



UNIVERSITY OF
FLORIDA

E X T E N S I O N

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SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

April 12, 2012

Despite a slight cool down over the weekend, much of the past month has been hot, windy and dry. These conditions have boosted evapotranspiration rates increasing irrigation demand and plant stress.

Temperatures have been running 3- 6 degrees above normal with nights in the 50's and 60's and daytime highs reaching into the mid 80's to low 90's most days. All areas reported less than an inch of rain for the period.

Unseasonably warm weather the entire season has resulted in most crops coming in 2-3 weeks ahead of schedule.

Many mornings saw foggy conditions and heavy dews which has 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					
3/19 – 4/12/12	51.73	89.96	0.76	75	0.15
Belle Glade					
3/19 – 4/12/12	54.77	90.64	0.38	77	0.16
Clewiston					
3/19 – 4/12/12	55.15	92.37	0.11	74	0.15
Ft Lauderdale					
3/19 – 4/12/12	59.68	91.04	0.69	71	0.16
Fort Pierce					
3/19 – 4/12/12	52.7	89.85	0.42	76	0.15
Homestead					
3/19 – 4/12/12	54.79	90.61	0.19	76	0.15
Immokalee					
3/19 – 4/12/12	51.96	94.75	0.26	74	0.16

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Watermelon harvest has started in South Florida. For a number of crops, the end of the deal is coming rapidly across south Florida spurred by hot weather and poor markets for many items. Crops coming to market included beans, cabbage, celery, cucumbers, endive, escarole, eggplant, peppers, radishes, squash, sweet corn, tomatoes, watermelon and a variety of specialty items.

The National Weather Service forecast indicates a high pressure ridge will set up over South Florida and result in mostly dry conditions through next week. Winds will strengthen across the area over the weekend as the pressure gradient increases. Temperatures through the period will remain warm with highs in the mid to per 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

Growers and scouts around Immokalee report that whiteflies have gone wild with high adult counts of 20-50/plant being reported along with the presence of nymphs and pupae in many fields. Some growers are also reporting issues with honeydew and sooty mold on plants and harvested fruit.

Growers around LaBelle and other areas of SW Florida are reporting somewhat lower whitefly populations but indicate that whiteflies are still active in many crops including melons.

Dr. Dak Seal reports that whitefly pressure is increasing in a variety of crops around Homestead and notes that in many places whiteflies are moving from old crops to the younger ones. He suggests the use neonicotinoids in rotation with other insecticides of different mode of action and recommends all fields should be destroyed after harvest 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 continue to increase and have reached much higher numbers 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 whitefly populations are increasing but occurrence is spotty and numbers are generally worse on farms near old crops. Growers and scouts around Manatee are reporting a serious problem with abandoned tomato fields in the county that are full of late blight and whitefly. 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
Phone: 352.372.3505 ext. 154

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 report that Manatee County pepper weevil populations have increased significantly over the past two weeks. Reports indicate that some growers have resorted to spraying every 72 hours to get some semblance of control in their fields. Jalapeños and banana peppers seem to be the first target for adult females.

Around Southwest Florida, pepper weevils are getting real bad in many locations with lots of bud/bloom and small fruit showing feeding/egg laying punctures. A number of growers indicate this has been 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.

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 although reduced susceptibility has been reported by some producers. A total of 24 pints can be applied for the season.

Other products that have performed well in trials include Belay (Clothianidin), Capture (bifenthrin), Kryocide (cryolite), Assail (acetamiprid), Actara (thiomethoxam) and Venom (Dinotefuran).

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.

Worms

Respondents in Manatee/Ruskin area report worm pressure remains steady at mostly low levels with some pinworm activity spiking in the Ruskin/Wimauma area.

Around SW Florida worm numbers are mostly low, with a few southern armyworms and loopers being encountered. Melonworms and a few pickleworms are present in cucumber and squash.

Fall armyworms are still going strong and growers and scouts report beet army worm and corn ear worm numbers have increased over the past two weeks in sweet corn in the Glades. Respondents indicate that diamondback moths are infesting the last few plantings of Chinese cabbage. Lettuce producers report increasing problems with fall armyworms and loopers. Loopers are also causing problems in beans.

Along the 441 corridor in 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 fall armyworms remain high in young sweet corn plants.

Reports indicate that beet armyworm populations remain low on pepper and tomato. Low numbers of diamondback moth remain active in brassicas. Melonworms and pickleworms are still active in some cucumbers.

Corn silk Fly

Silk fly remains a significant threat to sweet corn in both Belle Glade and Homestead.

Aphids

Growers and scouts in SW Florida report that aphids are still moving around in many locations and with the heat they can become established very quickly. Problems have been reported in several crops including tomatoes, peppers, and cucurbits

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 the Manatee/Ruskin area report that green peach aphid numbers are up and down depending on location.

Around the Belle Glade area, aphids are still moving into snap beans and celery as well as the remaining lettuce and cabbage crops. Dr. Gregg Nuessly reports that potato aphids have made an appearance in leafy vegetables in the EAA for the first time in many years. Green peach aphids still present, as are turnip aphids on crucifers.'

Of the aphid species in Florida vegetables, the green peach aphid is usually the most common and abundant species. With green peach aphids, infestations typically begin on the bottom most leaves of the plant. Potato aphid infestations are generally scattered over the plant.

Winged adults of the green peach aphid are pale or bright green and black, with a large, dusky blotch on the dorsum of the abdomen. The immature forms are yellow, pinkish, or pale green. The mature, wingless forms are pale or bright green.

Pink and green forms of the potato aphid are found in potatoes. This aphid is larger than the green peach aphid with longer cornicles, antennae and legs. Colonies are made up of adults with offspring closely clustered together.

The two species can be most reliably distinguished by looking at the tubercles between the base of the antennae. The tubercles of the potato aphid slope outward and those of the green peach aphid converge.

Management of green peach aphid and potato aphid involves an integrated program of reducing overwintering populations, controlling weeds in and around the field, and the use of foliar sprays. Monitor to schedule spray treatments.

Weeds along ditch banks, roads, and other non-cultivated areas contribute directly to the aphid problem. Mustards (*Brassica* spp.) serve as early season host plants where aphid populations increase before spreading to other host plants.

Thrips

Respondents in Homestead report that melon thrips are continue to be a problem 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.

Around Immokalee, thrips are still around but have started to drop off in many locations. Growers and scouts have seen very little sign of western flower thrips in most areas of SW Florida with few exceptions.

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

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, Dr. Gregg Nuessly reports that Florida flower thrips are particularly bad in some beans with some beans showing signs of bean red node virus. He notes that in other locations, there are beans with hardly a thrips to be seen.

Dr. Nuessly reminds growers to keep an eye out for thrips on tender leaves, blooms, fruit and pods and advises bean growers to 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.

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.

Leafminers

In most areas, respondents report that leafminers are declining in number and few growers are spraying for them.

The exception is around Belle Glade, where growers continue to battle leafminers in celery and leafy greens.

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 around South Florida. In most areas, these are being controlled by sprays targeted at whiteflies.

Diseases

Downy mildew of cucurbits

Growers and scouts around Southwest Florida report that downy mildew is widespread on watermelons, cantaloupes, cucumbers and squash.

Respondents in the Manatee Ruskin area are also reporting an increase in downy mildew on watermelons, cantaloupes, cucumbers and squash.

Incidence and occurrence has increased significantly in a number of watermelons fields over the past few weeks. Severity has reached moderate to severe levels in a number of fields and many growers agree pressure is higher than it has been in a number of years.

Leaf symptoms can be used to diagnose downy mildew in the field in some cases. On cucurbits other than watermelon, small yellowish areas occur on the upper leaf surface. Later, a more brilliant yellow coloration occurs with the internal part of the lesion turning brown. Lesions are usually angular as leaf veins restrict their expansion. When the leaves are moist, a downy grayish fungal growth can sometimes be seen on the underside of individual lesions. On watermelons, yellow leaf spots may or may not be angular and later turn brown to black in color. On watermelons an exaggerated upward leaf curling often occurs that growers sometimes liken to a dead man's hand.

Spores are produced on the underside of the leaf within the downy fungal growth associated with diseased tissue. Spores are easily dispersed by wind from one leaf spot to another leaf in a field or to another nearby planting. Spore movement occurs primarily during late morning to midday. Under ideal conditions spores may be transported for many miles from one field to another. When a spore contacts a leaf and the leaf is wet, the spore germinates and penetrates the leaf tissue. Within four to seven days, new lesions capable of producing spores are produced. As this cycle continues, an epidemic situation occurs and control becomes increasingly difficult.

Control of downy mildew on cucurbits is achieved primarily by the use of resistant varieties and/ or fungicide spray programs. Fungicide sprays are recommended for all cucurbits. Resistant varieties are currently available, particularly in cucumber, and can help reduce fungicide applications. Squash, pumpkin, cantaloupe, and non-resistant cucumber varieties are very susceptible and should be sprayed every five to seven days.

Since nighttime temperatures between 55 and 75° F and relative humidity above 90%, provide ideal conditions for infection, cucurbits planted in South Florida are always at risk from downy mildew and may be infected as early as the appearance of the first true leaves. In North Florida, cooler nighttime temperatures in the spring often delay the onset of downy mildew epidemics until flowering on squash and cucumbers.

Several factors influence the severity of downy mildew outbreaks. Use of resistant varieties will help minimize downy mildew. If cucurbits are planted close to established fields infected with downy mildew, a spray program should be initiated as soon as the first true leaves are present, to prevent infections from spores blowing in from the infected field.

Spray programs for downy mildew are most effective when initiated prior to the first sign of disease since once a planting becomes infected; it becomes more and more difficult for fungicides to control downy mildew. A range of fungicides is available for the control of downy mildew depending on the crop. Maneb, Dithane, Bravo, Ridomil MZ, Ridomil Gold/Bravo, Ridomil Gold/Copper, Flint, Gavel, Quadris, Presidio,

Tanos and Alliette have all shown efficacy against the disease. Use of Bravo should be avoided on watermelon after fruit set as it may increase the risk of sunburn. Newer fungicides such as Revus Top, Curzate, Reason, Ranman and Previcur Flex have provided superior control in a number of cases.

Lettuce Downy Mildew

Growers in the EAA continue to battle lettuce downy mildew.

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. Caution must be used with the phosphonics as the weather gets hotter.

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.

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.

Late Blight

Around Immokalee, late blight has slowed in most places but it is still active in several tomato fields and we've made first detections in a couple of locations in the past week. Some tomato fields have been significantly hurt by defoliation and fruit infections.

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 organic production systems.

In the Manatee Ruskin area; late blight remains active in tomato and scouts continue to report finding new infections on tomatoes.

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, some rainy weather, foggy mornings 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%.

Respondents indicate that TYLCV is really starting to get going in the Manatee/Ruskin area, with some fields at 25% 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 TYLCV is increasing rapidly in Palm Beach County and is also common in other east coast production areas at lower levels.

Groundnut Ringspot Virus

Reports of low numbers of GRSV infected tomato plants continue to be received 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 increasing 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.

Bacterial Spot

Around Immokalee, bacterial spot activity on tomato remains active in a number of places with foggy mornings.

Reports from the Manatee Ruskin areas indicate bacterial spot is moving around behind some foggy morning of recent days.

In Homestead respondents indicate that bacterial leaf spot is widespread and ranges from moderate to severe.

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

Respondents in Manatee County report some problems with target spot which has reached moderate levels in some fields.

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 and is now the major corn disease in the Glades.

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 still present on sweet corn around Belle Glade but both diseases have slowed down over the past few weeks.

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.

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.

News You Can Use

US Agriculture is Big Business

Agriculture is the nation's largest employer, with more than 21 million people working in some phase of the industry. This represents approximately 15 percent of the total U.S. workforce.

U.S. consumers spend just 10 percent of their disposable income on food each year.

98 percent of all U.S. farms are owned by individuals, family partnerships or family corporations.

Nearly 1.2 billion acres in the United States are devoted to farming – either as cropland, timberland or for fish farming.

Each U.S. farmer produces food and fiber for 143 people in the United States and abroad.

In 2006, \$68.7 billion worth of American agricultural products were exported around the globe.

Best yet to come for US agriculture

Worldwide agriculture is a \$3 trillion business and in the U.S., the agriculture sector is leading the recovery from our most recent economic recession.

Mike Dwyer, director of global policy for USDA's Foreign Agriculture Service, never gets tired of giving speeches these days.

The message is the same: Worldwide agriculture is a \$3 trillion business and in the U.S., the agriculture sector is leading the recovery from our most recent economic recession.

When speaking to a recent meeting of commodity associations, Dwyer gave the speech for the 17th time, including four continents and 10 countries.

“If you are a farmer anywhere in the world, and you get world prices for your crops, the story is a very optimistic one for you,” Dwyer said.

“When I talk about the prosperity of farming, I'm talking about two primary things: balance sheet and income sheet. Both are doing extremely well,” he added.

Net farm income in the U.S. alone topped \$103 billion — a big-time record for American agriculture. Dwyer said this income record is net income, after all the input costs have been figured into the equation.

The other all time high for agriculture is a \$2 trillion net equity in farms in the U.S. This is largely due to the rise in price of agriculture's No. 1 asset — land.

While the value of real estate in the U.S. has taken a dramatic hit during the recession, the price of farmland has risen, because the value of farm land is based on how much income it can produce.

“In my 30-year career in agriculture, I could rarely say agriculture is a top performing industry, and now it is. And, the beauty of prosperity in U.S. agriculture is that isn’t coming at the expense of U.S. taxpayers. Payments from the federal government to farmers are at a 20-year low, down by \$15 billion from 2005,” Dwyer said.

The USDA economist said the best is yet to come for farmers in the U.S. and around the world. The 10-year outlook is for continued growth and prosperity, which will be driven by a handful of economic factors globally.

“In the U.S. we are a nation of middle class buyers. If you get a raise in pay in January, your total cost for food will not go up. You may eat out more or you may change your diet, but your overall cost for food will not change much,” Dwyer said

Emerging countries

In emerging economic countries around the world that is not the case. The Middle Class in China, India and a number of other Asian and Latin American countries around the world is growing at an alarming rate. These emerging markets will be primary buyers of U.S. farm goods for the next ten years, he added.

“In the history of the world there has never been a greater increase of wealth in such a short period of time as we are seeing in China. This plays right into our hands as an agriculture exporter,” Dwyer said.

The recession was a major speed bump for the U.S., Japan and western European countries, China and other emerging economies barely slowed down. That’s important to the U.S. agriculture industry, because their growth has a huge impact on food demand, but regardless of the state of our economy, food demand stays about the same.

“It doesn’t take a degree in economics to figure out that an upturn in demand for good and a level line in food production is going to be good for farmers,” Dwyer said.

In China, there are currently about 125 million households that are considered middle class. By 2020 that number is expected to jump by another 223 million that go from basically subsistence level to middle class. They are going to want to buy more high protein, processed food.

As the dollar goes down, commodity prices tend to go up. The value of the U.S. dollar has trended downward over the past 10 years, pushing the buying power of emerging nations up.

In the first quarter of 2012, the dollar rallied in value, but that’s primarily due to financial problems in Europe, and not a long-lasting trend, Dwyer said.

USDA projections are for a 14 percent decline versus major export competitors over the next 10 years. If these projections are accurate, it will bode well for any American farmer who sells his crop for export and will tend to keep crop value high in both domestic and export markets.

Fuel from cellulosic processes may be the wave of the future, but for the next few years first generation biofuels stocks will continue to come from corn, sugar-producing crops and soybeans.

Around the world, more than 30 countries in the Western Hemisphere have biofuel mandates, trying to replicate what the U.S. is doing with ethanol and biodiesel in the U.S.

To produce first generation biofuels, these countries are going to have grow or import corn, soybeans or sugar-producing crops — like sugarbeets and sugarcane.

The U.S. is the world’s leader in ethanol exports, and the biggest customer is Brazil.

Strange as that sounds, the price of corn versus sugarcane makes the U.S. the lowest cost ethanol producer in the world. Europe wants to be in a similar situation as the U.S. in biofuel production, but they are more interested in biodiesel.

This whole biofuel trend again bodes well for stabilizing prices for oil-bearing or sugar-bearing crops for the next decade.

“The U.S. chalked up \$137 billion in export sales last year — never thought I’d see that level in my career,” Dwyer said.

FTA’s

“In the U.S. we entered into three major trade agreements last year and there is more to come. We can either play or we can watch these developing countries play, and it appears our government has made a commitment to play in the world trade market,” he added.

By 2020, the USDA estimates the agriculture export market will top one trillion dollars. Currently, agriculture exports stand at something close to \$700 billion, up 150 percent since 2000.

The path of least resistance in liberalizing trade comes from bilateral agreements between two countries. The most difficult path is unilateral agreements that involve numerous countries.

As long as profit is high in the export business, Dwyer contends the growth in bilateral agreements will continue.

Never underestimate the ability of governments to think they are doing the right thing and end up making huge mistakes. For example, in 2008, governments started banning exports of food to be sure they had an adequate supply of food for their country.

“All that did was scare all the major importers of food around the world,” the USDA economist said.

Russia did this again in 2011 with wheat. It caused a price spike in wheat, but depressed prices Russian wheat farmers received for their crop.

What this policy decision did was to lower the profitability in the ag sector, which slows down the supply response.

“It would be nice to say that won’t happen again, but with stocks at such low levels, the conditions are right for export bans and subsequent price spikes,” Dwyer said.

Agriculture is one of the most energy intensive sectors of the U.S. economy. If the price of petroleum goes up, the price of production goes up for farmers.

Many of the same factors that drive agriculture profitability drive energy prices. China, for example, will buy more food, but they will also buy more cars, which need fuel.

“Yields and cost of production is directly tied to the type seed used. There is no better technology in the world than biotechnology.

“We are just scratching the surface on such technology as drought tolerant crops. The payoff will be huge, but the question is: Where is it headed.

“There is no question the demand for food is going to increase over the next decade, and well beyond.

The only two ways to meet growing demand is to increase yield or bring new land into production. Failing to keep supply and demand in harmony could really create high food prices and be a negative factor in world agriculture growth," Dwyer said.

Roy Roberson
Southeast Farm Press
04-09-2012

IOM: FDA's Inspection Approach to Imports is 'Impractical'

An increasing portion of the food on our plate is coming from beyond our borders, but how do we know that it's safe? A new study by the Institute of Medicine looks at the "daunting" task of ensuring safe food across the globe and comes to the conclusion that it's going to take lot more than random, infrequent inspections.

The flood of imported food and drugs is putting a lot of stress on the U.S. Food and Drug Administration, the agency charged with overseeing the safety of food, drugs, cosmetics and medical devices. The volume of imported FDA-regulated products has tripled over the last decade, increasing by 13 percent each year since 2002. Now an estimated 40 percent of fruits and nuts and 85 percent of seafood consumed in the United States is imported.

The IOM suggests that FDA's traditional method of trying to keep a handle on food and product safety by making periodic inspections is impractical because 20 million types of FDA-regulated foods arrive from more than 300,000 factories in 150 different countries.

Instead, the committee suggests FDA use enterprise risk management -- which aggregates risk information across all products to analyze threats -- to guide the agency's efforts. The panel also recommends that FDA use its reputation and expertise to help developing countries build their own capacity to regulate food and drugs.

"These partnerships should involve other regulatory agencies, foundations and other donors, universities, international organizations, and non-governmental organizations, such as consumer and industry groups," reads the study. "One priority for the FDA and its international partners should be to expand education and training about regulatory science and policy in countries that are high-volume exporters of high-risk goods to the U.S. market."

The committee notes that the globalization of food and drugs presents a unique challenge to regulators and consumers alike: "International trade can turn the product safety failures of the poorest countries into liabilities for the richest ones."

The report comes just weeks after the U.S. Centers for Disease Control and Prevention released a review that suggests outbreaks tied to imported foods are increasing.

Of course, moving forward on the IOM's recommendations takes time, staff, and resources, which FDA and its allies are fighting for as discretionary spending gears up for another tough budget battle.

Helena Bottemiller
Food Safety News
April 5, 2012

Up Coming Meetings

May 1, 2012

Food Safety Update for Cantaloupe Growers

UF/IFAS Gulf Coast Research & Education Center
14625 County Road 672
Wimauma, FL 33598

To register contact Alicia Whidden or Shavon Filmore at the Hillsborough County Extension Service, 813-744-5519.

May 9, 2012

FFVA – Labor Issues Meeting

USDA/ARS U.S. Horticultural Laboratory
2001 South Rock Road
Fort Pierce, FL

To register, go to <http://ffvalaborissues.eventbrite.com/>

June 3-6, 2012

Florida State Horticulture Society Annual Meeting

Delray Beach Marriott - Beach Resort
Delray Beach, Florida

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

June 13- 16, 2012

Florida Seed Association 80th Annual Meeting

Pink Shell Resort
Fort Myers Beach, Florida

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 or 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

Focus on Tomato - a new online tomato resource for field and greenhouse growers, consultants, master gardeners, community supported ag groups, and other professionals has been launched by the Plant Management Network. Check it out at <http://www.plantmanagementnetwork.org/fot>

Florida Banner Center for Agriscience - Boosting Florida's agricultural economic engine through collaboration with key industry and educational partners is the primary goal of the Employ Florida Banner Center for Agriscience. Started in July 2009, the Banner Center is located at Florida Farm Bureau (FFB) in Gainesville and is focused on building a talent pipeline of future agriscience workers in areas such as agricultural biotechnology, agricultural technology, veterinary assisting, animal science and services and agricultural communications. Go to <http://www.agrisciencebannercenter.org/index.html>

Tomatoes are loaded with many, many health benefits. They are incredibly versatile and can be prepared in a seemingly endless number of dishes, as well as being great to eat alone. Here are 10 reasons why you should be eating more tomatoes as a part of your regular balanced diet. See why at: <http://www.foodandweightloss.com/health-foods/tomato-health-benefits.php>

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

You get the best out of others when you get the best out of yourself. - Harvey S. Firestone

Joys divided are increased. - J. G. Holland

Flaming enthusiasm, backed up by horse sense and persistence, is the quality that most frequently makes for success. - Dale Carnegie

Don't cry because it's over. Smile because it happened. - Dr. Seuss

A sharp tongue is the only edged tool that grows keener with constant use. - Washington Irving
Unless someone like you cares a whole awful lot, nothing is going to get better. It's not. - Dr. Seuss

On the Lighter Side

Five Life Lessons

1 - First Important Lesson - Cleaning Lady.

During my second month of college, our professor gave us a pop quiz. I was a conscientious student and had breezed through the questions until I read the last one: "What is the first name of the woman who cleans the school?"

Surely this was some kind of joke. I had seen the cleaning woman several times. She was tall, dark-haired and in her 50's, but how would I know her name?

I handed in my paper, leaving the last question blank. Just before class ended, one student asked if the last question would count toward our quiz grade.

"Absolutely," said the professor.. "In your careers, you will meet many people. All are significant. They deserve your attention and care, even if all you do is smile and say "hello..."

I've never forgotten that lesson.. I also learned her name was Dorothy.

2. - Second Important Lesson - Pickup in the Rain

One night, at 11:30 p.m., an older African American woman was standing on the side of an Alabama highway trying to endure a lashing rain storm. Her car had broken down and she desperately needed a ride.

Soaking wet, she decided to flag down the next car. A young white man stopped to help her, generally unheard of in those conflict-filled 1960's. The man took her to safety, helped her get assistance and put her into a taxicab.

She seemed to be in a big hurry, but wrote down his address and thanked him. Seven days went by and a knock came on the man's door. To his surprise, a giant console color TV was delivered to his home. A

Special note was attached. It read: "Thank you so much for assisting me on the highway the other night. The rain drenched not only my clothes, but also my spirits. Then you came along because of you, I was able to make it to my dying husband's' bedside just before he passed away... God Bless you for helping me and unselfishly serving others."

Sincerely,

Mrs. Nat King Cole.

3 - Third Important Lesson - Always remember those who serve.

In the days when an ice cream sundae cost much less, a 10-year-old boy entered a hotel coffee shop and sat at a table. A waitress put a glass of water in front of him.

"How much is an ice cream sundae?" he asked.

"Fifty cents," replied the waitress.

The little boy pulled his hand out of his pocket and studied the coins in it. "Well, how much is a plain dish of ice cream?" he inquired.

By now more people were waiting for a table and the waitress was growing impatient. "Thirty-five cents," she brusquely replied.

The little boy again counted his coins. "I'll have the plain ice cream," he said.

The waitress brought the ice cream, put the bill on the table and walked away. The boy finished the ice cream, paid the cashier and left. When the waitress came back, she began to cry as she wiped down the table. There, placed neatly beside the empty dish, were two nickels and five pennies.

You see, he couldn't have the sundae, because he had to have enough left to leave her a tip.

4 - Fourth Important Lesson. - The obstacle in Our Path.

In ancient times, a King had a boulder placed on a roadway. Then he hid himself and watched to see if anyone would remove the huge rock. Some of the King's' wealthiest merchants and courtiers came by and simply walked around it. Many loudly blamed the King for not keeping the roads clear, but none did anything about getting the stone out of the way.

Then a peasant came along carrying a load of vegetables. Upon approaching the boulder, the peasant laid down his burden and tried to move the stone to the side of the road. After much pushing and straining, he finally succeeded. After the peasant picked up his load of vegetables, he noticed a purse lying in the road where the boulder had been. The purse contained many gold coins and a note from the King indicating that the gold was for the person who removed the boulder from the roadway. The peasant learned what many of us never understand!

Every obstacle presents an opportunity to improve our condition.

5 - Fifth Important Lesson - Giving When it Counts...

Many years ago, when I worked as a volunteer at a hospital, I got to know a little girl named Liz who was suffering from a rare & serious disease. Her only chance of recovery appeared to be a blood transfusion from her 5-year old brother, who had miraculously survived the same disease and had developed the antibodies needed to combat the illness. The doctor explained the situation to her little brother, and asked the little boy if he would be willing to give his blood to his sister.

I saw him hesitate for only a moment before taking a deep breath and saying, "Yes I'll do it if it will save her." As the transfusion progressed, he lay in bed next to his sister and smiled, as we all did, seeing the color returning to her cheek. Then his face grew pale and his smile faded.

He looked up at the doctor and asked with a trembling voice, "Will I start to die right away".

Being young, the little boy had misunderstood the doctor; he thought he was going to have to give his sister all of his blood in order to save her.

When You're Gone

Three friends from the local congregation were asked, 'When you're in your casket, and friends and congregation members are mourning over you, what would you like them to say?'

Artie said: ' I would like them to say I was a wonderful husband, a fine spiritual leader, and a great family man.'

Eugene commented: 'I would like them to say I was a wonderful teacher and servant of God who made a huge difference in people's lives.'

Al said: 'I'd like them to say, 'Look, he's moving!'

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.

Contributors include: Joel Allingham/AgriCare, Inc, Jeff Bechtel/Syngenta Flowers, Bruce Corbitt/West Coast Tomato Growers, Gordon DeCou/Agri Tech Services Of Bradenton, Fred Heald/Farmers Supply, Sarah Hornsby/AgCropCon, Cecil Howell/H & R Farms, Bruce Johnson/General Crop Management, Barry Kostyk/SWFREC, Dr. Mary Lamberts/Miami-Dade County Extension, Leon Lucas/Glades Crop Care, Chris Miller/Glades Crop Care, Mark Mossler/UF/IFAS Pesticide Information Office, Gene McAvoy/Hendry County Extension, Alice McGhee/Thomas Produce, Dr. Gregg Nuessly/EREC Chuck Obern/C&B Farm, Dr. Monica Ozores-Hampton/SWFREC, 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, Ken Shuler/Stephen's Produce, Crystal Snodgrass/Manatee County Extension, Dr. Phil Stansly/SWFREC, Dr Gary Vallad/GCREC , Mark Verbeck/GulfCoast Ag, Alicia Whidden/Hillsborough County Extension, Dr Henry Yonce/KAC Ag Research and Dr. Shouan Zhang/TREC.

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