



UNIVERSITY OF  
FLORIDA

E X T E N S I O N

Institute of Food and Agricultural Sciences

Hendry County Extension

PO Box 68 LaBelle, Florida 33975-0068

Phone (863) 674-4092

## SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

**December 18, 2012**

**Last week brought much needed rain to most of the area, especially interior sections of Hendry and Glades County which experienced the driest November on record.** After the passage of Hurricane Sandy, both LaBelle and Moore Haven went 41 days without any measureable rainfall. Most places received 1-3 inches of rain, but a few areas reported significantly higher amounts with many places in a band stretching from East Naples to Jupiter recording from 4 – to as much as 10 inches of precipitation around Jupiter.

Much of November was relatively cool with temps running 3-5 degrees below normal making it the coolest

### FAWN Weather Summary

Date	Air Temp °F		Rainfall (Inches)	Ave Relative Humidity (Percent)	ET (Inches/Day) (Average)
	Min	Max			
<b>Balm</b>					
11/15 – 12/16/12	38.46	82.63	1.16	81	0.06
<b>Belle Glade</b>					
11/15 – 12/16/12	40.05	86.74	3.11	86	0.07
<b>Clewiston</b>					
11/15 – 12/16/12	41.12	86.23	1.58	84	0.07
<b>Ft Lauderdale</b>					
11/15 – 12/16/12	53.46	87.40	1.33	79	0.07
<b>Fort Pierce</b>					
11/15 – 12/16/12	41.09	85.98	0.95	85	0.07
<b>Homestead</b>					
11/15 – 12/16/12	48.52	86.29	0.44	85	0.07
<b>Immokalee</b>					
11/15 – 12/16/12	37.8	87.48	2.3	82	0.06

Wishing you all the best for a Blessed and Joyous Christmas  
and a Happy, Healthy and Prosperous New Year

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**since 2008.** Growers reported that cooler weather in November delayed harvest of some crops as much as 10 – 14 days. Temperatures moderated in December with daytime highs in the 70's and 80's and lows in the 50's and 60's.

**A number of foggy mornings have been reported over the past few weeks which have encouraged disease development in places.**

**Crops coming to market include cucumbers, eggplant, green beans, herbs, leafy greens, okra, peppers, sweet corn, squash, tomatoes, and various specialty items.** Fall crops are coming to an end in the Manatee Ruskin area as the center of production moves to south Florida. Volumes have been moderate and prices have been favorable.

**The National Weather Service extended forecast indicates that conditions will remain dry through Thursday.** A cold front over north Florida will move southward into south Florida late Thursday night and through south Florida early Friday. At this time, minimal shower activity is expected as deep moisture return is brief, keeping dynamics weak and the nocturnal passing of the front will minimize convective development. Minimum temperatures will be below norms Saturday and Sunday but daytime temps will be near normal by Sunday.

**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 in southwest Florida report that whiteflies are also building in older tomato fields and are migrating into younger fields.** Depending on the location, whitefly numbers range from just a few to 50/plant. TYLCV is moving with them and since some older fields now have high infections so the odds of whiteflies being carriers is going up.

**Reports from Homestead indicate that whitefly numbers are high in a number of crops**

**Reports from Palm Beach indicate that whitefly numbers are increasing on tomato, beans, eggplant, and pepper.**

**In the Manatee/Ruskin area, whitefly numbers are increasing to high levels in many places especially where crops are nearing completion and growers have stopped spraying.**

**As fall crops reach completion growers should strive to disrupt the virus-whitefly cycle in winter by creating a break in time and/or space between fall and spring crops, especially tomato by destroying 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.

**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>**

## **Aphids**

**Growers and scouts around Southwest Florida report that aphids are now appearing just about everywhere in a range of crops.** Winged aphids are common and colonies are starting to build in some fields.

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

**Around Palm Beach County, winged aphids are appearing beginning to show up in a variety of crops including tomatoes, cilantro and other herbs as well as variety of leafy greens.**

**As aphid densities increase on host plants, winged forms are produced, which then disperse to alternate hosts.** Winged green peach aphids attempt to colonize nearly all available host plants. They often deposit a few young and then again take flight. This highly dispersive nature contributes significantly to their effectiveness as vectors of plant viruses.

**In Florida, this cycle repeats continuously, though in the northern areas of the state the aphid development rate slows greatly during the winter.**

**The life cycle varies considerably.** Development can be rapid, often 10 to 12 days for a complete generation, and over 20 annual generations per year may occur in mild climates.

**Parthenogenic reproduction is favored where continuous production of crops provides suitable host plants throughout the year, or where weather allows survival on natural (noncrop) hosts.** The average temperature necessary for survival of active forms of green peach aphid is estimated at 4 to 10° C. Plants that readily support aphids through the winter months include beet, Brussels sprout, cabbage, kale, potato, and many winter weeds.

**Broadleaf weeds can be very suitable host plants for green peach aphid, thereby creating pest problems in nearby crops.** Common and widespread weeds such as field bindweed, lambsquarters, and redroot pigweed are often cited as important aphid hosts

**Because some of the virus diseases transmitted by green peach aphid are persistent viruses, which require considerable time for acquisition and transmission, insecticides can be effective in preventing disease spread in some crops.**

**Transmission of nonpersistent viruses such as cucumber mosaic virus can sometimes be reduced by coating the foliage with vegetable or mineral oil.** Oil seems to be most effective when the amount of disease in an area that is available to be transmitted to a crop is at a low level. When disease inoculum or aphid densities are at high levels, oils may be inadequate protection.

**Hundreds of natural enemies have been recorded and these are value in reducing damage potential.**

**Excessive and unnecessary use of insecticides should be avoided. Early in the season, aphid infestations are often spotty, and if such plants or areas are treated in a timely manner, great damage can be prevented later in the season.** In some cases, use of insecticides for other, more damaging insects sometimes leads to outbreaks of green peach aphid.

**Softer pesticides including insecticidal soaps such as M-Pede), nicotinoids like Admire, Provado, Assail and others including Beleaf, Movento and Fulfill will provide good control help reduce impact on beneficials.**

**Resistance to some insecticides has been reported in some aphid populations. Rotating pesticide materials may effectively help slow the development of resistance.**

### **Leafminers**

**Around Immokalee, leafminer pressure is sporadic but continues to build in a number of locations with adults moving out of older tomatoes into younger fields.**

**Reports from the East Coast indicate that leafminer pressure remains steady on young tomato and eggplant and other crops and has increased to moderate levels in older plantings.**

**In the Manatee/Ruskin area, leafminer numbers have reached threshold levels and are causing damage where they are not being treated.**

**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.**

**Phil 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.**

### **Worms**

**Around Southwest Florida report indicate that worm pressure remains high in some locations with worms of all sorts (with the exception of pinworm) hitting a variety of crops. However, some respondents note that worm pressure is beginning to decline compared to a few weeks ago.**

**Reports from the Glades indicate that fall armyworm worm pressure remains steady and that numbers have not abated much with cooler temps.**

**Around Palm Beach County reports indicate that warmer temps over the past few weeks have resulted in an increase in armyworm egg laying activity and new hatches on a range of crops.**

**Reports from the Manatee County area indicate that worm pressure has dropped off in recent weeks.**

### **Broad Mites**

**Broad mite numbers remain a threat and continue to flare up in 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 broad mites are sporadic in peppers.**

### **Pepper Weevils**

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

**Respondents in the Manatee Ruskin area report that low numbers of weevils are showing up in some pepper fields.**

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

### **Thrips**

**Growers and scouts report that thrips are beginning to show up on some farms in Palm Beach.**

Respondents report finding a mix of thrips species, including western flower thrips. Reports indicate that western flower thrips have reached 1-3 per bloom in the worst areas.

**Elsewhere, thrips remain very low.**

**Regular field scouting is essential as western flower thrips are difficult to detect and control because of their small size and tendency to hide in protected plant parts.**

Adults can move long distances on air currents to find new food. Adults and larvae also can be transported on transplants.

**Few insecticides are effective in controlling western flower thrips - *F. occidentalis*.** The key to managing resistance is to reduce selection pressure by rotating between insecticides with different modes of action and reducing the number of insecticide applications.

**Western flower thrips have been known to develop resistance rapidly on repeated exposure to one class of insecticide.** If poor control is encountered after an insecticide application, do not simply apply the same product again at a higher rate or shorter spray interval and hope for better control. Determine if poor control resulted from application error, equipment failure or unfavorable environmental conditions during or after application. If none of these occurred, the population may be developing resistance.

**Western flower thrips cannot be managed with insecticides alone.** Consult UF/IFAS recommendations for currently labeled insecticides for western flower thrips control in Florida vegetables.

**Natural enemies, such as minute pirate bugs (*Orius* spp.), lacewings and predatory mites (*Amblyseius* spp.), play an important role in controlling western flower thrips populations.** One minute pirate bugs (*Orius* spp.) per 180 WFT will suppress WFT; 1 *Orius* per 50 WFT will keep WFT under control without spraying. Growers should avoid the use of broad spectrum insecticides such as pyrethroids when WFT are present. Broad-spectrum insecticides kill not only western flower thrips, but also natural enemies and harmless native organisms that compete with the pest for resources. The result: After a brief decline in western flower thrips populations, the pest comes back in force, and may develop insecticide resistance.

**Cultural methods should not be neglected.** Since thrips pupate occur in the soil, new plantings of tomatoes, eggplants, and peppers should not be planted following, near or adjacent to old, infested plantings.

**The use of UV reflective mulches which help repel thrips and other insects in combination with reduced risk insecticides has proven an effective way to reduce losses from tomato spotted wilt in tomato.** Research shows that a light application of kaolin clay discourages thrips by making it tough for thrips to feed and breed on pepper leaf tissue.

### **Spider mites**

**Spidermites are showing up in a few locations across south Florida on eggplant, tomatoes and a few cucurbits.**

**Around Plant City, mite pressure is increasing rapidly in strawberries.**

### **Corn silk fly**

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

**Around Homestead, reports indicate that corn silk 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 corn silk 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 corn silk 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 corn silk 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 corn silk flies. To conserve the remaining effectiveness and to try to regain previous levels of effectiveness of pyrethroids, growers must eliminate unnecessary pyrethroid treatments.

## **Diseases**

### **Sclerotinia**

**Growers and scouts report that sclerotinia is jumping on a variety of crops across South Florida in recent weeks.** Reports indicate that Sclerotinia is taking off several pepper farms and also in eggplant, tomato, basil and dill. Several respondents indicate that it is probably as bad early in the season in some places as respondents have ever seen.

**Reports from the Glades indicate that sclerotinia is also starting to show up in leaf crops.** Recent rainfall, foggy morning and heavy dews have all been conducive to development.

**The fungus, *Sclerotinia sclerotiorum*, is responsible for a number of vegetable diseases attacking a wide range of crops.** Common names for Sclerotinia diseases in Florida are white mold (beans), drop (lettuce), white mold (pepper, potato and tomato), and nesting (post-harvest disease of bean).

**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.**

**Symptoms vary between crops.** White mold in beans usually appears after flowering. The disease often appears in leaf axils and advances into the stem, producing water-soaked spots that increase in size, girdling the stem, and killing it above the point of infection. The disease can also enter the plant through leaves or pods that touch the soil where sclerotia or infected plant parts act as inoculum.

**In tomato, potato and pepper, infection typically starts at flowering.** Water-soaked spots are usually the first symptom, which is followed by invasion of the stem, girdling, and death of the upper part of the stem that turns a light gray. The disease can also begin where the plant contacts the soil or infected plant debris. Large portions of the field may become diseased, producing large, circular, areas of dead plants. The black sclerotia formed by the fungus are often found inside infected stems.

**Almost all Sclerotinia diseases are field diseases, but when they occur in post-harvest situations they can be very damaging.** In beans, the fungus may create a mass of diseased pods that is stuck together by fungal growth, resembling a nest (hence, the name "nesting").

**Under cool moist conditions, the fungus is capable of invading a host plant, colonizing nearly all of the plant's tissues with mycelium.** Optimal temperatures for growth range from 15 to 21 degrees Celsius. Under wet conditions, *S. sclerotiorum* will produce an abundance of mycelium and sclerotia. The fungus can survive in the soil mainly on the previous year's plant debris.

**High humidity and dewy conditions supports the spread and increases the severity of infections.**

**The fungus produces a survival structure called a sclerotium either on or inside the tissues of a host plant.** When conditions are favorable, the dormant sclerotia will germinate to produce fruiting bodies. These produce ascospores, which then germinate on the host and begin to invade the host's tissues via mycelium, causing infection. *S. sclerotiorum* is capable of invading nearly all tissue types including stems, foliage, flowers, fruits, and roots. Once a plant is infected white mycelium will grow on the surface of the infected tissues. At the end of the season, sclerotia are produced. The sclerotia will then remain on the surface of the ground or in the soil, on either living or dead plant parts until the next season.

#### **Management Methods:**

**Four to five weeks of flooding of fields that have a history of Sclerotinia diseases during the summer rainy season may help reduce the numbers of viable sclerotia, thereby reducing the amount of disease in succeeding crops.**

**Recycled irrigation tail water may move sclerotia to fields where sclerotia are not present.**

**The use of plastic mulch may suppress Sclerotinia diseases, while high plant populations may increase the incidence.**

**Timing is also a critical issue of fungicide applications is critical and growers should try to apply during periods of long cool, wet weather which is also favorable for other foliar pathogens.**

**In beans, fungicides including DCNA/dicloran (Botran 5F), PCNB (Blocker 4F), boscalid (Endura), Iprodione (Rovral 4F, Nevado 4F, and Enclosure 4), fluazinam (Omega 500 F), cyprodinil/fludioxinil (Switch), and thiophanate methyl (Topsin) applied at bloom stage have been effective in controlling white mold.**

**Boscalid (Endura), DCNA/dicloran (Botran 5F), Iprodione (Rovral 4F, Nevado 4F, Enclosure 4), and cyprodinil/fludioxinil (Switch) have been used with good results in lettuce.**

**For potato, Boscalid (Endura), DCNA/dicloran (Botran 5F), PCNB (Terraclor F), Iprodione (Rovral 4F, Nevado 4F, and Enclosure 4), fluazinam (Omega 500 F), and thiophanate methyl (Topsin M WSB) are recommended for Sclerotinia control.**

**In tomato, choices are limited to azoxystrobin (Heritage, Quadris) and pyraclostrobin (Cabrio) and Priaxor (a premix of Cabrio and fluxapyroxad) on tomato and pepper.** Unfortunately use of these products may exacerbate problems with target spot. Thiophanate methyl (Topsin) used to be labeled (SLN) on tomato but is not anymore. The other SDHI fungicides (Endura, Fontellis) work well at suppressing Sclerotinia, but are not specifically labeled for Sclerotinia on tomato and pepper yet.

**Biologicals like Contans WG, Regalia, Rhapsody, Serenade Max and Sonata are also labeled and may provide various degrees of control alone or in combination with other fungicides.** Contans WG is specifically aimed at limiting the seasonal carryover of sclerotia and must be applied prior and following the cropping season...it will not provide much control once the crop is in the ground.

### **Target Spot**

**Low levels of target spot continues to show up on tomato in a number of locations around South Florida and is moving up into lower plant canopies in a number of places.**

**Around the Manatee/Ruskin area, target spot is everywhere but remains at manageable levels.** Pressure has increased marginally with warmer weather over the past week or so.

**Target spot remains 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 not to 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.

### **Bacterial Spot**

**Drier weather has slowed down bacterial spot infections in most areas except those which were impacted by recent heavy rains including Naples, Devils Garden and Palm Beach County.**

**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.** Incidence is low in younger fields.

**Around Immokalee, growers and scouts report some new bacterial spot infections on tomato but note incidence and severity is mostly low.** Most but not all peppers are clean.

**Respondents on the East Coast report that bacterial spot has increased in pepper and tomato with warmer wetter weather.**

**Around Homestead, bacterial spot is present at low levels in tomato and pepper.**

### **Downy Mildew**

**Respondents in the Manatee/Ruskin area report that downy mildew has slowed down with drier weather but is still plentiful in squash although powdery mildew is picking up.**

**Around SW Florida, downy mildew continues to cause problems in cucurbits especially 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.**

### **Basil Downy Mildew**

**As expected reports indicate downy mildew is severe on basil in the greenhouse and in the field as well – especially in organic production systems.**

### **Powdery Mildew**

**Powdery mildew is beginning to show up on squash, cucumbers and beans in Palm Beach and Immokalee. Pressure is high in older squash.**

**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.**

### **Fusarium**

**Growers and scouts in the Manatee Ruskin area report lots of issues with Fusarium wilt since temperatures have warmed up. Incidence in some fields has reached high levels of incidence (40 – 60% in some places).**

**Fusarium is also becoming common on tomatoes around Immokalee.**

### **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 widespread. Reports indicate that it has reached as high as 80% in spots in some of the older plantings but in general is closer to 20-30% in many older fields and less than 2% in many younger plantings.**

**Reports indicate that TYLCV is present at low levels in Palm Beach County and is increasing in Homestead**

### **Groundnut Ring Spot Virus/ Tomato Chlorotic Spot Virus**

**Growers and scouts around south Florida report finding a few GRSV and TCSV infected plants which they are rouging out as they are detected.**

### **Verticillium**

**There have been some reports of verticillium causing problems on eggplant around Homestead.**

## News You Can Use

### MANDATORY 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. In addition, you **will not be able to purchase fumigants** bearing the new labels unless you have completed the EPA approved on-line training.

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. Currently the web based EPA training program is the only option for Florida growers.

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.

### COOL AND DRY NOVEMBER

December 1, 2012: After a wet and stormy rainy season over much of South Florida, the first full month of the dry season brought an abrupt change to very dry conditions. Most of the region received less than an inch of rain the entire month of November (Figure 1), with a few locations west of Lake Okeechobee recording no measurable rain whatsoever (Moore Haven, LaBelle and Muse). The only areas receiving near normal rainfall for the month (between 2 and 4 inches) resulted from narrow, localized bands of heavy showers in mid and late November. Areas affected include portions of northern coastal Palm Beach County, coastal Miami-Dade County and the Homestead area.

Following are November 2012 rainfall totals and historical rank for select locations:

<b>Station – Beginning of Records</b>	<b>Nov. 2012</b>	<b>Rank</b>
MIAMI - 1911	0.50	12th driest
WEST PALM BEACH – 1888	0.75	4th driest
FORT LAUDERDALE	0.83	11th driest
NAPLES – 1942	0.12	4th driest
JUNO BEACH	3.80	
MIAMI BEACH - 1927	2.47	
CAPE FLORIDA	2.04	
HOLLYWOOD – 1963	1.80	
POMPANO BEACH AIRPARK	1.37	
NORTH MIAMI BEACH	0.87	
FORT LAUDERDALE EXEC.	0.74	
THE REDLAND – 1958	0.60	8TH driest
HOMESTEAD GENERAL	0.57	
NWS MIAMI- SWEETWATER	0.54	
FORT LAUDERDALE BEACH	0.34	
OPA LOCKA AIRPORT	0.47	
HIALEAH - 1978	0.24	2nd driest
TAMIAMI AIRPORT	0.20	
BRIGHTON RESERVATION	0.19	
SOUTH BAY/OKEELANTA	0.13	
ORTONA	0.11	
MARCO ISLAND	0.08	
BIG CYPRESS RES	0.08	
PALM BEACH GARDENS	0.05	
MOORE HAVEN - 1918	0	Driest on record
LABELLE - 1929	0	Driest on record
MUSE	0	Driest on record

Despite the low November rainfall values, a few sites are close to their record-wettest calendar years. Miami International Airport’s total to date of 86.43 inches is less than 3 inches away from their record of 89.33 inches set back in 1959; however it will take a wetter-than-normal December to reach the record. The Redland is also relatively close to their calendar-year record of 83.98 inches also set in 1959. At the National Weather Service Miami office located in western metro Miami-Dade County, the year-to-date rainfall of 99.03 inches is less than an inch away from the 100-inch mark!

## TEMPERATURES

Another noteworthy aspect of November’s weather was the cooler-than-normal temperatures felt throughout the month. Average temperatures ran about 3 to 5 degrees below normal and represented the coolest November since 2008. At Miami International Airport, November 2012 was the coolest since 1981.

Low pressure in the mid-levels of the troposphere was generally responsible for the drier and cooler weather pattern which predominated in November (Figure 3). West to northwest winds in these levels transported provided the support for cold fronts and associated cool, continental air masses to make their way into Florida.

- Miami International Airport had an average November temperature of 71.4 degrees Fahrenheit. This is 3.5 degrees above the 30-year normal for November and ranks as the 25th coolest November on record. The lowest temperature recorded last month was 55 degrees on the 25th. The highest temperature recorded last month was 83 degrees on the 3rd and 6th.

- Palm Beach International Airport had an average November temperature of 70.3 degrees Fahrenheit. This is 2.5 degrees below the 30-year normal for November and ranks as the 23rd coolest November on record. The lowest temperature recorded last month was 49 degrees on the 24th. The highest temperature recorded last month was 83 degrees on the 6th.

- Fort Lauderdale/Hollywood International Airport had an average November temperature of 71.2 degrees Fahrenheit. This is 4.3 degrees below the 30-year normal for November and ranks as the 18th coolest November on record. The lowest temperature recorded last month was 55 degrees on the 24th and 25th. The highest temperature recorded last month was 83 degrees on the 6th.

- Naples Municipal Airport had an average November temperature of 68.5 degrees Fahrenheit. This is 3.6 degrees below the 30-year normal for November and ranks as the 8th coolest November on record. The lowest temperature recorded last month was 50 degrees on the 24th, 25th and 26th. The highest temperature recorded last month was 83 degrees on the 3rd, 14th and 17th.

### **Weather Outlook and Potential Hazards**

The long-range outlook by the Climate Prediction Center for December indicates an enhanced likelihood that the cool and dry trend observed in November will continue in December and possibly into early 2013. The below normal temperature outlook for December may at least be partly due to cooler sea surface temperatures over the coastal waters, with a possible storm track farther north over the United States keeping most of the deeper moisture north of our region and increasing the likelihood of dry conditions across south Florida.

While December typically presents fewer and less frequent weather hazards than during the summer months, we're still vulnerable to hazards such as rip currents and freezing/cold temperatures. For daily weather forecasts, watches, warnings and statements, visit <http://weather.gov/southflorida>.

### **Heavy Rainfall Impacts Parts of South Florida last Monday Night and Tuesday Evening**

An unusually moist and unstable airmass was in place across south Florida Monday night and Tuesday – 12/10-12/11. Convergence along a surface trough, in addition to an upper-level impulse, resulted in locally heavy rainfall across portions of South Florida. Rainfall became excessive at some locales, leading to street flooding as well as some flooding of homes and businesses.

The heavy rain concentrated across southwestern Collier County Monday night into Tuesday morning, affecting the greater Naples area. On Tuesday afternoon and evening, the heavy rain focused across northeastern Palm Beach County, hitting the Jupiter area hardest.

Here is a list of the highest rainfall totals from Monday night through Tuesday evening.

#### **HIGH RAINFALL TOTALS (DECEMBER 11-12TH, 2012)**

<b>LOCATION</b>	<b>RAINFALL TOTAL</b>	<b>SOURCE</b>
JUPITER HEIGHTS	10.75"	WEATHER UNDERGROUND
JUPITER	8.82"	WEATHER UNDERGROUND

(PENNOCK LN & INDIANTOWN RD)

JUPITER (CENTER ST & LOXAHATCHEE)	8.14"	WEATHER UNDERGROUND
JUPITER MIDDLE SCHOOL	7.99"	WEATHERBUG
JUNO BEACH (SEMINOLE GOLF CLUB)	7.22"	NWS COOP
JUPITER (INDIAN CREEK PARK)	6.49"	WEATHER UNDERGROUND
JUPITER INLET LIGHTHOUSE	6.45"	WEATHERBUG
EAST NAPLES (TAMIAMI TRAIL & SANDPIPER DR)	5.94"	WEATHER UNDERGROUND
PALM BEACH GARDENS (PGS BLVD & U.S. 1)	4.98"	WEATHER UNDERGROUND
JUPITER (INDIANTOWN RD & I-95)	4.83"	SFWMD ESTIMATE
NORTH PALM BEACH (J.D. McARTHUR STATE PARK)	4.20"	WEATHERBUG
6 MI E U.S. 1 & COLLIER BLVD	4.17"	NWS EMPLOYEE
EAST NAPLES (TAMIAMI WEST OF COLLIER BLVD)	3.98"	WEATHER UNDERGROUND
PALM BEACH COUNTY ESTATES	3.68"	WEATHER UNDERGROUND
PALM BEACH GARDENS (WATSON MIDDLE SCHOOL)	3.44"	WEATHERBUG
MARCO ISLAND	3.35"	NWS COOP
PALM BEACH GARDENS (PGA NATIONAL GOLF CLUB)	3.20"	NWS COOP
PALM BEACH GARDENS (MILITARY TRAIL)	2.10"	WEATHER UNDERGROUND

### **EPA Approves Bulk of DEP's Water Standards**

After a federal judge declined to again extend the deadline for action on the Florida Department of Environmental Protection's numeric nutrient criteria for Florida waterways, the U.S. Environmental Protection Agency announced Nov. 30 that it was approving the state's rule in its entirety. Although seemingly a clear-cut victory for Florida and the DEP, the EPA also announced that it was proposing rule-making for coastal waters,

estuaries, South Florida canals and other miscellaneous waters, such as intermittent streams and manmade conveyance systems, which were not covered by the state rule.

Under the proposed EPA rule, canals in the Everglades Agricultural Area would be exempt, with criteria instead being applied to estuaries where they discharge (DEP's rule exempted all canals, ditches and manmade conveyance systems statewide). EPA's recently proposed rules were issued in order to comply with the original consent decree and would not take effect for about a year.

### **Resistance Reported in Florida Corn Pests**

Fall armyworms in southern Florida survived after ingesting leaves of corn engineered to produce an insecticidal *Bacillus thuringiensis* (Bt) protein, according to 2012 field trial data presented November 13 at the annual conference of the Entomological Society of America in Knoxville, Tennessee. The protein is marketed by Dow and DuPont as Herculex.

“This is most likely field resistance,” Fangneng Huang, an assistant professor at LSU, said at the annual meeting.

Fall armyworm, the caterpillar stage of a moth, got the name because infestations move between fields like a marching army, typically in autumn. The insect can survive U.S. winters only in southern Florida and Texas, limiting its range as a pest to the southeast. Dow spokesman Garry Hamlin, said in an e-mail that the finding of armyworm resistance “would seem to have little agronomic significance for U.S. growers operating north of Tampa.”

DuPont's Pioneer seed unit sells “a minimal amount” of corn with the Cry1F protein in Florida and doesn't expect a business impact, Josh St. Peters, a spokesman for the Wilmington, Delaware-based company, said in an e-mail. A Dow study earlier this year found no indications of armyworm resistance, he said. Armyworm is not a primary target of the insecticide produced by the crop, and the companies will work with the U.S. Environmental Protection Agency (EPA) to determine the next steps. Fall armyworm resistance to the insecticide was first discovered in Puerto Rico in 2006, prompting Dow and DuPont to voluntarily stop selling the product on the island, according to the EPA's registration for the product. (Bloomberg, 11/16/12).

### **Labor Notes**

#### **Minimum Wage**

The minimum wage will change again for the State of Florida this coming January 1st! The initiative passed by the legislature requires that each September the state re-calculate the Florida minimum wage for the following year. This year they have calculated to increase the current minimum wage of \$7.67 per hour to \$7.79 per hour effective January 1, 2013. This means that you will have to update your Worker Information - Terms and Conditions of Employment forms (WH-516) and change to the new minimum wage poster effective January 1, 2013. Please remember to update all your postings. This is a good time to review your “broken-arm” posters to make sure your dates of coverage on the labels are still valid.

#### **Farm Labor Contractor Registration**

The U.S. Department of Labor / WHD has changed the WH-514 form (the vehicle inspection form) and will not accept any previous versions. The new form (with an expiration date of 8/31/2015) has a place for an “Authorized Inspection Number.” Atlanta states this number should be the number assigned by the Florida Department of Ag & Consumer Services to a qualified repair shop and should begin with the letters “MV”. Please note that the new document states, “This inspection must be performed by an independent inspection company not affiliated with the applicant.” You can further help your registration process by doing several

small things. Send your registration documents 59 days before your renewal or date of need. Atlanta will not accept documents submitted earlier than 60 days before expiration. Make sure you include all the documents necessary for your registration in one package. Renew any documents that will expire within the next year (your driver's license, doctor's certificate, fingerprint card, or alien registration) and send them with your package. Make a copy of the entire mailing - and remember to send it via FedEx/UPS or U.S. Postal Service via Certified Mail with a Return Receipt. (See 29 CFR 500.50, F.S. 450.31)

### **Workers Comp Rates**

The Florida Insurance Commissioner approved a workers' compensation rate increase for January 1st! Citing increases in medical and pharmaceutical costs, the insurance commissioner granted an overall 6.1% rate increase effective on all policies on and after January 1, 2013. As usual, this is not an across the board increase; some rates actually went down a small amount while others went up higher than the average (citrus harvesting going to \$10.89 and vegetable farming and harvesting going to \$3.96)

### **Novozymes Acquires Natural Industries Inc.**

Novozymes has signed a definitive agreement to acquire Natural Industries Inc. based in Houston, Texas. U.S. Natural Industries Inc. has annual revenues of \$5 million and is a bioagricultural company.

"I am excited to have the people and technologies of Natural Industries Inc. join our growing BioAg business. Natural Industries Inc. expands Novozymes' position in the important biocontrol segment and improves our capabilities to grow our business in key U.S. markets on high-value crops like fruits and vegetables," said Thomas Videbæk, Executive Vice President of Novozymes and head of BioBusiness.

Biological technologies are natural solutions with multiple modes of action. They are used to improve plant health and growth or combat diseases across various broad-acre crops such as corn and soy and high-value crops such as salads, strawberries and nuts.

The biological solutions complement the use of traditional chemicals and pesticides, which have a world market worth \$150 billion. By contrast, the emerging bioagriculture market is estimated to be worth about \$1 billion with an annual growth rate of 10-15%.

### **BASF Completes Acquisition of Becker Underwood**

BASF has completed the acquisition of Becker Underwood from Norwest Equity Partners, a U.S.-based private equity investment company, for a purchase price of \$1.02. With the acquisition, BASF is now a leading global provider of technologies for biological seed treatment as well as seed treatment colorants and polymers. BASF has also expanded its product portfolio in the areas of biological crop protection, turf and horticulture, animal nutrition and landscape colorants and coatings.

"The acquisition fits very well with our long-term growth strategy. It will provide our customers with an even broader range of innovative solutions for agriculture. And it also provides our new colleagues with access to BASF's global R&D platform as well as new markets and customers," said Dr. Andreas Kreimeyer, member of BASF's Board of Executive Directors responsible for the Agricultural Solutions segment and Research Executive Director.

In the coming months, a detailed integration plan will be developed by a joint team of BASF and Becker Underwood employees. Most businesses of Becker Underwood will join the newly established global business unit Functional Crop Care as part of BASF's Crop Protection division. Within this new unit, BASF will merge its existing research, development and marketing activities in the areas of seed treatment, biological crop



protection, plant health, as well as water and resource management with those of Becker Underwood. Becker Underwood's animal nutrition business will be integrated into BASF's Nutrition & Health division.

## Up Coming Meetings

### **January 6 - 7, 2013                      Hydroponic Vegetable workshop**

Vertical Horizon Farm  
Hobe Sound, Florida

Note this is Sunday-Monday. The cost of the short course is \$280 for an Early Bird (postmarked before December 28) Primary Participant, and \$240 for an Early Bird Secondary Participant (does not receive class materials). After December 28, the prices go up to \$325 and \$285, respectively. To register go to:  
[http://smallfarms.ifas.ufl.edu/calendar/2013\\_0106\\_HydroponicsHobeSound.pdf](http://smallfarms.ifas.ufl.edu/calendar/2013_0106_HydroponicsHobeSound.pdf)

### **January 17, 2013                      Farm Labor Supervisor Training - Transporting Workers                      9 am – 2 pm**

Turner Agri-Civic Center  
Arcadia, Florida

This 4-hour training session covers legal compliance for vehicles that transport farm workers, primarily focused on Florida Highway Patrol (previously FDOT) regulations plus DOL and DBPR transportation requirements. Content includes rules for CDL-required buses and high-capacity vans, plus car-pooling and van safety issues. Specifically, the class will cover: DOT, DOL and DBPR licensing, authorizations and required insurance; markings and postings; Driver Qualification Files; explanation of tracking Hours of Service; and information about DOT-approved Drug & Alcohol testing programs.

**INSTRUCTOR:** Trooper Tracey McQuilken, Florida Highway Patrol

**WHO SHOULD ATTEND:** Transportation supervisors, primary contractors and administrative staff responsible for transportation compliance.

**COST:** \$25.00 including lunch. Attendees will receive a Certificate of Attendance for 4 hours toward completion of the Farm Labor Supervisor Training program.

**TO REGISTER:** Contact Marcela Rice at 239-658-3400 or email [mlrice@ufl.edu](mailto:mlrice@ufl.edu) by January 10, 2013.

### **March 12, 2013                      2nd Vegetable and Small Fruit Protected Ag Field Day                      8 am to 4 pm and IV Protected Ag Information Network Congress.**

UF/IFAS GCREC  
14625 CR 672  
Wimauma, FL 33579

Find out more on the latest research efforts on protected culture of tomato, pepper, strawberry, blackberry and herbs.

Registration is free – Register today at <http://protectedagfieldday.eventbrite.com>

## **For the Record....**

### **Pesticide Registrations and Actions**

- Based on requests by IR-4 and ISK Biosciences Corp., the EPA has approved tolerances for the fungicide fluazinam (Omega®). Tolerances of importance to the region include melon (subgroup 9A) and pepper/eggplant (subgroup 8-10B). (Federal Register, 11/7/12).
- Based on a request by IR-4, the EPA has approved a tolerance for cucumber and the fungicide flonicamid (Beleaf®). (Federal Register, 11/14/12).
- Based on a request by IR-4 and Nichino America, the EPA has approved tolerances for the insecticide buprofezin (Applaud®). Tolerances of importance to the region include green bean fruiting vegetables (group 8), and brassica leafy greens (subgroup 5B). (Federal Register, 10/17/12).
- As of December 1, 2012, the final set of soil fumigant product label changes went into effect. The amended product labels incorporate the second and final phase of mitigation measures required by the EPA's 2009 reregistration eligibility decisions (REDs) for the soil fumigants methyl bromide, chloropicrin, metam sodium/metam potassium, and dazomet. The new measures appearing on soil fumigant Phase 2 labels include buffer zones and posting, emergency preparedness and response measures, training for certified applicators supervising applications, fumigant management plans, and notice to state lead agencies who wish to be informed of applications in their states. Measures added to labels in the first phase of implementation included Phase 1 Fumigant Management Plans, good agricultural practice requirements, and new worker protection measures among other things. Phase 1 labels were approved in 2010.

After December 1, 2012, only soil fumigant products bearing the Phase 2 measures may be sold and distributed by registrants. Distributors and retailers who are not registrants may sell and distribute existing stocks of products bearing Phase 1 labels until their supplies are exhausted. Likewise, growers and applicators may apply products bearing old labels until those supplies have been exhausted. The newly approved labels are available through the Pesticide Product Label System (PPLS) at [www.epa.gov/pesticides/ppls](http://www.epa.gov/pesticides/ppls) (EPA OPP, 12/3/12).

- The EPA and Arysta LifeScience North America, LLC have entered into a Memorandum of Agreement to formally terminate all agricultural use of iodomethane in the United States by the end of 2012 and ultimately remove all iodomethane products from the U.S. market. In March 2012, Arysta, the sole registrant, announced its plans to immediately suspend all sales of its iodomethane Midas® products in the United States. All of Arysta's existing iodomethane end-use product registrations will be cancelled and use of existing stocks in the United States will be prohibited effective December 31, 2012. Further distribution and sale of iodomethane end-use products will be prohibited except to return the products to Arysta (the company will take back existing stocks) or for proper disposal or export. (EPA OPP, 11/21/12).

## **Opportunities**

### **Assistant Farm Manager**

Assistant farm manager needed. Must be self-motivated, detail oriented, with strong computer skills including Microsoft Office Suite. Bilingual in Spanish is necessary. Approximately 30% travel to Pa and Ga. Salary begins at 45k but commensurate with experience. Solid benefits applicable after completion of trial period. Large career growth potential for hardworking ambitious individual. For interview call 941-575-7721

## **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**

**USA blight** is a new national website that will act as an information portal on late blight. You can report disease occurrences, submit a sample online, observe disease occurrence maps, and sign up for text disease alerts. There are also useful links to a decision support system, and information about identification and management of the disease. Check it out at <http://usablight.org/>

**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/>

**EPA-approved Fumigant training program** for certified applicators using methyl bromide, chloropicrin, chloropicrin and 1,3-dichloropropene, dazomet and metam sodium and potassium - <http://www.fumigantraining.com/>

**EPA-approved training program** for certified applicators using dimethyl disulfide (DMDS) - <http://paladin.trainingmine.com/>

## **Quotable Quotes**

For it is in giving that we receive. – St Francis of Assisi

Guard with jealous attention the public liberty. Suspect everyone who approaches that jewel. Unfortunately, nothing will preserve it but downright force. Whenever you give up that force, you are inevitably ruined. - Patrick Henry

Knowledge comes, but wisdom lingers. - Alfred Lord Tennyson

If my house was on fire, I can't compromise about which part of the house I'm going to save. You save the whole house or it will all burn down. We either save this country or we do not. - Marco Rubio

Try not to become a man of success, but rather try to become a man of value. - Albert Einstein

All the beautiful sentiments in the world weigh less than a single lovely action. - James Russell Lowell

O Lord, help me to be pure, but not yet. - Saint Augustine

## **On the Lighter Side**

### **Bubba**

His name was Bubba, he was from Mississippi..... and he walked into a bank in New York City and asked for the loan officer. He told the loan officer that he was going to Paris for an international redneck festival for two weeks and needed to borrow \$5,000 and that he was not a depositor of the bank. The bank officer told him that the bank would need some form of security for the loan, so he handed over the keys to a new Ferrari.

The car was parked on the street in front of the bank. Bubba produced the title and everything checked out. The loan officer agreed to hold the car as collateral for the loan and apologized for having to charge 12% interest.

Later, the bank's president and its officers all enjoyed a good laugh at the Redneck for using a \$250,000 Ferrari as collateral for a \$5,000 loan. An employee of the bank then drove the Ferrari into the bank's private underground garage and parked it.

Two weeks later, Bubba returned, repaid the \$5,000 and the interest of \$23.07. The loan officer said, "Sir, we are very happy to have had your business, and this transaction has worked out very nicely, but we are a little puzzled. While you were away, we checked you out on Dunn & Bradstreet and found that you are a Distinguished Alumni from Ole Miss University, a highly sophisticated investor and multi-millionaire with real estate and financial interests all over the world. Your investments include a large number of wind turbines around Sweetwater, Texas. What puzzles us is why would you bother to borrow \$5,000?"

The good 'ole boy replied, "Where else in New York City can I park my car for two weeks for only \$23.07 and expect it to be there when I return?"

Don't under estimate southern boys!

### **The Wooden Bowl**

A frail old man went to live with his son, daughter-in-law, and four-year-old grandson. The old man's hands trembled, his eyesight was blurred, and his step faltered

The family ate together at the table. But the elderly grandfather's shaky hands and failing sight made eating difficult. Peas rolled off his spoon onto the floor. When he grasped the glass, milk spilled on the tablecloth.

The son and daughter-in-law became irritated with the mess. 'We must do something about father,' said the son. 'I've had enough of his spilled milk, noisy eating, and food on the floor.'

So the husband and wife set a small table in the corner. There, Grandfather ate alone while the rest of the family enjoyed dinner. Since Grandfather had broken a dish or two, his food was served in a wooden bowl. When the family glanced in Grandfather's direction, sometimes he had a tear in his eye as he sat alone. Still, the only words the couple had for him were sharp admonitions when he dropped a fork or spilled food.

The four-year-old watched it all in silence.

One evening before supper, the father noticed his son playing with wood scraps on the floor. He asked the child sweetly, 'What are you making?' Just as sweetly, the boy responded, 'Oh, I am making a little bowl for you and Mama to eat your food in when I grow up.' The four-year-old smiled and went back to work..

The words so struck the parents so that they were speechless. Then tears started to stream down their cheeks. Though no word was spoken, both knew what must be done.

That evening the husband took Grandfather's hand and gently led him back to the family table. For the remainder of his days he ate every meal with the family. And for some reason, neither husband nor wife seemed to care any longer when a fork was dropped, milk spilled, or the tablecloth soiled.

On a positive note, I've learned that, no matter what happens, how bad it seems today, life does go on, and it will be better tomorrow. Some other things I've learned:

- I've learned that you can tell a lot about a person by the way he/she handles four things: a rainy day, the elderly, lost luggage, and tangled Christmas tree lights.
- I've learned that making a 'living' is not the same thing as making a 'life.'
- I've learned that life sometimes gives you a second chance.
- I've learned that you shouldn't go through life with a catcher's mitt on both hands. You need to be able to throw something back sometimes.
- I've learned that if you pursue happiness, it will elude you. But, if you focus on your family, your friends, the needs of others, your work and doing the very best you can, happiness will find you.
- I've learned that whenever I decide something with an open heart, I usually make the right decision.
- I've learned that even when I have pains, I don't have to be one.
- I've learned that every day, you should reach out and touch someone.
- People love that human touch -- holding hands, a warm hug, or just a friendly pat on the back.
- I've learned that I still have a lot to learn.

I've learned that you should pass this on to everyone you care about .I just did.

**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, let me know. 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.

Gene McAvoy  
County Extension Director / Extension Agent IV  
Regional Specialized Agent - Vegetables/Ornamental Horticulture

Hendry County Extension Office  
PO Box 68  
LaBelle, Florida 33975  
Web: <http://hendry.ifas.ufl.edu/>

863-674-4092 phone  
863-673-5939 mobile - Nextel 159\*114449\*  
863-674-4637 fax  
[GMcAvoy@ifas.ufl.edu](mailto:GMcAvoy@ifas.ufl.edu)

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***Thomas Produce Company***

Of South Florida  
Grower and Shippers of Quality Vegetables  
9905 Clint Moore Road  
Boca Raton, Florida 33496

Shawn Barley

***Wedgworth's Inc.***  
**Big W Brand Fertilizer**

(863) 441-9255 cell

Carol Howard

***Mobley Plant World***

1351 W Cowboy Way  
LaBelle, Florida 33935  
Phone 863-675 -2020

Fred Heald

***Farmers Supply Inc***

710 Broward Street  
Immokalee, FL 34142  
Phone 239-657-8254 Fax 239-657-2005

***Gargiulo***

Growers Shippers Importers Exporters  
David Pensabene: Production Manager  
Naples Operations  
Phone 239-353-0300 Fax 239-353-3407

***Nichino America***

Makers of Courier, Portal & Vetica  
Technical Sales Representatives  
Todd Villars: West Florida - 863-532-0937  
Sam Monroe: East Florida - 772-473-0873

Dr. Nancy Roe

***Farming Systems Research***

5609 Lakeview Mews Drive  
Boynton Beach, Florida 33437  
Phone 561-638-2755

Ed Early

***DuPont Agricultural Products***

5100 South Cleveland Avenue  
Fort Myers, Florida 33907  
Phone 239-332-1467 Mobile 239-994-8594

***Glades Crop Care, Inc.***

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Charlie Mellinger, Ph.D.  
Phone 561-746-3740 Fax 561-746-3775

Stacey Howell

***Bayer CropScience***

3481 3rd Ave NW  
Naples, FL 34120  
Phone (239) 353-6491 Cell (239) 272-8575

Glen Kaufman

***Paramount Seeds, Inc.***

PO Box 1866  
Palm City, Florida 34991  
Phone 772-221-0653 Fax 772-221-0102

Bart Hoopingarner

***Gowan Company***

3605 162nd Ave East  
Parrish, FL 34219  
Phone 941-776-1105 Cell 941-737-7444

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Cody Hoffman  
**Syngenta Crop Protection**  
1505 Paloma Dr.  
Fort Myers, FL 33901  
Cell 321- 436-2591

**OmniLytics - AgriPhage**  
Safe Natural Effective  
Vegetable Bacteria Control  
Dave Cole - 561-261-1545  
Tony Swensen - 801-808-2132

Ryan Richards  
**Marrone Bio Innovations**  
863-517-4829 cell  
[r-richards@marronebio.com](mailto:r-richards@marronebio.com)

Brent Beer  
**Beer Leveling &  
Land Development**  
Office 863-675-1663 863-673-3173 cell  
158\*17\*43857 Nextel

**Certis USA**  
*Bio-Pesticides for Crop Production*  
Joe Craig - 863-291-9203  
Chuck Goodowns - 352-538-4471

Scott Houk  
**Dow AgroSciences LLC**  
Phone 239-948-3999  
Email [sehok@dow.com](mailto:sehok@dow.com)

**FMC**  
**FMC Corporation APG**  
Ron Palumbo  
Cell 305-304- 7941  
Nextel Agnet 14772  
[Ronald.Palumbo@fmc.com](mailto:Ronald.Palumbo@fmc.com) [www.fmccrop.com](http://www.fmccrop.com)

Steve Mike Dave  
**Jamerson Farms**  
Growers, Packers and Shippers of  
Florida's Finest Vegetables  
Phone 239-229-5734 Fax 239-368-0969

Sarah Hornsby, CCA  
**Agricultural Crop Consulting, Inc**  
Scouting: Manatee, Hillsborough, Collier  
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Garry Gibson  
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**KAC Agricultural Research**  
Scouting, Consulting  
Research  
386-736-0098 work 386-527-1124 cell  
[HDYONCE@msn.com](mailto:HDYONCE@msn.com)

**Grower's Management, Inc**  
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