



UNIVERSITY OF
FLORIDA

E X T E N S I O N

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SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

March 14, 2008

Another strong cold front passed through the area this past weekend bringing a late season cool down which caused temperatures in many places to dip into the mid 30's. Some unusually late patchy frost was reported in some of the normally cooler interior areas on the morning of March 10, 2008. With the exception of this brief cool down, temperatures have been warm with daytime temperatures ranging from the mid 70's to the mid 80's with most nights in the 50's and 60's.

In spite of forecasts for a dry spring most South Florida growing areas received significant rainfall over the past two weeks with many areas receiving in excess of two inches for the period. Most areas also experienced heavy fogs and night dews which helped keep disease active. Winds have been high on a number of recent days and some wind damage is being reported on foliage and small fruits.

FAWN Weather Summary

Date	Air Temp °F		Rainfall (Inches)	Ave Relative Humidity (Percent)	ET (Inches/Day) (Average)
	Min	Max			
Balm					
3/2 – 3/14/08	38.62	86.40	2.38	72	0.1
Belle Glade					
3/2 – 3/14/08	42.71	85.50	1.77	78	0.11
Clewiston					
3/2 – 3/14/08	41.45	89.82	2.97	76	0.12
Ft Lauderdale					
3/2 – 3/14/08	50.32	91.60	2.85	75	0.11
Fort Pierce					
3/2 – 3/14/08	42.35	85.14	2.20	79	0.11
Homestead					
3/2 – 3/14/08	46.80	91.31	0.37	72	0.12
Immokalee					
3/2 – 3/14/08	37.62	89.33	1.01	78	0.11

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Vegetables coming to market include snap beans, cabbage, celery, eggplant, endive, escarole, lettuce, pepper, radishes, squash, strawberries, sweet corn, tomatoes, and various specialty items. Packinghouses continue to report some quality issues and higher culls associated with weather related injury as plantings affected by the January freeze and high winds are harvested.

The short-term forecast from the National Weather Service in Miami indicates that the weak cold front that moved in behind the shortwave which affected the area this past weekend will barely affect temperatures. By mid-week, a mid level ridge rebuilds over the Gulf and peninsula and temps will warm up again. A stronger cold front later in the week will provide the area with some cooler temperatures and drier air by the end of the week.

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

Insects

Whiteflies

Around Manatee County, respondents indicate that whiteflies are around in mostly low numbers.

Respondents in Southwest Florida report that whitefly adults are increasing across the entire area in a number of crops, including, peppers, potatoes, tomatoes, squash and watermelons, with some older fields developing nymphs. Whiteflies are reportedly high in some squash causing silverleaf in young plants. Organic producers are also reporting high pressure. Growers continue to report that in many instances it appears that foliar applications of traditional adulticides (Endosulfan, Baythroid, Warrior, and Monitor) are providing very little relief. It is not known if this is due to high pest pressure or that commonly used insecticides are not as effective as before.

Whiteflies have been up and down in watermelons and reports indicate that more watermelons fields have been treated than ever before in response to findings that vine decline and other cucurbit viruses are whitefly vectored.

In Palm Beach County reports indicate that whitefly persistent with adults moving from older crops. Numbers have been high in cucumber and in pepper.

Reports from Homestead indicate that whiteflies numbers which had been relatively low are beginning to build.

For current management recommendations – see Management of Whiteflies, Whitefly-Vectored Plant Virus, and Insecticide Resistance for Vegetable Production in Southern Florida -
<http://edis.ifas.ufl.edu/IN695>

Pepper Weevils

Around Southwest Florida, pepper weevils continue to increase and are beginning to show up in younger fields. Pressure is very high in some areas of concentrated pepper production.

Reports from the Manatee County area indicate that pepper weevils are not too bad at this point, and that most populations can be traced to old fields in the area.

Growers and scouts on the East Coast report that pepper weevils are bad everywhere and causing problems in a number of locations.

Leafminer

Respondents around Immokalee report that leafminers numbers were up over the past two weeks and then dropped off following the cold front.

Reports from Palm Beach County indicate that leafminer pressure is mostly moderate.

Leafminers are active in Homestead and are reported to be causing problems in tomatoes, squash and other crops.

Around Manatee County, leafminer pressure is slowly picking up in places.

Worms

In Palm Beach County, respondents note some worm activity. A few beet armyworms are being reported in pepper and eggplant with some loopers showing up in eggplants. Reports indicate that melon and pickle worm pressure is high and continues to cause problems in squash but pressure appears to be abating in some places. Control has been problematic due to the worms tendency to move quickly into the blooms were they are protected.

Around Southwest Florida, worm numbers are mostly low but scouts report some hatches and are finding some beet and southern armyworms in tomato and pepper. Pickle worms are still active in squash and there have been some scattered reports of very low levels of pinworm in some double crop eggplants, interestingly no heavy concentrations but rather very evenly distributed.

Respondents in Manatee County report that armyworm activity was high a week or so ago on all crops, but has slowed since that time.

Around the Glades, there have been some reports of fall armyworm causing problems in Chinese cabbage.

Aphids

Growers and scouts around Immokalee report that aphids are present at mostly low levels, with a few colonies in some peppers.

On the East Coast, reports indicate that a few winged aphids are showing up in eggplant, pepper and tomato.

A few aphids are also present in the Manatee Ruskin area.

Growers in the Glades report that aphids are still causing problems in leafy vegetables.

Broad Mites

East Coast respondents indicate that broad mites are still present in eggplant and peppers.

Around Southwest Florida while broad mites continue to require treatment in a number of locations.

Reports from Hillsborough County indicate that cyclamen mites are a lot heavier in strawberry than in years past but the problem seems to have come from the nursery and were never cleaned it up when the plants went in the ground.

Spider Mites

Growers and scouts around Southwest Florida report that spider mites are present in scattered locations and have reached threshold levels in places mostly in eggplants and watermelons.

Reports from Palm Beach note scattered problems with spider mites on cucumbers, eggplant and tomato.

Around Homestead spider mites are causing some problems in squash.

Thrips

Scouts on the East Coast report mostly high thrips pressure in pepper, eggplants squash and cucumber. Species present include some Florida flower thrips as well as western flower thrips and *Thrips palmi*.

Some East Coast locations are reporting problems with control where western flower thrips is present. In some older pepper pressure is extremely high with dozens of thrips present on fruits and in every flower. Some scouts report that thrips damage appears to be aggravating problem with bacterial spot as new infections are coming in on thrips damaged areas around the stem and calyx.

Respondents in Southwest Florida report that thrips are more common now than a week ago but are still low and so far growers are not reporting any problems.

Around Plant City, respondents report that thrips are showing up in strawberry blossoms but are not bad yet as they seem to concentrating on citrus and oak blossoms.

Managing Western Flower Thrips

Thrips are tiny insects with fringed wings. There are over 5,000 described species with about 87 species of thrips that are pests of commercial crops due to their feeding on leaves, fruits, and flowers causing discoloration, deformity, and reduced marketability.

The western flower thrips (*Frankliniella occidentalis*) was spread over many parts of the world during the 1980's and 1990's due to the global trade in ornamental plants. Originally from the southwestern US, it is now largely cosmopolitan, and it is the key vector of *Tomato spotted wilt virus*. The insect and the virus have become the key pest problems of tomato, pepper, and other crops in northern Florida, but they were not, until 2006, serious pests in central and southern Florida. In northern Florida, the eastern flower thrips (*Frankliniella tritici*) is more common than the western flower thrips. In central and southern Florida, the Florida flower thrips (*Frankliniella bispinosa*) is the more common. All of the above-mentioned species of thrips have a broad host range that includes many crops, weeds and other plants in and around crop fields.

The pest status of individual species of flower thrips differs in tomato and pepper. The adults of the western flower thrips inhabit the flowers where they feed on pollen and flower tissues. The females lay eggs individually on the small developing fruit in the flower, and the larva hatches in about six days. A small dimple sometimes surrounded by a halo remains on the developing fruit of pepper and tomato. Direct feeding by the western flower thrips larvae also can cause cosmetic fruit damage referred to as 'flecking'. Both types of damage can result in cull-out and lowering of grade of the harvested fruit, with tolerance based on price and demand in the marketplace.

The eastern flower thrips is virtually a non-pest. It does not damage fruit and it is an incapable vector of *Tomato spotted wilt virus*. The Florida flower thrips is not damaging to fruit. Although it is a capable vector of *Tomato spotted wilt virus*, epidemics are rare in central and southern Florida where it is the predominate species. In fact, they compete with the western flower thrips, and in high numbers they out-compete the

populations of western flower thrips. The eastern flower thrips and the Florida flower thrips are suppressed by insecticides in many chemical classes with different modes of action. The adults of these species are much more active than the adults of western flower thrips. They are capable of rapidly re-colonizing insecticide treated crops and sometimes there is an apparent lack of control for these species under field conditions.

There is an unusual virus-vector relationship between the thrips and the *Tomato spotted wilt virus*. The virus is acquired only by the larvae, and the adults can transmit to host plants. Primary spread is due to infections caused by incoming viruliferous adults to a crop (such as tomato and pepper) from outside sources that are usually host weed species. Adults persistently transmit, and their control with insecticides does not prevent transmission due to the short time of feeding for infection to occur. Secondary spread is caused by viruliferous adults that acquired the virus as larvae feeding on an already infected plant in the tomato or pepper field. For secondary spread, thrips need to colonize and reproduce on that season's crop. Most viral infections in northern Florida usually are the result of primary spread, although some secondary viral infections occur late in the season.

The invading populations of western flowers thrips were largely resistant to most organophosphate, carbamate, pyrethroid, and organochlorine insecticides. Further, insecticidal control of the viruliferous adults proved ineffective in preventing spread of *Tomato spotted wilt virus*. Even though ineffective, growers in most parts of the world responded by spraying insecticides on a calendar schedule. This sometimes resulted in an economic and environmental disaster with growers suffering uncontrollable damage due to high thrips populations and epidemics of tomato spotted wilt. Application of broad-spectrum insecticides may suppress western flower thrips initially, but their numbers can increase rapidly a few days after application in numbers that are many-fold greater than untreated pepper. This was the situation in northern Florida and southern Georgia beginning the 1980's. Eventually, integrated pest management programs were developed and once adopted these proved to be effective, economic, and sustainable.

Natural infestations of a predatory bug, the minute pirate bug (*Orius insidiosus*) are very effective predators of thrips in pepper. Their effectiveness is predictable based on the number of the predator relative to the number of thrips prey. Suppression occurs when there is one predator for approximately 180 thrips. Control occurs when there is one minute pirate bug per 50 thrips. A conservation biological control program was implemented in northern Florida and this program has been adapted to local conditions throughout the world. This integrated pest management program employs reduced-risk insecticides, natural infestations of minute pirate bugs, and cultural control tactics including ultraviolet-reflective mulch. SpinTor (Dow AgroSciences, Indianapolis, Indiana) is the most effective insecticide able to suppress populations of western flower thrips, and it is a reduced-risk insecticide that does not suppress populations of minute pirate bugs at labeled rates. In pepper and other fruiting vegetables, this product is being replaced by another spinosyn insecticide, Radiant, with the same mode of action.

Minute pirate bugs do not prefer tomato and numbers remain too low in tomato fields to suppress thrips. Other management tactics are highly beneficial. Ultraviolet-reflective mulch (aluminum layered) is very effective in reducing the colonization of all thrips species onto tomato plants and in reducing the incidence of primary infections of *Tomato spotted wilt virus*. This is the most effective tactic in northern Florida tomatoes. Development of the larvae is about 5 days, and weekly applications of insecticides are sufficient to prevent successful larval development and subsequent secondary spread of *Tomato spotted wilt virus* on tomato.

Monitor (Valent USA Corp., Walnut Creek, California) and Radiant are in different chemical classes with different modes of action. Few other insecticides are efficacious against the western flower thrips.

The predominate thrips in central and southern Florida is the Florida flower thrips. The western flower thrips has been established in very low population levels for over two decades. Recently, populations have increased in a number of crops grown during the winter and spring. Large, damaging populations have occurred

in peppers and tomatoes throughout Palm Beach County. Damaging populations have been noted in more isolated occurrences in other locations throughout central and southern Florida. There appear to be several factors responsible for this increase including the unusually dry conditions which favor the western flower thrips over the native species. Calendar sprays of broad-spectrum insecticides in attempts to control pests have caused outbreaks of the western flower thrips. Populations resurge when natural enemies and competing thrips are killed. Also, some insecticides especially pyrethroids have beneficial effects on the development and reproduction of western flower thrips. Growers need to be aware that the western flower thrips is resistant to most broad-spectrum insecticides and their use can only serve to induce outbreaks. Bioassays of western thrips in central and southern Florida reveal a mix of resistant and susceptible populations to Radiant. There are increased incidences of *Tomato spotted wilt virus* in central and southern Florida, although epidemics have remained localized.

Producers in central and southern Florida will need to begin considering western flower thrips as a key pest. At this time, tomato spotted wilt is not a serious pest.

Specific recommendations for the management of western flower thrips in fruiting vegetables include the following:

- Plant and maintain refugia such as sunflowers. Some weeds such as Spanish needle (*Bidens* species) also are good refugia. These refugia are a source for minute pirate bugs to invade peppers and other suitable crop hosts and a sink for thrips leaving tomato or pepper to be eaten by predators. There are other benefits of refugia as well.
- Identify the thrips in crops as the western flower thrips is a damaging pest and the Florida flower thrips is not damaging. Also, the Florida flower thrips competes with the western flower thrips.
- Scout and use established economic threshold for western flower thrips as appropriate for individual crops. Thresholds should include the impact of the minute pirate bug and the predator's ratio relative to the number of thrips.
- Use reduced-risk insecticides to conserve populations of minute pirate bugs in pepper, eggplant, and strawberries. Minute pirate bugs will not invade tomato in sufficient numbers to suppress thrips.
- Use ultraviolet-reflective mulches when possible (aluminum layered mulches reflect the most)
- Do not use insecticides known to induce western flower thrips.
- Rotate insecticides with different modes of action as a resistance management strategy. Do not rotate Radiant with SpinTor, because they are in the same class of chemistry. Multiple plantings of susceptible crops from fall to spring on the same farm creates many problems. Western flower thrips can move from one planting to another. In some locations especially southeastern Florida, populations of western flower thrips are treated with Radiant on one planting and then move to the adjacent planting and get sprayed again. This results in the same thrips population getting sprayed multiple times. Multiple applications can result in the thrips population developing tolerance to the spinosyn chemistry and thus poor performance. Adjacent fields should be planted and destroyed at the same time, so that they can be managed together. Therefore, there should be communication between growers in an area-wide knowledge-based approach.
- Do not make more than two consecutive applications of Group 5 insecticides (Radiant and SpinTor). If additional treatments are required after two consecutive applications, rotate to another class of effective insecticide for at least one application. Do not apply more than 34 oz or 6 applications of Radiant per calendar year.

In some cases, additional management efforts are needed to manage western flower thrips and other difficult pests in space and time. Management of the pepper weevil (*Anthonomus eugenii*) is proving a challenge to pepper growers trying at the same time to manage western flower thrips. Growers need to emphasize sanitation and other cultural tactics over broad-spectrum insecticides that kill minute pirate bugs or induce western flower thrips in other ways.

In summary, western flower thrips can not be controlled by the used of insecticides alone. A knowledge-based integrated approach to manage this pest is required.

Contributed by Dr. Joe Funderburk, Entomologist UF/IFAS NFREC, Quincy, FL and Mr. Tony Weiss, Dow AgroSciences, Brandon, Florida

Diseases

Late Blight

Respondents on the East Coast report no new late blight and not that activity has been relatively low in areas where it had been found previously.

Around Immokalee, late blight in the location of the original find reported two weeks ago has spread to a few adjacent fields. Incidence and severity is mostly low to moderate and no "melt downs" have been reported. Late blight is also present in a few other locations around Southwest Florida including some home gardens and at least one organic farm.

Dr Pam Roberts reports that preliminary characterization by a single test of the strain of *P. infestans* from Immokalee has the same pattern of strains found in 2005-06 and 2006-07 growing season but not the particularly aggressive strain from 2005. Full genotyping should be available later in the season.

Around the Manatee County area, Dr Gary Vallad, Plant Pathologist at the University of Florida/IFAS, Gulf Coast Research and Education Center reports that late blight was confirmed in Manatee County in the Parrish area. Since this find respondents note that the area is seeing an increasing amount of late blight on tomatoes and potatoes. They report that none of the infections are serious at this time except on some of our organic fields.

Late blight 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.

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.

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. In addition to cultural means, 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. They may kill some established infections and may suppress production of new spores. 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 conducive environmental conditions.

Dr Pam Roberts, Pathologist at SWFREC is interested in obtaining samples in an effort to characterize races occurring in Florida. She can be contacted at 239-658-3400.

Bacterial Spot

Around Southwest Florida, bacterial spot is still the big disease in tomatoes and to a lesser extent in pepper.

Respondents in Homestead report widespread bacterial spot causing problems in tomato.

Growers and scouts on the East Coast report that bacterial spot is bad especially in pepper and less in tomato. Some fruit lesions are present.

Reports from Manatee County indicate after an initial bout with some bacterial spot things have slowed down and most plantings are looking good although there is some race 4 bacterial leaf spot is showing up in peppers at low levels.

Dr Ken Pernezny reports that isolates from our UF/IFAS bacterial spot resistant bell pepper trials in Delray yielded mostly Race 4 and 6.

TYLCV

Around Southwest Florida, tomato yellow leaf curl virus continues to increase in many fields with scattered fields around showing 20-30% symptoms prior to first harvest.

Some organic fields are reportedly experiencing higher infection rates. Some growers have reported moved to using resistant varieties for the spring crop.

Respondents in Homestead indicate that tomato yellow leaf curl virus is widely present and note that some grape tomatoes are heavily infected with TYLCV with plots almost 100% plants infected with TYLCV.

On the East Coast, reports indicate that TYLCV is reaching 100% in some scattered older plantings but remains low to moderate in many others.

Around Manatee County, reports indicate that tomato yellow leaf curl virus is present at mostly low levels. Some reports from Manatee County have described virus like symptoms on supposedly TYLCV resistant cultivars and investigations are under way to determine what might be happening.

Leaf mold

Respondents around Homestead report that leaf mold is being found in both field and greenhouse tomatoes.

Around Southwest Florida, growers and scouts report that leaf mold has been showing up in many locations and is causing some defoliation in a few fields and has resulted in many yellowed leaves in many other fields. Some scouts indicate that leaf mold has impacted production more than late blight at this point in time.

Leaf mold, caused by the fungus *Fulvia fulvum*, is usually considered to be a disease of greenhouse tomatoes, and appears less frequently under field conditions in Florida.

Symptoms typically begin on older lower leaves. Initially, pale green spots with diffuse margins appear that later turn yellow appear on the upper leaf surface. The spots are often so diffuse that the yellowing often looks like nondescript mottling. The most distinctive symptom is on the underside of leaves, where patches of olive-green, fuzzy mold consisting of masses of conidia and conidiophores can be observed.

As lesions coalesce infected leaves curl up, wither, and may eventually drop from the plant. Occasionally, other aboveground plant parts, including fruit, can be attacked; fruit infections result in a black, leathery lesion on the stem end.

High relative humidity and warm to high temperatures favor disease development. To infect tomato plants and spread in the field, the fungus requires very high humidity - in excess of 85% - for prolonged periods. These conditions occur frequently greenhouses with poor air circulation, especially at night, but less frequently in the field.

The pathogen can survive for at least one year in the soil on infested debris or as sclerotia. Conidia are dispersed by rain or wind. The fungus can also be spread by machinery and by workers.

The pathogen is known to be carried on seed and can give rise to infested seedlings.

Several precautions will help avoid problems from leaf mold.

Sanitation is important. Clean up and destroy debris from infested fields and greenhouses to discourage overwintering of the pathogen. In the greenhouse, it is advisable to sterilize production areas once debris has been removed, either with steam or with a disinfectant.

Since the disease may be seed borne it pays to purchase quality seeds and transplants that have been certified disease-free. Resistant cultivars are available, but the pathogen continues to develop new races.

Humidity control is important in greenhouses. Regulate night temperatures to prevent the humid conditions that favor disease spread. Venting houses shortly after sunset, in addition to heating, will help to keep night-time humidity down. Good air movement during the day is essential, too.

In the field, staking and pruning helps improve air flow and can reduce humidity.

Leaf mold can be controlled effectively with a labeled contact fungicide applied on a preventative basis.

Target Spot

Growers and scouts around Immokalee report that target spot continues to work on interior foliage threatening tomatoes but has not flared greatly following recent rains.

Target spot is widely present around Palm Beach and respondents are reporting target spot damage on tomato fruit.

Alternaria

Growers and scouts across the area report that Alternaria is widely present in a number of locations.

Downy Mildew

Cucurbit producers around Southwest Florida report that downy mildew continues to be a major problem in squash and especially in cucumbers.

Growers and scouts on the East Coast indicate that downy mildew is still causing problems on cucumber and not that growers need to stay on top of it to get control.

Around Homestead, respondents note that downy mildew is increasing in squash.

Respondents around Belle Glade are reporting lots of downy mildew on both leaf and head lettuce in the Glades.

Downy mildew is also causing problems on basil in a number of locations. Dr Rick Raid, Plant Pathologist at UF/IFAS EREC reports good control with phosphonic acid products such as ProPhyate, NutriPhyate and strobilurin fungicides such as Amistar/Cabrio.

Powdery Mildew

On the East Coast, powdery mildew is causing problems squash. Powdery mildew is also present on pepper in scattered locations.

Powdery mildew is wide spread in squash and cucumbers in Homestead. In many fields, incidence is surpasses that of downy mildew. Some problems have also been noted with powdery mildew on tomato.

Around Immokalee, a few tomato fields have powdery mildew present older foliage on with a few upper branches showing infections.

Gummy Stem Blight

Gummy stem is widely present on watermelons at low levels around Southwest Florida.

Respondents in Palm Beach County report that gummy stem is present on cucumbers and squash in several locations.

Sclerotinia

White mold is widely present on beans in a number of locations around South Florida.

Around Southwest Florida, sclerotinia is present in several pepper, potato and tomato fields.

Respondents indicate that sclerotinia is also present on pepper at mostly low levels around Palm Beach County.

Mosaic

Reports from Homestead indicate that mosaic is widespread in squash.

Mosaic is widely present on squash around Southwest Florida. In at least one location, nearly 100% infection has been reported on young seedlings prompting growers to destroy the crop and replant.

Some mosaic is also being reported in watermelon around SW Florida.

Fusarium crown rot

Reports from SW Florida note some increase in Fusarium crown rot following the recent rains.

Some fusarium wilt is also being reported on tomatoes around Homestead.

Cucurbit Leaf Crumple Virus

Cucurbit Leaf Crumple Virus has been diagnosed on squash in Hendry County. Beans have also been implicated as a host.

Managing Cucurbit Viruses in Florida

Management recommendations for cucurbit viruses are similar to recommendations for tomatoes and TYLCV. They include:

- Select the most vigorous and well adapted varieties
- When using transplants, use pathogen-free, whitefly-free transplants. Use caution when buying transplants that were produced in the western U.S.
- Use reflective mulches
- Treat prior to planting with nicotinoids to manage whiteflies in the field
- Apply appropriate insecticides for whitefly control during production in the field
- Don't plant in old established fields. Volunteers, especially cucurbits and balsam apple, can be a significant reservoir for these viruses.
- Post-production sanitation – pull up the plastic and plow fields under. Prevent growth of volunteers or remove all volunteers
- Maintain a host-free period between spring and fall crops

Excerpted from UF/IFAS Vegetarian, December, 2007, for photos, go to <http://www.hos.ufl.edu/vegetarian/07/December%2007/Triple%20Threat%20for%20Cucurbits.htm>

News You Can Use

Ag Leaders Meet with UF President Over IFAS Budget Cuts

A small group of agriculture industry leaders met March 7 with University of Florida President Bernie Machen to discuss the budget challenges facing UF and its Institute of Food and Agricultural Sciences.

“It was a good, productive meeting in that we had an opportunity to get issues out on the table and express our view of the importance of Florida agriculture and the critical role IFAS plays in supporting the industry, ensuring it remains competitive,” said FFVA President Mike Stuart.

Machen also outlined the challenges the university faces given the state’s severe revenue shortfall. The university must cut 6 percent from its budget by July 1, with more cuts expected next year.

South Florida Water Management District Happenings

District-wide rainfall for the past week was 1.73 inches. The rainfall outlook for the next seven days is below average.

Lake Okeechobee measured 10.13 feet NGVD 29 on Tuesday, which is 0.06 feet higher than it was on that day last week and 0.12 feet higher than it was a month ago. The current stage is 0.89 feet lower than it was a year ago and 4.43 feet below its historical average for this time of year. Water clarity increased slightly from last month.

During the last week, the upper Kissimmee Basin received 2.52 inches of rainfall, and the lower basin received 2.48 inches. Water levels in the upper basin lakes are at or below their regulation schedules. Discharge from Lake Kissimmee has been increased to avoid an increase in lake stage during the nesting season. Last week's rainfall caused water levels in Lakes Hart and Mary Jane and from Lakes Myrtle, Preston and Joel, to rise to their respective regulation schedules. Releases are being made from these lakes to keep water levels from exceeding the regulation schedules. No other releases are being made in the upper basin.

Average salinity decreased throughout the St. Lucie Estuary due to local rainfall. Based on the salinity tolerance of oysters, salinity conditions are good. Average salinity increased in the Caloosahatchee Estuary. Salinity conditions in the upper estuary east of Ft. Myers are poor. Based on the tolerance of oysters, salinity conditions downstream of Cape Coral are poor.

The Water Conservation Areas (WCAs) received between 0.86 and 2.99 inches of rainfall. Water depths increased almost everywhere, remaining above one foot and also above optimum depths for wading bird foraging. Water levels in WCA-1 and the WCA-2A marsh are above regulation, and WCA-3 is slightly below regulation.

Everglades National Park received 0.44 inches of rain during the past week. Water levels declined between 0.6 and 3 inches.

Agricultural Assistance Act of 2007

On May 25, 2007, President Bush signed into law the "U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007" (2007 Act).

The 2007 Act provides approximately \$3 billion in agricultural disaster aid for America's farmers and ranchers. The aid will cover crop losses, livestock and feed losses, emergency conservation practices and dairy losses. The Act also extends the Emergency Forestry Conservation Reserve Program (EFCRP) and the Milk Income Loss Contract (MILC) program.

This page serves as a clearinghouse for information about the farm programs addressed in the 2007 Act.

You are eligible for this new disaster aid if:

- Your county was declared a disaster area by the President or Secretary of Agriculture for disasters occurring between January 1, 2005 and December 31, 2007 (livestock).
- You experienced a loss of 35 percent or greater. (crops)
- You had crop insurance or coverage under the Noninsured Crop Disaster Assistance Program (NAP). (crops)

USDA Accepts Applications for Crop, Feed and Livestock Losses Suffered Feb. 28 up To Dec. 31, 2007

New Law Effects Other FSA Programs

WASHINGTON, Jan. 25, 2008 - The U.S. Department of Agriculture announced that eligible farmers and ranchers who suffered livestock, livestock feed and crop losses that occurred before Dec. 31, 2007, can apply to receive disaster payments beginning today.

On Dec. 26, 2007, President Bush signed the Consolidated Appropriations Act, 2008 (2008 Act). The 2008 Act amends certain sections of the U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007, which allows agricultural producers who suffered losses for crops planted before Feb. 28, 2007, or eligible livestock or livestock feed losses between Jan. 1, 2005, and Feb. 28, 2007, to apply for disaster payments under the Crop Disaster Program (CDP), Livestock Compensation Program (LCP) and Livestock Indemnity Program (LIP). The 2008 Act extends CDP, LCP and LIP payments to eligible farmers and ranchers who suffered 2007 crop, livestock and livestock feed losses throughout the 2007 crop year before Dec. 31, 2007.

The Farm Service Agency (FSA) is now accepting applications and making payments for quantity losses before Dec. 31, 2007, under CDP. FSA is currently issuing LCP and LIP payments for losses up to Feb. 28, 2007, and will soon issue payments for losses incurred during the remainder of 2007. FSA will conduct sign-up and begin making payments for quality losses under CDP this spring. More information about CDP, LCP and LIP is available online at: <http://disaster.fsa.usda.gov>.

Applications Sought for Specialty Crop Grants

The Agricultural Marketing Service announced in the Feb. 28 Federal Register that it will make available approximately \$8.4 million in block grant funds, less USDA administrative costs, to enhance the competitiveness of specialty crops.

The Specialty Crop Block Grant Program is authorized by the Specialty Crops Competitiveness Act of 2004.

Applications must be filed by state departments of agriculture and must be postmarked no later than March 5, 2009.

Examples of enhancing the competitiveness of specialty crops include, but are not limited to: research, promotion, marketing, nutrition, trade enhancement, food safety, food security, plant health programs,

education, "buy local" programs, increased consumption, increased innovation, improved efficiency and reduced costs of distribution systems, environmental concerns and conservation, product development, and developing cooperatives.

Members of the Florida agriculture industry, academia, and community-based organizations are encouraged to contact the Florida Department of Agriculture and Consumer Services for additional information.

Registration Now Open for Produce Ripening and Ethylene Control Workshop

Registration is open for the 14th annual Management of Ripening and Ethylene Control Workshop to be held May 20 at the University of California, Davis Campus. During this one-day event, attendees will hear from leading produce experts in academia and industry on how to increase profits by controlling produce ripening during shipping. The course is targeted specifically at shippers and destinations (wholesale and retail) handlers who are involved in ripening fruits and fruit-vegetables. It is sponsored by the Postharvest Technology Research & Information Center at UC Davis.

Attendees may register at <http://postharvest.ucdavis.edu> or by contacting Penny Stockdale, registration coordinator, at (530) 754-4326 or pastockdale@ucdavis.edu.

Up Coming Meetings

Miami Dade County

March 25, 2008 **Irrigation Restrictions: Production Implications** 1:30 PM – 3:30 PM.

John D. Campbell Ag Center
18710 SW 288 Street
West Palm Beach, Florida

Contact Teresa Olczyk at 305-246-2932 for more information

Palm Beach County

April 7, 2008 **General Standards/Core Training and Test Review** 8:00 AM – 10:00 AM
Private Applicator Test Review (2 CEUs each) 1:00 PM – 3:00 PM

Clayton Hutchinson Ag Center
559 N Military Trail
West Palm Beach, Florida

Contact 561-233-1700 – select option, 1 then option 3

April 9, 2008 **General Standards/Core Test Review (4 CEUs)** 8:00 AM – 12:00 PM
Ag Row Crops Test Review (2 CEUs) 1:00 – 3:00 PM

Belle Glade Extension Office
2975 State Road 15
Belle Glade, Florida

Call 561-996-1655 for more information.

April 8, 2008

UF/IFAS Everglades REC Field Day

Southwest Florida

March 18, 2008

Irrigation Restrictions: Production Implications 4:00pm – 6:00pm.

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

Contact Gene McAvoy at 863-674-4092 for details

March 31, 2008

General Standards/Core Test Review
Private Applicator Test Review

8:00 - Noon

1:00 – 5:00 PM

Hendry County Extension Office
1085 Pratt Boulevard
LaBelle, Florida

Contact Gene McAvoy at 863-674-4092 for details

April 1, 2008

Row Crop /Tree Crop Test Review
Aquatic Test Preview

8:00 - Noon

1:00 – 5:00 PM

Hendry County Extension Office
1085 Pratt Boulevard
LaBelle, Florida

Contact Gene McAvoy at 863-674-4092 for details

April 2, 2008

WPS – Handler Training

English

8:00 - Noon

Spanish

1:00 – 5:00 PM

Hendry County Extension Office
1085 Pratt Boulevard
LaBelle, Florida

Contact Gene McAvoy at 863-674-4092 for details

Other Meetings

April 9, 2008

Certified Crop Advisor Seminar

7:30 AM to 6:30 PM

UF/IFAS CREC and other locations

Registration fee - \$100

Go to www.crec.ifas.ufl.edu/cca for information

Websites

UF/IFAS Vegetarian Newsletter Archive – this site hosts back issues of the UF/IFAS Vegetarian Newsletter from 1950 – 1999. It is very interesting to go back in time and see what was going on back there and compare the issues then and now. <http://www.hos.ufl.edu/vegetarian/Vegetarian%20Archive%201950-1999/Vegetarian%20Archives%201950-1999%20html%20pages/Archives%201950.htm> April 1950 edition lists commonly used insecticides including DDT, lindane, chlordane and parathion!

The 2007 Proceedings of the Florida Tomato Institute are accessible on-line, go your browser to <http://www.hos.ufl.edu/vegetarian/07/December%2007/2007%20TOMATO%20PROCEEDINGS.pdf> to read them. Proceedings from previous years (2002-2006) are available at <http://gcrec.ifas.ufl.edu/vegetables.htm>

Quotable Quotes

When they call the roll in the Senate, the Senators do not know whether to answer 'Present' or 'Not guilty.' - Theodore Roosevelt

Do what you can, with what you have, where you are. - Theodore Roosevelt

Don't hit at all if it is honorably possible to avoid hitting; but never hit soft! - Theodore Roosevelt

Whenever you are asked if you can do a job, tell 'em, 'Certainly I can!' Then get busy and find out how to do it. - Theodore Roosevelt

The only man who never makes a mistake is the man who never does anything. - Theodore Roosevelt

Keep your eyes on the stars, and your feet on the ground. - Theodore Roosevelt

By the work one knows the workmen. - Jean De La Fontaine

On the Lighter Side

Grocery List

Louise Redden, a poorly dressed lady with a look of defeat on her face, walked into a grocery store. She approached the owner of the store in a most humble manner and asked if he would let her charge a few groceries.

She softly explained that her husband was very ill and unable to work, they had seven children and they needed food.

John Longhouse, the grocer, scoffed at her and requested that she leave his store at once.

Visualizing the family needs, she said: "Please, sir! I will bring you the money just as soon as I can." John told her he could not give her credit, since she did not have a charge account at his store.

Standing beside the counter was a customer who overheard the conversation between the two. The customer walked forward and told the grocer that he would stand good for whatever she needed for her family. The grocer said in a very reluctant voice, "Do you have a grocery list?"

Louise replied, "Yes sir." "O.K" he said, "put your grocery list on the scales and whatever your grocery list weighs, I will give you that amount in groceries."

Louise, hesitated a moment with a bowed head, then she reached into her purse and took out a piece of paper and scribbled something on it. She then laid the piece of paper on the scale carefully with her head still bowed. The eyes of the grocer and the customer showed amazement when the scales went down and stayed down.

The grocer, staring at the scales, turned slowly to the customer and said begrudgingly, "I can't believe it." The customer smiled and the grocer started putting the groceries on the other side of the scales. The scale did not balance so he continued to put more and more groceries on them until the scales would hold no more.

The grocer stood there in utter disgust. Finally, he grabbed the piece of paper from the scales and looked at it with greater amazement.

It was not a grocery list; it was a prayer, which said; "Dear Lord, you know my needs and I am leaving this in your hands."

The grocer gave her the groceries that he had gathered and stood in stunned silence.

Louise thanked him and left the store.

The other customer handed a fifty-dollar bill to the grocer and said; "It was worth every penny of it. Only God Knows how much a prayer weighs."

When you read this, say a prayer. Just stop right now, and say a prayer of thanks for your own good fortune.

Cowboy Sense.....

There is no arguing with cowboy logic. The Sierra Club and the US Forest Service were presenting an alternative to Wyoming ranchers for controlling the coyote population. It seems that after years of the ranchers using the Tried and true methods of shooting and/or trapping the predator, the Tree-huggers had a "more humane" solution. What they proposed was for the Animals to be captured alive, the males castrated and let loose again and the population would be controlled.

This was ACTUALLY proposed to the Wyoming Wool and Sheep Grower's Association by the Sierra Club and the USFS. All of the ranchers thought about this amazing idea for a couple of minutes.

Finally, an old boy in the back stood up, tipped his hat back and said, "Son, I don't think you understand the problem. Those coyotes ain't *&%\$#@ (mating with) our sheep - they're eatin' 'em.

Man's Best Friend...

A dog is truly a man's best friend.
If you don't believe it, just try this experiment.

Put your dog and your wife in the trunk of the car for an hour.
When you open the trunk, who is really happy to see you?

Happy St. Patrick's Day – may the luck of the Irish be with you!

Note: The hotline is now available by subscribing to the South Florida Vegetables LISTSERV. Get the latest pest and disease updates and news in a timely fashion -the e-version is automatically sent to you as soon as it is published.

If you want to switch over just drop me an email and help save a tree.

Contributors include: Joel Allingham/AgriCare, Inc, Bruce Corbitt/West Coast Tomato Growers, 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, 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, Dr. Gregg Nuessly/EREC Chuck Obern/C&B Farm, Teresa Olczyk/ Miami-Dade County Extension, Dr. Aaron Palmateer/TREC, Dr. Ken Pernezny/EREC, Dr. Rick Raid/ EREC, Dr Ron Rice/Palm Beach County Extension, Dr Pam Roberts/SWFREC, Dr. Nancy Roe/Farming Systems Research, Wes Roan/6 L's, Dr. Dak Seal/ TREC, 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, , Mark Verbeck/GulfCoast Ag, Alicia Whidden/Hillsborough County Extension and Dr. Shouan Zhang/TREC.

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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