



UNIVERSITY OF
FLORIDA

E X T E N S I O N

Institute of Food and Agricultural Sciences

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SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE

August 24, 2006

While it is hard to generalize, many locations across South Florida have seen below average precipitation this summer with some east Coast locations as much as 10 – 15 inches below normal. Overall rainfall has been variable with many locations reporting below seasonal averages while others particularly on the west Coast are near or above seasonal averages. Despite this some growers report that they are irrigating in order to achieve optimum soil moisture levels to allow them properly prepare and bed fields.

Temperatures have been at or above normal with most locations reaching into the 90's on a daily basis. Nighttime temperatures have been warm mostly in the 70's.

Field preparation is in full swing around Immokalee where early fall plantings have also started. Around Homestead field preparation for fall and winter plantings is picking up while harvest of okra continues.

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
Balm											
8/1- 8/23//06	65.4	94.1	2.75	0.0	0.0	0.0	0.0	0.0	0.0	54.6	102.5
Ft Lauderdale											
8/1- 8/23//06	70.9	95.8	4.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9
Fort Pierce											
8/1- 8/23//06	69.1	94.3	1.49	0.0	0.0	0.0	0.0	0.0	0.0	3.2	26.3
Homestead											
8/1- 8/23//06	70.8	93.6	6.48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3
Immokalee											
8/1- 8/23//06	69.5	94.8	4.44	0.0	0.0	0.0	0.0	0.0	0.0	4.0	71.1

**Welcome back - hope you all had a great summer
and best wishes for a successful and prosperous season.**

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The short-term forecast from the National Weather Service in Miami indicates that deep tropical moisture will persist across South Florida weather through the upcoming weekend resulting in numerous scattered showers and thunderstorms. Some of these storms may produce locally heavy rain due to weak steering currents. Tropical storm Debby, which has formed in the far east Atlantic and may reach hurricane strength over the next few days poses no threat to Florida at this time. Forecasters are watching an area of low pressure in the eastern Caribbean, which may develop over the next few days and could influence our weather next week. For additional information, visit the National Weather Service in Miami website at <http://www.srh.noaa.gov/mfl/newpage/index.html>

News You Can Use

Q- biotype Whitefly Found in Florida.

Dr. Lance Osborne, Entomologist at the UF/IFAS Mid Florida Research and Education Center in Apopka issued a Pest Update for Growers on August 21, 2006 indicating that Q-whitefly has officially been identified in 5 counties:

Dade- Wholesale Nursery
Lee- Wholesale Nursery
Hillsborough- Wholesale Nursery
Suwannee- Wholesale Nursery
Orange - Wholesale and Retail Nursery

In most cases the infested plants were hibiscus.

I am also attaching some information about the Q biotype provided by Dr Dave Schuster, Phyllis Gilreath and Alicia Whidden last spring when it was thought that the Q-biotype had been found in Florida

To review some information about the Q biotypeit is visually indistinguishable from the B biotype. While B out-competes Q in the absence of insecticides, Q out-competes B in the presence of many insecticides, and Q can transmit TYLCV at least as efficiently as B. The major problem facing growers is that Q is resistant or tolerant to many of our commonly used insecticides, including the nicotinoids, the pyrethroids and the insect growth regulators Knack and Courier. Thus, if both biotypes are present and growers spray heavily, they are selecting for the Q biotype. This makes spraying as little as possible and following resistance management recommendations even more critical, including rotation of chemicals and the inclusion of **a crop-free period** into the production cycle.

What should growers do? If your current whitefly pesticide program is working, continue using it! If you are having difficulty controlling whitefly, you may want to consider some other options. Oberon is effective on Q; thus, if you are targeting nymphs, this would be an alternative to Knack and Courier. Oberon is also effective on adults, although it is slow to act. Venom (Valent) is a nicotinoid that has been more effective on Q in greenhouse trials than have other nicotinoids. It is labeled on tomatoes as a foliar spray or drench. This should be a "last resort" treatment. It is recommended that this **not** be used on crops where nicotinoids have already been applied this season. Recent work in ornamentals has shown control with a combination of Agri-Mek and a pyrethroid. Another combination that could be trialed is a combination of Agri-Mek and oil. Soaps, oils, Prev-Am and similar materials should still be useful, but remember.....good coverage is critical.

We would caution growers **NOT** to immediately begin changing their pesticide program if they feel their current one is working. We would also recommend that if you feel you are having problems controlling whitefly, you might want to submit samples for Q testing. A minimum of 20 adults should be sampled from different plants. It would probably be easiest to try and carefully collect leaflets with whitefly adults and put

them into a baggie. You can then put them in the freezer to slow them down and then transfer them to vials of 95% ethanol with a q-tip or artist's paintbrush. Do not crush the whitefly. Be sure to label the vial, but use a code so that you will know where the sample came from but the identity of the farm will not be known. You can also request them from Dr. McKenzie. Vials should be kept out of heat and carefully packaged and sent via priority mail or overnight to the following address:

Dr. Cindy L. McKenzie
Subtropical Insects Research
2001 South Rock Road
Ft. Pierce, FL 34945
Phone: 772-462-5917
Fax: 772-462-5986
Email: cmckenzie@ushrl.ars.usda.gov

If you are unable to sample, please give us a call and we will try to help.

For additional information on biology and control information, a good source is Dr. Lance Osborne's website at <http://www.mrec.ifas.ufl.edu/LSO/bemisia/bemisia.htm>. It includes a number of documents that you can click on for information from Florida and other states.

Below are the current whitefly control recommendations from IFAS.

Recommendations for Management of Whiteflies, Begomovirus, and Insecticide Resistance for Florida Vegetable Production

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, **both biotype B and biotype Q (if present)**, and lower the initial infestation level during the cropping period.

1. Establish a minimum two-month crop free period during the summer, preferably from at least mid-June to mid-August.

2. Use a correct crop destruction technique, which includes destruction of existing whitefly populations in addition to the physical destruction of the crop.

- a. Promptly and efficiently destroy all vegetable crops **within 5 days of final harvest** to maximally 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 quickly kill whiteflies.
- 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, **both biotype B and biotype Q (if present)**, by strictly adhering to cultural practices.

1. Use proper pre-planting practices.

a. Plant whitefly and virus-free transplants.

- 1) Do not grow vegetable transplants and vegetatively propagated ornamental plants (i.e. hibiscus, poinsettia, etc.) at the same location, especially if bringing in plant materials from other areas of the US or outside the US.
- 2) Isolate vegetable transplants and ornamental plants if both are produced in the same location.
- 3) Do not work with or manipulate vegetable transplants and ornamental plants at the same time.
- 4) Practice worker isolation between vegetable transplants and ornamental crops.
- 5) Avoid yellow clothing or utensils as these attract whitefly adults.
- 6) Cover all vents and other openings with whitefly resistant screening. Use double doors with positive pressure. Cover roofs with UV absorbing films.

b. Delay planting new fall crops as long as possible.

c. Do not plant new crops near or adjacent to old, infested crops.

d. Use determinant varieties of grape tomatoes to avoid extended crop season.

e. Use TYLCV resistant tomato cultivars (see additional information below for list) where possible and appropriate, especially during historically critical periods of virus pressure. Whitefly control must continue even with use of TYLCV resistant cultivars because these cultivars are able to carry the virus.

f. Use TYLCV resistant pepper cultivars (see additional information below for list) when growing pepper and tomato in close proximity.

g. Use ultraviolet light reflective (aluminum) mulch on plantings that are historically most susceptible to whitefly infestation and TYLCV infection.

2. Use proper post-planting practices.

a. Apply an effective insecticide to kill whitefly adults prior to cultural manipulations such as pruning, tying, etc.

b. Rogue tomato plants with symptoms of TYLCV at least until second tie. Plants should be treated for whitefly adults prior to roguing and, if nymphs are present, should be removed from the field, preferably in plastic bags, and disposed of as far from production fields as possible.

c. Manage weeds within crops to minimize interference with spraying and to eliminate alternative whitefly and virus host plants.

d. Dispose of cull tomatoes as far from production fields as possible. If dumped in pastures for cattle feeding, the 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 and, if present, they should be controlled by mowing or with herbicides.

- 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.

C. Insecticidal Control Practices.

1. Use a proper whitefly insecticide program. *Follow the label!*

- a. On transplants in the production facility, do not use a neonicotinoid insecticide if biotype Q is present. If biotype B is present, apply a neonicotinoid **one time** 7-10 days before shipping. Use products in other chemical classes, including Fulfill, soap, etc. before this time.
- b. Use neonicotinoids in the field **only during the first six weeks of the crop**, thus leaving a neonicotinoid-free period at the end of the crop.
- c. As control of whitefly nymphs diminishes following soil drenches of the neonicotinoid insecticide or after more than six weeks following transplanting, use rotations of insecticides of other chemical classes including insecticides effective against biotype Q. 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 because this can kill natural enemies, thus interfering with biological control, and because this can select for biotype Q, if present, which is more resistant to many insecticides than biotype B.

2. Soil applications of neonicotinoid insecticides for whitefly control.

- a. For best control, use a neonicotinoid as a soil drench at transplanting, preferably in the transplant water.
- b. Soil applications of neonicotinoids through the drip irrigation system are not recommended.
- c. Do not use split applications of soil drenches of neonicotinoid insecticides (i.e. do not apply at transplanting and then again later).

3. Foliar applications of neonicotinoid insecticides for whitefly control.

- a. If foliar applications of a neonicotinoid insecticide are used instead of or in addition to soil drenches at transplanting, **foliar applications should be restricted to the first six weeks after transplanting**. Do not exceed the maximum active ingredient per season according to the label.
- b. Follow scouting recommendations when using a foliar neonicotinoid insecticide program. Rotate to non-neonicotinoid insecticide classes after the first six weeks and do not use any neonicotinoid class insecticides for the remaining cropping period.

D. Do unto your neighbor, as you would have them do unto you.

1. Look out for your neighbor's welfare.

This may be a strange or unwelcome concept in the highly competitive vegetable industry but it is in your best interest to do just that. Growers need to remember that should the whiteflies develop full-blown resistance to insecticides, especially the neonicotinoids, it's not just the other guy that will be

hurt—everybody will feel the pain! This is why the Resistance Management Working Group has focused on *encouraging region-wide cooperation in this effort*.

2. Know what is going on in the neighbor's fields.

Growers should try to keep abreast of operations in upwind fields, especially harvesting and crop destruction, which both disturb the foliage and cause whitefly adults to fly. Now that peppers have been added to the list of TYLCV hosts, tomato growers will need to keep in touch with events in that crop as well.

For additional information:

IRAC (Insecticide Resistance Action Committee) Website – <http://www.irac-online.org>.

More suggestions for breaking the whitefly/TYLCV cycle and a list of TYLCV resistant pepper cultivars can be found in articles by Dr. Jane Polston in the 2002 and 2003 Proceedings of the Florida Tomato Institute: http://swfrec.ifas.ufl.edu/veghort/docs/tom_inst_2002_091202.pdf and <http://gcrec.ifas.ufl.edu/TOMATO%202003.pdf>, respectively.

TYLCV resistant tomato cultivars can be found in an article by Dr. Jay Scott in the 2004 Florida Tomato Institute Proceedings: <http://gcrec.ifas.ufl.edu/TomatoOptimized.pdf>.

Tomato Burn Down Rule

CHAPTER 5B-59 PLANT PEST CONTROL

5B-59.001 Plant Pest Control.

5B-59.002 Standards for Determining when to Cease Use of a Pesticide During an Emergency Response to a Plant Pest Infestation Which Involves the Aerial Application of a Pesticide to an Urbanized Area.

5B-59.003 Tomato Plant Destruction.

(1) Definitions. For the purpose of this rule, the definitions in Sections 1.01, 500.03, 570.02, 677.102, and 581.011, Florida Statutes, and the following definitions shall apply:

(a) Commercial Tomato Producer. A person who is engaged in and has an economic risk in the business of producing, or causing to be produced, tomatoes for market.

(b) Final harvest. When an active pest management system is no longer maintained in the field following tomato harvest or if harvest has not occurred or not intended and no pest management system is being maintained.

(2) Tomato Plant Destruction. Within five days following the final harvest of a tomato crop, commercial tomato producers shall destroy remaining tomato plants on the production site using a chemical burn-down with a contact desiccant type herbicide that is EPA labeled and approved for this use such as paraquat or diquat that also contains a minimum three percent oil and a non-ionic adjuvant to destroy crop vegetation. This must be followed by immediate complete destruction by crop removal unless double cropping is planned.

(3) The commercial tomato producer failing to destroy tomato plants within five days following final harvest as described in (2) shall be issued an immediate final order. An immediate final order issued by the department pursuant to this section shall notify the property owner that the tomato plants that are the subject of the immediate final order must be removed and destroyed unless the commercial tomato producer, no later than 10 days after delivery of the immediate final order requests and obtains a stay of the immediate final order from the

district court of appeal with jurisdiction to review such requests. The commercial tomato producer shall not be required to seek a stay of the immediate final order by the department prior to seeking the stay from the district court of appeal. If the commercial tomato producer refuses or neglects to comply with the terms of the notice within 10 days after receiving it, the director or her or his authorized representative may, under authority of the department, proceed to destroy the tomato plants. The expense of the destruction shall be assessed, collected, and enforced against the commercial tomato producer by the department.

Methyl Bromide Alternatives, High Barrier Mulches, and Reduced Rate Application Technologies: What Growers Should be Considering this Fall!

The price of methyl bromide, like that of gasoline and diesel, has now exceeded the \$3.00 benchmark. This was not unexpected, as we have previously reported, since the methyl bromide price is a direct function of supply and demand. As CUE approved levels and existing supplies of methyl bromide (stocks) are reduced, prices have increased and will continue to do so as long as demand remains high. There are ways, however, to reduce methyl bromide costs, including new plastic mulch products.

All of these plastic mulch products are high barrier and virtually impermeable (VIF) to diffusion of methyl bromide and other fumigant gases. Previous research has demonstrated that field application rates of methyl bromide can be reduced by as much as 50 percent without problem or yield penalty.

On-farm research, field days and grower experience has demonstrated that these mulches can be rapidly laid in the field without problem or tractor stoppage. A list of the mulch products which provide enhanced containment of methyl bromide and will allow field application rate reductions of as much as 50% are listed in **Table 1**. This list may not include all VIF mulches commercially available. If they have not yet evaluated these high barrier films on farm, growers are encouraged to contact the distributors of these products for pricing information and field evaluations this fall.

The savings derived from reduced rates of methyl bromide application should more than compensate for the added material costs for any of these high barrier mulches.

There are other reasons besides cost to reduce fumigant field application rates and to use high barrier mulch. It is likely that new EPA regulatory decisions regarding the re-registration of the alternative fumigants (metham sodium, chloropicrin, methyl iodide, dazomet, and others) will require very dramatic reductions of field application rates.

This will mandate use of high barrier mulch films and reduced rate fumigant application technology on the part of growers. For this season, it is still not too late to trial an alternative fumigant like Telone C35 at a reduced rate (17 gal/ treated acre) with the high barrier mulch.

At some point growers will have to adapt to the use of alternative fumigants and the sooner they begin to evaluate high barrier mulches and methyl bromide alternatives the better off they will be.

It is important to note that successful use of high barrier or VIF mulches involves more than just reducing gas flow and laying the more gas impermeable mulch film in the field.

Success with reduced rate applications requires a new level of sophistication and application technology, such as changes in fumigant metering and flow systems, as well as balancing gas flow between chisels by ensuring sufficient back pressure on each gas delivery line by reducing line size from the manifold to the gas knives.

Table 2 summarizes application and fumigant injection equipment modifications required to use high barrier / VIF plastic mulch. These are but a few new considerations and equipment modifications required to successfully use VIF and reduced rates of methyl bromide or any other fumigant. Growers who plan to use the high barrier VIF mulches are encouraged to contact their fumigant distributors and address these issues before attempting a reduced rate application. For additional, more comprehensive information, growers are also encouraged to review “*Application Considerations for Successful Use of VIF and Metalized Mulches with Reduced Fumigant Rates*”. [http:// edis.ifas.ufl.edu/HS270](http://edis.ifas.ufl.edu/HS270))

Excerpted from Methyl Bromide Alternatives, High Barrier Mulches, and Reduced Rate Application Technologies: What Growers Should be Considering this Fall! – by J.W. Noling, Alicia Whidden, and J.P. Gilreath; Berry/Vegetable Times, August 2006

Table 1. Manufacturing and/or Distribution Sources of High Barrier/Virtually Impermeable Plastic Mulch Films.

<p>ORGALLOY® www.atofinachemicals.com</p> <p>Atofina Chemical Inc. 2000 Market Steet, Philadelphia, PA 19103-3222 PH: (215) 419-7000 FAX: (215) 419-7591 1 (800) 225-7788</p>
<p>BROMOSTOP® www.bromostop.com</p> <p>Bruno Rimini Corp. 305 Ballards Lane London N12 8 NP United Kingdom PH: +44 (0) 20 8446 3646 FAX: +44 (0) 20 8446 7654 Email: simon@bromostop.com</p> <p>Florida Distribution: Intergro Inc. Attention: Jim Stoutz (813) 245-8799 (800) 783-0416</p>
<p>HYTIBAR® www.klerks.com</p> <p>Klerk's Plastic Products Manufacturing Inc. 546 L & C Distribution Park, Richburg, S.C. 29729 PH: (803) 789-4000 FAX: (803) 789-4001</p> <p>Florida Distribution: Intergro Inc. Attention: Jim Stoutz (813) 245-8799 (800) 783-0416</p>
<p>BLOCKADE VIF® www.pliant.com</p> <p>Pliant Corporation. Florida Distribution: Pliant Sales Representative Attention: Dennis Sutton 2007 74th NW, Bradenton, FL 34209 PH: (941) 761-8293 FAX: (941) 792-5603 Mobile (941) 704-1712</p>

GINEGAR OZGARD VIF www.ginegar.com

Ginegar Plastic Products LTD.

Florida Distribution: Crop Protection Inc.
Attention: Charlie Young
2607 Sammond's Road, Plant City, Florida
PH: (813) 754-3083 Fax: (813) 754-3896 Mobile
(813) 927-5491

CANSLIT BLACK METALIZED MULCH

Imaflex Inc. / Canslit Inc.
5710 Notre Dame West
Montreal, Quebec, Canada H4C 1V2
Tel: (514) 935 -5710 FAX: (514) 935-0264
Email: info@imaflex.com

Florida Distribution: Intergro Inc.
Attention Jim Stoutz
(813) 245-8799 (800) 783-0416

Table 2. Summary of recommended fumigant injection equipment modifications required for use of high barrier / VIF mulch and reduced rate applications of soil fumigants.

Replace tubing from manifold to chisels with smaller diameter poly tubing to compensate for the new reduced flow capacity requirement and to increase line back pressure needed to insure accurate, uniform flow. (i.e., yellow, red, or black polytubing.

To the manifold - flow divider; install individual sight gauges to observe uniformity of fumigant liquid flow to each chisel outlet.

Install a low pressure gauge (0-30 psi) immediately upstream of the manifold or flow divider to insure at least 15 psi of backpressure.

Insure that the flow meter registers a minimum of 10% flow

Public Advisory on Africanized Honey Bees

Africanized Honey Bees are now widely present and are becoming more common in human or animal bee encounters. On July 11, 2005 the Florida Department of Agriculture and Consumer Services issued a Public Advisory on Africanized Honey Bees (AHB's).

Some highlights from the advisory make recommendations to help you prepare for potential encounters with AHBs.

You are encouraged to follow the safety precautions listed below and to educate your staff as well.

AHB safety precautions:

- Be attuned and alert to buzzing in your environment - this may indicate a nest or swarm of bees.
- Use care when entering sheds or outbuildings where bees may nest.
- Examine work areas before using power equipment such as lawn mowers, weed cutters, and chain saws - the noise excites bees.

- Be alert when engaged in all outdoor activities.
- Teach respect and caution of all bees.
- Visit with a doctor about bee sting kits and procedures if sensitive to bee stings.
- Do not disturb a nest or swarm of bees, leave the area immediately, and contact a pest control company or your county extension agent.
- If attacked by aggressive bees, run as fast as possible to a safe area. Aggressive AHBs may pursue for up to ¼ of a mile.

If stung:

- Go quickly to a safe area.
- Remove stingers by scraping - use a flicking action with a fingernail or credit card.
- Do not squeeze or the stinger may stay in and get infected
- Apply ice.
- Seek medical attention immediately if breathing becomes labored.

If you have any questions, need further clarification, staff training or if we can assist you with more information, please contact the Hendry County Extension Office at 863-674-4092 or your local Extension Office.

IPM Conscious Vegetable Growers Wanted

IPM Florida recently released a request seeking to identify top IPM producers of lettuce, tomato, green pepper, and red onion. Both national restaurant and retailer chains are looking for suppliers who have a superior reputation for implementing IPM-based production. Both Wal-Mart and Scotts Miracle Gro have shown interest in incorporating more IPM in their product lines and consumer information. Wal-Mart is also developing IPM program components for food/fiber products they source. Contact the your local Vegetable Extension Agent for more information. (IPM Florida email of 7/19/06).

Help Wanted

The UF Entomology and Nematology Department has issued a request for assistance in collecting a new leafhoppered bug which has been found mostly on tomato, but also feeds on many other fruits and vegetables. Its distinguishing characteristics are two large yellow spots behind the head and a wavy white line across the back. Place the bugs in rubbing alcohol and send to Lyle Buss at Box 110620, Gainesville, FL 32611. (UF/IFAS e-mail of 8/3/06).

Whole Foods to Buy Local

Whole Foods Stores, based in Austin, Texas, has been criticized that it has grown so rapidly that it has left some of its core values behind, and is now requiring that each store buy products directly from at least four local farmers. The company, known for its natural and organic products, sources most of its meat and produce nationally and in some cases internationally, and founder and chief executive John Mackey is attempting to push the chain back to its local roots. In addition to buying from local farmers, Whole Foods' 184 nationwide stores will be encouraged to host local farmers markets in its parking lots, and the company has hired an "animal compassion field buyer," to work with livestock suppliers to enforce its standards of humane animal care. Further, the company announced earlier that is providing up to \$10 million a year in low-interest loans to small, local farmers to encourage the production of grass-fed, humanely raised meat, poultry and dairy products. (Meatingplace.com, 7/27/06).

Pesticide Registrations and Actions

On July 7, the Florida Department of Agriculture and Consumer Services (FDACS) accepted new uses for Bayer CropScience's Decis® (**deltamethrin**) insecticide (EPA Reg. No. 34147-12-264) that includes bulb vegetables, cucurbit vegetables, fruiting vegetables, root vegetables, tuberous and corm vegetables, pome fruits, tree nuts, field/pop/sweet corn, soybean, sorghum, and sunflower. (PREC Agenda, 8/3/06).

On July 14, the FDACS registered Arysta LifeScience's Battalion® (**deltamethrin**) insecticide (EPA Reg. No. 264-1007-66330) for control of insects in bulb vegetables, cucurbit vegetables, fruiting vegetables, root vegetables, tuberous and corm vegetables, pome fruits, tree nuts, field/pop/sweet corn, soybean, sorghum, and sunflower. (PREC Agenda, 8/3/06).

On July 17, the FDACS registered Agrilience's Delta Gold® (**deltamethrin**) insecticide (EPA Reg. No. 264-1011-1381) for control of insects in bulb vegetables, cucurbit vegetables, fruiting vegetables, root vegetables, tuberous and corm vegetables, pome fruits, tree nuts, field/pop/sweet corn, soybean, sorghum, and sunflower. (PREC Agenda, 8/3/06).

The FDACS is proposing modifications to the **aldicarb** (Temik®) rule, which would increase the application period by moving the starting date from January 1 back to November 15. This would add an additional 47 days to the current period to allow applicators more flexibility. The FDACS is also proposing to eliminate the 10-day waiting period after a permit application is filed before application can begin. (Florida Administrative Weekly, 7/7/06).

Based on a request by Monsanto, temporary exemptions from the requirement of tolerance for residues of the *Bacillus thuringiensis* Cry1A.105 and Cry2Ab2 proteins and the genetic material necessary for their production in field/pop/sweet corn has been granted by the EPA. The tolerance will expire 6/30/09 with the condition that no safety concerns are encountered. (Federal Register, 7/17/06).

Based on a request by IR-4, tolerances for combined residues of the insecticide **imidacloprid** and its metabolites containing the 6-chloropyridinyl moiety are approved. Tolerances of importance to Florida include green bean, atemoya, biriba, cherimoya, custard apple, ilama, soursop, sugar apple, banana, herbs subgroup 19A dried, and herbs subgroup 19A fresh. (Federal Register, 8/11/06).

Based on a request by IR-4, tolerances for the insecticide **bifenthrin** are approved. Tolerances of importance to Florida include, tuberous and corm vegetables (subgroup 1C), brassica leafy greens (subgroup 5B), turnip greens, pea and bean (dried shelled, except soybean, subgroup 6C), coriander leaves, coriander dried leaves, coriander seed and okra. (Federal Register, 8/11/06).

The special local needs registration SLN FL-880004 (**Lannate**® use in radish) has been revised to include product limitations (no more than 12 pints/acre/crop) and application limitations (no more than eight applications/crop). (FDACS letter of 7/28/06).

Information provided above was taken from Chemically Speaking produced by the UF/IFAS Pesticide Information Office.

Organic Approvals Received

The **AgriPhage** line of products, which control bacteria in tomato and pepper, have been listed by the Organic Materials Review Institute (OMRI) for use in organic production. In addition, the EPA recently approved a label amendment for these products, reducing the REI to zero hours and eliminating the requirement for all PPE. (OmniLytics Press Release, 8/2/06).

On October 27, 2005, the Environmental Protection Agency (EPA) and the United States Department of Agriculture (USDA) approved for organic production **KeyPlex 350 OR**. This was accomplished under the

aegis of the National Organic Program (NOP), which was instituted in October 21, 2002. The NOP established national standards for the production and handling of organically produced products. On January 21, 2006, the Florida Department of Agriculture and Consumer Services, Bureau of Pesticide/Pesticide Registration Section registered KeyPlex 350 OR as an organic pesticide. KeyPlex 350 OR has been registered with the Florida Organic Growers (FOG).

KeyPlex 350 OR is a Biopesticide because it helps the plant control disease and environmental stresses. KeyPlex 350 OR is completely non-toxic to the plant and to the environment and completely biodegradable. It does not kill or poison pests. KeyPlex 350 OR acts by eliciting or increasing certain cell enzymes, which act as an immune system in the plant. This phenomenon has been recognized in plant science and is called Systemic Acquired Resistance (SAR). Scientific data produced by USDA and IFAS (Florida Institute of Agricultural Science, University of Florida) demonstrated that this effect was elicited in plants on application of KeyPlex 350 OR.

Up Coming Meetings

Miami Dade County

August 29, 2006 **Methyl Bromide Alternatives** 10: 30 AM. - 1 PM

Dade County Extension Auditorium
18710 SW 288th Street
Homestead, Florida

For more information, please contact Mary Lamberts at 305-248-3311

August 31, 2006 **Laws & Regulations Affecting Pesticide Applicators** 12 Noon - 1 PM

Dade County Extension Auditorium
18710 SW 288th Street
Homestead, Florida

For more information, please contact Mary Lamberts at 305-248-3311

Palm Beach County

September 18, 2006 **General Standards/CORE Training** 8 AM – 12 AM
Aquatic Weed Control Test Review 1 PM – 3 PM

Clayton E. Hutchinson Agricultural Center
559 N Military Trail
West Palm Beach

Contact 561-233-1700

September 20, 2006 **General Standards/CORE Test Review** 8 AM – 10 AM
Private Applicator Test Review 1 PM – 3 PM

Belle Glade Extension Office
2976 State Road 15
Belle Glade

Contact 561-996-1655

September 21, 2006 **Agro-Terrorism and Crime Prevention for Farms and Ag Businesses**

UF/IFAS Everglades Research and Education Center 8:30 - Noon
3200 E Palm Beach Road
Belle Glade, Florida

For more information, contact 561-996-1680.

Southwest Florida

August 29 2006 **UF/IFAS C-139 Basin Phosphorous Project Update** 6:00 PM

UF/IFAS SWFREC
Hwy 29 N
Immokalee, Florida

Contact Gene McAvoy at 863-674-4092 for details

September 27, 2006 **WPS- Handler/Worker Training** 9:00 AM - Spanish
1 PM - English

UF/IFAS Hendry County Extension Office
1085 Pratt Boulevard
LaBelle, Florida

Contact Gene McAvoy at 863-674-4092 for details

Other Meetings

August 29 –30, 2006 **Agritech 2006 – Educational Meeting and Trade Show of the Florida Strawberry Industry**

John R. Trinkle Building
1206 N Park Road
Plant City, Florida.

For more information contact the Florida Strawberry Growers Association at 813.752.6822 or visit www.straw-berry.org

September 5, 2006 **2nd Annual Tomato Packinghouse Managers Workshop**
“Sanitation and Food Safety Update for the Fall Season”

Ritz Carlton
Naples, Florida

See details below.

September 6, 2006 **2006 Florida Tomato Institute** **9:00 AM**

Ritz Carlton
Naples, Florida

See details below.

September 20, 2006 **Organic Production Field Day & Workshop** 8:30 AM - 4:00 PM.

UF/IFAS Plant Science Research and Education Unit (PSREU)

Citra Florida

For registration information, contact: Dr Jennifer Taylor, FAMU Statewide Small Farms Program at Jennifer.Taylor@famu.edu , (850) 412-5260 or visit the UF-IFAS Small Farms website: <http://smallfarms.ifas.ufl.edu/>

September 17- 21 2006 **Cucurbitaceae 2006**
Asheville, North Carolina

For more information visit <http://www.ncsu.edu/cucurbit2006>

November 14 - 15, 2006 **Watermelon Growers Symposium**

Scottish Rite Auditorium
San Antonio, Texas

For more information contact Champion Seed Co at 956- 618-5574

December 3-6, 2006 **4th International Bemisia Workshop**
December 6-8, 2006 **International Whitefly Genomic Workshop**

Hawk's Cay Resort
Duck Key, Florida

For more information, go to <http://conference.ifas.ufl.edu/bemisia>

Tomato Packinghouse Managers Workshop
“Sanitation and Food Safety Update for the Fall Season”
Tuesday, September 5, 2006 • 1:30 – 5:00 p.m. • Ritz-Carlton, Naples

REGISTRATION FORM

Please print clearly

Attendee Name: _____

Title: _____

Company Name: _____

Company Address: _____

City, State, Zip: _____

Phone: _____ FAX: _____

E-mail: _____

Preferred Method of Contact (check one): Phone FAX E-mail

Send completed registration form and payment of \$50 (check or money order only - payable to Florida Tomato Exchange) to:

Florida Tomato Committee
Attn: Tomato Packinghouse Managers Workshop
800 Trafalgar Court, Suite 300
Maitland, FL 32751

Deadline for advance registration is Friday, September 1, 2006. Registration is available on-site for \$60 the day of the meeting (check or money order only; no cash please).

For more information contact Steve Sargent: sasa@ufl.edu)

2006 Florida Tomato Institute Program

September 6, 2006

Ritz Carlton, Naples

Morning Moderator: Gene McAvoy, Hendry County Extension Service, LaBelle

9:00 Welcome and Opening Remarks – George Hochmuth, Associate Dean for Research, UF/IFAS, Gainesville

9:10 ‘State of the Florida Tomato’ Address - Reggie Brown, Florida Tomato Committee, Orlando

9:20 Methyl Bromide CUE Status for 2007 and Beyond - Mike Aerts, FFVA, Orlando

9:40 Food Safety and the Florida Tomato Industry - Martha Roberts, UF/IFAS, Gainesville

10:00 Impact of Energy Issues on the Florida Tomato Industry - John VanSickle, UF/IFAS, Gainesville

10:20 Labor Challenges for the Florida Tomato Industry – Walter Kates, FFVA, Orlando

10:40 Potential Impact of Increased Efficiency in Harvesting and Packing of Fresh Tomatoes - Steve Sargent, UF/IFAS, Gainesville

11:00 Research Update on Grape Tomatoes: Varieties, Taste Tests and N Rates - Eric Simonne, UF/IFAS, Gainesville

11:20 Lunch and Visit Information Cafe

Afternoon Moderator: Alicia Whidden, Hillsborough County Extension Service, Seffner

1:00 BMP Fertilizer Trials in Central and Southwest Florida - Monica Ozores-Hampton, SWFREC, Immokalee

1:20 Whitefly Resistance Update and Proposed Mandated Burn Down Rule - Dave Schuster, GCREC, Wimauma

1:40 TYLCV-Resistant Cultivar Trial and Whitefly Control - Kent Cushman, SWFREC, Immokalee

2:00 Industry Updates

3:00 Adjourn and Visit Information Cafe

Two (2) pesticide applicator CEUs have been approved.
Certified Crop Consultant CEUs have been requested.

Websites

Florida Certified Organic Growers & Consumers is a non-profit organization, which provides an Organic Certification Program. Visit their website at <http://www.foginfo.org/>

Quality Certification Services - Florida Organic Grower's organic certification program is called Quality Certification Services (QCS) and serves to verify label claims for producers, thereby providing more options in the marketplace and to provide assurance to the consumer as to the validity of those labels. Go to www.qcsinfo.org for more information.

UF/IFAS Small Farms Website – Small farms represent over 90% of all farms in Florida and make about 15% of all farm product sales in Florida. This website explores critical issues facing small farms including access to profitable markets, business skills development, accessible technical information, and alternative crops and enterprises. Go to <http://smallfarms.ifas.ufl.edu/>

Quotable Quotes

Millions long for immortality who don't know what to do with themselves on a rainy Sunday afternoon. - Susan Ertz,

Not only is the universe stranger than we imagine, it is stranger than we can imagine. - Sir Arthur Eddington

As I know more of mankind I expect less of them, and am ready now to call a man a good man upon easier terms than I was formerly. - Samuel Johnson

Do not accustom yourself to use big words for little matters. - Samuel Johnson

Perhaps it's good to have a beautiful mind, but an even greater gift is to have a beautiful heart. - John Nash

Never approach a bull from the front, a horse from the rear or a fool from any direction.

On the Lighter Side

A Southern Blessing

Bless this house, oh Lord, we pray.
Please keep it cool in mid-July.
Bless the walls where termites dine,
While ants and roaches march in time.
Bless our yard where spiders pass
Fire ant castles in the grass.
Bless the garage, a home to please
Carpenter beetles, ticks and fleas.
Bless the love bugs, two by two,
The gnats and mosquitoes that feed on you.
Millions of creatures that fly or crawl,
In the South, Lord, you've put them all!!
But this is home, and here we'll stay,
So thank you Lord, for insect spray.

Which Wolf?

One evening an old man told his grandson about a battle that goes on inside people. He said, "My son, the battle is between two "wolves" inside us all.

One is Evil. It is anger, envy, jealousy, sorrow, regret, greed, arrogance, self-pity, guilt, resentment, inferiority, lies, false pride, superiority, and ego.

The other is Good. It is joy, peace, love, hope, serenity, humility, kindness, benevolence, empathy, generosity, truth, compassion and faith."

The grandson thought about it for a minute and then asked his grandfather: "Which wolf wins?"

The old man simply replied, "The one you feed."

Contributors include: Joel Allingham/AgriCare, Inc, Karen Armbrester/SWFREC, Kathy Smith/Agricultural Pest Management, Bruce Corbitt/West Coast Tomato Growers, Dr. Kent Cushman/SWFREC, Dr. Phyllis Gilreath/Manatee County Extension, Michael Hare/Drip Tape Solutions, Fred Heald/Farmers Supply, Sarah Hornsby/AgCropCon, Cecil Howell/Taylor &Fulton, Loren Horsman/Glades Crop Care, Keith Jackson/SWFREC, Bruce Johnson/General Crop Management, Dr. Mary Lamberts/Miami-Dade County Extension, Leon Lucas/Glades Crop Care, Bob Mathews, Glades Crop Care, Mark Mossler/UF/IFAS Pesticide Information Office, Gene McAvoy/Hendry County Extension, Alice McGhee/Thomas Produce, Jimmy Morales/Pro Source One, Chuck Obern/C&B Farm, Teresa Olczyk/ Miami-Dade County Extension, Dr. Aaron Palmateer/TREC, Darrin Parmenter/Palm Beach County Extension, Dr. Ken Pernezny/EREC, Dr. Pam Roberts/SWFREC, Dr. Nancy Roe/Farming Systems Research, Wes Roan/6 L's, Kevin Seitzinger/Gargiulo, Jay Shivler/ C&B Farm, Ken Shuler/Stephen's Produce, Ed Skvarch/St Lucie County Extension, John Stanford/Thomas Produce, Mike Stanford/MED Farms, Dr. Phil Stansly/SWFREC, Eugene Tolar/Bright Star Farms, Mark Verbeck/GulfCoast Ag, and Alicia Whidden/Hillsborough County Extension.

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

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