



UNIVERSITY OF
FLORIDA

E X T E N S I O N

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Hendry County Extension

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SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

March 16, 2004

Weather across South Florida has been dry over the past two weeks with most locations recording little or no measurable precipitation for the period. Clear skies and warm conditions bring unseasonable warm temperatures for the first part of the period favored plant growth and development helped many crops pull out of the winter doldrums. A blast of cool air moved down across the peninsula on March 8th bringing cooler temperatures and dry air and possibly our last breath of winter for the season.

Temperatures have been variable for the period. Daytime temperatures have been in the 60's, 70's and 80's with nighttime lows ranging in the low 60's 50's, and a few nights in the 40' s in normally colder areas.

Dry conditions over the past two weeks have helped keep planting, harvest and cultural operations on schedule across the area. Potato digging is increasing in south Florida production areas.

Crops coming to market include snap beans, celery, cucumbers, peppers, potatoes, radishes, squash, strawberries, sweet corn, tomatoes, and specialty crops. Light supplies of eggplant, endive escarole and lettuce are also available. Cucumbers supplies are increasing as the weather warms while radishes decrease. Quality is mostly good.

FAWN Weather Summary

Date	Air Temp (°F)		Rainfall (Inches)	Hours Below Certain Temperature (hours)							
	Min	Max		40°F	45°F	50°F	55°F	60°F	65°F	70°F	75°F
Bradenton											
2/28 – 3/15/04	41.5	83.3	0.00	0.0	18.3	45.0	2.7	24.0	14.5	26.1	35.0
Ft Lauderdale											
2/28 – 3/15/04	47.5	87.3	0.29	0.0	0.0	8.4	26.1	18.1	17.9	11.9	20.5
Fort Pierce											
2/28 – 3/15/04	44.8	85.9	0.00	0.0	0.5	46.1	12.2	7.7	1.7	43.6	48.6
Homestead											
2/28 – 3/15/04	47.1	84.3	0.03	0.0	0.0	12.1	26.7	39.8	17.5	19.1	12.8
Immokalee											
2/28 – 3/15/04	44.4	86.3	0.00	0.0	4.9	42.3	16.6	24.1	23.9	40.4	16.2

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The short-term forecast from the National Weather Service in Miami indicates that showers may develop across the region today as a surface low develops over the southeast dragging a cold front across the area. Showers should abate by morning and high pressure will bring dry weather and clear skies with temperatures in the 80's during the day and in the 60's at night.

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

Insects

Insect pressure remains mostly low but with some seasonal increase in pest activity.

Whiteflies

Reports from the Manatee/Ruskin area indicate that whitefly adult numbers on most farms are still relatively low, but virus infections are still averaging 5-15% in most fields with some higher levels of 40% or more in older blocks in isolated locations. Virus incidence is much higher than expected from the number of whitefly being seen. Obviously, almost every whitefly coming into these fields has been “dirty”. Some of the virus being noted now seems to coincide with a small but temporary jump in whitefly counts in late February that was noted by several respondents. In Fact , whitefly adult numbers are actually lower now than earlier in the crop.

Phyllis Gilreath notes that once again, problems appear to be due to carryover of fall or “winter” crops that were virus infected, picked late and/or destroyed in a less than timely manner. She indicates that the lack of a winter crop free period may be just as important for growers in the Ruskin area as the summer crop free period. The presence of older blocks with high infection rates makes for a very tough decision for growers, i.e. whether to rogue infected plants, entire blocks or settle for whatever fruit will be produced from blooms and young fruit present prior to infection and then struggle to protect the younger blocks on the same farm. Blocks in this situation are usually old enough that the effectiveness of nicotinoid applications made at transplanting has diminished. Some growers have asked if making an additional application of a nicotinoid through the drip system would be advised to try and extend protection. The answer is NO! Repeated applications only lengthen the period of exposure of whiteflies to this chemistry, thus increasing the chance for the development of resistance. Furthermore, just the sheer volume of plant foliage that you are trying to protect at this point would mean that the dosage present in the plant following such an application would be sub lethal and would not be effective and again only help to increase resistance. This is when you need to switch to other chemistries.

A resistance management meeting is being planned for the Manatee/Ruskin area in early April to discuss these issues and what strategies can be implemented to reduce TYLCV. Meeting time and agenda will be announced soon.

Banded wing whiteflies are still being seen in fields around West-Central Florida. Banded wing whiteflies are not believed to be a vector of TYLCV.

Growers and scouts in Southwest Florida indicate that whitefly activity continues to increase in several crops including tomato, pepper, cucurbits, eggplant and potatoes. Reports note a steady influx of adults in many places particularly in fields near potatoes where reports indicate that it is not unusual to find from 2 – 10 adults per plant despite heavy applications of soap.

East Coast growers report that whitefly numbers are building in older plantings. Whiteflies are present in eggplant, pepper, squash and tomatoes. Pressure has been persistent in squash and some silverleaf is being reported in places. One grower reports that some interesting results using reflective mulch for whitefly control

in squash. In some places in the field the reflective silver plastic tore and it was taken up. In those places, the expression of silver leaf is over 30%. In places where the plastic is intact, there is only about a 2% rate of expression of silverleaf. Some growers reports good results with Courier in controlling whitefly on tomato but note that results in squash have been less than spectacular.

Reports from Miami-Dade County indicate increasing whitefly pressure in beans and cucurbits, and what has been termed a whitefly and TYLCV explosion in tomato. Scouts indicate that there has also been an accompanying increase in the incidence of bean golden mosaic virus as well as tomato yellow leaf curl virus.

Growers are reminded to maintain vigilance and keep up whitefly control measures to avoid a buildup of whiteflies and prevent the movement of infected whiteflies carrying TYLCV into younger plantings.

In older plantings growers should strive to maintain control of adults with oils, soaps and materials OTHER THAN nicotinoids. A strong emphasis should be placed on PROMPT destruction, block by block, as harvest is completed, including oil with herbicide for quick burndown and control of existing whiteflies in those blocks, thus minimizing movement out to other blocks.

Remember that a big part of an effective resistance management program is not following an application of a nicotinoid with another application (soil or foliar) of the same or different nicotinoid. Please think twice before doing this!! While they may work now, then what? What will you use next time? There are NO new adulticides coming down the pipe, at least not in the near future. While you may feel you have no alternatives right now, the nicotinoids may be the only thing standing between a decent crop and disaster. If we were to lose the nicotinoids to resistance, we likely would not be able to grow tomatoes in South Florida.

Aphids

Aphid pressure is variable around Southwest Florida but scouts have noted increases in a number of areas and report colony development in fields that have not been treated with neonicotinoids. Aphids are present in cucurbits, peppers, potato, tomatoes and specialty brassicas.

Respondents in Homestead indicate that aphids are widely present in beans, cucurbits, potatoes and tomatoes and note that pressure has increased in recent weeks.

Reports from the Bradenton area indicate that winged aphid numbers have picked up around West Central Florida, in spite of some fairly intense chemical programs for whitefly control.

Reports from Palm Beach indicate scattered problems with aphids. Aphids have been reported in cucurbits, herbs, peppers, tomatoes and specialty crops including oriental brassicas.

Worms

In the Manatee/Ruskin area southern armyworm egg masses have been noted in many tomato fields along with a few looper eggs. Low levels of diamondback moth continue to be reported in cabbage in some locations around West Central Florida but respondents indicate that most fields remain clean..

Around Southwest Florida, worm pressure remains low in most places with scouts detecting a fruit worms as well as few beet and southern armyworms. A few hotspots have been reported where traps have been yielding from 6 – 13 beet and southern armyworms per count. Reports indicate that melonworms/pickleworms are also increasing in several locations.

Growers and scouts around southwest Florida continue to report increased pinworm pressure in a number of locations. Pinworms have been reported in eggplant and tomato and high trap counts have been

reported in places. Several reports note that most pinworms have been largely restricted to field perimeters. Growers should be aware that tomato volunteers and regrowth in double crop watermelons could allow pinworms (as well as leafminer and whiteflies) to build up affecting nearby fields. To avoid problems, volunteers and regrowth should be scouted and controls applied as necessary.

Growers and scouts in the Homestead area report increasing worm pressure in a variety of crops including beans, cucurbits, and tomato. Worm pressure remains high in corn.

East Coast producers report detecting increased hatches of armyworms and looper in a variety of crops. They also note the presence of pinworms in eggplant and tomato.

Diamondback moths have been reported in collards and specialty brassicas across South Florida. Dr. Gregg Nuessly, UF/IFAS/EREC reports that diamondback moth in the Everglades Agricultural Area typically ramps up beginning the first or second week of February through the remainder of the cabbage season, and this year is proving to be no exception. Growers are also finding some diamondback larvae in collards and other brassicas around Southwest Florida.

Thrips

Reports from Homestead note “heavy” thrips pressure in beans and eggplants and increasing problems with thrips in pepper and potato.

Respondents on the east Coast indicate increasing thrips pressure in eggplant, pepper and tomato. Indications are that these are mostly flower thrips although some isolated reports of *Thrips palmae* damage on pepper including fruit etching and stem damage continue to be received.

Around Manatee County, a few more thrips are being detected in susceptible crops.

Around southwest Florida, flower thrips are increasing and this trend is expected to continue as citrus bloom peaks and thrips move out of groves.

Leafminers

Respondents around Manatee County indicate that leafminer activity has increased steadily over the past two weeks. Some growers have treated and gotten good control but note that leafminers have come on early compared to last spring. Growers are concerned about open mines as an entry point for target spot or early blight problems later this season.

Growers and scouts in the Homestead area report problems with leafminer mainly in young tomatoes.

Leafminer activity around southwest Florida varies between locations with several areas reaching treatment threshold levels and other areas reporting little pressure. Crops affected include beans, cucurbits, tomatoes and specialty crops.

East Coast growers report some problems with aphids in leafy vegetables, as well as cucurbits, eggplant and tomatoes.

Mites

Growers and scouts on the East Coast continue to report problems with two-spotted and red spider mites in eggplant as well as problems with mites in tomato and specialty items especially along field margins and ditch banks. Reports indicate that broadmites are still present in pepper and eggplant in mostly low

numbers but indicate that they have been worse in some locations where they have persisted through out the season.

Around Southwest Florida, reports indicate Spidermites are scattered in tomato, eggplant and cucurbits with some fields requiring treatment. Some new broadmite activity has been reported in a few pepper and eggplant fields.

Reports from Homestead report that red and two spotted spider mites are becoming more numerous in a variety of crops including beans, cucurbits, eggplant, strawberries and tomatoes. Broadmites are widely present in eggplant and pepper with some heavy pressure being reported in places on peppers.

Strawberry producers in West Central Florida report that mite populations are building up but overall pressure has been low this season. Mites are also beginning to show up in young melons. Growers are hopefully that recent rains may slow pressure temporarily.

Pepper Weevils

Respondents around southwest Florida indicate that pepper weevils have been detected in a few more pepper fields but report that overall pressure remains low with a few exceptions.

Growers and scouts on the East Coast report scattered pepper weevil activity. Numbers remain low in most places but some hotspots have been noted.

Around Homestead, respondents report pepper weevils populations are beginning to increase and scouts report increased trap counts over the past few weeks.

Silk Fly

Respondents in Homestead report consistent silk fly pressure and note growers have obtained good control by rotating pyrethroids with organophosphates such as PennCap.

Diseases

Growers and scouts some increase in disease pressure following rainy weather a few weeks ago.

Late Blight

Late blight continues to be reported on tomato in a number of areas around Southwest Florida and several reports of new infections have been received in recent days. Incidence and occurrence remain mostly low with a few exceptions where incidence and severity has been high.

Respondents report that late blight has also reared its head on potato and tomato in several east coast locations including Martin, Okeechobee, Palm Beach, and St Lucie Counties.

Some reports of late blight have also been received from the Bradenton area but no new infections have been reported in recent days.

Since the disease can spread so rapidly, growers should scout their fields thoroughly each day, especially when cool and wet conditions conducive to disease development prevails. Since late blight symptoms may be confused with symptoms of other diseases, the following diagnostic pointers may help growers distinguish between the late blight and other diseases.

Late blight symptoms on leaves appear as irregularly shaped brown to purplish lesions with indefinite border lesions that can span veins. The lesions may be seen any time of day, on any stage of plant growth and on leaves of any age. Velvety, white fungal growth may appear on the lower surface of affected leaflets early in the morning before leaves dry and/or in the lower canopy.

On stems, purplish lesions may be seen any time of day and may be found any where on the stem.

Cottony, white growth of fungus on stems with lesions can often be seen early in the morning and/or in the lower canopy. Stems with lesions are brittle and break easily. Lesions are confined to epidermis and cortex. Leaf rolling and wilting is often associated with stem lesions and purpling of leaflets may occur in some varieties.

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 on the East Coast and in Immokalee growers in other areas are advised to adhere to a preventative spray program.

Bacterial Spot

Around Southwest Florida, reports indicate that rain and windy weather a few weeks back carried bacteria which had been confined to lower foliage high into the canopies of tomatoes and peppers in a number of locations. Incidence and severity ranges from low to moderate with a few locations reporting fruit infections.

Dr Pam Roberts: Pathologist at the UF/IFAS Southwest Florida Research and Education Center notes that several bacterial samples at the clinic have been diagnosed as bacterial speck.

Respondents around the Homestead area report new bacterial spot activity in tomato.

East Coast growers report that bacterial spot is widespread in pepper and tomato and note that there has been some movement in recent weeks.

Reports from the Manatee/Ruskin area indicate bacterial leaf spot pressure remains mostly low in tomatoes and peppers. Some isolated hotspots have been reported.

Gray Mold

Growers and scouts continue to report finding botrytis in tomato in several locations around southwest Florida, especially around the Naples area. Some reports indicate heavy bloom loss with complete flower hands displaying infection symptoms, in the most severely affected plantings. Some very low levels of fruit infection have also been detected.

Around Bradenton, low incidence of botrytis being reported in tomato. Infection noted on foliage that was damaged by wind and/or frost. Infection has also been noted on Roma tomato plants damaged during tying as lateral growth was pulled up in order to tie. Botrytis has also been causing problems on strawberries in a number of locations around West Central Florida.

Reports from Palm Beach County note that botrytis has caused bloom loss in some tomato plantings.

Sclerotinia

East Coast growers report that problems with sclerotinia have declined in recent weeks.

Growers and scouts around Southwest Florida report that active sclerotinia is still widely present on bean, pepper, tomato and eggplant but note that new infections have declined over the past week or so.

Respondents in Homestead area report that some new white mold infections have been noted in eggplant in recent weeks.

Some sclerotinia has been reported on young tomato in the Bradenton area.

In tomato and pepper, infections typically start 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.

Sclerotinia is a fungus that prefers cool, moist weather, causing diseases of great intensity when temperatures range from 60 - 70°. High humidity with dew formation supports the spread and increases the severity of infections. Topsin has given good results in controlling the disease in fruiting vegetables if applied preventatively.

A good indicator of Sclerotinia is the presence of small, black sclerotia (resting structures) of the fungus. Sclerotia vary in size and shape. Sclerotia can form on the surface of plant parts as well as inside the stems of tomato. Another common indicator of Sclerotinia diseases is the presence of white, cottony-like mycelium of the fungus when weather conditions are cool and moist.

Topsin M 70 WP has an emergency, Section 18 label for use in Florida on fruiting vegetables including tomato, pepper, and eggplant for suppression of white mold caused by *Sclerotinia sclerotiorum* from July 3, 2003 to March 31, 2004. The rate is 0.5 to 1.0 lbs of product per acre. It is for use by ground application only. A maximum of 4 applications per crop are allowed. Do not apply within 2 days of harvest. The maximum amount of product per crop that can be used is 3.5 lb/acre.

Early Blight

Reports from Homestead indicate that early blight is active on potato and tomato.

Early blight is widely present on tomatoes in East Coast growing areas. Incidence and occurrence is mostly low to moderate but specialty growers report higher incidence and severity in heirloom varieties.

Around southwest Florida, respondents report an increased early blight activity in tomato and potato over the past few weeks and note that early blight along with a combination of associated foliar diseases such as bacterial spot and target spot can be found in nearly every mature tomato field.

Alternaria leaf spot, caused by the fungus *Alternaria brassicae*, has been observed on Chinese cabbage this fall throughout the Glades. Dr Rick Raid notes that although this disease can be brought into check by some of the broad spectrum protectants, such as chlorothalonil and maneb, strobilurin fungicides registered on this crop have proven to be the most effective. Again, this class of fungicide should be alternated or tank mixed with a broad-spectrum protectant to avoid or reduce the likelihood of fungicide resistance developing and to improve efficacy.

Alternaria is also present on Chinese cabbage in the Bradenton area.

Reports indicate that Alternaria leaf spot is present at low levels in melons around Southwest Florida and in Manatee County.

Target spot

Respondents in Palm Beach County report that target spot is widely present on tomato. Incidence and severity is mostly low.

Growers around Homestead report that new target spot activity in tomato.

Growers and scouts around Southwest Florida indicate that target spot remains active inside tomato plants with thick foliage.

Tomato Yellow Leaf Curl Virus

Around Homestead, respondents report that new TYLCV infections are increasing rapidly and report a TYLCV “explosion” over the past few weeks.

In Manatee County, TYLCV infections are averaging 5-15% in most fields with some higher levels of 40% or more in older blocks in isolated locations. Phyllis Gilreath reports that Virus incidence is much higher than we would expect from the number of whitefly being seen and indicates that a high proportion of the whiteflies entering fields were obviously viruliferous.

In Southwest Florida, tomato Yellow Leaf Curl Virus incidence continues to increase seasonally as whitefly populations build in tomatoes. Infections varied greatly across the area with many fields remaining below 1% and some hotspots reaching over 50%.

Growers and scouts on the East Coast report increasing incidence of TYLCV as the season progresses with some fields showing up to 10% infection or higher.

Rust and Blight on Sweet Corn

Reports from the Belle Glade area indicate that common rust of corn, incited by *Puccinia sorghi*, has picked up early this year. A foliar disease, common rust may be diagnosed by the orange to brown pustules that develop on both sides of the corn leaf. Easily disseminated long distances by wind-blown spores, the disease may spread quite rapidly. Rust on young seedlings may result in stunted plants and pustules on ear husks may adversely affect marketability. Broad-spectrum protectants (EBDCs and chlorothalonil) used in a rotational or tank-mix program with the more effective strobilurin and sterol-inhibiting fungicides are recommended. On susceptible varieties, growers should not wait for the disease to build up to significant levels before applying chemical controls. This greatly reduces the likelihood of keeping the disease below economic levels. In addition, it increases the risk that fungicide-insensitive strains may develop. Use of a spreader-sticker, particularly when the plants are young and have waxy leaves may assist in obtaining good coverage. Once again, read all labels and follow all restrictions and safety instructions before applying pesticides.

Dr Rick Raid reports that common rust and northern corn leaf blight will be kicking into high gear with the bulk of the acreage now planted and inoculum levels in the area rising. Both of these foliar diseases are fully capable of causing significant reductions in yield or marketability if left unchecked. If growing a susceptible variety, good control may be obtained using registered fungicides, *if disease is not allowed to build up to uncontrollable levels before hand.* While the strobilurins as a class of compounds are outstanding for rust, the sterol inhibitors as a class are probably slightly better against blight. Both of these classes are superior to the broad-spectrum protectants (EBDCs and chlorothalonil), but these should be included in a sound chemical control program for fungicide resistance management. Using varieties that are resistant to the diseases may reduce or eliminate the need for chemical controls and this should be a prime consideration when possible.

Respondents in Homestead report very low rust in corn and not that growers have achieved good control with Quadris rotated with Tilt at first detection, combined with prompt crop destruction of old field immediately after harvest.

Rust

Rust has also been reported on beans in the Devils Garden area of Hendry County.

Respondents indicate that bean rust is also widely present in Homestead primarily on non-resistant varieties.

Downy Mildew

Dr Rick Raid reports that downy mildew, incited by *Bremia lactucae*, has now been reported throughout most of the south Florida lettuce production areas of the Glades.

Specialty growers in Palm Beach report some problems with downy mildew on arrugula.

Reports indicate that downy mildew is active in squash in a number of locations across South Florida.

Powdery mildew

Respondents in Palm Beach County indicate that they continue to find powdery mildew on squash in a number of locations. Incidence is low to moderate but drier conditions and crop maturity will favor disease development. Powdery mildew has also been reported on beans, eggplant, pepper and snow peas as well.

Powdery mildew is also widely present on squash around southwest Florida. Scouts operating around Immokalee note they are seeing some powdery mildew in older pepper in a few locations.

Fusarium crown rot

Fusarium crown rot in tomato has increased significantly in some tomato fields around Immokalee especially fields that were nearing first harvest during recent heavy rains.

Growers in scouts in Palm Beach also report finding a few isolated cases of fusarium in pepper and tomato.

Phytophthora

Reports from the East Coast continue to note that new infections by *Phytophthora capsici* have declined in recent weeks.

Phytophthora is present on pepper and squash in a several locations around southwest Florida.

Gummy stem blight

Growers and scouts around Immokalee report increasing incidence of gummy stem blight infections in watermelon. A number of growers report finding infected plants in trays coming from the plant house.

Low levels of gummy stem have also been reported around Manatee County.

Anthracnose

Growers and scouts around Immokalee continue to report problems with anthracnose on pepper.

Respondents in Palm Beach County indicate that anthracnose is present on pepper and note that Cubanelle peppers seem to be more affected than other varieties.

Watermelon Vine Decline and Fruit Rot Alert

For at least the past 2 seasons, central and southwest Florida growers have experienced problems with watermelon vine decline late in the crop cycle approaching harvest characterized by wilting in the plant, scorched leaves, defoliation and rapid vine collapse on maturing vines. Frequently, fruit were observed with greasy, necrotic lesions on the interior portion of the rind that rendered the fruit non-marketable.

Investigations to date have been inconclusive for identifying a cause. No pathogen was consistently associated with the symptoms nor were any cultural or environmental factors identified as the cause. Under the leadership of Dr. Pam Roberts at Immokalee, we now have additional resources to address this problem if or when it appears this season.

Last year the problem seemed to develop rapidly following heavy rains around the beginning of March. If this pattern continues growers may expect to encounter problems over the next few weeks.

If you see or suspect a problem, please notify your county extension agent immediately so we can begin collecting samples and information to try and pinpoint a cause. A significant number of melons have been lost to this problem and we need to find a solution.

Up Coming Meetings

Manatee County

March 30, 2004 **WPS - Train-the-Trainer Workshop.** 9 AM – 11 AM

Manatee County Extension Office
1303 17th Street W
Palmetto, Florida

Contact Phyllis Gilreath at 941-722-4524

April 1, 2004 **Strategies for Whitefly Control and Resistance Management** 3 PM

UF/IFAS Gulfcoast Research and Education Center
5007 60th Street East
Bradenton, Florida

Contact Phyllis Gilreath at 941-722-4524

Miami Dade County

March 17, 2004 **General Standards Training Class & Exam** 8:30 AM - 5:00 PM

South Dade Government Center
10710 SW 211th St., Rm. 203
Homestead, Florida

Call Mary Lamberts at 305-248-3311 for information

Palm Beach County

March 17, 2004 **General Standards/Core Test Review** 8 AM - 12 Noon
Aquatic Weed Control Test Review 1 PM – 3 PM

Clayton E Hutchinson Agricultural Center
559 North Military Trail
West Palm Beach, Florida

Contact Laura Powell at 561-996-1655

April 5, 2004 **General Standards/Core Test Review** 8 AM - 12 Noon

Clayton E Hutchinson Agricultural Center
559 North Military Trail
West Palm Beach, Florida

Contact Laura Powell at 561-996-1655

Southwest Florida

April 1, 2004 **Food Safety and BASF Update** **6:00 – 8:00 PM**

Hendry County Extension Office
1085 Pratt Boulevard
LaBelle, Florida

Contact 863-674-4092 for details

St Lucie County

March 31, 2004 **Drip Irrigation School** 9:30 AM - 3:00 PM

UF/IFAS Indian River Research and Education Center
2199 S Rock Road
Fort Pierce, Florida

Contact Ed Skvarch at 561-462-1660

Other Meetings

March 23-27, 2004

**ISHS International Symposium on Protected Culture
in a Mild-Winter Climate**
Orlando, Florida, USA.

Contact Dr. Daniel J. Cantliffe at 352-392-1928 ext. 203

June 21-24, 2004

**1st International Symposium on Tomato Diseases
and 19th Annual Tomato Disease Workshop**
Grosvenor Resort at Walt Disney World
Orlando, Florida

For more information, visit <http://plantdoctor.ifas.ufl.edu/istd.html>

November 14 – 16, 2004

17th International Pepper Conference

Naples Beach Hotel and Golf Resort
Naples, Florida

For more information, contact Gene McAvoy at 863-674-4092 or visit
<http://conference.ifas.ufl.edu/pepper>

Websites

Agricultural Research – is the U.S. Department of Agriculture's science magazine, published monthly by the Agricultural Research Service. It is available online and you can keep abreast of the latest research by going to <http://www.ars.usda.gov/is/AR/index.html>

The Calm Before the Storm (500,000 BP) - Five hundred thousand years ago in LaBelle, great herds of mammoths, mastodons, horses, camels, sloths and other animals roamed the land. During the dry season there water was scarce, forcing wildlife to migrate to quench their thirst. During the summer rainy season, water was no problem--unless it was delivered during a hurricane or other major storm. Streams that would normally be shallow might quickly become graveyard deep – check out what happened to entomb dozens of these magnificent creatures at <http://www.paleopress.net/labelle.htm> .

Help Wanted?

Mark Renz of Lehigh Acres is currently overseeing a group of volunteers who are excavating a major mammoth fossil bed in LaBelle. (See above) They have had a couple of large diesel pumps loaned to them, most recently for 1 year. Now they are in desperate need of another pump to keep the water level in the pit low enough to dig.

If you or any one you know who might be willing to loan Mark another pump -- hopefully for a minimum of 1 year, he would greatly appreciate speaking to you. He is looking for a 4-inch or larger (their last one was 8 inches) centrifugal pump that can run 24 hours a day. The area to be drained is large, probably 150 x 200 feet across, and 10-12 feet deep. Contact Mark at 239-368-3252.

News You Can Use

Pesticide Application Rate Calculations

What is an acre?? This is a question that has been floating around for some time and has driven many of us slightly crazy at times. When we are talking about fertilizer applications or herbicide applications, the calculation of an acre is a little more straightforward than when we are talking about drop boom applications of insecticides or fungicides on crops such as tomatoes. Some want to talk about a “vertical acre” or a three dimensional acre. Other variables that keep popping up in the conversations include the row width or spray swath width, length of nozzle extensions off the boom, and the number of nozzles open.

In light of current concerns about resistance management with silverleaf whitefly (SWF) and in light of concerns about perceived poor control with some chemicals, it’s probably good to review how we calculate an acre to determine spray application rates. In other words, should we be spraying based on so much per 100 gal or so much per acre? In talking with several people recently, including growers, industry and university researchers, it seems that we may have some inconsistencies going on that may be causing problems. In some cases, we have found that materials are being applied in terms of so much per 100 gal and when we go back and calculate it out, we are actually applying 1/2 or even less of the labeled per acre rate. The research and labeling of products (both by the manufacturer and by University researchers) is done based on how the EPA defines a treated acre which is a swath width (for most of us here that's 6 feet since most are on 6 foot centers) times the row length required to equal 43,560 square feet. If you are on 5-foot centers, your row acre is different than if you are on 6-foot centers. The EPA doesn’t care how many nozzles are open, or whether you have extensions off the drop boom, or whether the actual concentrations in that spray solution changes as that crop grows. All they care about is from a residue standpoint what goes out on that net acre which is 43,560 square feet.

The big question is whether this discrepancy in application rates may be contributing to poor efficacy or even increased resistance development due to the lower rates being applied. In addition, increased frequency of application due to poor efficacy may actually be costing growers money. It's probably not quite as critical for many of our standard fungicides since most of these go out preventively and often, but for hard to control insects and/or those organisms that seem to develop resistance (i.e. whitefly, late blight) and even for some of the newer fungicides where we have to worry about resistance development, these discrepancies may be a problem.

I am hearing reports that some growers who have switched to the per acre method of calculating over the last season or two are seeing increased efficacy with some pest control materials. Considering current problems with SWF control and virus, it’s more important than ever for growers to pay close attention to calibration and make sure that applications are based on the labeled rate per acre and not on concentration.

Thanks to Dr. Phyllis Gilreath: Manatee County Vegetable Extension Agent VI

Whitefly Meeting In Bradenton

Although whitefly numbers have remained generally low this season around Bradenton, virus incidence continues to increase in many fields, with some fields at or above 40% infection. Even with a number of fall crops that were harvested into the spring, others that were not destroyed in a timely manner, and some “winter” crops, which served as a bridge between seasons, it’s hard to explain the virus incidence being observed in some fields. It’s becoming more obvious that the crop or host free period may be as important in this area in the winter as in the summer, especially when mother nature doesn’t take care of things herself.

To update everyone on the current situation, review resistance management guidelines and discuss other potential control measures, including the interest in and feasibility of voluntary crop destruction deadlines, we have scheduled a meeting for **Thursday afternoon, April 1, 2004, at 3 PM** at the Gulf Coast Research and Education Center (**GCREC**) in **Bradenton**. To be successful, such an effort would require the cooperation and participation of **all** area growers.

Drs. Dave Schuster, Jane Polston and Jay Scott will be on hand to review where we are now, answer your questions and discuss control options. In order to try and address as many questions as possible, we offer you the opportunity to submit questions prior to the meeting. In this way, we hope to address the issues of most concern to you and be better prepared to answer your questions. You can submit questions either by phone (941-722-4524), fax (941-721-6608) or email (prgilreath@ifas.ufl.edu).

While you may think this does not affect you this season - that your fields are relatively clean now - next season could be different, as some have found out the hard way. This is **NOT** the problem of just a few growers. This is an industry wide problem which impacts everyone who grows tomatoes, and will require an industry wide solution. Whether you are a grower, owner or manager, you need to attend this meeting and provide your input. If you have any questions, please feel free to call us. We look forward to seeing you on April 1. Thank you!
Submitted by Phyllis Gilreath: Manatee County Vegetable Extension Agent VI.

Quotable Quotes

When I was a boy I was told that anybody could become President. Now I'm beginning to believe it. -- Clarence Darrow

Ninety-eight percent of the adults in this country are decent, hard-working, honest Americans. It's the other lousy two percent that get all the publicity. But then--we elected them. -- Lily Tomlin

History is the version of past events that people have decided to agree upon. -- Napoleon Bonaparte

Health nuts are going to feel stupid someday, lying in hospitals dying of nothing. – Redd Foxx

A boy can learn a lot from a dog: obedience, loyalty, and the importance of turning around three times before lying down. -- Robert Benchley

On the Lighter Side

Coincidences

Two men were sitting next to each other at a bar. After a while, one guy looks at the other and says, "I can't help but thinking, from listening to you, that you're from Ireland."

The other guy responds proudly, "Yes, that I am".

The first guy says, "So am I! And where about from Ireland might you be?"

The other guy answers, "I'm from Dublin, I am."

The first guy responds, "Sure and begora, and so am I! And what street did you live on in Dublin?"

The other guy says, "A lovely little area it was, I lived on McCleary Street in the old central part of town." The first guy says, "Faith and it's a small World. So did I! And to what school would you have been going?"

The other guy answers, "Well now, I went to St. Mary's of course."

The first guy gets really excited, and says, "And so did I. Tell me, what year did you graduate?"

The other guy answers, "Well, now, I graduated in 1964."

The first guy exclaims, "The Good Lord must be smiling down upon us! I can hardly believe our good luck at winding up in the same bar tonight. Can you believe it, I graduated from St. Mary's in 1964 my own self."

The bartender walks over shaking his head and mutters, "It's going to be a long night tonight. The Murphy twins are drunk again."

Saturday Nights all right for fighting

Into a Belfast pub comes Paddy Murphy, looking like he'd just been run over by a train. His arm is in a sling, his nose is broken, his face is cut and bruised and he's walking with a limp.

"What happened to you?" asks Sean, the bartender.

"Jamie O'Conner and me had a fight," says Paddy.

"That little shit, O'Conner," says Sean, "He couldn't do that to you, he must have had something in his hand."

"That he did," says Paddy, "a shovel is what he had, and a terrible lickin' he gave me with it."

"Well," says Sean, "you should have defended yourself, didn't you have something in your hand?"

"That I did," said Paddy... "Mrs. O'Conner's breast, and a thing of beauty it was, but useless in a fight."

Last Wishes

Mary Clancy goes up to Father O'Grady after his Sunday morning service, and she's in tears. He says, "So what's bothering you, Mary my dear?"

She says, "Oh, Father, I've got terrible news. My husband passed away last night."

The priest says, "Oh, Mary, that's terrible. Tell me, Mary, did he have any last requests?"

She says, "That he did, Father."

The priest says, "What did he ask, Mary? "

She says, "He said, 'Please Mary, put down that damn gun...'

Happy St Patrick's Day and may the luck of the Irish be with you all!

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