



Berry/Vegetable Times Summer 2007



From Your Agent... Lightning Facts and Safety Tips



2007 Calendar of Events

July 10 and August 14 Pesticide License Testing. Hills. Co. Extension Office, Seffner. 9 am. For more information call Mary Beth Henry, 813-744-5519, ext 103.

July 5 Africanized Honey Bee Informational Program. Hills. Co. Extension Office, Seffner. 6:30 pm. See page 10.

July 6 Africanized Honey Bee Training . Morning Session for First Responders; 9:00am- noon. Safety Training for Outdoor Workers; 1:00pm -4:00 pm. Hills. Co. Extension Office, Seffner. 6:30 pm. See page 10.

July 12 Worker Protection Standards Train-the-trainer Workshop. Hills. Co. Extension Service, Seffner, Fl. 1:30-4:30 pm. See page 11.

July 18-20 Farm to Fuel Summit. Marriott Renaissance Vinoy Resort, St. Petersburg. See page 8 for costs and details.

August 28 & 29 2007 FSGA Strawberry Agritech Educational Session & Tradeshow, Trinkle Building, UF/HCC Plant City Campus. For more details contact FSGA office, 813-752-6822.

Sept. 4 Tomato Packinghouse Managers Workshop. Ritz-Carlton Hotel. Naples, Fla., 1:30-5:00 pm. In conjunction with the 2007 Joint Tomato Conference, Sept. 4-9. For more information contact the Florida Tomato Exchange, 407-660-1949.

Sept. 5 Tomato Institute, Ritz-Carlton Hotel. Naples, Fla. In conjunction with the 2007 Joint Tomato Conference, Sept. 4-9. For more information contact the Florida Tomato Exchange, 407-660-1949.

June 24-30, 2007 is designated as Lightning Safety Week. The theme for this year’s campaign is “When lightning roars, go indoors”. Lightning ranks #2 in storm-related deaths in the US- flooding is #1.

There are on average 100 deaths each year caused by lightning. There are many more injuries from lightning strikes- only 10% of victims are killed; 90% will survive but will suffer from life-long injury and disability. In central Florida lightning safety should be a high priority since we are the “lightning capital of the world”. Florida ranks number 1 in the number of lightning casualties. The area between Tampa and Orlando is known to be a very active area for lightning activity. This is caused from daytime heating coupled with a

(Continued on page 2)

To the Bitter End

J.W. Noling, Alicia Whidden, and Phyllis Gilreath

Each year the price of methyl bromide and chloropicrin content of the methyl bromide formulation increases. As we have repeatedly indicated, this is an expected outcome of an established economic principal of supply and demand in-step with a long protracted phase-out, and it will only get worse before it gets better. There was a time late this past spring when we thought an apparent threshold had been crossed and strawberry growers would begin the transition to alternatives. The motivating factors for transition were formulation and price, i.e., a projected price of \$4 per lb and only a formulation of 50/50 to be available from the distributors. It seemed apparent to us that the price of methyl bromide had finally exceeded a growers threshold value of ‘willingness to pay’, particularly after we repeatedly heard that “I will quit

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moisture laden atmosphere and the collision of sea breezes that usually happen right over our area and give us many afternoon thunderstorms with lots of lightning. A person's odds of being struck by lightning is 1 in 3,000 and since we are in the "lightning capital" and work outside our odds are probably much higher so we need to learn the facts about lightning and how to protect ourselves, our families and our employees.

Lightning Facts: Lightning can strike as far away as 10 miles from the rainstorm. The maximum you can hear thunder is about 10 miles so if you can hear it, you are within striking distance and should take cover. Also lightning can come from debris clouds that come after the initial thunderstorm has broken up. This is why most victims are struck before and after the rainstorm; most people seek shelter while it is raining. Thunder travels at 1 mile per five seconds so counting the number of seconds between the visible flash and the big bang of thunder we hear and dividing by 5 can give a rough estimate as to the distance of the lightning from you.

Central Florida has been found to have the greatest flash density- a square kilometer of land is struck 16 times each year. Lightning activity has an annual cycle. There is a rapid increase in May which peaks in July and then a rapid decrease in September. Through the winter the flash rate will continue to decline with January being the lowest. In a 24 hour cycle more lightning will occur during afternoon and early evening between 12:00 and 8:00 p.m. with the peak about 4:00.

Lightning Medical Facts: Lightning causes nervous system injury and may affect the brain, autonomic nervous system and the peripheral nervous system. If someone is struck by lightning first call 9-1-1. Death is caused by cardiac arrest and/or breathing is

stopped so after calling 9-1-1 give the victim CPR or mouth-to-mouth resuscitation. It is recommended that if there are multiple victims in a strike to treat the apparently dead first since many can be revived. Strike victims can suffer lifelong neurological problems. Symptoms are problems with short-term memory, problems sleeping, irritability, attention span problems, chronic pain, dizziness, chronic fatigue and personality changes.

Lightning Safety Tips:

1. *Get the weather forecast ahead of going outdoors.* Try to plan activities around times of exposure to hazardous weather.
2. *If outdoors, identify a proper shelter and stay within range.* Use the "30-30 Rule" to know when to seek safety. The "30-30 Rule"- When you see lightning count the time till you hear thunder. If the time is 30 seconds or less, go immediately to a safe shelter.

Remember if you hear thunder then lightning is within striking range. After the storm has moved on wait 30 minutes or more after hearing the last thunder before leaving safe shelter. The "30-30 Rule" protects against storms moving into the area but does not protect against the first lightning strike so always be alert to the condition of the sky overhead. Watch clouds to see if they are increasing, thickening, and darkening, especially if they develop a deep vertical extent or if rain gets heavier and the wind stronger.

3. *If lightning threatens go to a safe shelter.* What is a safe shelter? The safest place is a large, fully enclosed, substantially constructed building. The wiring and plumbing in a building such as a house or public building will conduct the lightning safely to the ground.

When you are in the safe shelter stay away from open windows and doorways; inner rooms are considered safer. Do not use corded phones, computers and video games. Hard-wired phones are the leading cause of indoor lightning strikes. Cell phones are safe to use.

Stay away from electrical appliances, lighting, electric sockets and plumbing.

If you can't take shelter in a substantial building then an enclosed vehicle with a solid metal roof and metal sides is a good second choice. We have always heard vehicles are safe because they have rubber tires to insulate them but the correct reason is the metal shell of the vehicle. Inside the vehicle close the windows, lean away from the door and don't touch the steering wheel, ignition gear shift or radio- you want to avoid any conducting pathways going outside, and put your hands in your lap. Convertibles, cars with fiberglass or plastic body shells and open-framed vehicles are not safe lightning shelters.

4. *If you can not reach a safe shelter minimize your risk of being struck.* Avoid all outdoor metal objects such as poles, fences, gates, metal bleachers, mowing and road machinery. Avoid solitary trees, water, open fields, high ground or caves. Do not remain in open vehicles, such as tractors, riding lawnmowers or golf carts. Open structures such as picnic pavilions, rain shelters or bus stops are not safe shelters. Be sure to remember not to get under a tree for protection from the rain.

5. *If you are far from shelter and lightning is occurring it usually gives a warning.* Your hair may stand on end, your skin will tingle and light metal objects will vibrate and you may hear a crackling or "kee-kee" sound. These signs mean you are in the bolt's electric field. Quickly remove metal objects including baseball caps. If you are in a group of people everyone needs to spread out so there is at least 15 feet between each person. Then go into the lightning crouch- put your feet together, squat down, tuck your head and cover your ears. When the immediate threat has passed get to a safe place as soon as possible.

6. *If someone is struck they do not carry an electrical charge and it is safe to begin first aid immediately.*

Lightning is the underrated storm-related danger and we live, work and play in the "lightning capital". Remember to pay attention to the weather conditions and seek safe shelter when necessary. For more information and for links to references for this article go to www.lightningsafety.noaa.gov. "When lightning roars, go indoors"

Have a safe summer,

Alicia Whidden

Hillsborough County Extension Agent

(Continued from page 1)

if I have to pay \$4/lb for 50/50". In the final analysis, we discovered it was not much of a revolt and that chloropicrin was the cause.

Florida strawberry growers have never particularly liked chloropicrin (pic). For Florida growers (we won't implicate others) there was justification for such disdain. As long as methyl bromide was the near exclusive constituent of the formulation, chloropicrin was not needed for soilborne pest and disease control. In fact, if you added too much pic to the mix you could almost certainly count on a few more weeds in the field to deal with after fumigation. In addition to weeds, we also have a fear that with a formulation of 50/50 we may even see a few more nematodes survive the treatment to become an unresolvable problem during the season. Secondly, and probably as important as the loss of pest control activity, are the issues of worker complaints and potential for off-site movement of a compound alternatively identified as tear gas. Pic, unlike methyl bromide, can be very unforgiving to workers for sloppy application and fumigation procedure. Finally, there is the dogma that chloropicrin confers undesirable vegetative

farming growth at the expense of fruit growth in strawberry. This is a plant growth phenomenon which we have yet to demonstrate in the field. In fact, it seems ironic that all of the alternatives to methyl bromide currently used in California, Florida and other states of the southeast for strawberry rely heavily on either chloropicrin alone for its fungicidal activity, or for its synergizing effect with 1,3-D (Telone) or methyl iodide (Midas) for fungicidal, nematocidal, and even added herbicidal activity.

So with all of this said, 50/50 will be the principal fumigant of choice this fall, but realize that there are other choices that should be considered for testing. If growers are intent on using 50/50, they should really consider a reduced rate (150 lb/A) under a high barrier or VIF mulch film. We recognize that the costs for a minimum 20-25% reduced rate and use of the high barrier are not off-setting. We believe that any problems in field preparation, fumigant calibration, delivery, and or containment will only force growers to pay for the errors later with reduced pest control efficacy and yield. To us, it translates to 'you can pay for it now or later, take your pick'.

This past spring we concluded the season much the same way we have others, with an extension grower meeting. This year in addition to a discussion of Critical Use Exemptions (CUE) for methyl bromide, we focused on the current status of EPA re-registration of the soil fumigants, particularly that of chloropicrin. It was a lively, well attended meeting, particularly after it was reported that we were getting near the bitter end to methyl bromide availability and that EPA was proposing to implement requirements for pretty substantial buffer zones surrounding fumigant treated fields. We proceeded to indicate that due to changes in personal protective equipment (PPE) and buffer zone requirements anticipated with

EPA fumigant reregistration, our field research focus had shifted towards evaluations and recommendations of pre-bed applications rather than in-bed or broadcast fumigant treatments. We indicated that the best available alternative for strawberry is currently Telone C-35 (1,3-Dichloropropene + 35% chloropicrin), applied pre-bed at 22 to 35 gallons per treated acre, 3-5 weeks ahead of scheduled transplanting (Table 1). We indicated that to avoid the requirement for use of half face respirators, Telone C-35 had to be injected to flat soil just prior to any soil mounding or bed-forming operation (pre-bed) to a depth of at least 12 inches. In combination with pre-bed Telone C-35, we recommend use of only a high barrier or virtually impermeable mulch film (VIF). With use of the impermeable mulches, fumigant rates can be reduced 25 to 40% from maximum labeled broadcast application rates as a starting point for evaluation. In addition to the Telone C-35, a herbicide tank mix of Goal (oxyfluorfen) (0.5 pounds) plus Devrinol (napropamide) (4 pounds) per treated acre, applied to the raised bed surface at plastic laying would overcome the weed control limitation of the fumigant. Also remember that use of Goal requires a minimum 30-day pre-plant interval before transplanting.

In addition to pre-bed Telone C-35, there are other fumigant options which we believe growers should be considering for field evaluation during Fall 2007, particularly where sting nematode is a recurring problem. In these situations, a late summer broadcast treatment with Telone II (12-18 gal/A) should be considered in advance of a pre-bed treatment with chloropicrin alone or with Telone C-35. With 2 drip tapes per bed, chemigational uses of the alternative fumigants should also be considered as potential alternatives to methyl bromide, particularly for minimizing PPE and future buffer zone requirements. Conducting the fumigation after the plastic is laid and

irrigation is operational puts the majority of workers out of the field and the fumigant under the plastic. Based on our previous injection dye work, we know that use of two tapes per bed will provide near complete distribution and coverage of the fumigant in the bed, but just as important, will also confer significant benefit to plant growth through improved plant nutrition and moisture availability to twin rows of strawberry and then to any crops which follow. If there were a ‘Best buy’ or ‘blue light special’ to be had, this strategy is it.

We realize that human nature prevents us from assuming too much risk, from treading too far into the unknown and unfamiliar. At some point however, these giant steps will have to be taken, particularly when we’ve shown the risks to be minimal. At some point we will have to accept the use

of the high barrier mulches as standard operating procedure and the sooner we begin the evaluation of the alternative fumigants the better off we will be. Methyl bromide price and continued availability has been both a blessing and impediment to Florida growers who continue to be reluctant to transition to the new integrated pest management strategies. We don’t believe the attitude and response to suggested change should be “I will quit farming” before I do this or do that. As altruists, we are afraid that Florida strawberry farmers will be forced to quit farming if they don’t start the investment, i.e., planning and implementing their own on-farm transition strategies and timetables. The learning curve can be steep, and we don’t think growers can wait until the bitter end and pull it off flawlessly.

Table 1. Recommended alternative fumigant and herbicide treatment regime to that of methyl bromide 50/50 for Florida strawberry Fall 2007.

CROP	Treatment	Application Procedure	Herbicide Rate
Strawberry	Telone C-35 22-35 gal/a	Pre-Bed ¹ , under High Barrier or VIF Mulch Film ² ; applied 3-5 weeks before transplanting	Oxyfluorfen ³ (0.5 lb) Napropamide (4 lb)
Strawberry	Telone II 26 gal/a Chloropicrin (75-150 lb/a)	Applied Broadcast ¹ ; 2-3 weeks before in-row chloropicrin treatment. Pre-Bed ¹ , under High Barrier or VIF Mulch Film ² ; 2-3 weeks before transplanting	Oxyfluorfen (0.5 lb) Napropamide (4 lb)
Strawberry	Telone II 26 gal/a Telone C-35 22- 35 gal/a	Applied Broadcast ¹ ; 2-3 weeks before in-row chloropicrin treatment. Pre-Bed ¹ , under High Barrier or VIF Mulch Film ² ; 2-3 weeks before transplanting	Oxyfluorfen (0.5 lb) Napropamide (4 lb)
CHEMIGATION – 2 Drip tapes / bed			
Strawberry	InLine 22- 35 gal/a	Post-Bed , under High Barrier or VIF Mulch Film ³ ; 3-5 weeks before transplanting	Oxyfluorfen (0.5 lb) Napropamide (4 lb)
Strawberry	Vapam or Kpam 75 or 60 gal/a	Post-Bed , under High Barrier or VIF Mulch Film ² ; 3-5 weeks before transplanting	Oxyfluorfen (0.5 lb) Napropamide (4 lb)

¹ To avoid the requirement for use of half face respirators, inject Telone C35 to flat soil prior to any soil mounding or bed operation (PreBed) to a depth of at least 12 below the final bed top.

² In combination with fumigant, use only a high barrier or virtually impermeable mulch film (VIF) with measured transmissivity to methyl bromide of less than 14 grams per square meter per hour. With use of the mulch, fumigant rates can be reduced 25 to 40% from maximum labeled application rate.

³ Oxyfluorfen (Goal),: Napropamide (Devrinol)

What is Geomatics?

Amr Abd-Elrahman, Assistant Professor of Geomatics—GCREC Plant City

Geomatics is defined in the Oxford English Dictionary as “the mathematics of the earth; the science of the collection, analysis, and interpretation of data, especially instrumental data, relating to the earth's surface”.

Geomatics helped the development of many evolving technologies that strongly touch our daily life. When we talk Geomatics we can talk about navigation and positioning using GPS equipment; Google Earth mapping through satellite and aerial images, and county land records via Geographic Information Systems (GIS), etc.

Advancements in the field of **Precision Agriculture** are strongly linked to recent development in the Geomatics field. For example, autonomous navigation of equipment, such as farm tractors, is only facilitated by GPS technology. Plant behavior with different soil management and fertilization techniques can be imaged, monitored, and managed. Plant diseases can be detected early through imaging with different sensors utilizing a wide range of infrared energy. With tens of billions of dollars spent by the agriculture industry in soil treatment, fertilizing, and fighting plant diseases, it leaves no doubt that the integration of Geomatics technology and expertise in the Precision Agriculture field, which has long way to go, shall be of a great mutual benefit to both fields.



Using Preplant Starter Fertilizer with ‘Strawberry Festival’

Bielinski M. Santos, Horticulturist

Nitrogen (N) is the most absorbed plant nutrient on per weight basis in most vegetable crops. This nutrient is an essential component of basic structures in all plant species and its deficiency can severely affect growth and development. Most of the N is absorbed through plant roots in the form of the ion nitrate (NO_3^-) dissolved in the solution. In soils with low organic matter content, such as the sandy soils throughout Florida, natural N supply is low and supplemental fertilization is required to cover the crop demand of this essential nutrient. In strawberry production, this is achieved in two ways: a) through application during the growing season of all N through drip lines (fertigation), or b) a combination of this practice and the application of dry preplant starter N before bed formation.

Recent surveys showed that about one-half of strawberry growers apply preplant fertilizer formulas that include N. Application rates usually ranged between 20 and 40 lb/acre of N. Environmental concerns over leaching nitrates to Florida ground waters has brought to the forefront the necessity of conducting research on best management practices that could reduce the use of starter fertilizers in production systems where fertigation is available, such as in strawberry fields. Therefore, studies were conducted to determine whether using preplant starter N fertilization increases strawberry early and total yield.

Field studies were conducted at the Gulf Coast Research and Education Center, IFAS, University of Florida. ‘Strawberry Festival’ bare-root transplants from Canadian nurseries were transplanted in the first week in October of each year. Plant nutrients, other than N, were applied through drip lines according to IFAS recommendations to ensure

non-limiting conditions. Calcium nitrate was used as the starter fertilizer at a rate of 40 lb/acre of N. A non-treated control was also included. The fertilizer was broadcast incorporated 4 inches deep on bed tops before final bed pressing. Afterwards, beds were fumigated and covered with black high-density polyethylene mulch immediately after fumigant injection. Simultaneously, a single drip line was buried on bed centers. Strawberries were grown following recommended local practices.

The results showed that applying starter N fertilizer did not improve monthly or total strawberry yield (Figure 1). This indicated that growers can avoid using preplant starter N fertilizer and still obtain the same yields, provided that appropriate fertigation rates are used to ensure satisfactory crop growth and development.

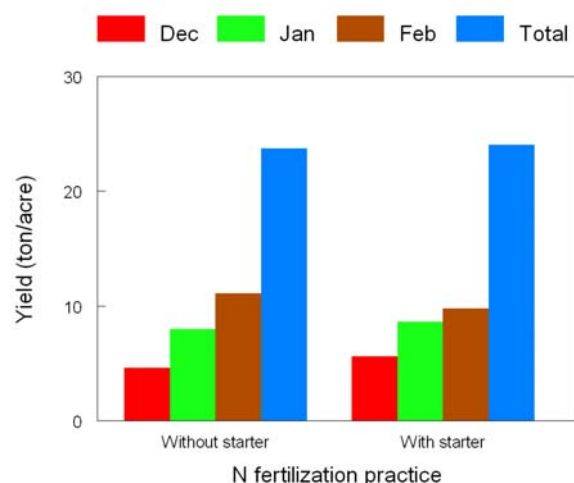


Figure 1. Strawberry marketable yields per month and total in response to the application of starter (preplant) N fertilizer at a rate of 40 lb/acre.

Your Skin in the Sun

From [Safety Stuff](#) no. 346 March 28, 2007—
Richard Hawk

"Beauty's but skin deep," observed a poet of Elizabethan times—a depth, actually, of only a few millimeters. This thin, elastic covering gloves the body from scalp to sole, giving color and character to the human form. Of all the body's tissues, none is more exposed to disease and injury than the skin.

Here are a few tips and trivia about this wonderful (but often abused) organ:

- Skin cancer is the most common form of cancer. Ultraviolet light is its leading cause. People of northern European descent, having the least amounts of melanin, are most prone. Ireland, with a fair-skinned population, has one of the world's highest rates of skin cancer, even though it does not receive especially high amounts of ultraviolet light. Basically, the darker your skin is naturally, the less likely you are to get skin cancer.
- It is ironic that tanned skin is associated with a youthful, healthy look. Steady tanning can lead to premature wrinkles, sags and discoloration.
- Sun damage is cumulative and irreversible. Once the skin is so affected, no amount of facials or moisturizers can reverse the damage, which usually does not show up until later in life.
- You might be getting only half as much skin protection from your sunscreen lotion as you think. The thickness of the sunscreen layer on your skin is the key to getting the sun protection promised on the bottle. In a clinical study, 50 people applied a variety of brands of sunscreen the way they normally would. Scientists added fluorescent coloring to the sunscreens so the thickness could be measured. Most of the sunscreen-users rubbed on their lotion only half as thick as the recommended thicknesses.

- Scars have less pigment than the rest of your skin, so they're especially vulnerable to sunburn--and prolonged redness. You should make certain to cover all exposed scars with a sunscreen with an SPF of 25 or higher.
- A simple, moderately severe sunburn damages the blood vessels to such an extent that it takes four to fifteen months for them to return to their normal condition.
- The most effective sunscreens contain the chemical agent paraaminobenzoic acid, PABA, which duplicates the action of melanin by absorbing ultraviolet rays. Products such as baby oil and coconut butter do not protect the skin from burning at all.
- In the United States, more than 500,000 new cases of skin cancer are found each year. This is why one in seven Americans can expect to get skin cancer.
- Some diuretics, antibiotics, tranquilizers, birth control pills and diabetes medications can add more salt to your sun-burn wounds. They can make you sun-sensitive. So can some medicated soaps, perfumes and "wrinkle removers". So if you use any of these medications or products, doctors advise you to take extra precautions when exposing your skin to the sun.
- In only one square inch of human skin there are 19 million cells, 625 sweat glands, 90 oil glands, 65 hairs, 19 feet of blood vessels, 19,000 sensory cells, and over 20 million microscopic animals.

2007 Farm to Fuel Summit July 18-20 • St. Petersburg Florida Marriott Renaissance Vinoy Resort and Golf Club

This unique conference provides industry leaders with an excellent opportunity to learn, network and strategize. *Who should attend?* Producers, Marketers and Retailers of Ethanol, Biodiesel, and Petroleum; Farmers, Ranchers, Agriculturalists; Government Officials; Transportation Industries; Researchers, Scientists; Lenders and Financial Institutions; Investors.

If you are interested in attending the 2007 Summit, find the registration form at:
http://www.floridafarmtofuel.com/RegForm_2007.pdf.

The registration fee is \$300.00 and your check or money order should be made out to the Florida Dept. of Ag and Consumer Services, and mailed to: FDACS—Farm to Fuel Summit, 3125 Conner Blvd., Ste. E MS C17, Tallahassee, FL 32399-1650

For room reservations: Call the resort directly at 1-888-303-4430. The summit rate is \$139.

If you have any questions regarding the summit—email summit@doacs.state.fl.us or call 850-922-5432.



Actara and Platinum Receive Expanded Labels

Syngenta Crop Protection on June 19, 2007 was granted by the EPA expanded labels for Actara® and Platinum® insecticides. The expanded labels will allow higher application rates and use on additional vegetables and grapes. State registrations for these expanded labels are pending.

New crops for Actara will include fruiting vegetables, cucurbits, leafy vegetables, brassica crops and grapes. For Platinum this will include leafy vegetables, brassica crops and grapes.

Actara and Platinum have the same active ingredient, thiamethoxam, which is used to control many sucking and chewing pests. Actara is foliar applied and Platinum is soil applied.

Summarized from media release received from Syngenta on June 25, 2007.

Pesticide Registrations and Actions:

- Chateau herbicide (flumioxazin) has been approved for use on strawberry. The EPA registration number for the Valent product is 59639-119. (*The Grower*, April 2007).
- The EPA has approved tolerances for the fungicide prothioconazole, which is a demethylation inhibitor. This triazolinthone compound is active against *Septoria* spp., *Fusarium* spp., and *Rhizoctonia* spp. and has both curative and eradicated activity. Tolerances of importance to Florida include: peanut and pea and bean excluding soybean (subgroup 6C). (*Federal Register*, 3/14/07).

- The EPA has once again approved a Section 18 specific exemption in Florida for the use of thiophanate (Topsin ® M) on fruiting vegetables to control white mold. The exemption will expire on 4/12/08 (FDACS letter, 4/9/07).
- Sovran fungicide (kresoxim) has been approved for use on cucurbits to control powdery mildew and gummy stem blight. The EPA registration number for the BASF product is 7969-154. (*The Grower*, May 2007).

Pesticide Potpourri

An unusually durable fungus that was first spotted on tiny insets feeding on eggplants in Texas may be come a new biological control for the widespread and costly whitefly. The fungus was first isolated by USDA Agricultural Research Service (ARS) entomologists at the ARS Beneficial Insects Research Unit, Weslaco, Texas. The new fungal species has been names *Isaria propawskii*. In the lower Rio Grande Valley of Texas, it has been shown to kill both larval and adult stages of silverleaf whitefly. In fact, since 2001, it has periodically wiped out whiteflies at the ARS insect-rearing facilities in Weslaco. Notable aspects of *I. propawskii* include its natural establishment in a semiarid region where temperatures can reach 107 degrees Fahrenheit and its continuing persistence, even in the absence of insect hosts. A high spore production in common culture media makes this fungus comparatively easy to grow *in vitro* in the laboratory. These features, plus its high pathogenic potential against a second major insect pest—the glassy-winged sharpshooter, *Homalodisca vitripennis*—make the fungus a promising candidate for practical biological control of two major U.S. farm pests. (ARS News, 5/11/07).

The use of trade names in this publication is solely for the purpose of providing specific information. It is not a guarantee or warranty of the products names and does not signify that they are approved to the exclusion of others of suitable composition. Use pesticides safely. Read and follow directions on the manufacturer's label.



Africanized Honey Bee Training

Friday, 6 July 2007

Hillsborough County Cooperative Extension Service, 5339 County Rd 579 Seffner, Fl., 33584-3334

Morning Session: 9:00 a.m. - Noon Training for First-Responders
(Fire Fighters, Law Enforcement, Pest Control Operators)

Afternoon Session: 1:00 - 4:00 p.m. Safety Training for Outdoor Workers
Registration is Free!
Registration is Required!

This program is supported by a grant from the Florida Department of Agriculture and Consumer Services. ***Registration is required!** To register, please call Steffany Dragon at 813-744-5519 x 127 or Lacey Marsden x 128. AHB Training Programs

Agenda

Morning: Training for First-Responders
(Fire Fighters, Law Enforcement)

- 9:00 Africanized Honey Bee Biology and Behavior
- 10:00 Personal Protection Equipment and Tactics
- 11:00 Rescue / Extraction
- 12:00 Distribution of Training Certificates

Afternoon: Outdoor workers

- 1:00 Africanized Honey Bee Biology and Behavior
- 2:00 Personal Protection Equipment and Response
- 3:00 Swarm and Colony Control Recommendations
- 4:00 Distribution of Training Certificates and GHP CEU's



Africanized Honey Bee Informational Program
Free to the General Public!

Thursday Evening, 5 July 2007
Hillsborough County Cooperative Extension Service, 5339 County Rd 579 Seffner, Fl. 33584-3334
813-744-5519

- 6:30 p.m Introduction to the Africanized Honey Bee**
- 7:30 p.m Questions and Answer Session**

This program is supported by a grant from the Florida Department of Agriculture and Consumer Services.



December 6-7, 2007
University of Florida/IFAS
Gulf Coast Research and Education Center, Balm, FL
<http://flagexpo.ifas.ufl.edu>
for upcoming details.

A University of Florida/IFAS and Florida Cooperative Extension Service newsletter
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<http://grec.ifas.ufl.edu>

WPS “Train the Trainer” Three Steps to WPS Training Success

July 12, 2007

1:30 to 4:30 pm

Hillsborough Co. Extension Office
813-744-5519

Step One

WPS Requirements—an Overview

- The EPA How to Comply Manual—and you’ll receive a copy.
- The Florida Agricultural Worker Safety Act
- The Florida “First Offense” Fines

Step Two

Conducting Worker Training

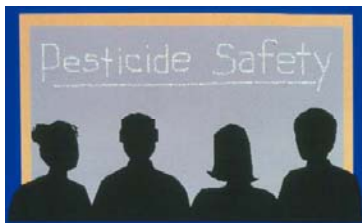
- Training requirements
- Documentation

Step Three

Training Materials and Methods

- Selecting Materials
- Training Techniques

Who should attend? Anyone who employe agricultural workers or pesticide handlers (or both) in the commercial production of agricultural plants: Nursery, Greenhouse, Farm, Forest. CEU’s available.



WPS “Train the Trainer”

Registration - \$20.00 (non-refundable)
Materials & Refreshments provided.
Registration Deadline July 09, 2007

Name

Company

Address

City, State

Zip

Phone

E-mail

Please detach and mail completed form with checks payable to “TBWG Extension Education Fund” to Laura Miller.

Hillsborough County Extension Office
5339 County Road 579
Seffner, FL 33584

Participants requiring special accommodations contact Laura Miller by July 9, 2007. lm1@ufl.edu.