



UNIVERSITY OF  
FLORIDA

E X T E N S I O N

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## SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

January 19, 2015

Despite a couple of weak cold fronts, January has been unseasonably warm with a number of days reaching into the mid-80's. Foggy conditions and scattered showers helped increase disease pressure in many crops.

Spring plantings are going in the ground in the Manatee/ Hillsborough which is running a little late due to holding fall crop over for good markets. South Florida farmers are harvesting green beans, beets, cabbage, collards, cucumbers, eggplant, herbs, kale, peppers, potatoes, squash, strawberries, sweet corn, Swiss chard, tomatoes, and a range of specialty items. Warm conditions have increased volumes and growers report a general softening of market prices for many items in recent weeks.

### FAWN Weather Summary

Date	Air Temp °F		Rainfall (Inches)	Ave Relative Humidity (Percent)	ET (Inches/Day) (Average)
	Min	Max			
<b>Balm</b>					
1/1 – 1/19/15	37.49	83.73	0.08	85	0.06
<b>Belle Glade</b>					
1/1 – 1/19/15	47.95	86.27	0.43	88	0.07
<b>Clewiston</b>					
1/1 – 1/19/15	45.46	86.90	0.31	85	0.06
<b>Ft Lauderdale</b>					
1/1 – 1/19/15	52.84	83.75	1.80	82	0.07
<b>Homestead</b>					
1/1 – 1/19/15	45.99	84.94	0.26	86	0.07
<b>Immokalee</b>					
1/1 – 1/19/15	42.11	88.29	0.49	85	0.06
<b>Okeechobee</b>					
1/1 – 1/19/15	40.37	85.55	1.54	87	0.06

**“Remember, when in doubt - scout.”**

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**The National Weather Service forecast indicates that moisture will increase in advance of a shortwave which will move across the Gulf and across South Florida late Tuesday.** A few showers are possible beginning late Tuesday along with an increase in cloud cover. A few showers could prevail through mid-week as enough moisture persists across the area. Temperatures will warm to slightly above seasonal averages for January.

**Models show a more amplified shortwave moving across the Gulf later in the week with surface low pressure forming in advance of it.** Much of the activity will be north of our area across north and central Florida, but a chance of showers will accompany this front Friday through early Saturday before a cooler, drier air mass moves into south Florida with temps falling to slightly below average by Sunday - Monday.

**A much stronger cold front will move across Florida early next week as a longwave trough amplifies over the eastern states, but this is over 7 days away and much can change.** For additional information, visit the National Weather Service in Miami website at <http://www.srh.noaa.gov/mfl/newpage/index.html>

## **Insects**

### **Leafminer**

**Growers and scouts in SW Florida report that leafminer is big pest in a number of crops and note that pressure is increasing in some areas east of Immokalee, mostly in young crops including tomatoes and watermelons.** In other places, respondents report that leafminer has slowed down somewhat over the past week compared to high activity in the last half of December. Some respondents report disappointment over the length of control provided by Coragen.

**On the East Coast, leafminer are present in low to moderate numbers in a variety of crops including tomato and eggplant.**

**Respondents in the EAA report low to moderate leafminer pressure on a variety of crops.**

**Reports from Homestead indicate leafminer numbers are high in all crops.** Growers are using Spintor, Radiant, Vydate, Coragen, Durivo, neonicotinoids, Agrimek for controlling other pests which also provides control of leafminers.

**An integrated pest management program that stresses conservation of natural enemies is important for the successful control of leafminer.** Chemical control can be difficult due to the feeding habits inside the leaf of the host plant. Insecticides that specifically target the leafminer are recommended as use of broad-spectrum materials may decimate beneficial insects including those that attack leafminer. This often results in a larger leafminer problem if the pesticide reduces numbers of leafminer parasites.

**Several parasites for this insect have been recorded in Florida, but parasitic wasps are most common.** Up to 90% parasitism in non-sprayed tomatoes has been observed in Florida.

**To determine whether leafminer larvae are dead or alive, leaflets can be held up to the sun and examined with a hand lens.** Living larvae are a pale yellow and flush with the end of the mine. The back and forth feeding movements are readily visible, although movement may cease when larvae are disturbed or molting. Dead larvae do not show movement and are usually discolored and removed from the ends of mines. Therefore, it is important that the scouting program include not only an assessment of the number of leafminers present but also the natural enemies.

**Cyromazine (Trigard) alternated with abamectin (Agrimek) are effective against leafminer in tomato.** Both of these products have limited crop registrations and must not be used on unregistered crops. Dow products Spintor (Spinosad) and Radiant (Spintoram) have also given good results and are labeled on a wide range of crops. Some other materials that may be used to conserve beneficials include azadirachtin (Neemix) and insecticidal oils. Both products are approved for use by organic growers as is Conserve (spinosad).

The newest addition to the grower's arsenal of control are the diamide insecticides – Verimark, Exeril (cyazypr) and Coragen (rynaxpyr) DuPont, which have given good results and have virtually eliminated leaf miner pressure on many farms. Since these materials are often used to target other pests growers should be careful to rotate modes of action and avoid back to back applications.

**Field sanitation is another important control tactic.** Weeds and abandoned crops can serve as reservoirs for this pest. After harvest crops should be destroyed as soon as possible to avoid having them serve as reservoir for new infestations. Growers often learn about the importance of sanitation the hard way!

### Whiteflies

**Around Palm Beach County, whiteflies are increasing on some pepper and in tomato and eggplant and adults pressure is persistent.** Nymphs are also widely present. Numbers are high in some old pepper but remain mostly low in eggplant.

**Around Southwest Florida, growers and scouts report a significant jump in whitefly numbers both adult and immatures in Immokalee area tomatoes over the past two weeks.** Scouts note the presence of old plantings left in fields and new "winter" plantings going in nearby. To reiterate: Growers often learn about the importance of sanitation the hard way!

**High numbers of whiteflies are also causing “silverleaf” in some squash plantings.**

**Reports from Homestead indicate that silver leaf whitefly numbers are increasing and note that in the second planting of bean and some of the first planting of tomato, silverleaf whitefly transmitted viral diseases are increasing.**

### **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. Disrupt the virus-whitefly cycle in winter by creating a break in time and/or space between fall and spring crops, especially tomato.
2. Destroy crops quickly and thoroughly after harvest, killing whiteflies and preventing re-growth.
  - a. Promptly and efficiently destroy all vegetable crops within 5 days of final harvest to decrease whitefly numbers and sources of plant begomoviruses like TYLCV.
  - b. Use a contact desiccant (“burn down”) herbicide in conjunction with a heavy application of oil (not less than 3 % emulsion) and a non-ionic adjuvant to destroy crop plants and to kill whiteflies quickly.

- c. Time burn down sprays to avoid crop destruction during windy periods, especially when prevailing winds are blowing whiteflies toward adjacent plantings.
- d. Destroy crops block by block as harvest is completed rather than waiting and destroying the entire field at one time.

## **B. Other Cultural Control Practices.**

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

1. Use proper pre-planting practices.
  - a. Plant whitefly and virus-free transplants.
  - b. Do not plant new crops near or adjacent to old, infested crops.
  - c. Use determinant varieties of grape tomatoes to avoid extended cropping season.
  - d. Use TYLCV resistant tomato cultivars (see additional information below for list) where possible and appropriate, especially during historically critical periods of high virus pressure. Whitefly control must continue even with use of TYLCV resistant cultivars because these cultivars can still carry host the virus.
  - e. Use TYLCV resistant pepper cultivars (see additional information below for a source of a list) when growing pepper and tomato in close proximity.
  - f. Use UV reflective (aluminized) mulch on plantings that growers find are historically most commonly infested with whiteflies and infected with TYLCV.
2. Use proper post-planting practices.
  - a. Scout for whitefly adults and apply a short reentry interval insecticide if necessary 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.
  - d. Dispose of cull tomatoes as far from production fields as possible. If deposited in pastures, fruit should be spread instead of dumped in a large pile to encourage consumption by cattle. The fields should then be monitored for germination of tomato seedlings, which should be controlled by mowing or with herbicides if present.
  - e. Avoid u-pick or pin-hooking operations unless effective whitefly control measures are continued.
  - f. Destroy old crops within 5 days after harvest, destroy whitefly infested abandoned crops, and control volunteer plants with a desiccant herbicide and oil.
  - g. Plant non-host cover crops such as Sudex during summer fallows or rye grass during winter to discourage weeds and volunteer crop plants from growing and being infested by whiteflies.
  - h.

## **C. Insecticidal Control Practices.**

1. Delay resistance to neonicotinoid and other insecticides by using a proper whitefly insecticide program. Follow the label!
  - a. On transplants in the production facility, apply a neonicotinoid one time 7-10 days before shipping. Use products in other chemical classes, including Fulfill, soap, etc. before this time.
  - b. Use a soil application containing a neonicotinoid (group 4A) or cyantraniliprole (group 28) only once during each crop. Do not repeat with a foliar application of either mode of action. If only foliar applications of these insecticides are to be made, than restrict each mode of action to a single 6-week period within any crop cycle.

- c. As control of whitefly nymphs diminishes following soil applications, use rotations of insecticides of other chemical classes as needed based on scouting recommendations. Consult the Cooperative Extension Service for the latest recommendations.
- d. Use selective rather than broad-spectrum control products where possible to conserve natural enemies and enhance biological control.
- e. Do not apply insecticides on weeds on field perimeters. These could kill whitefly natural enemies and, thus, interfere with biological control, as well as select for biotype Q, if present, which is more resistant to many insecticides than biotype B.

After the residual effects of soil-applied nicotinoids abate, growers may turn to a variety of materials to suppress whitefly populations. These include insecticidal soaps and oils, IGR's such as Knack. In recent trials, pymetrozine – (Fulfill- Syngenta) has been demonstrated to be effective in preventing viral transmission by whiteflies. Movento (spirotetramat – Bayer) and Oberon (spiromesifen – Bayer) have given excellent control of whiteflies in University trials.

It's important to note that Belt (flubendiamide) and Coragen (chlorantraniliprole) are diamide insecticides used to manage caterpillar pests on tomato and other horticultural crops, and Coragen is also used for leafminer control. Durivo® (Syngenta) contains chlorantraniliprole and thiamethoxam, the same active ingredients as Coragen and Platinum. With the registration of Verimark, diamide insecticides are now available to target pests of tomato at each stage of its development: nursery, at-planting, through vegetative and fruiting stages. The risk is high that sweetpotato whitefly and other pests of tomato will develop resistance to diamide insecticides if they are overused. Growers using Verimark for early season protection against sweetpotato whitefly and TYLCV should not use Group 28 insecticides for management of leafminer and caterpillars in the same crop or at a minimum should avoid the use of this mode of action for at least five weeks after the application of Verimark.

Organic growers can use biocontrols like Mycotrol- *Beauveria bassiana* , insecticidal soaps, oils and Neem based materials (note: use of Neem products is provisionally allowed but regulated – check OMRI for status) for whitefly management.

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

## Worms

**Around Belle Glade, worms are mostly low but are active and populations are increasing in established corn fields.** Young spring plantings showing a little more pressure than usual but numbers are still low.

**Respondents in Southwest Florida report that worms are still around with some new hatches of beet, fall and southern army worms in places.** Fall armyworm trap counts are averaging about 10 to 13 male adults per night, which is twice what it was at this time last year.

**In Palm Beach county and east coast locations, southern armyworm has been causing problems in some pepper and has taken several sprays to bring things under control.**

**Around Homestead, worms remain active on a variety of crops.**

## Thrips

**Respondents in Southwest Florida note that thrips numbers are starting to increase and scouts report finding *Thrips palmi* in several pepper fields which is unusual for Southwest Florida.**

**Reports indicate that thrips pressure is growing in the Palm Beach area on pepper, eggplant and squash.** Respondents also note some issues with thrips on pepper in Martin and St. Lucie Counties but not that it is more moderate.

**Around Homestead, Dr Dak Seal reports that the melon thrips situation is growing worse and they are being found on tomato this year with samples yielding 5-10 adults per 10-leaf sample of tomato flowers/30 ft. long plot.** Eggplants are also getting hammered by melon thrips and economic damage is being reported in a number of other crops as well.

**Dak advises that to avoid problems with melon thrips, growers should:**

- a. Do not use insecticides unless you are sure about pest status of the thrips on your crop. In order to be sure, get your thrips identified by the nearest available thrips authority (extension agents, scouts, researchers, etc.). Some thrips can be harmless or even beneficial.
- b. Once the species is confirmed to be a harmful one, plan your IPM program.
- c. Scout fields to confirm the level of infestation- if population is below threshold level, use environmentally compatible products, such as Trilogy, Neemix, Requiem, Grandevo. These products can be used alone or in combination (Trilogy + Requiem or Neemix + Grandevo).
- d. If thrips numbers are increasing, use Radiant in combination with Movento followed by Closer/Exirel. All of these above mentioned insecticides will provide suppression of thrips populations but none of them is a silver bullet.

**Common blossom thrips (*Frankliniella schultzei*) and western flower thrips (*F. occidentalis*) are also causing serious damage to tomato around Homestead by transmitting tospovirus.** Dak reports collecting common blossom thrips more than western flower thrips and are finding an average of one adult every two 10-flower sample. Malathion, Radiant, Requiem, Spintor, Agrimek in rotation or in combination are doing well in reducing thrips.

### Silk fly

**In the Glades, silklies are building up in older blocks but remain mostly low.** Reports indicate that they are most noticeable in places with older adjacent fields nearby.

**In the Homestead area, corn silkfly remains active.** Dr Dak Seal reports Certis Bait looked promising in controlling silkfly in his trials

### Aphids

**Reports from the EAA indicate that aphids are moving in on the leaf crops, esp. Chinese cabbage.**

**In Palm Beach County, aphids are building in pepper in some areas.**

**Around Southwest Florida, aphid pressure remains mostly low but some infestations have been noted in pepper and squash.**

**Dr. Dak Seal, Entomologist at TREC reports that Sulfoflor (Closer – Dow Agrosiences) is the best insecticide to control green peach aphid.** Most of the neonicotinoids will also provide aphid control.

### Pepper Weevil

**Around Southwest Florida, scouts are reporting a few problems with pepper weevils.**

**On the East Coast, pepper weevils are increasing in all areas.**

**In the Homestead area pepper weevil remains a major threat.**

**Dr. Dak Seal, Entomologist at TREC advises growers to scout fields routinely to determine the beginnings of infestations.** This can be done by visually inspecting the field and also by using yellow sticky traps. Once infestation is detected, growers should start applying chemical insecticides such as Actara, Vydate, the diamides and pyrethroids in a program to control pepper weevil.

### **Sweetpotato Weevil**

**Dr Dak Seal reports that sweetpotato weevils are abundant on boniato sweetpotato around Homestead.** Lannate, pyrethroids and Sulfoxaflor (Closer) provided significant reduction of sweetpotato weevil in his laboratory and field studies.

### **Broad Mites**

**Broad mites remain active on pepper and eggplant around South Florida but respondents indicate while that pressure has been declining, there have been a few flair ups reported.**

**Around Homestead broad mites are causing problems in bitter melon, snake melon and some other cucurbits.**

### **Stinkbug**

**A few spider mites have been reported on tomatoes and eggplants around South Florida.**

## **Diseases**

### **Late Blight**

**Growers and scouts from Naples to Devil's Garden report that late blight is now widely present on tomato across the area.** Incidence and occurrence is becoming widespread although severity remains low in most tomato fields at this point. It is also present in potato around the area.

**Respondents report finding scattered low levels of late blight around Central Florida and Homestead as well.**

**Currently, fungicides are the most effective means of controlling late blight and will remain the primary tool until cultivars with resistance to this disease become available.** Fungicides slow the rate at which the disease develops in the field by creating a protective barrier on the foliage.

**Just applying a chemical, however, does not necessarily equate with effective disease control.** Relative effectiveness of a product, coverage, and timing must be factored into the equation for maximum benefit.

**Numerous fungicide products are registered for late blight control.** Protectants, as the name implies, protect foliage from infection by spores. Protectant chemicals must be well distributed over the leaf surface and must be applied before spores land on leaves. They are ineffective against established infections.

**PROTECTIVE applications of chlorothalonil are your first line of defense for managing late blight.** Timing is critical - applications must be made when conditions are conducive for disease development and before infection occurs!!!

**Systemic products become distributed locally within plant tissues and protect foliage from infection by spores.** They may kill some established infections and may suppress production of new spores. Even a short break in spray schedules, despite what is said regarding some of the newer fungicides, can result in a dramatic increase in blight under the proper conditions.

### **Fungicides for Late Blight**

Product	Brand Name	FRAC Number
chlorothalonil	many brands	M5
maneb/mancozeb	many brands	M3
cyazofamid	Ranman	21
cymoxanil	Curzate	27
strobilurins	Quadris, Cabrio, Flint	11
fluopicolide	Presidio	43
famoxadone + cymoxanil	Tanos	11 + 27
mandipropamid	Revus	40
Dimethomorph	Acrobat, Forum	40
mefenoxam**	Ridomil	4
propamocarb	Previcur Flex	28
zoaxamide + mancozeb	Gavel	22 + M3
ametoctradin + dimethomorph	Zampro.	40 + 45

\*\* resistance documented in many races

Consult current UF/IFAS recommendations for labeled fungicides for the control of late blight.

**In Florida, it has been observed that seldom does a widespread late blight epidemic occur on tomatoes in the Manatee-Ruskin area unless the disease was present in the Immokalee area and/or Dade County.** Since late blight has been confirmed on both potato and tomato in Immokalee growers in other areas are advised to adhere to a preventative spray program.

**Dr. Pam Roberts, Pathologist at UF/IFAS SWFREC advises that early samples have come back as race 23 which has been the predominate race in Florida and the Northeast for the past few years.** This race should be sensitive to intermediate sensitive to mefenoxam.

**See USAblight for more info and photos - <http://usablight.org/lateblight>**



## Target spot

Around Immokalee, target spot continues to cause problems in tomato in a number of locations.

In East Coast production areas, target spot remains mostly low in tomato.

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.

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

## Sclerotinia

Respondents in Pam Beach report that sclerotinia increased in most areas on pepper and eggplant in areas a week or so ago and is becoming common in pepper. Growers are also finding a little in tomato.

Around Immokalee, growers report finding sclerotinia in several tomato and pepper fields at mostly low levels.

In the EAA, sclerotinia is present in lettuce and beans and is causing some losses.

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), stem rot (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.

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. 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.

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.**

**In beans, fungicides including Botran 75 W, Endura 70 WG, Iprodione 4 L Quadris F, Rovral 4 F and Switch applied at bloom stage have been effective in controlling white mold.** Iprodione and Rovral 4 F have been used with good results in lettuce. For potato, Iprodione 4 L, Rovral 4 F and Topsin M WSB and 4.5 L are recommended for Sclerotinia control while in tomato, Priaxor and various strobilurins have given good results. Biologicals like Contans WG, Serenade Max and Sonata have also provided various degrees of control alone and in combination with other fungicides.

**Consult UF/IFAS recommendations for currently labeled fungicides for sclerotinia control in Florida vegetables.**

### **Bacterial Spot**

**Around SW Florida, bacterial spot is present at mostly low levels in pepper and tomato and some increases are being reported following wet periods.** Incidence is mostly sporadic but is reaching higher levels in some pepper fields.

**On the East Coast, bacterial spot is becoming more common in tomato and pepper. Incidence and occurrence is mostly low but is present at fairly high in some fields.**

**Bacterial spot is present on pepper and tomato around Homestead.**

### **Bacterial Speck**

**Bacterial speck is present on tomato around Southwest Florida.** Incidence and severity is mostly low and is present in mixed infections along with bacterial spot.

**Bacterial speck of tomato, caused by *Pseudomonas syringae pv. tomato*, is a disease of increasing importance to Florida fresh-market tomato production.**

### **Early Blight**

**Early blight has been reported on some tomatoes around South Florida.** Some fruit infections have been noted.

### **Botrytis**

**Around Southwest Florida, growers and scouts report some problems with botrytis causing abortion of tomato flowers and note that it has increased with the foggy mornings.**

### **Downy Mildew**

**Around Southwest Florida, downy mildew remains widespread on squash and cucumber.**

**In the Homestead area, respondents indicate downy mildew is moderate to severe on some squash and other cucurbits.**

**On cucurbits, downy mildew lesions start out as yellow angular leaf spots typically located away from leaf margins that will later turn brown to black in color.** Often leaf curling and water soaking are associated with downy mildew. A white to grayish fungal growth will appear in the undersides of these lesions when the leaves are wet from heavy dews, rainfall and high humidity (> 90%).

**Protectant fungicides (chlorothalonil and mancozeb) provide excellent control early in the season, but their effectiveness is limited once the disease becomes established.**

**Downy mildew has been reported to have resistance to Ridomil Gold and FRAC group 11 (e.g., Cabrio, Quadris) fungicides.**

**Revus, Ranman, Presidio and Previcur Flex are the recommended fungicides for downy mildew control once it is present.** These fungicides should be mixed with a protectant fungicide to provide optimal control of downy mildew.

### **Lettuce Downy Mildew**

**Low levels of lettuce downy mildew have been reported in the EAA.**

**Lettuce growers are urged to be on a preventative program with mancozeb and phosphite tank-mixtures and these should be alternated with a good translaminar or systemic fungicide more specific to downy mildew.** There is a large selection to choose from and growers should rotate among dissimilar chemistries for management of fungicide resistance.

**Downy mildew is a serious foliar disease of lettuce which has a direct effect on yield and quality, as it affects the marketable portion of the crop.** In addition to losses in the field, downy mildew's impact is accompanied by significant postharvest losses. In Florida, yield losses of up to 100 percent have been reported for individual fields.

**Symptoms of downy mildew appear initially as chlorotic yellow spots on the upper leaf surface.** Under favorable conditions, a white cottony-like fungal growth indicative of sporulation may be seen on the lower leaf surface.

**During the early stages, leaf spots are often delineated by the veins of the leaf, giving an angular appearance.** Lesions become increasingly chlorotic and eventually turn brown. Although downy mildew is most severe on the older outer leaves, the disease may become systemic over time, infecting heads internally. Lesions may also provide entry for secondary fungi such as Botrytis.

**Due to downy mildew demonstrated ability to develop resistance, growers are advised to rotate chemistries to avoid problems - FRAC numbers on labels will help avoid using similar active ingredients repeatedly.**

**The list of fungicides currently labeled for lettuce downy mildew control includes maneb, fosetyl Al, metalaxyl, and several copper compounds.** Recently some newer compounds including Presidio, Previcur Flex, Reason, Revus, and Tanos have been added to growers control options. Resistance in *B. lactucae* to the fungicide metalaxyl was reported in Florida during 1989, and therefore its efficacy may be somewhat reduced.

**Applications must be made prior to infection if adequate control is to be maintained.** If downy mildew is known to be present in the area, growers should launch a fungicide program immediately.

**Several cultural practices, such as the establishment of a lettuce-free period, crop rotation, and the destruction of possible weed hosts, are also recommended control measures.**

**Downy mildew is also present at mostly low levels on crucifers especially kale around South Florida.**

## **Basil Downy Mildew**

**Downy mildew pressure in basil has been relentless and growers have to work hard to keep it in check.**

**Dr Rick Raid, pathologist at UF/IFAS EREC notes that recent weather with cool nights has been extremely favorable for development and will continue to ideal for disease development over the next few months.**

**Although few fungicides are specifically labeled for this disease, some broadly labeled fungicides which are labeled under the herb crop grouping on current labels, such as Revus, Ranman, Quadris and Amistar (Azoxystrobin) and the phosphonic acids have shown efficacy in managing the disease.**

**These fungicides are most effective when applications are started before or just after initial symptoms are found.**

## **Powdery Mildew**

**Growers and scouts around Southwest Florida report that powdery mildew continues to cause problems in cucurbits, especially in squash.**

**On the East Coast and in Homestead, powdery mildew is widely present on squash.**

**Powdery mildew has also been reported on some pepper in some east Coast locations.**

**Powdery mildew is also present in some strawberries.**

## **Bacterial Blight**

**Respondents in Homestead continue to report some problems with bacterial blight (both common and halo blight) on beans.**

**Symptoms on leaves first appear as small, water-soaked spots which are usually more evident on the underside of the leaves.** These lesions become larger and develop into dry, brown spots with distinct, rather narrow, yellow halos. As infection proceeds, the spots may coalesce, and the yellowing of leaves becomes more general.

**Growers should avoid movement through and work in fields when plants are wet.** This simple cultural practice can greatly reduce disease development and spread.

**Applications of copper may provide some control once disease appears.**

## **Southern corn rust**

**This year sweet corn growers around Belle Glade are reporting an unusually early outbreak of southern corn rust.** This disease typically does not show up around Belle Glade until the late spring, but the early disease development being observed is likely the result of relatively warm conditions which have prevailed this winter coupled with heavy fogs which have blanketed the area for the past several weeks.

**Yield loss due to southern rust can be severe when environmental conditions favorable for disease development persist.**

**The symptoms of southern rust are orange to brown masses of spores (urediospores) that erupt through the upper leaf surface.** Leaves, stalks, and the husks on ears may be infected. Southern rust typically sporulates profusely on the upper leaf surface and only sparsely on the lower leaf surface. In contrast, common rust produces spores on both surfaces.

**Common rust tends to produce elongated pustules whereas southern corn rust has somewhat rounded pustules.**

**Identification can be done quickly with a microscope.** The rounded urediospores of common rust tend to be uniform in diameter whereas those of southern corn rust are oblong in shape. Unlike common rust which typically abates as plants tassel and reach maturity, southern rust can continue to develop and infect plants beyond tasselling.

**Many hybrids which have resistance to common rust have no resistance to southern rust.** Super-sweet (SH-2) varieties are particularly susceptible.

**When sequential plantings are made, earlier plantings should be downwind in relation to predominant winds.** For example, in south Florida, east winds predominate during the sweet corn season; hence the corn should be planted from west to east.

**Fungicides are the major means used to control rust in sweet corn.** Spray programs should begin at the first sign of rust. Strobilurin and triazole fungicides work well and should be used in a program with the broad-spectrum protectant mancozeb. Several sprays may be required. Use of a spreader-sticker, particularly when the plants are young and have waxy leaves may assist in obtaining good coverage.

### **Corn Leaf Blight**

**Low levels of southern and northern corn leaf blight are present in young corn around Belle Glade.**

**NCLB produces a long, elliptical lesion, while those of southern corn leaf spot tend to be oblong and much smaller than those produced by NCLB.** 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 NCLB.

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

**Resistant varieties are available and should be considered, particularly for spring plantings.**

**Fungicides should be applied when lesions first become visible on the lower leaves or when disease is reported to be in the area.**

**Triazoles and strobilurins both provide control, with some pre-mixes giving superior control.** These products should be used with a broad spectrum protectant to minimize development of fungal resistance.

**Use EDBC fungicides such as mancozeb as a protectant before disease is present.** Apply 4- 6 sprays on a 5 – 7 day basis. Use a surfactant/sticker as corn leavers are waxy and spray tends to run off. Rotate with a stobulurin such as Headline etc. As corn matures or disease becomes present, rotate between triazoles such as Folicur, Monsoon, Propimax etc and strobilurins or premixes of the two.

## Cercospora

**Cercospora or early blight is present on celery around Belle Glade.**

**On leaf blades, it produces light brown spots that are somewhat circular or slightly angular and 1/4 to 3/4 inch across.** Spots may be greasy in appearance with or without surrounding yellow halos. On the petiole, elongated, brown to gray lesions are formed. Gray, fuzzy fungal growth may be observed in the centers of leaf and petiole lesions, but distinct structures (such as those found with celery late blight) are not formed by this pathogen.

***Cercospora apii* is a seedborne pathogen and may also survive in the field on celery debris.** Spores are spread via wind and splashing water. Celериac and specialty celery, like Chinese celery, are also hosts of this pathogen.

**Management of early blight involves an IPM approach in which several techniques are combined for most efficient and economical control:**

- **Use Cercospora-indexed seed**
- **Do not plant infected transplants.** Disease-free transplants should be produced by using clean seed and a rigorous spray program as diseased transplants have an overriding influence over other subsequent control measures.
- **Use resistant varieties. Such varieties will reduce, but not eliminate, early blight.**
- **Spray with a recommended fungicide immediately after transplanting.** Celery transplants in late summer to early fall may need sprays two to four times weekly in South Florida, as blight favorable weather occurs commonly during this time. By late fall and during winter months conditions conducive to blight occurs on a sporadic basis thus allowing you to use available forecasting systems. During spring months weather favorable to the development of early blight will again become more common, thus dictating frequent sprays again. Use recommended fungicides such as Tilt (Propiconazole), Flint (Trifloxystrobin), Quadris (Azoxystrobin), chlorothalnil and copper. Cultural controls and some copper sprays are acceptable for use on organically grown produce. Consult UF/IFAS recommendations for currently labeled fungicides for early blight control on celery in Florida.
- **Movement of equipment (tractors, harvesters) in the field can also cause release of high numbers of spores which can be blown to nearby celery fields.** Celery plantings that are downwind, and within one-half mile of a field being harvested, should be sprayed just prior to the harvesting operation.

## Tomato Yellow Leaf Curl Virus

**Growers and scouts indicate that TYLCV incidence is beginning to increase slowly in a number of locations around South Florida.**

**Around Homestead, TYLCV can be found in most tomato fields.**

## Groundnut Ring Spot Virus and Tomato Chlorotic Spot Virus

**Around Homestead, symptoms of the Tospoviruses, Groundnut Ring Spot Virus (GRSV) and Tomato Chlorotic Spot Virus (TCSV) are increasing in a number of tomato fields.** In some fields around Homestead, up to 30% infection rate has been reported.

**Tomatoes infected with TCSV display necrotic lesions and chlorotic spots, and ring spots on leaves, stems, petioles, and fruit.** Following the initial symptoms, wilting and bronzing of the infected plants may occur. Infection of TCSV in young tomato plants may result in severe stunting and eventually death of the

plant. Symptoms of Groundnut Ring Spot Virus and Tomato Chlorotic Spot Virus are similar and require lab diagnosis to distinguish the two.

**TCSV was first reported in tomato plants from South Florida in 2012.** Like Tomato spotted wilt virus (TSWV), TCSV is transmitted by thrips. Western flower thrips (*Frankliniella occidentalis*), common blossom thrips (*F. schultzei*) and possibly other thrips species are vectors of this new tospovirus. The fact that the disease is beginning to show up more widely with greater frequency across South Florida is a cause for concern.

**The close relationship between TCSV and TSWV indicates that integrated management strategies directed against TSWV may also be effective for control of these new tospoviruses.** Research in North Florida has demonstrated that a combination of UV reflective mulches, acibenzolar-S-methyl (Actigard), and insecticides has provided excellent management of TSWV in commercial tomato fields.

**A number of varieties of tomato that are resistant or tolerant to TSWV are commercially available.** The source of resistance in all of the resistant cultivars is reported to be the Sw5 gene. It is thought that cultivars containing the Sw5 gene may also confer resistance to other tospoviruses such as TCSV. Trials are being planned to evaluate these resistant varieties in Homestead in spring of 2015.

**Insecticides Radiant (spinetoram), Spintor and Entrust (spinosad) are efficacious against thrips while sparing predator populations.** Field trials were conducted in Homestead with various insecticides such as Entrust, Closer, Verimark, Exirel, Belay, Movento, Requiem, Lannate, and pyrethroids for melon thrips control. The insecticides were applied four times weekly with the exception of Verimark, which was applied only once at planting. All products showed a reduction on melon thrips populations. The best control was achieved by combining Radiant with Requiem and alternating this combination with other above mentioned insecticides.

Research in North Florida with TSWV has indicated that insecticides alone may not be adequate to control the virus.

For more information, see ENY859- Managing Thrips and Tospoviruses in Tomato at <http://edis.ifas.ufl.edu/in895>.

## News You Can Use

### UF/IFAS SWFREC Plant Disease Clinic

The plant pathology program at SWFREC has expanded its plant disease diagnostic services through the newly re-opened Florida Extension Plant Diagnostic Clinic. The clinic is intended to serve all clients in the region and state experiencing plant disease problems. The clinic in Immokalee joins the network of the Florida Plant Diagnostic Network and of plant diagnostic clinics located in Gainesville and at research and educational centers. The Plant Disease Clinic at SWFREC has been updated with key equipment and diagnostic personnel.

Plant disease samples are accepted during regular operational hours of 8 am to 5 pm or may be submitted by mailing to SWFREC-Plant Disease Clinic.

SWFREC Plant Disease Clinic  
University of Florida-IFAS-SWFREC  
2685 S.R. 29 N  
Immokalee, FL 34142-9515

There is a \$40.00 charge per sample. The clinic number is 239-658-3432.

## **Vydate Shortage**

On November 15, 2014, a tragic accident occurred at the DuPont La Porte plant in Texas, resulting in four fatalities. As a result, supply of Vydate® L and Vydate® C-LV, has been suspended. Production will not resume until government agencies and DuPont complete investigations into the incident, release the process unit and DuPont completes any activities necessary to safely restart the process.

Supply of Vydate® will be interrupted and there will be a significant shortfall in 2015. At this time, DuPont does not anticipate any interruption of Lannate® supply.

Nematodes and pepper weevil are some of the biggest pests that Vydate is used for in Florida. Producers might want to take a look at Exirel which has been shown to be an excellent rotational partner in a pepper weevil program. Unfortunately, no other nematicides are currently available that can be used within the cropping season through the drip like Vydate.

- Source: DuPont Press Release

## **Building agricultural research**

Donald Kennedy  
Science Magazine  
January 16, 2015

Nine billion people are expected to inhabit Planet Earth by 2050. Without agricultural research, there is little hope of sustaining this population surge, given that arable land and water supplies are fixed commodities. Yet for decades the agricultural sector has suffered from neglect. If we want to combat new strains of pests that destroy crops, find new crop varieties enriched in nutritional value, improve yields, develop resistance to disease and drought, and provide environmentally sensitive cultivation practices, then agricultural research must be a priority. Why isn't it?

In the 1970s, as a biology professor at Stanford University, I worked with the Office of Science and Technology Policy in the White House to discover what incentives might encourage the growth of competitive peer-reviewed agricultural research.

At the time, other major federal agencies such as the U.S. National Institutes of Health were enjoying boosts in competitive research funding. On the other hand, the U.S. Department of Agriculture (USDA) used "formula" funding on a regional or commodity-focused basis, largely through the public land-grant universities. That process yielded key advances, increasing our ability to feed more people: improved fertilizers, artificial irrigation, harvest mechanization, and hybridization. But many researchers believed that advances in basic science would provide new ways to revolutionize agricultural production. We found it hard to understand why a brilliant cell biologist had to seek support from another agency to fund innovative research, rather than make a major contribution to how we grow food through support from USDA. A modest competitive grant program was launched then, but its survival in future budget cycles turned out to be perilous.

What happened? Over the past 35 years, new ventures in U.S. public investment in agriculture research and development confronted a steady decline. At the same time, great advances in biochemistry, cell and molecular biology, and genetics were being made through increased funding to other agencies for competitive merit-based research grants. Because of the earlier history, agricultural research is now in a deficit position with respect to the infrastructure, human capital, and policies needed to address the challenges of food security.

A real revolution in agricultural research is possible if today's deeper knowledge, new tools, and advanced capacities could be effectively blended. Fortunately, in response to a USDA task force (headed by William



Danforth, then the chancellor of Washington University), Congress created the National Institute of Food and Agriculture (NIFA) within USDA in 2006 as a means to modernize the management of fundamental agricultural research. NIFA now manages \$200 million in competitive merit-based grants for fundamental agricultural research through its Agriculture and Food Research Initiative.

That new agency is one of the rare federal research programs to have shown steady increases over the past 5 years, making this a major turnaround in competitive research support.

Despite this success, the current level of funding for USDA falls short of the opportunity presented by the agricultural sciences. Certainly, today's fiscal climate makes it hard to argue for extending discretionary federal spending. That is why nonpartisan science-based groups that have seen the need to bolster research in agriculture and are willing to work for its improvement are important players.

One is the recently created organization called Supporters of Agriculture Research (SoAR). William Danforth, appropriately, is its chairman. SoAR includes eminent scientists across disciplines as well as representatives of consumer and commodity groups, and I am eager to work with them.

High on SoAR's agenda is to increase funding for competitive grants, so that USDA can encourage interdisciplinary and innovative research.

The much-needed revolutions in agriculture can only come about through the investments that we make now. Nine billion people will, we hope, reap the benefits of today's wise decisions.

Donald Kennedy is president emeritus at Stanford University, Stanford, CA, and a former editor-in-chief of Science.

Dr Jack M. Payne, Senior Vice President of Agriculture and Natural Resources comments this editorial in the from the journal "Science" describes the sad state of affairs in our country today regarding agricultural research.

The problem is nation-wide affecting all of our public universities. Most public-funded university research is provided with federal dollars through a competitive grants process, where our scientists compete to have the best of the best studies funded. Although there are other "pots" of federal dollars for research, the big three are the National Institutes of Health (NIH) with a \$31B budget, the National Science Foundation (NSF) with a \$6B budget and the Agriculture Food and Research Initiative (AFRI) with a \$400M budget. NIH provides grant dollars to solve cancer, heart disease, etc. NSF funds basic science questions, such as the composition of comets. AFRI funds the studies that will keep our agriculture successful, competitive and find the answers to the problems that will arise in feeding and providing energy and shelter to the 9 billion more people in 40 years. \$31B vs \$6B vs \$400M??? It is an embarrassment that so little is provided (AFRI budget) for such an incredibly important purpose.

We may find a cure for cancer and heart disease, but we will starve getting there because we are NOT funding agricultural research!

### **Fighting Farm Crime**

Somewhere, thieves are loading a farm's crops or cattle into a truck. Chemicals, tools, solar panels, storage tanks, fuel and generators are all targets.

Here are some ways to wreck a thief's day.

## **Farm Security Survey**

Some farms have security holes big enough to drive a truck through — stuffed with its goods. To find these holes before thieves do, conduct a survey.

For farmers doing their own security survey, it is recommended to work from outer perimeter to interior. In addition, take a critical look at your operation at least every six months. Find your risks and then patch the holes.

## **Take Stock of Your Stuff**

Make a list of assets and their approximate value. A good inventory for insurance purposes can be made with a video camera or smart phone. Include vehicle and license plate numbers. Store a copy of records off site.

Keep records current so that if items go missing, they won't go unnoticed. Case in point: missing cows are often not even missed. It happens to ranchers who don't take regular counts. Tagging or tattooing livestock isn't enough. Count them, regularly!

## **Farm Watch**

Experts say security comes in layers. It also comes in numbers. Consider starting a farm watch program, which recruits rural neighbors, law enforcement and the combined technology of a network.

Farm, ranch and grove watch programs fight crime with extra eyes, security devices, signs and the Internet. Members may post photos on Facebook and issue online alerts about stolen property or suspicious persons. Farmers learn to spot rural crime, which may involve illegal drugs and random clues like discarded cold medicine packages. As the murder of an Alabama farmer who confronted a thief in 2012 makes clear, crimes should be reported, not interrupted.

## **Prevent Crime on Your Property**

- Mark your property with an Owner-Applied Number (OAN). This number is engraved on your equipment in a hidden spot with metal punches or brands. The information is fed into a computer. When stolen equipment is recovered, if it has been numbered, the rightful owner can be notified. This FBI-established system helps return stolen property using a unique 10-digit number, identifying the state, county and owner. The permanent number can be stamped on everything from tractors to tools. Equipment can be recovered from anywhere in the U.S.
- If possible, lock equipment inside a barn or shed each night, preferably near the house. Make sure doors and windows are secure. To cheat the bolt-cutter, weld a metal cover over the hasp to protect padlocks from being cut. Lock storage areas with padlocks, hasps and deadbolts. And don't just have locks — use them.
- Thieves hate bright lights. Wattage aside, are you illuminating the right places? Light critical areas: fuel tanks, grain bins, buildings. Night is a thief's cloak. Place motion sensor lighting around the perimeter of shops and outbuildings to spotlight them. Keep outside lights on automatic timers. Prune shrubbery that blocks light sources.
- Fortify gate hinges that can be easily removed. Secure access roads with gates or cables stretched between posts cemented in the ground. Secure gates with chains and locks. Gates can also be topped, with strands of barbed wire.
- Never park machinery within easy access to the road where it is vulnerable to theft and vandalism.

- Keep small equipment locked in a barn or garage.
- Remove rotors, distributor caps or batteries from motorized equipment left outside for long periods of time.
- Do not leave tools or other equipment in the back of a pickup truck. Locked toolboxes are a deterrent to thieves.
- Keep storage areas neat and well-organized to keep track of equipment and discourage potential thieves.
- Lock up chemicals; if stolen, they can be resold.
- Notify your local law enforcement agency of your chemical delivery and storage sites.
- Install audible alarms on outbuildings to prevent illegal entry or theft.
- Make a note of any suspicious vehicle or person that you notice and send the information to the Sheriff's Office.
- Avoid feeding livestock next to a county or public road. Livestock can be accustomed to this and may run up to any vehicle.
- Brand, mark, tattoo, or identify your stock in some manner.
- Secure gas pumps, gas tanks, storage bins and grain elevators with strong locks, sturdy padlocks with hardened steel hasps, or dead bolts with a one-inch throw.

### Protecting Your Chemicals

- Lock up all chemicals, they are essentially like cash money for a thief.
- Request that chemicals be delivered on the days you need them and not before.
- Return excess chemicals to the chemical distributor. By not having a stockpile of chemicals in your shed you will decrease the opportunity for theft.
- Notify your local law enforcement agency of your chemical delivery and storage sheds.
- Install alarms on chemical shed doors or windows.
- Video surveillance systems include cameras, monitors and recorders. For best results, integrate them with detection devices like motion sensors that trigger an alarm and activate the video recorder. A 40-pixel or higher camera/video system is recommended to ensure clear images. Most of these cameras and alarms can sync with a smart phone for activation on or off site. Install equipment in hidden places and in areas where break-ins are likely.

### Ways You Can Assist Law Enforcement

- Preserve the crime scene by staying away from the area. This will avoid contamination of evidence.
- Keep cattle and other livestock out of the area of question.

- If it appears it might rain, prior to law enforcement officers arriving, place boxes, tarps or some form of protective cover over tire/shoe tracks and any evidence.
- Mark your livestock. The most foolproof means of doing this is probably by doing hot, chemical or freeze branding.
- Let thieves know your livestock is permanently marked by displaying signs on your fences, barns and gates. These signs can be purchased from the California Farm Bureau. [Click here.](#)
- Check your stock frequently by conducting daily counts if possible. Make arrangements to have your livestock checked when you are away.
- Make sure all fences and gates are in good condition and locked.

It is imperative that farmers and ranchers work together to deter crime by reporting all suspicious incidents and individuals: like suspicious buyers, people selling chemicals, or other equipment.

Here is the contact information for the Agricultural Deputies in SW Florida.

Charlotte - Office: 941-505-4638 (Deputy Justin Treworgy)  
 Collier - Office: 239-252-0321 (Sergeant David Estes)  
 Glades - Office: 863-946-1600 (Sergeant David Hardin)  
 Hendry - Office: 863-674-4092 (Charles White)  
 Lee - Office: 239-691-9062 (Sergeant Randy Hodges)

You can remain anonymous and be paid a reward if your information leads to an arrest by calling Crimestoppers at: 1-800-780-TIPS

## Up Coming Meetings

**January 27, 2015      Making Decisions and Understanding the 2014 Farm Bill      2:00-4:30 PM**

Everglades Research and Education Center.  
 3200 E Palm Beach Rd.  
 Belle Glade, FL 33430

This meeting is one of a series of meetings being held statewide that will provide information and analysis to producers and landowners and assist with understanding what's required and make decisions with respect to the 2014 Farm Bill. Meetings are conducted jointly by University of Florida agricultural economists and the USDA Farm Service Agency. Questions and answers and discussion will be included.

Topics to be covered include:

- Decisions to be made, who makes them, and the timeline
- Opportunity to update Payment Yields; how it's done
- Crop History; opportunity to reallocate Base acres; how reallocation works
- Choosing between PLC and ARC; how each works and how they compare
- Generic Base; assigning "covered commodities" to Generic Base
- STAX- the new safety net for cotton
- Noninsured Assistance Program (NAP)
- Resources and decision-aids available to help make decisions

RSVP to Christine Sullivan 561-996-1655 or [cbsulliv@pbcgov.org](mailto:cbsulliv@pbcgov.org)

## Websites

**Agricultural Marketing Resource Center (AgMRC)** - as the name suggests and in accordance with the terms of their USDA grant, AgMRC provides unbiased, science-based marketing information for U.S. farmers and ranchers. Visit the AgMRC website at: <http://www.agmrc.org>

**Growers Guide – Quality Assurance of Bio-Control Products** - [http://www.vinelandresearch.com/sites/default/files/grower\\_guide\\_pdf\\_final.pdf](http://www.vinelandresearch.com/sites/default/files/grower_guide_pdf_final.pdf)

**GMO's – An Introduction**  
<https://medium.com/@realfoodorg/gmos-an-introduction-d9e546f6b309>

## Quotable Quotes

It takes about 20 years to build a reputation and five minutes to ruin it. If you think about you will probably do things differently. – Warren Buffett

I love those who can smile in trouble, who can gather strength from distress, and grow brave by reflection. 'Tis the business of little minds to shrink, but they whose heart is firm, and whose conscience approves their conduct, will pursue their principles unto death. - Thomas Paine

The art of being wise is knowing what to overlook. - William James

The seat of knowledge is in the head, of wisdom, in the heart. - William Hazlitt

In the hopes of reaching the moon men fail to see the flowers that blossom at their feet. - Albert Schweitzer

Happiness is where we find it, but rarely where we seek it. - J. Petit Senn

The only way on earth to multiply happiness is to divide it. - Paul Scherer

## On the Lighter Side

### Ron

Ron, an elderly gentleman, 89 years of age, was stopped by the police around 2 a.m. and was asked where he was going at that time of night

Ron replied, "I'm on my way to a lecture about alcohol abuse and the effects it has on the human body, as well as smoking and staying out late."

The officer asked, "Really? Who's giving that lecture at this time of night?"

Ron replied, "That would be my wife."

## Ponderisms

**There are two kinds of pedestrians . . . The quick and the dead.**

**Healthy is merely the slowest possible rate at which one can die.**

**All of us could take a lesson from the weather. It pays no attention to criticism.**

**How is it one careless match can start a forest fire, but it takes a whole box to start a campfire?**

**Who was the first person to look at a cow and say, 'I think I'll squeeze these dangly things and drink whatever comes out'? Hmmm, How about eggs? . . .**

**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 and many thanks to all our sponsors who support the hotline and make it possible.**

**Check out Southwest Florida Vegetable Grower on Facebook**

**<https://www.facebook.com/pages/South-Florida-Vegetable-Grower/149291468443385> or follow me on Twitter @SWFLVegMan**

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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*

Gene McAvoy

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