



UNIVERSITY OF  
FLORIDA

E X T E N S I O N

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## SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

**November 15, 2012**

The past few weeks have been mostly cool and dry, following a cold front which moved into the area behind the passage of Hurricane Sandy off the East Coast. A series of fronts have kept temperatures several degrees below normal with daytime highs ranging in the 70's to mid-80's. Lows ranged from low 40's to upper 50's, with only a few nights reaching into the 60's and low 70's

Interior and west coast locations were relatively dry for the period with most places reporting 1/2 inch or less. East coast locations received a bit more precipitation from rain bands associated with Sandy and showers blowing in off the Atlantic.

### FAWN Weather Summary

Date	Air Temp °F		Rainfall (Inches)	Ave Relative Humidity (Percent)	ET (Inches/Day) (Average)
	Min	Max			
<b>Balm</b>					
10 25 - 11/15/12	40.92	84.96	0.01	79	0.07
<b>Belle Glade</b>					
10 25 - 11/15/12	43.06	84.02	0.45	81	0.08
<b>Clewiston</b>					
10 25 - 11/15/12	43.96	83.52	0.23	78	0.08
<b>Ft Lauderdale</b>					
10 25 - 11/15/12	52.36	84.81	1.33	71	0.09
<b>Fort Pierce</b>					
10 25 - 11/15/12	46.69	82.98	1.73	78	0.08
<b>Homestead</b>					
10 25 - 11/15/12	49.84	83.80	1.25	78	0.08
<b>Immokalee</b>					
10 25 - 11/15/12	40.67	86.61	0.15	77	0.08

Wishing you all the best for Happy and Healthy Thanksgiving Holiday

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**Nearly two weeks of strong winds before and after Hurricane Sandy, buffeted crops in many places leaving behind lots of tattered leaves, wind burnt tops, stunting and sand blasting, and catfaced fruit in some places.** Only a few foggy mornings have been reported over the past few weeks although this has encouraged disease development in places.

**Drier conditions are helping growers catch up on planting schedules.** Crops coming to market include cucumbers, eggplant, herbs, leafy greens, okra, peppers, sweet corn, squash, tomatoes, watermelon and various specialty items. Overall volumes are increasing in advance of the Thanksgiving Holiday but yields are reported to be on the light side.

**The National Weather Service forecast calls with a few showers mostly over Atlantic Coastal areas along with northeast winds and mild temperatures.** A cold front is forecast to move through south Florida late Saturday or Sunday, bringing windy conditions and some cooler temperatures back into our region for part of next week. Chance of showers returns mid-week.

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

## **Insects**

### **Whiteflies**

**Reports from the Manatee/Ruskin area report that whitefly pressure remains steady with higher numbers coming in from cultivated areas like groves and other vegetable fields.** Scouts report finding nymphs and pupae in a number of fields. Growers report good results with Courier against immature whiteflies.

**Respondents in Homestead indicate that whiteflies remain active in green beans.**

**Around Immokalee, whitefly numbers are increasing in a number of locations and are reported to be “horrible” in a few places.** Nymphs are also building in a number of older fields.

**Reports from Palm Beach indicate that whitefly numbers remain generally low in most areas.** Some early plantings of tomatoes and eggplants are being treated with growth regulators to hinder reproduction.

### **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.

## **B. 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. Use determinant varieties of grape tomatoes to avoid extended crop season.

d. 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. 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.

## **Insecticidal Control Practices for Whiteflies.**

1. Delay resistance to neonicotinoid and other insecticides by using a proper whitefly insecticide program. Follow the label!

a. 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.

b. 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.

c. Use selective rather than broad-spectrum control products where possible to conserve natural enemies and enhance biological control.

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

## Worms

**Reports from the Glades indicate that worm pressure remains steady and that numbers have not abated much with cooler temps.** Sweet corn, lettuce and some chinese vegetables are still showing higher than normal numbers of beet armyworms, fall army worms and scattered cabbage loopers, along with some bean leaf rollers in green bean fields in the Glades.

**Around Palm Beach County reports indicate mostly low-moderate worm pressure in fruiting vegetables.**

**Growers and scouts in Southwest Florida report this has been a bad year for worms with fall armyworm causing significant damage in some pepper where growers were not on top of things.** Southern, beet and fall armyworms, along with fruitworms, loopers and melonworms are all present depending on the crop and location. Some scouts have reported difficulty in battling loopers.

**Reports from the Manatee County area indicate that cooler weather has slowed worms down a little but worm pressure remains steady with beet armyworms, southern armyworms and fruit worms still causing problems.**

**Although armyworms are active year round in our area, numbers are typically highest from August through October as cooler weather to our north pushes migrating moths southward.** Pheromone traps can help provide relative estimates of moth activity within an area.

**Hosts include many vegetables, agronomic crops and grasses.** Most armyworms go through five larval stages within 14 to 21 days (species and temperature dependent). Young caterpillars tend to congregate in the vicinity of hatching for about 24 to 48 hours, after which they migrate to different plants and/or feeding sites. Young worms scarify the leaves as they feed, leaving a thin, windowpane appearance. As they grow, their ability to consume plant tissue increases and they can chew large holes in leaves or strip an entire plant. Damage can be extensive.

**Scouting is extremely important in detecting worms early before they can do significant damage.** The Florida Tomato Scouting Guide indicates a pre-bloom threshold of 1 larva/6plants and post-bloom threshold of 1 egg mass or larva/field.

**Over the past few years, chemical manufacturers have produced a variety of new tools in the battle against armyworms so that growers now have a wide array of excellent worm control materials at their disposal these days.**

**Growers are reminded to rotate between products of different chemical classes to avoid the buildup of possible pest resistance.** The range of materials available to choose from makes this task relatively easy to do.

**Consult UF/IFAS recommendations for currently labeled insecticides for worm control in Florida vegetables.**

### **Broad Mites**

**Broad mite numbers remain high and continue to threaten peppers and eggplants around SW Florida.**

**On the East Coast, broad mites remain a problem in pepper and to a lesser extent on eggplant.**

**Growers and scouts in the Manatee/Ruskin area indicate that peppers are “full” of broad mites in many places.**

**Broad mites can affect a large number of hosts including vegetables such as basil, eggplant, green beans, potato, and tomato as well as a variety of fruits and ornamental plants.**

**This destructive pest attacks terminal leaves and flower buds and causes them to become malformed.** Broad mite feeding distorts plant tissue, causing leaves to become hardened, thickened and narrow, giving them a “strappy” appearance. The blooms abort and plant growth is stunted when heavy pressure is present.

**Mites are usually seen on the newest leaves and small fruit.** Leaves turn downward and turn coppery or purplish. Internodes shorten and the lateral buds break more than normal.

**Malformed terminal buds and stunted growth is often a telltale sign that broad mites are present.** Broad mites are extremely tiny and are impossible to see without a 10X or stronger hand lens. The mites may crowd into crevices and buds. Mites prefer the shaded side of fruit and the underside of leaves, which usually faces the plant, so scouts must be diligent and carefully inspect affected plants to detect these tiny creatures.

**A number of products such as AgriMek Oberon and Portal are labeled for control of this pest.** Sulfur, insecticidal oils or soaps are also effective and can be used by organic producers. Due to short life cycles, frequent repeated sprays may be necessary to obtain control.

### **Leafminers**

**Around Immokalee, leafminer pressure is increasing and has reached threshold levels in a number of fields.**

**Reports from the East Coast indicate that leafminer pressure remains mostly low with some young eggplants and tomatoes getting hit.**

**Leafminers remain mostly low around Manatee County.**

**As we approach the time of year that leafminer become more prevalent, growers and scouts should be aware that leafminer populations tolerant to chlorantraniliprole, the active ingredient in Coragen and other products have been detected in a number of places including SW Florida.**

**Dr. Phil Stansly, Entomologist at UF/IFAS SWFREC writes it is important to realize, that Coragen, just like all other insecticides, is subject to selection for resistance.**

**He advises that it is a good rule of thumb not to use it more than once in a crop and not to apply it to successive generations of pests.** Coragen is a terrific product and as such has been used frequently by many growers. The result is that we are seeing some tolerance to the product cropping up in vegetable leafminer populations. The best strategy would be to not make that second application of Coragen or any other product containing chlorantraniliprole such as Voliam Flexi or Durivo or other group 28 products such as Belt. In addition, he reminds growers that the next generation of group 28 products containing cyantraniliprole will soon be available but could likely be compromised by the over-exposure of pest populations to chlorantraniliprole.

### **Pepper Weevils**

**Growers and scouts report that pepper weevil is now established in several pepper around SW Florida with scouts finds both adults in larvae in these locations.**

**Respondents in the Manatee Ruskin area report that weevils have showed up in some pepper fields.**

**Reports from East Coast growing areas indicate that pepper weevils are still hard to find in most places.**

**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. Pheromone traps may also help growers detect first adult emergence or migration into the field.

**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 (bifenithrin), 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.

### **Cornsilk fly**

**Around Belle Glade, cornsilk fly adult numbers are relatively stable but remain on the high side in sweet corn.**

**Around Homestead, reports indicate that cornsilk fly is present on alternate hosts.**

**Dr. Gregg Nuessley, Entomologist at UF/IFAS EREC advises that he is very concerned that if growers don't make changes now to their pyrethroid use in sweet corn that they will have very few to no alternatives to control cornsilk flies in corn in the very near future.**

**He advises that when using a pyrethroid during ear stage sweet corn, always use the maximum labeled rate.** Never use below label rates for pyrethroids at any time in sweet corn. Do not add pyrethroids to another

chemical unless it is directly needed for control of something that the other product does not control. If growers need to control armyworm or earworm, but no cornsilk flies are present, then they should not use pyrethroids to control these Lepidoptera, because there are many alternative choices.

**Growers need to eliminate the use of "insurance sprays" of pyrethroids, because the continuous low residual levels of pyrethroids on corn are leading to resistance development in cornsilk flies to pyrethroids.** If there were many other products for control of these flies, then this would not be as critical.

**However, there is only one other material that provides good control of the flies and that is the organophosphate, chlorpyrifos.** While some contact control is provided by methomyl, this product has no residual control of the cornsilk flies. To conserve the remaining effectiveness and to try to regain previous levels of effectiveness of pyrethroids, growers must eliminate unnecessary pyrethroid treatments.

### **Aphids**

**Around Southwest Florida, growers and scouts reports that they have been seeing winged aphids over the past days in different crops.** Some colony formation has been reported.

**Respondents report high aphid numbers on host crops around the Homestead area.**

**In Palm Beach County some growers are reporting outbreaks of aphids on mustards and other greens.**

**Reports from the Manatee Ruskin area indicate that aphid numbers are low but are beginning to increase.**

### **Diseases**

#### **Bacterial Spot**

**Reports from the Manatee/Ruskin area indicate that bacterial spot has dried up in many locations with plants showing clean tops but bottoms gone in many older fields.**

**Around Immokalee, growers and scouts report that bacteria has slowed in most cases after a bad couple of weeks with disease although some scouts report bacterial leaf spot moving in on wind damaged foliage.**

**Respondents on the East Coast report that bacterial spot has increased in pepper and tomato but note that spread has been checked somewhat by drier weather in recent days.** Some pepper growers are reporting that resistant varieties with resistance to races 1-5 are getting hit hard with bacteria indicating that races 6 is present.

**Around Homestead, respondents report finding bacterial spot on small tomato seedling transplanted into the field only a couple of weeks, also on peppers.**

#### **Target Spot**

**Low levels of target spot are showing up on tomato in a number of locations around South Florida.**

**Around the Manatee/Ruskin area, while target spot remains mostly light some fruit infections have been reported.**

**In the Immokalee area, target spot is increasing in tomato and seems to like foggy mornings.**

**Target spot remains very low on the East Coast.**

**Target spot is frequently misdiagnosed as in its early stages as symptoms are difficult to recognize and can be confused with bacterial spot and early blight.**

**The name derives from the bull's eye appearance that is often displayed in lesions caused by the disease.** Since concentric rings are not always visible and not all lesions with concentric rings are target spot, it is recommended that a laboratory diagnosis be obtained to ensure that a correct diagnosis is made.

**On tomato leaves and stems, foliar symptoms of target spot consist of brown-black lesions with subtle concentric rings giving them a target-like appearance.** These can sometimes be confused with early blight. With early blight, the lesions are often associated with a general chlorosis of the leaf.

**On tomato fruit, lesions are more distinct.** Small, brown, slightly sunken flecks are seen initially and may resemble abiotic injury such as sandblasting. As fruits mature the lesions become larger and coalesce resulting in large pitted areas.

**As we move later into the season and plant canopies develop, we often see target spot take over from bacterial spot as the predominant foliar problem in tomatoes.**

**Currently, target spot is controlled primarily by applications of protectant fungicides.** It should be noted that tank-mix sprays of copper fungicides and maneb do not provide acceptable levels of target spot control. In recent trials, at the University of Florida fungicides were rated for efficacy as follows:

- 1) Switch, Inspire Super
- 2) Revus Top, Scala
- 3) Tanos, Endura, Quadris (and other strobilurins), Reason
- 4) Bravo (chlorothalonil)
- 5) Mancozeb, Copper

**Dr. Gary Vallad Pathologist at UF/IFAS GCREC advises growers to not use strobilurins for target spot management due to widespread resistance to strobilurins and notes that in some instances it can actually make disease worse.** Gary also advises seeing some early signs of resistance to SDH inhibitors. These include Endura, Fontelis, Luna and Priaxor.

**Priaxor**

### **Early Blight**

**Early blight is also showing up on tomato at very low levels in several locations around South Florida.** Lesions appear darker in color than those caused by target spot.

**Dr. Vallad expresses similar concerns with strobilurin resistance in Alternaria although he indicates that he has not tested FL isolates yet, but notes that wide-spread resistance has been documented in production areas to our north.**

### **Downy Mildew**

**Respondents in the Manatee/Ruskin area report that downy mildew is widespread on watermelons and other cucurbits.**

**Around SW Florida, downy mildew continues to cause problems in watermelon, squash and cucumbers.**

**Growers and scouts in the Palm Beach area report they are now finding downy mildew in squash and cukes.**

**Early symptoms include angular chlorotic lesions on the upper surface of the leaf – these often appear water soaked when observed from below early in the morning.**

**Downy mildew is favored by:**

- **Cooler Temps 59-77°F**
- **High relative humidity (> 90%)**
- **Periods of extended leaf wetness including heavy morning dew and foggy mornings**

**Spores are easily dispersed by wind and rain.**

**Dr Vallad advises that downy mildew is showing resistance to a number of chemicals including the strobilurins (Quadris, Cabrio, Flint), fluopicolide (Presidio), mandipropamid (Revus), dimethomorph (Acrobat, Forum) and mefenoxam (Ridomil).**

**Cyazafamid (Ranman), cymoxanil (Curzate), propmacarb (Previcur Flex) and zoaxamide+maneb (Gavel) remain good choices to rotate with protectant fungicides such as chlorothalonil and mancozeb.**

### **Anthracnose**

**Growers in the Manatee Ruskin area are reporting a higher than usual incidence of anthracnose on tomato this fall. Foliar symptoms are widespread with some fruit infections being reported.**

### **Pythium**

**Growers and scouts in the Homestead area report some problems with pythium on young transplants.**

### **Rhizoctonia**

**Grower and scouts around Belle Glade report significant issues with rhizoctonia in green beans. They report damping off as well as poor growth and stand establishment in affected fields. PCNB fungicides are labeled for control.**

### **Southern Corn Leaf Blight**

**Reports from Belle Glade indicate that southern corn leaf blight, caused by the fungus *Bipolaris maydis*, is present in sweet corn.**

**Lesions are light tan in the center with a reddish-brown border. A greenish growth near the center of the lesion may be evident if spores are present. Mature lesions range from 1/4 to 1 1/2 inches in length and may be tapered, flat or serrated on the ends.**

**Lesions caused by southern corn leaf blight are much smaller (up to 1/2 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*.**

**When severe, lesions may become so numerous that they coalesce and turn the entire leaf necrotic. Southern blight, like northern blight, moves from the lower canopy to the upper canopy. Fungal sporulation may be observed with a simple hand lens on foliar lesions following periods of high humidity.**

**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.**

**Disease development is favored by warm to hot temperatures (68-90° F) and periods of extended leaf wetness.** With optimal weather conditions, the time from infection by germinating spores to lesion formation with new spores may be as short as 3 to 5 days.

**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.

### **Southern Blight**

**Growers and scout report find low levels on southern blight mostly consisting of single scattered plants in several locations.**

### **Sclerotinia**

**Reports from the Glades indicate that sclerotinia is starting to show up in leaf crops.** The fungus, *Sclerotinia sclerotiorum*, is responsible for a number of vegetable diseases attacking a wide range of crops.

**A good indicator of Sclerotinia disease is the presence of small, black sclerotia (resting structures) of the fungus.** Sclerotia can form on the surface of plant parts as well as inside the stems of pepper and tomato. The sclerotia enable the fungus to survive from season to season and are the source of inoculum to infect crops.

**Another common indicator of Sclerotinia diseases is the presence of white, cottony-like mycelium of the fungus when weather conditions are cool and moist.**

### **Tomato Yellow Leaf Curl Virus**

**Around Immokalee, TYLCV incidence has been increasing with 5% incidence common in many fields.** A few respondents indicate it has reached 50% incidence or more in some places.

**In the Manatee Ruskin area, tomato yellow leaf curl virus is present at mostly low levels with some exceptions where it is worse.** Some fields in the Plant City area have reportedly reached fairly high infection levels.

**TYLCV remains mostly low on the East Coast although some infections have been reported despite mostly low whitefly numbers.**

### **Groundnut Ring Spot Virus**

**Growers and scouts on the East Coast from Palm Beach to Homestead report find a few GRSV infected plants which they are rouging out as they are detected.**

## Powdery Mildew

Powdery mildew is beginning to show up on squash and cucumbers in Palm Beach and Immokalee.

Dr. Gary Vallad notes that the new Gowan product, Torino, will be a great management tool for powdery mildew, especially on edible-peel cucurbits where Quintec can't be used.

## Gummy Stem Blight

Respondents indicate that gummy stem blight has slowed up in watermelons fields around SW Florida.

Respondents in Palm Beach report finding some gummy stem blight in young cukes.

## Cucurbit leaf crumple virus

Cucurbit leaf crumple virus is widely present on squash and watermelon in several locations from Plant City to Immokalee. Incidence is mostly low.

## News You Can Use

### SOIL FUMIGANT TRAINING FOR CERTIFIED APPLICATORS

Vegetable growers wishing to use fumigants in the future should be aware that updated soil fumigant product labels, due out on Dec 1, 2012, will **require**, as a condition of use, certified applicators to successfully complete an EPA- approved training program.

Below is a link to a webpage includes the EPA-approved registrant soil fumigant training programs, as well as state-specific EPA-approved alternatives to the registrant training programs.

Fumigant distributors will require proof of this training prior to shipping phase II labeled products. Beginning Dec 1, the above listed products will be packaged with Phase II labels.

#### Registrant-Developed Training Materials for Certified Applicators

EPA required registrants to develop and implement training programs for certified applicators supervising soil fumigant applications. This training must be completed every 3 years.

EPA-approved training program for certified applicators using methyl bromide, chloropicrin, chloropicrin and 1,3-dichloropropene, dazomet and metam sodium and potassium

<http://www.fumiganttraining.com/>

EPA-approved training program for certified applicators using dimethyl disulfide (DMDS)

<http://paladin.trainingmine.com/>

This page includes approved training programs and links to other resources for soil fumigant certified applicators, and approved Fumigant Safe Handling information for soil fumigant handlers. (NOTE: Fumigant product labels include the following link to this web page

[http://www.epa.gov/pesticides/reregistration/soil\\_fumigants/soil-fum-handlers.html#certified](http://www.epa.gov/pesticides/reregistration/soil_fumigants/soil-fum-handlers.html#certified)

The site also contains fumigant specific training for methyl bromide, chloropicrin, 1,3-dichloropropene, and dazomet.

### **Florida Automated Weather System (FAWN) - Text Message Freeze Alert System - Save Time, Water and Money with the FAWN Text Message Freeze Alert Tool!**

FAWN will save you time - As an active and mobile alert system, you can receive important weather-related information while in the field, instead of having to get it in front of your computer.

FAWN will save you water - One of the most critical aspects of what FAWN does is help you save water. Depending on the size of your farm, you can save a lot of water.

With the FAWN mobile platform, we can provide you with time-critical information for when to a) start and b) stop your water, all the while maximizing protection of your crop from cold air damage.

FAWN will save you money - By saving your time and helping you turn on/off your water at optimal times, you will save money.

FAWN will Help protect your crops - With water being the most widely used method of protecting crops during a freeze event, our alert provides you with real-time feedback on the best actions to protect your crops.

#### **Savings during a Relatively Warm Winter**

100 ac Farm, Water Savings	840K – 6.5M gal.
100 ac Farm, Cost Savings	\$440 - \$3,392
500 ac Farm, Water Savings	4.2M – 32.4M gal.
500 ac Farm, Cost Savings	\$2,200 - \$16,960
1,000 ac Farm, Water Savings	8.4M – 64.8M gal.
1,000 ac Farm, Cost Savings	\$4,400 – \$33,920

#### **Time Savings**

Est. Hours Saved per night using FAWN Tools	2 Hours
Irrigation Hours Saved using FAWN in warm winter	4*
Irrigation Hours Saved using FAWN in cold winter	20**

\*Average of 2 freeze events

\*\*Average of 10 freeze events

#### **Money Savings during a Relatively Cold Winter**

100 ac Farm, Water Savings	4.2M – 32.4M gal.
100 ac Farm, Cost Savings	\$2,200 - \$16,960
500 ac Farm, Water Savings	21M – 162M gal.
500 ac Farm, Cost Savings	\$11,000 - \$84,800
1,000 ac Farm, Water Savings	42M – 324M gal.
1,000 ac Farm, Cost Savings	\$22,000 - \$169,600

Only \$40 per season - subscribe at [http://fawn.ifas.ufl.edu/freeze\\_alert/](http://fawn.ifas.ufl.edu/freeze_alert/)

## **El Niño has been cancelled.**

Forecasters indicate that it appears that the El Niño condition predicted for the coming winter will likely not materialize and we're in a condition that climate scientists like to call "ENSO-neutral".

There's a number called the Southern Oscillation Index which measures the overall strength of ENSO at any given time. Negative values of the Southern Oscillation Index mean that we are experiencing El Niño conditions, and positive values mean that we are currently seeing La Niña conditions. At the present time, the value of the Southern Oscillation Index is actually right around zero, meaning that we are currently in neither an El Niño nor a La Niña event.

What does it mean to be "ENSO Neutral"? If El Niño and La Niña are the extremes of the Southern Oscillation, does that mean that the conditions are "normal" when the Southern Oscillation Index is near zero, the way it is right now? Well, that's a difficult question to answer. "Normal" is a strong word because it implies that the other conditions are "abnormal", which isn't quite right—the variability between El Niño and La Niña conditions is perfectly natural and normal, too.

ENSO Neutral is probably more accurately thought of as the "average condition"—right now, the conditions across the Pacific are something like the average of all of the years—including El Niño and La Niña years. It isn't more normal or less normal than other years, it's just more like the average than we typically see. By way of analogy, think about the amount of light we are getting from the sun right now. At night, there's no light from the sun at all; in the afternoon, there is a lot of light. At sunrise there is some light, but less than in the afternoon. Does that mean that the amount of sunlight that we receive at sunrise is the "normal" amount of light? Of course not, although I suppose that it is something like the "average" amount of sunlight that we get over a 24 hour period. But the amount of sunlight that we get at sunrise isn't "normal" any more than the amount of sunlight that we get in the afternoon is "abnormal"—it's just part of the natural variability of sunlight over the course of a day. In the same way, our current ENSO Neutral conditions aren't "normal" or "abnormal"—they're just part of the climate system, just like El Niño and La Niña are.

Bottom line - please plan on normal dry season rains and temperatures.

## **Minimum Wage in Florida**

The 2013 minimum wage in Florida is \$7.79 per hour, effective January 1, 2013, with a minimum wage of at least \$4.77 per hour for tipped employees, in addition to tips.

Florida law requires the Florida Department of Economic Opportunity to calculate a minimum wage rate each year. The annual calculation is based on the percentage increase in the federal Consumer Price Index for Urban Wage Earners and Clerical Workers in the South Region for the 12-month period prior to September 1, 2012.

On November 2, 2004, Florida voters approved a constitutional amendment which created Florida's minimum wage. The minimum wage applies to all employees in the state who are covered by the federal minimum wage.

Employers must pay their employees the hourly state minimum wage for all hours worked in Florida. The definitions of employer, employee, and wage for state purposes are the same as those established under the federal Fair Labor Standards Act (FLSA). Employers of tipped employees, who meet eligibility requirements for the tip credit under the FLSA, may count tips actually received as wages under the Florida minimum wage. However, the employer must pay tipped employees a direct wage. The direct wage is calculated as equal to the minimum wage (\$7.79) minus the 2003 tip credit (\$3.02), or a direct hourly wage of \$4.77 as of January 1, 2013.

Employees who are not paid the minimum wage may bring a civil action against the employer or any person violating Florida's minimum wage law. The state attorney general may also bring an enforcement action to enforce the minimum wage. FLSA information and compliance assistance can be found at:  
<http://www.dol.gov/dol/compliance/comp-flsa.htm>.

Florida Statutes require employers who must pay their employees the Florida minimum wage to post a minimum wage notice in a conspicuous and accessible place in each establishment where these employees work. This poster requirement is in addition to the federal requirement to post a notice of the federal minimum wage.

Florida's minimum wage poster is available for downloading in English and Spanish from the Florida Department of Economic Opportunity's website at:  
<http://www.floridajobs.org/business-growth-and-partnerships/for-employers/display-posters-and-required-notices>

## Up Coming Meetings

**November 21, 2012**      **Collier 2012 Farm City BBQ**      **11:30am - 2:30pm**

Barron Collier Company Farm Location

Off Oil Well Rd

Just north of the new Arthrex Manufacturing Facility  
(1/2 mile West of Ave Maria Entrance)

Tickets are now available online: <http://www.farmcitybbq.com/> - click on the 4-H tab to help benefit Collier County 4-H clubs.

**December 4, 2012**      **Fall Vegetable Field Day**      **10:00 - 1:30 PM**

SW Florida Research and Education Center  
SR 29 N  
Immokalee, Florida

For more info or to register, contact 863-674-4092 or email [gmcavoy@ifas.ufl.edu](mailto:gmcavoy@ifas.ufl.edu)

**December 10, 2012**      **Core and Private Applicator Training and Exam**

Manatee County Extension Service  
1303 17 St W  
Palmetto, Florida

For details and registration visit: <http://coreprv121012.eventbrite.com/>

**December 11, 2012**

**Cucurbit Weed Management Meeting**

**12:00 noon - 2:30 PM**

SW Florida Research and Education Center  
SR 29 N  
Immokalee, Florida

For more info or to register, contact 863-674-4092 or email [gmcavoy@ifas.ufl.edu](mailto:gmcavoy@ifas.ufl.edu)

**For the Record....**

### **Pesticide Registrations and Actions**

- **Inspire Super** – Jonathan Stevenson, Syngenta Crop Protection advises that Inspire Super can now be used on Grape, Cherry and round tomatoes for target spot control. Previously its use was restricted to tomatoes over 2” in diameter

### **Employment Opportunities**

#### **Sprayer Operator**

Watercress Farms is a Florida agribusiness producing watercress and baby leaf salad crops. We are based in Myakka City and are looking for a sprayer operator with a current Private Applicators License. Experience with calibrations would be advantageous.

The hours will be variable through the season with the need to work weekends and holidays. Wage is negotiable given prior experience.

All responses should be addressed to:

Rob Last  
Production Manager  
Watercress Farms Inc  
13060 Sugar Bowl Road  
Myakka City  
Florida  
Tel 941 219 9494  
E mail [rob@watercressfarms .com](mailto:rob@watercressfarms.com)

#### **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

#### **Growers Wanted**

Leathers Melon Company, Inc. is currently searching for watermelon growers for the upcoming 2013 spring watermelon season. You may contact Jim @ 573-275-6109 or Joey @ 239-410-6403 or the office @ 863-675-6722.

## Websites

**Tomato Institute Proceedings** are available at [http://swfrec.ifas.ufl.edu/vegetable\\_hort/tomato\\_institute/](http://swfrec.ifas.ufl.edu/vegetable_hort/tomato_institute/)

**2012-2013 Vegetable Production Handbook for Florida** - provides complete information on Florida vegetable production, ranging from seed technology to integrated pest management to irrigation and pesticide safety. The handbook is produced as a reference for all individual vegetable commodities and cultural practices used and recommended in the state of Florida. Check it out at <http://www.thegrower.com/vegetable-production-handbook-for-florida/pdf/>

**Web Soil Survey** is operated by the USDA Natural Resources Conservation Service (NRCS) and provides soil maps and data available online for more than 95 percent of the nation's counties and anticipates having 100 percent in the near future <http://websoilsurvey.nrcs.usda.gov/app/>

## Quotable Quotes

“Denial ain't just a river in Egypt” - Mark Twain

“It ain't those parts of the Bible that I can't understand that bother me, it is the parts that I do understand.” - Mark Twain

“A man who carries a cat by the tail learns something he can learn in no other way.” - Mark Twain

“Anger is an acid that can do more harm to the vessel in which it is stored than to anything on which it is poured.” - Mark Twain

"Therefore do not worry about tomorrow, for tomorrow will worry about itself. Each day has enough trouble of its own." - Matthew 6:34

"When you can do the common things in life in an uncommon way, you will command the attention of the world!" - George Washington Carver

## On the Lighter Side

### The Donkey

One day a farmer's donkey fell down into a well. The animal cried piteously for hours as the farmer tried to figure out what to do. Finally, he decided the animal was old, and the well needed to be covered up anyway; it just wasn't worth it to retrieve the donkey.

He invited all his neighbors to come over and help him. They all grabbed a shovel and began to shovel dirt into the well. At first, the donkey realized what was happening and cried horribly. Then, to everyone's amazement he quieted down.

A few shovel loads later, the farmer finally looked down the well. He was astonished at what he saw. With each shovel of dirt that hit his back, the donkey was doing something amazing. He would shake it off and take a step up.

As the farmer's neighbors continued to shovel dirt on top of the animal, he would shake it off and take a step up. Pretty soon, everyone was amazed as the donkey stepped up over the edge of the well and happily trotted off!

MORAL :

Life is going to shovel dirt on you, all kinds of dirt. The trick to getting out of the well is to shake it off and take a step up. Each of our troubles is a steppingstone. We can get out of the deepest wells just by not stopping, never giving up! Shake it off and take a step up.

### **Five Simple Rules**

Remember the five simple rules to be happy:

1. Free your heart from hatred - Forgive.
2. Free your mind from worries - Most never happens.
3. Live simply and appreciate what you have.
4. Give more.
5. Expect less from people but more from yourself.

**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/The Andersons, 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/Palm Beach County Extension, 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. 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.

The **South Florida Pest and Disease Hotline** is compiled by **Gene McAvoy** and is issued on a biweekly basis by the **Hendry County Cooperative Extension Office** as a service to the vegetable industry.

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