15
Belle Glade

Contact 561-996-1655

February 8, 2006 **Lettuce Advisory Committee Meeting** 12:00 - 2:00 pm

Everglades Research and Education Center
Belle Glade

Contact Darrin Parmenter (561) 233-1725

February 21, 2006 **2006 Dow Product Update** 11:30 - 1:30 pm

Richard's Steakhouse
6545 Boynton Beach Blvd.
Boynton Beach

Contact Darrin Parmenter (561) 233-1725

Southwest Florida

February 10, 2005 **WPS – Worker and Handler Training** Spanish 8:30 AM
English 1:00 PM

Hendry County Extension Office
1085 Pratt Boulevard
LaBelle, Florida 33935

Contact Gene McAvoy at 863-674-4092

February 22, 2005 **2006 Dow Product Update** 6:00 PM

UF/IFAS Southwest Florida Research and Education Center
2686 Hwy 29 N
Immokalee, Florida 34142

Contact Gene McAvoy at 863-674-4092

Other Meetings

February 4-8, 2006 **American Society of Horticultural Science**
Southern Region Annual Meeting

Wyndham Orlando Resort
Orlando, Florida

For more information, go to <http://ashs.org/regional/index.html>

May 21-23, 2006

18th International Pepper Conference
Palm Springs, California

Go to <http://www.internationalpepper.com/> for details

September 17- 21 2006

Cucurbitaceae 2006
Asheville, North Carolina

For more information visit <http://www.ncsu.edu/cucurbit2006>

Websites

How to Comply with the Worker Protection Standard for Agricultural Pesticides – What Employers Need to Know – The Worker Protection Standard for Agricultural Pesticides How to Comply Manual has been updated to reflect amendments to the Worker Protection Standard (WPS), a regulation designed to protect agricultural workers and pesticide handlers. The new 2005 WPS How to Comply (HTC) Manual supersedes the 1993 version. Go to <http://www.epa.gov/agriculture/htc.html>

USDA Hurricane Relief website - Information for Food and Housing Assistance, Disaster Cleanup, Agency Resources, Recovery, and Consumers , and for USDA Personnel In the Affected Areas. Set your browser to <http://www.usda.gov/wps/portal/usdahome?contentidonly=true&contentid=HurricaneInfo.xml>

Quotable Quotes

Don't go around saying the world owes you a living. The world owes you nothing. It was here first. - Mark Twain

I have never let my schooling interfere with my education. -- Mark Twain

No one is useless in the world who lightens the burden of another. - Charles Dickens

Never fight with an ugly person, they have nothing to loose!! -- author unknown

A lot of people like snow. I find it to be an unnecessary freezing of water. -- Carl Reiner

On the Lighter Side

Southern Lawyers

Lawyers should never ask a witness a question if they aren't prepared for the answer. In a trial, a Southern small town prosecuting attorney called his first witness, a grand motherly, elderly woman to the stand.

He approached her and asked, "Mrs. Jones, do you know me?" She responded, "Why, yes I do know you, Mr. Williams. I've known you since you were a young boy, and frankly, you've been a big disappointment to me. You lie, you cheat on your wife, you manipulate people and talk about them behind their backs.. You think you're a big shot when you haven't the brains to realize you never will amount to anything more than a two-bit paper pusher. Yes, I know you."

The Lawyer was stunned! Not knowing what else to do, he pointed across the room and asked, "Mrs. Jones, do you know the defense attorney?"

She again replied, "Why yes, I do. I've known Mr. Bradley since he was a youngster too. He's lazy, bigoted, and he has a drinking problem. He can't build a normal relationship with anyone and his law practice is one of the worst in the entire state. Not to mention he cheated on his wife with three different women. One of them was your wife. Yes, I know him."

The defense attorney almost died.

The judge asked both counselors to approach the bench and in a very quiet voice, said, "If either of you scoundrels asks her if she knows me, I'll jail you for contempt."

The Original Computer

Memory was something you lost with age
An application was for employment
A program was a TV show
A cursor used profanity

A keyboard was a piano
A web was a spider's home
A virus was the flu
A CD was a bank account

A hard drive was a long trip on the road
A mouse pad was where a mouse lived

And if you had a 3 inch floppy ... you just hoped nobody ever found out!

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, 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/ 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/Red 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.

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

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