



UNIVERSITY OF
FLORIDA

E X T E N S I O N

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SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

March 19, 2012

March came in like the proverbial Lion with strong winds and unsettled weather which brought welcome showers to many locations. All areas reported significant precipitation which in many areas came as a series of widely scattered showers every few days for a couple of weeks. East Coast locations reported the highest totals with Fort Pierce topping the list with over 3 inches for the period.

Apart from a few cool nights which saw temperatures dip into the 30's and 40's, temperatures have been running a few degrees above normal with nights in the 50's and 60's and daytime highs reaching into the low to mid 80's most days.

Heavy winds in late February and continuing into March battered crops. Secondary pathogens moving into wind twisted stems are causing stand loss in melons. Many mornings saw foggy conditions and heavy dews which in combination with warm weather and scattered showers have kept diseases active in many places.

FAWN Weather Summary

Date	Air Temp °F		Rainfall (Inches)	Ave Relative Humidity (Percent)	ET (Inches/Day) (Average)
	Min	Max			
Balm					
2/26 – 3/16/12	34.99	87.82	0.08	77	0.12
Belle Glade					
2/26 – 3/16/12	43.15	88.38	0.39	81	0.12
Clewiston					
2/26 – 3/16/12	42.2	87.85	1.43	80	0.12
Ft Lauderdale					
2/26 – 3/16/12	53.06	86.63	1.74	77	0.12
Fort Pierce					
2/26 – 3/16/12	44.48	88.68	3.19	80	0.11
Homestead					
2/26 – 3/16/12	48.94	85.48	2.03	80	0.12
Immokalee					
2/26 – 3/16/12	37.09	89.8	0.96	80	0.12

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Harvesting of winter vegetables is on-going across the southern peninsula. Crops coming to market included beans, cabbage, celery, cucumbers, endive, escarole, eggplant, peppers, radishes, strawberries, squash, sweet corn, tomatoes and a variety of specialty items.

The National Weather Service forecast indicates the surface high pressure will strengthen Tuesday into Wednesday as surface low pressure develops over Texas. The pressure gradient will increase over south Florida with breezy conditions expected. Possibility of showers remains low with a 10-20 percent chance for the entire region.

A backdoor cold front moves through the region on Sunday into Monday keeping the forecast dry. However, with the continued easterly flow, a few showers will be possible. Temperatures through the period will remain seasonably warm with highs near 80 to the mid-80s and lows in the upper 50s to around 70 degrees.

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

Insects

Whiteflies

Around SW Florida reports indicate that whiteflies are increasing on tomatoes in a number of places with scouts reporting high counts of adults and nymphs in many older tomato fields. Whiteflies have also been active in melons.

Dr. Dak Seal reports that whiteflies pressure is increasing in a variety of crops around Homestead and reports indicate that the incidence of TYLCV and Bean Golden Mosaic Virus is also on the increase. He suggests the use neonicotinoids in rotation with other insecticides of different mode of action. All fields after harvest should be destroyed to remove food and shelter where whiteflies and diseases may continue to increase and spread to nearby fields.

Reports from Palm Beach indicate that whitefly numbers are increasing and have reached much higher levels in many places. Scouts report that they are moving around and blow in from surrounding areas right after control measures making virus control difficult. Growers are reportedly spraying quite a bit of soap which seems to help. There have been some reports of issues with clogged nozzles when tank mixed with certain fungicides.

Respondents in the Manatee/Ruskin area report that adult white fly numbers are all over the place. Reports indicate that whiteflies are moving and growers spray, keep adults down for a few days until new adults fly in.

Management of Whiteflies, Whitefly-Vectored Plant Virus, and Insecticide Resistance for Vegetable Production in Southern Florida

Recommendations:

A. Crop Hygiene

Field hygiene should be a high priority and should be included as an integral part of the overall strategy for managing whitefly populations, TYLCV incidence, and insecticide resistance. These practices will help reduce the onset of the initial infestation of whitefly, regardless of biotype, and lower the initial infestation level during the cropping period.

1. Establish a minimum 2 month crop free period during the summer, preferably from mid-June to mid-August.
2. Disrupt the virus-whitefly cycle in winter by creating a break in time and/or space between fall and spring crops, especially tomato.
3. Destroy the crop quickly and thoroughly, killing whiteflies and preventing re-growth.
 - a. Promptly and efficiently destroy all vegetable crops within 5 days of final harvest to decrease whitefly numbers and sources of plant begomoviruses like TYLCV.
 - b. Use a contact desiccant (“burn down”) herbicide in conjunction with a heavy application of oil (not less than 3 % emulsion) and a non-ionic adjuvant to destroy crop plants and to kill whiteflies quickly.
 - c. Time burn down sprays to avoid crop destruction during windy periods, especially when prevailing winds are blowing whiteflies toward adjacent plantings.
 - d. Destroy crops block by block as harvest is completed rather than waiting and destroying the entire field at one time.

B. Other Cultural Control Practices.

Reduce overall whitefly populations, regardless of biotype, and avoid introducing whiteflies and TYLCV into crops by strictly adhering to correct cultural practices.

1. Use proper pre-planting practices.
 - a. Plant whitefly and virus-free transplants.
 - b. Delay planting new fall crops as long as possible.
 - c. Do not plant new crops near or adjacent to old, infested crops.
 - d. Use determinant varieties of grape tomatoes to avoid extended crop season.
 - e. Use TYLCV resistant tomato cultivars where possible and appropriate, especially during historically critical periods of virus pressure. Whitefly control must continue even with use of TYLCV resistant cultivars because these cultivars can carry the virus.
 - f. Use TYLCV resistant pepper cultivars when growing pepper and tomato in close proximity.
 - g. Use ultraviolet light reflective (aluminum) mulch on plantings that growers find are historically most commonly infested with whiteflies and infected with TYLCV.

2. Use proper post-planting practices.

- a. Apply an effective insecticide to kill whitefly adults prior to cultural manipulations such as pruning, tying, etc.
- b. Rogue tomato plants with symptoms of TYLCV at least until second tie. Plants should be treated for whitefly adults prior to roguing and, if nymphs are present, should be removed from the field, preferably in plastic bags, and disposed of as far from production fields as possible.

- c. Manage weeds within crops to minimize interference with spraying and to eliminate alternative whitefly and virus host plants.
- d. Dispose of cull tomatoes as far from production fields as possible. If deposited in pastures, fruit should be spread instead of dumped in a large pile to encourage consumption by cattle. The fields should then be monitored for germination of tomato seedlings, which should be controlled by mowing or with herbicides if present.
- e. Avoid u-pick or pin-hooking operations unless effective whitefly control measures are continued.
- f. Destroy old crops within 5 days after harvest, destroy whitefly infested abandoned crops, and control volunteer plants with a desiccant herbicide and oil.
- g. Plant non-host cover crops such as Sudex to discourage weeds and volunteer crop plants from growing and being infested by whiteflies.

Insecticidal Control Practices for Whiteflies.

- 1. Delay resistance to neonicotinoid and other insecticides by using a proper whitefly insecticide program. Follow the label!
 - a. On transplants in the production facility, do not use a neonicotinoid insecticide if biotype Q is present. If biotype B is present, apply a neonicotinoid one time 7-10 days before shipping. Use products in other chemical classes, including Fulfill, soap, etc. before this time.
 - b. Use neonicotinoids in the field only during the first six weeks of the crop, thus leaving a neonicotinoid-free period at the end of the crop.
 - c. As control of whitefly nymphs diminishes following soil drenches of the neonicotinoid insecticide or after more than six weeks following transplanting, use rotations of insecticides of other chemical classes.
 - d. Use selective rather than broad-spectrum control products where possible to conserve natural enemies and enhance biological control.
 - e. Do not apply insecticides on weeds on field perimeters. These could kill whitefly natural enemies and, thus, interfere with biological control, as well as select for biotype Q, if present, which is more resistant to many insecticides than biotype B.

2. Soil applications of neonicotinoid insecticides for whitefly control.

- a. For best control, use a neonicotinoid as a soil drench at transplanting, preferably in the transplant water.
- b. Soil applications of neonicotinoids through the drip irrigation system are inefficient and not recommended.
- c. Do not use split applications of soil drenches of neonicotinoid insecticides (i.e. do not apply at transplanting and then again later).

3. Foliar applications of neonicotinoid insecticides for whitefly control.

- a. Foliar applications, if used instead of or in addition to soil drenches at transplanting, should be restricted to the first 6 weeks after transplanting. Do not exceed the maximum active ingredient per season according to the label.

b. Follow scouting recommendations when using a foliar neonicotinoid insecticide program. Rotate to non-neonicotinoid insecticide classes after the first 6 weeks and do not use any neonicotinoid class insecticides for the remaining cropping period.

For more information, see Management of Whiteflies, Whitefly-Vectored Plant Virus, and Insecticide Resistance for Vegetable Production in Southern Florida at <http://edis.ifas.ufl.edu/in695>

Under Florida law, abandoned tomato fields that have not been destroyed within five days after final harvest are subject to an immediate final order (IFO) per rule in FS Chapter 5B-59.003, Tomato Plant Destruction.

You can report abandoned tomato fields by sending an email to the Division of Plant Industry describing the physical location of the property. Their first route of destruction would be to make contact with the growers and request compliance, if this does not occur an IFO is issued in which the grower has 10 days to correct the problem. If the commercial tomato producer refuses or neglects to comply with the terms of the notice within 10 days after receiving it, the director or her or his authorized representative may, under authority of the department, proceed to destroy the tomato plants. The expense of the destruction shall be assessed, collected, and enforced against the commercial tomato producer by the department.

See the rule here <https://www.flrules.org/gateway/RuleNo.asp?ID=5B-59.003>

Please contact Tyson Emery if you have any further questions or to report abandoned fields.

Tyson Emery
Chief- Bureau of Plant and Apiary Inspection
Division of Plant Industry
Florida Department of Agriculture and Consumer Services
Email: tyson.emery@freshfromflorida.com
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Pepper Weevils

Growers and scouts in Palm Beach report that weevil pressure is very high in many areas and note that it will most likely stay that way till the end. Some growers report mowing old fields where weevils were out of control.

Respondents in the Manatee/Ruskin report finding adult pepper weevils in pheromone traps set out in pepper fields.

Pepper weevil numbers are increasing in many older fields and have reached very high numbers in several places in the Immokalee area. Weevil activity is also becoming a significant issue in several younger fields. Some growers report that it is shaping up to be the worst year for weevils in recent memory.

Reports from Homestead note that weevils are widespread and population numbers are high in many fields with the majority of fruits infested with pepper weevils in some fields. Dr. Dak Seal suggests growers treat pepper with Actara in rotation with Vydate along with Pounce in a tank mix with each of the above products.

The major form of damage is destruction of blossom buds and immature pods. Both adult and larval feeding causes bud drop. Adult feeding punctures appear as dark specks on the fruit, and are not very damaging. Sometimes the fruit is deformed.

Larval feeding within the mature pod is another important form of damage, causing the interior to become brown, moldy and hence unmarketable. The stem of pods infested by larvae turn yellow, and the pod turns yellow or red prematurely. Fruit drop is common, and is perhaps the most obvious sign of infestation.

Scouting efforts should concentrate on a search for adults in leaf whorls, flowers and fruit during morning hours. Commercially available pheromone traps may also aid in early detection. Fruit and flower buds should be examined for damage and fallen fruit and buds examined for presence of larvae.

Infested fruits can be recognized before they fall by the yellow calyx and the presence of oviposition punctures that look like small dimples. Hot peppers like Jalapeno and Serrano's are often the first peppers to be affected. Fruit and flower buds should be examined for damage and fallen fruit and buds examined for presence of larvae. If possible, all damaged and fallen fruit should be removed and destroyed.

Chemical control is difficult because all stages but the adult are protected within the fruit, so that only the adult weevil is vulnerable to insecticides. Frequent sprays may be necessary starting in the initial stages of infestation in order to avoid unacceptable levels of damage.

Spraying should commence at the first sign of weevils or with flowering in fields with a history of problems. Vydate has been the standard control and has given pretty good results when sprayed weekly in trials at the Southwest Florida Research and Education Center. A total of 24 pts. can be applied for the season. Other products that have performed well in trials include Capture (bifenthrin), Kryocide (cryolite), Assail (acetamiprid) and Actara (thiomethoxam).

Organic growers have few options – Pyganic may provide some control of adults. Some growers report that tank mixes of Pyganic and diatomaceous earth may provide some synergy and enhance control. Application of products like Surround (kaolin clay) may help reduce egg-laying. Sanitation including removal and destruction of damaged and fallen fruit is an important control measure.

Thrips

Thrips activity is beginning to pick up in a number of locations. Populations will most likely spike as the citrus bloom comes to an end over the next few weeks.

Around Homestead, melon thrips remain high in bean, cucumber, eggplants. Dr. Dak Seal reports that in a recent study, conducted in a grower's field, significant reduction of melon thrips larvae and adults was observed on bean plants treated with either Radiant + Lannate, Radiant + Hero, Radiant + Provado, or Radiant in rotation with Torac. Trilogy was added to each treatment at the rate of 0.5% v/v.

In the Manatee/Ruskin area, thrips activity is variable ranging from bad in some areas to very light in others. In some locations, chili thrips are present and causing problems.

Around Immokalee, thrips have picked up significantly in tomato, pepper and melons. Some western flower thrips activity has been noted.

Scouts indicate that thrips are high in areas of pepper, tomato and eggplant in Palm Beach area. Growers report that etching on sides of tomato fruit is becoming common in some locations around Palm Beach County.

Dr. David Sui, vegetable Extension Agent in Palm Beach reports that western flower thrips have been on the rise in recent couple of weeks along the 441 Corridor, especially in the Boca Raton and Boynton Beach areas. WFT counts have totaled 8.3, 8.5, and 6.4 per flower for the recent three weekly monitoring. Some farms have persistent WFT pressure and others not. Chemical resistance and old vines are important

factors in consideration. Some pepper growers report that they are finding oviposition dimples in peppers and TSWV symptoms on the young leaves. WFT remained low in the Delray Beach area.

Dr. Joe Funderburk, UF/IFAS entomologist, advises that the economic threshold has changed to 6 WFT per flower, from the previous 10 per flower. Growers should be certain to identify thrips correctly before engaging in any management program.

In the EAA, thrips numbers are picking up and causing damage to several crops, including snap beans. Dr. Gregg Nuessly notes that this is a little early for thrips damage in the EAA compared to other seasons. He reminds growers to keep an eye out for thrips on tender leaves, blooms, fruit and pods. While spinetoram remains a very effective insecticide for controlling thrips, other insecticides like Requiem and Movento also work well and growers should be rotating among insecticides with different modes of action (MOA) to reduce the chances for development of resistance to the most effective compounds.

Bean growers should keep a close eye on thrips populations, because in addition to causing feeding scars and egg-laying blemishes on pods, they transmit bean red node. Symptoms appear at the branches of flowers stalks and vegetative growth, but also on pods.

Leafminers

In Palm Beach County, leafminer pressure has fallen off in many areas but is still causing some problems in tomato. Around Belle Glade, growers continue to battle leafminers in celery and leafy greens.

Respondents in SW Florida report that leafminers are still around but not a problem in most places.

Around Homestead, leafminers numbers range from low to medium in variety of crops including tomatoes, beans and other crops.

Dr. Dak Seal reports that Coragen applied at planting provided lasting suppression of leafminers. In a recent study he observed about 14 species of parasitoids of *L. trifolii* in Florida. *Opius dissitus* (Muesebeck) and *Diglyphus* spp. were found abundant in bean crops in south Florida. These parasitoids are active in feeding on various development stages of leafminers. He cautions that attention should be made to avoid use of harmful insecticides that may decimate parasitoid populations.

Growers and scout around Manatee County report mostly low leafminer activity. Some growers report that they feel strict anti-feedant programs (Aza-Direct, Requiem, and Fulfill) are holding down LM and other pests.

Worms

Around SW Florida worm numbers are being to increase and scouts report finding mostly southern armyworms in pepper and tomato. Melonworms and a few pickleworms are present in cucumber and squash.

Worm pressure in the Glades has been up and down over the past few weeks; however scouts report that beet and some fall armyworms showed up in sweet corn two weeks ago.

Respondents in Manatee County report mostly low worm pressure with a few pin worm, beet armyworms, and fruitworms showing up.

Around Palm Beach County, reports indicate that worm pressure is mostly low. Melonworm and pickleworm are still causing problems in squash in some areas. Diamondback moth is causing problems with some brassicas.

Grower and scouts in Homestead report that beet armyworm numbers remain low in pepper and tomato but note that melonworm and pickleworm are increasing in cucurbits. Fall armyworm pressure remains high in corn and diamondback moth populations are medium to high in cabbage. Growers are using a program of Bt's, Coragen, Avaunt, Synapse and Radiant to control these and other lepidopteran pests.

Aphids

Around the Belle Glade area, aphids are still going strong in all the leaf and cabbage crops, and scouts report finding some high numbers in parsley as well.

Growers and scouts in SW Florida report that aphids are increasing in pepper and tomato.

Around Palm Beach County, aphid numbers are up and populations are building in some crops even with other control measures. Crops of concern have been mainly pepper and cabbage but have seen lesser issues with tomato and eggplant.

Respondents in Homestead report that green peach aphid numbers remain mostly low.

Corn silk Fly

Silk fly adult numbers in corn have been slowly creeping up around Belle Glade and are high in Homestead. Significant damage is being reported in corn in excess of what the adult numbers suggest.

Mites

Mostly low levels of two-spotted mites and red spider mites are being reported around South Florida.

A few broad mites are starting to show up in a few locations.

Stinkbugs

Scattered problems with stinkbugs and leaf-footed bugs continue to be reported in a number of crops and locations across South Florida.

Diseases

Late Blight

Around Immokalee, late blight remains widespread and new infections have been up and down with the weather. While the overall severity isn't bad, the distribution is more extensive than has been seen in a long time. Many tomato and potato fields have a mostly low incidence and occurrence of the disease, enough to warrant extra fungicides but not really hurting the crop. A few tomato fields do have significant crop injury from late blight.

Late blight is widespread on a number of organic farms around SW Florida approaching 100% in old plantings and rapidly spreading in new plantings, being nearly uncontrollable under organics production systems.

In the Manatee Ruskin area; mostly low levels of late blight are present on tomato and scouts report finding new infections on young tomatoes in several places especially around Wimauma.

The disease thrives under cool 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.

Dr. Gary Vallad explains that dry windy weather and higher temps in recent days has slowed disease progression down considerably. He cautions growers to keep an eye on late blight situation, but advises them not to lose any sleep over it unless we get another cold snap or some wet weather.

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 anywhere 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.

Begin a spray program with fungicides if late blight is in your area or weather conditions are suitable for late blight development. At harvest, kill infected foliage to minimize tuber infection.

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 when conditions are conducive to disease development.

Consult current UF/IFAS recommendations for labeled fungicides for the control of late blight. Curzate, Previcur Flex, Presidio, Ranman and Reveus Top are all newer materials that have performed well in trials.

Cheap tomatoes, rainy humid weather and late blight have proven a bad combination.

Tomato Yellow Leaf Curl Virus

Around Immokalee, TYLCV is widely present in most tomato fields and continues to spread. Growers are battling whiteflies in an attempt to holding it down but are still seeing new infections.

Many fields now range from about 25% to 50% infection to some extreme cases where incidence is nearly 100% at first tie. Despite the high rate of infection in some fields, a number of growers indicate that whiteflies have been relatively low.

Respondents indicate that TYLCV is really starting to get going in the Manatee/Ruskin area, with some fields at 10% infection level or better.

TYLCV incidence is on the increase in Homestead where an increasing number of infections are showing up in tomato.

On the East Coast respondents indicate that is increasing rapidly in younger fields in Palm Beach County and is also common in other east coast production areas at lower levels. Some locations have reported a 10 x increase in infection incidence over the past few weeks.

Bacterial Leaf Spot of Lettuce

Dr. Rick Raid, Pathologist at UF/IFAS EREC reports that bacterial leaf spot has been found on lettuce following recent rains.

Early symptoms of bacterial leaf spot are small water-soaked spots on the outer leaves. As the lesions mature, they become brown to black and greasy-looking. The lesions are typically bordered by leaf veins and angular in shape. In some instances, mature lesions on the underside of leaves may retain a water-soaked appearance. Lesions quickly turn black which is diagnostic of this disease. If disease is severe, numerous lesions may coalesce, resulting in the collapse of the leaf. Older lesions dry up and become papery in texture, but retain the black color. Lesions rarely develop on newly developing leaves.

Cultural methods are the primary means of controlling this disease. Overhead irrigation should be avoided where possible. Working in fields where plants are wet can spread the disease and should be avoided. Avoid planting back-to-back lettuce crops if the first crop had a confirmed outbreak of bacterial leaf spot and infected lettuce residue is present.

Copper sprays in the field applied for other diseases may provide some control of bacterial leaf spot, since most strains recovered to date are fairly sensitive to copper. To be most effective, copper fungicides must be applied before infection occurs.

Lettuce Downy Mildew

Growers in the EAA continue to battle lettuce downy mildew and have seen a steady increase of downy mildew in leaf in the Glades. Reports indicate that lower market prices have seen growers reduce spray programs in response to lower market prices.

Dr. Rick Raid, Pathologist at UF/IFAS EREC advises growers not to let their guard down and stresses that everyone growing lettuce should be on a PREVENTATIVE program. The phosphites are good tools but should be used in a program with maneb and other compounds that are more efficacious against downy mildew.

The list of fungicides currently labeled for lettuce downy mildew control includes maneb, fosetyl-Al, metalaxyl, and several copper compounds along with several newer compounds such as Presidio, Previcur Flex, Forum, Curzate, Reason, Revus, and Tanos, that have been added to growers control options. Consult current UF/IFAS recommendations for labeled fungicides for the control of lettuce downy mildew.

Resistance in *B. lactucae* to the fungicide metalaxyl was reported in Florida during 1989, and therefore its efficacy may be somewhat reduced. Due to downy mildew demonstrated ability to develop resistance, growers are advised to rotate chemistries to avoid problems - FRAC numbers on labels will help avoid using similar active ingredients repeatedly.

Downy mildew of cucurbits

Respondents around Immokalee report that downy mildew is present on cucumbers and squash.

Reports from Palm Beach County indicate that downy mildew is not doing much in cukes or squash that are being sprayed regularly.

Basil Downy Mildew

Basil downy mildew has been very severe around South Florida given the warm, moist conditions of the last couple of weeks. Dr. Richard Raid, Plant Pathologist at UF/IFAS EREC recommends a preventative program using a good phosphite fungicide, alternated or tank-mixed with azoxystrobin.

Under favorable conditions for disease development, sprays must be at least weekly, perhaps even more frequently. Since there is abundant inoculum all over south Florida, growers should not wait until the disease shows up.

Dr. Raid notes that Sect 24 labels have been approved for Subdue and Heritage for control of basil downy mildew in greenhouses only.

Groundnut Ringspot Virus

A few more GRSV infected tomato plants continue to be reported from fields around Homestead, Palm Beach and SW Florida. In most cases, occurrence is spotty and incidence is low although a few hot spots have been reported.

Groundnut Ringspot Virus in Florida was recently published and can be found on-line at <http://edis.ifas.ufl.edu/pp282>

Powdery Mildew

Around southwest Florida, powdery mildew is widely present in squash with incidence and severity dependent on location and crop age.

Powdery mildew is also present at low levels in some mature pepper and tomatoes and is now starting to increase in watermelon fields.

Powdery mildew is primarily associated with greenhouse-grown tomatoes in Florida. The disease occurs occasionally on tomatoes grown in commercial fields although in recent years, infections on field grown plants seem to becoming more common.

Symptoms of the disease occur only on the foliage. Symptoms initially appear as light green to yellow blotches or spots that range from 1/8 - 1/2 inches in diameter on the upper surface of the leaf.

These spots eventually turn brown as the leaf tissue dies. Eventually, the entire leaf will turn brown and shrivel, but remains attached to the stem. The white, powdery growth of fungal mycelium is typically present on the lower surfaces of affected leaves.

With powdery mildew of watermelon, the white masses of sporulation that are frequently seen with other powdery mildews are often not seen. Symptoms of powdery mildew of watermelon first appear as yellow blotches on the oldest leaves.

In some cases affected leaves may display the typical yellowing, bronzing, and a fair amount of white powdery fungal growth but often little or no white powdery mycelia are present and in these cases microscopy may be necessary to find a limited amount of the powdery mildew fungus in the yellowed areas. In some instances, powdery mycelia may be absent on the leaves but present on the fruit.

If untreated the fungus quickly spreads to completely affect the entire leaf. As the disease progresses these blotches become bronzed and turn dark brown or purplish. Eventually the leaf dies and has a crisp texture.

In Palm Beach County, powdery mildew is severe on squashes, melons, tomatoes, and watercress in some locations. Growers and scouts also report finding some powdery mildew in pepper.

Respondents in Homestead report that powdery mildew is severe in squash and causing some problems in beans.

In the Glades, low levels of powdery mildew are present on beans.

Powdery mildew remains active on strawberries in Hillsborough County.

Bacterial Spot

Around Immokalee, bacterial spot activity on tomato has increased in a number of places following recent rains.

In Homestead respondents indicate that bacterial leaf spot is widespread and ranges from moderate to severe in many places following recent winds and heavy rains.

Around Palm Beach, bacterial spot spread with rains where it already was established in tomato and pepper. In some fields, the situation is pretty bad where it was introduced early in the crop.

Target Spot

Around Immokalee, reports indicate that target spot is still around but not a major issue at this time.

Reports from Palm Beach and Homestead indicate that target spot is present in both areas. Incidence and severity is low to moderate.

Early Blight

Growers and scouts in Immokalee report that Alternaria continues to be found on tomatoes at mostly low levels. Products listed for target spot should provide good control. Due to increasing evidence of resistant strains of Alternaria to the strobilurin fungicides, Dr. Gary Vallad recommends that growers limit their use in tomatoes and be sure to rotate fungicides and follow good resistance management practices

Southern Corn Rust

Dr. Rick Raid reports that southern corn rust is pressure is increasing in the Glades. He notes that this is early.

Scouts have also reported the occurrence of rust on corn in Homestead.

Southern/northern Corn Leaf Blight

Both southern and northern corn leaf blight are increasing on sweet corn around Belle Glade.

Lesions caused by southern corn leaf blight (*Bipolaris maydis*) are much smaller (up to ½ inch wide and 1 inch long) than those caused by northern corn leaf blight. Southern blight lesions are also lighter in color (light tan to brown), and have parallel sides rather than the tapering sides of lesions caused by *E. turcicum*.

Southern corn leaf blight is most prevalent during the fall growing season in south Florida, but may also appear at the end of the spring growing season, particularly if unseasonably warm. Dr. Raid speculates that unusually warm conditions have favored carry-over of inoculum and the occurrence of all three diseases at the same time.

Control of Southern corn leaf blight is best achieved with resistant varieties. Resistant varieties are available and should be considered, particularly for fall plantings.

Where resistance is lacking, spraying with fungicides may be necessary, particularly with sweet corn produced in peninsular Florida. Spray programs with recommended fungicides should commence at the first sign of disease if favorable weather is likely.

Fungicides should be applied early, particularly if the forecast is for warm, humid weather. As with northern corn leaf blight, the sterol inhibitors and strobilurin fungicides are most efficacious. These products should be used together with a broad spectrum protectant to minimize development of fungal resistance.

Fusarium

Growers and scouts around south Florida are beginning to report finding some fusarium crown rot dropping a few nearly mature tomato plants along with a few peppers in places. Incidence is low and occurrence is patchy.

Fusarium is taking out some watermelons in a couple of fields around Desoto and Hendry Counties.

Phytophthora

Respondents in Palm Beach County report that Phytophthora is a problem on some older pepper and in some hotspots where it is a chronic issue.

Pythium

Pythium is causing some stand loss in watermelons where it is coming in on plants which suffered wind damage and twisted stems earlier in the season.

Sclerotinia

Sclerotinia is still causing scattered problems in tomato and pepper around southwest Florida.

Botrytis

Growers and scouts are reporting some problems with botrytis on tomatoes around Manatee County.

Gummy stem blight

Gummy stem blight is present at mostly low levels on watermelons in several locations around south Florida.

Growers and scouts are also reporting some problems on cucumbers in Palm Beach County especially where cukes were planted behind cukes.

Gray Wall

Growers and scouts in several locations are reporting problems with gray wall in tomato.

Symptoms are first observed as flattened, blotchy, brownish- gray areas that develop on green fruit. As the fruit mature, these blotchy areas remain gray or turn yellow while the rest of the fruit turns red resulting in uneven ripening. Internally, there may be some browning of the vascular tissue.

While the disorder is not well understood, certain conditions seem to favor its' development. These conditions include: plants that are growing rapidly, high nitrogen, low potassium, high soil moisture, high humidity, temperature fluctuations, low light intensity, low temperatures and soil compaction.

News You Can Use

Increase in Ag Jobs Leads To Drop In State Unemployment Rate

Florida's unemployment rate dropped to its lowest mark since March 2009, with numbers for January down 10 percent since November, according to the state Department of Economic Opportunity. For the first month of 2012, the seasonally adjusted unemployment mark for the Sunshine State was 9.6 percent, down from 9.9 percent a month earlier and 10.9 percent a year earlier. Overall, there were 894,000 listed as unemployed during the post-holiday season out of a potential labor force of 9.3 million. In December, the seasonally adjusted number of unemployed stood at 913,000. Most of the gains were in agricultural jobs, with the growing season now starting to bloom across the peninsula. (Sunshine State News)

Farm Service Agency Updates

Here are some programs/deadlines that you may be interested in.

Farm Record Changes

June 1, 2012 is the deadline to provide changes to your farm records at the local FSA office for the 2012 crop year. If you are changing your operation entity type, adding or dropping cropland or farms, or adding entities to your operation, contact the FSA county office by June 1.

Supplemental Revenue Assistance Program (SURE)

The sign-up for 2010 SURE losses continue through June 1, 2012. The Supplemental Revenue Assistance Program (SURE) provides benefits for farm revenue losses due to natural disasters that incurred in the crop year 2010.

SURE is available to eligible producers on:

- Farms in counties with Secretarial disaster declarations, including contiguous counties, that have incurred crop production or quality losses, or both, and includes all crops grown by a producer nationwide, except grazed crops.
- Any farm in which, for the crop year, the actual production on the farm because of disaster-related conditions is 50 percent or less than normal production of the farm.

Noninsured Crop Disaster Assistance Program (NAP)

The noninsured crop disaster assistance program (NAP) is a federally funded program that helps producers reduce their risk when growing food and fiber crops, specialty crops and crops for livestock feed. These benefits are only available for crops for which the catastrophic level of crop insurance is not available. Application for coverage must be filed by the applicable crop's application closing date.

Production records for all crops must be reported to FSA no later than the acreage reporting date for the crop for the following year. FSA requires that any production reported in a loss year be verifiable according to Agency specifications. NAP Losses must be reported within 15 days of loss.

Farm Loan Programs

The Farm Service Agency is committed to providing family farmers with loans to meet their farm credit needs. If you are having trouble getting the credit you need for your farm, or regularly borrow from FSA, direct and guaranteed loans are currently available.

Ask your lender about an FSA loan guarantee if you've had a setback and your lender is reluctant to extend or renew your loan.

Farm ownership loans or farm operating loans may be obtained as direct loans for a maximum of up to \$300,000. Guaranteed loans have a maximum limit of \$1,214,000. This makes the maximum combination of direct and guaranteed loan indebtedness \$1,514,000.

The one-time loan origination fee charged on FSA guaranteed farm ownership and operating loans has increased from 1 percent to 1.5 percent of the guaranteed portion of the loan, for loans obligated after October 1, 2011.

Beginning and Limited Resource Farmers

FSA assists beginning farmers and or members of socially disadvantaged groups to finance agricultural enterprises. Under these designated farm loan programs, FSA can provide financing to eligible applicants through either direct or guaranteed loans. FSA defines a beginning farmer as a person who:

- Has operated a farm for not more than 10 years
- Will materially and substantially participate in the operation of the farm
- Agrees to participate in a loan assessment, borrower training and financial management program sponsored by FSA
- Does not own a farm in excess of 30 % of the county's median size.

Regalia® biofungicide assigned FRAC Code

Marrone Bio Innovations, Inc. announced that the active ingredient in its Regalia® biofungicide, *Reynoutria sachalinensis*, has been included in the Fungicide Resistance Action Committee's (FRAC) 2012 code list,

following an extensive technical review. FRAC, a technical group of CropLife International, is a global association of crop protection and agricultural biotechnology companies that provides fungicide resistance management guidelines to growers and crop consultants in order to prolong the effectiveness of fungicides and to limit crop losses caused by fungicide resistance.

The active ingredient in Regalia was added to the FRAC code list because of its Induced Systemic Resistance (ISR) mode of action. Because of Regalia's unique mode of action, a new FRAC code was created for the active ingredient and designated as P5. When treated with Regalia, the natural defense systems of crops are "switched on" to protect against attacking diseases. Research shows that plants treated with Regalia produce and accumulate elevated levels of specialized proteins and other compounds known to inhibit fungal and bacterial diseases.

Regalia can be used alone, in rotation or in a tank mix with most commercially available fungicides to control a broad spectrum of bacterial and fungal diseases. The product is tolerance exempt and helps growers manage residues in harvested produce.

MANA names Dennis Long as Southern Region Innovation and Marketing Demand Leader

Kelvin Jordan, MANA Southern Region Leader, would like to announce the hiring of Dennis Long as the Southern Region Innovation and Marketing Demand Leader. Dennis will focus on market opportunities for our new innovative products, while providing Technical Service support for our existing portfolio. Dennis will also oversee the direction and focus we are giving our non-transactional customers. Dennis can be contacted at: dlong@manainc.com or 229-848-7129 (cell).

EPA Approves New Fumigant Labels

The EPA approved nearly all soil fumigant product labels incorporating the second phase of mitigation measures required by the 2009 Reregistration Eligibility Decisions (REDs) for the soil fumigants methyl bromide, chloropicrin, metam sodium/metam potassium, and dazomet. New risk reduction measures include buffer zones and related measures that will help protect workers and bystanders from exposure to potentially harmful airborne concentrations of these pesticides.

Measures added to labels in the first phase of implementation included Fumigant Management Plans (FMPs), good agricultural practice requirements, and new worker protection measures among other things. Phase 1 labels were approved in 2010.

Existing stocks of products bearing Phase 1 labels may be sold and distributed by registrants until December 1, 2012.

After that date, only products bearing the newly approved labels may be sold or distributed by registrants. Distributors and retailers who are not registrants may sell and distribute products until their supplies are exhausted. Likewise, growers and applicators may apply products bearing old labels until those supplies have been exhausted. (EPA OPP Update, 1/13/12).

Up Coming Meetings

June 3-6, 2012

Florida State Horticulture Society Annual Meeting

Delray Beach Marriott - Beach Resort
Delray Beach, Florida

<http://fshs.org/meetings.shtml>

July 29- 29, 2012

Florida Small Farms and Alternative Enterprises Conference.

Kissimmee, Florida

<http://www.conference.ifas.ufl.edu/smallfarms/agenda.html>

November 4-6, 2012

21st International Pepper Conference

Naples Grande

Naples, Florida

For more information, go to <http://www.conference.ifas.ufl.edu/pepper2012/>

Opportunities

Growers Wanted

Custom Pak which is a division of the 6 L's company (Lipman Produce) is looking for grower contacts in south Florida to purchase the following commodities:

- Watermelon
- Canteloupe
- Honeydew
- Butternut Squash
- Pumpkin

Custom Pak is also actively looking to contract/buy from Florida growers for this coming season and going forward.

For more information, contact Peter Cicero

Email: Peter.Cicero@LipmanProduce.com

Phone: 330-240-3019

Farm Land for Lease

Farm Land for lease in LaBelle area – contact Clyde Lavender at 863-673-2338

Farm Land for lease on Babcock Ranch, Hwy 31, Charlotte County. Rotational fields or permanent locations, phone 941-639-3958

Websites

Florida MarketMaker: Connecting willing markets and quality sources of food from farm and fisheries to fork in Florida. <http://fl.marketmaker.uiuc.edu/>

UF/IFAS Small Farms Website: production, marketing and economic topics aimed at small farm enterprises. <http://smallfarms.ifas.ufl.edu/>

SW Florida Vegetable Grower Facebook Page providing up-to-date news for vegetable growers and industry reps on the go! Become a friend - <http://www.facebook.com/?ref=home#!/pages/SW-Florida-Vegetable-Grower/149291468443385>

Quotable Quotes

Women and cats will do as they please, and men and dogs should relax and get used to the idea. – Robert Heinlein

Change is inevitable, except from a vending machine. – Robert Gallagher

Those who live by the sword get shot by those who don't. – Anon.

Give a man a fish and he will eat for a day. Teach a man to fish and he will sit in a boat all day drinking beer. - Anon

The best place to look for a helping hand is at the end of your arm. – Swedish Proverb

Wise men speak because they have something to say; Fools because they have to say something. - Plato

On the Lighter Side

Historical Trivia

Did you know the saying "God willing and the Creek don't rise" was in reference to the Creek Indians and not a body of water? It was written by Benjamin Hawkins in the late 18th century. He was a politician and Indian diplomat. While in the south, Hawkins was requested by the President of the U.S. to return to Washington. In his response, he was said to write, "God willing and the Creek don't rise." Because he capitalized the word "Creek" it is deduced that he was referring to the Creek Indian tribe and not a body of water.

One Man's Poison

A man goes to see the Rabbi. 'Rabbi, something terrible is happening and I have to talk to you about it.'

The Rabbi asked, 'What's wrong?'

The man replied, 'My wife is poisoning me.'

The Rabbi, very surprised by this, asks, 'How can that be?'

The man then pleads, 'I'm telling you, I'm certain she's poisoning me, what should I do?'

The Rabbi then offers, 'Tell you what. Let me talk to her, I'll see what I can find out and I'll let you know.'
A week later the Rabbi calls the man and says, "I spoke to her on the phone for three hours. You want my advice?'

The man said yes and the Rabbi replied, 'Take the poison.'

Cletus and Billy Bob

Cletus is passing by Billy Bob's hay barn one day when, through a gap in the door, he sees Billy Bob doing a slow and sensual striptease in front of an old John Deere tractor.

Buttocks clenched, he performs a slow pirouette, and gently slides off first the right strap of his overalls, followed by the left. He then hunches his shoulders forward and in a classic striptease move, lets his overalls fall down to his hips, revealing a torn and frayed plaid shirt.

Then, grabbing both sides of his shirt, he rips it apart to reveal his stained T-shirt underneath. With a final flourish, he tears the T-shirt from his body, and hurls his baseball cap onto a pile of hay.

Having seen enough, Cletus rushes in and says, "What' in the world're ya doing, Billy Bob?"

"Good grief, Cletus, ya scared the bejeebers out of me," says an obviously embarrassed Billy Bob.

"But me 'n the wife been havin trouble lately in the bedroom d'partment, and the therapist suggested I do something sexy to a tractor."

Note: State and local budgets cuts are threatening to further reduce our funding – if you are receiving currently receiving the hotline by mail and would like to switch over to electronic delivery – just drop me an email. It is much quicker and you will get the hotline within minutes of my completing it and help conserve dwindling resources at the same time. Thanks to those that have already made the switch.

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