



Dade Pesticide Newsletter



Vol. 12, No. 3

Winter 2007-08

Upcoming Classes & CEU Workshops

Training Classes

- * **Thursday, January 10th**—General Standards Training Class & Exam.
Location: John D. Campbell Ag Center, Homestead. *Time:* 8:30—3:00. *CEUs:* 4.0 Core
- * **Wednesday, February 6th**—Aquatics Training Class & Exam. *Location:* John D. Campbell Ag Center, Homestead. *Time:* 8:30—5:00. *CEUs:* 6.0 Aquatics, Private, Ag Animal
- * **Wednesday, March 19th**—General Standards Training Class & Exam.

Location: South Dade Government Center, Cutler Bay. *Time:* 8:30—3:00. *CEUs:* 4.0 Core

- * **Wednesday, March 26th**—Right-of-Way Training Class & Exam.
Location: John D. Campbell Ag Center, Homestead. *Time:* 8:30—3:00. *CEUs:* 4.0 Right-of-Way, Natural Areas Management

Registration & pre-payment are **required** for these workshops. Please call Lize (305) 248-3311 X242 for a registration form or visit <http://miami-dade.ifas.ufl.edu/programs/pesticidetraining.htm>

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Washington Begins Mandated Spray Study

As directed by the 2007 legislature, the Washington State Department of Agriculture (WSDA) is starting a 2-year, \$150,000 voluntary notification study project concerning the application of Danger/Poison pesticides near schools, hospitals, nursing homes and adult/child daycares. This project will collect data to determine if notification is a significant factor in reducing pesticide exposures when agricultural pesticides are applied by aerial or airblast application methods near these facilities. The study ... will focus on pesticides labeled with the signal words Danger/Poison that are applied either by air or by airblast application equipment. A voluntary notification register will be maintained by the Department and made available for applicators to check contact information if they plan on making specific types of applications near facilities.

The primary source of information regarding location of facilities and facility contact information will be the WSDA website. Being a voluntary notification project, no regulatory action will be taken against any applicator that fails to notify a nearby facility nor against any facility that does not want to be notified. However, it is hoped that by providing an easy and practical way for applicators to let facilities know in advance that an application is anticipated, communication will be enhanced and the potential for pesticide exposures reduced. Applicators will be informed on where they can find information on facilities that want to be notified. As a requirement for a facility to be listed on the WSDA website for notification, the facility must agree to completing a questionnaire.

It is the policy of Miami-Dade County to comply with all of the requirements of the Americans with Disabilities Act (ADA). For sign language interpreter services, call 305-670-9099 5 days in advance. For material in accessible format call the Consumer Services Department (CSD). For ADA complaints call CSD at 305-375-3843 or the Office of ADA Coordination at 305-375-3566. The use of trade named products is with the understanding that no endorsement is made to the exclusion of other equally effective products.

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 Vegetable Agent & County Trainer

WSDA will not be collecting specific information on the pesticides applied or the applicator. Data will be collected on the number and type of facilities participating, the number of notifications received, any actions taken by a facility

as a result of the notification, and any increase or decrease in the number of drift complaints reported to WSDA due to increased awareness of applications. (*Beyond Pesticides Daily News blog, 11/14/07, Chem. Speak, 12/07*).

Hard Time to Get Ahead for Plants

Botanists at Oregon State University have discovered that a single plant gene can cause resistance to one disease at the same time it produces susceptibility to a different disease - the first time this phenomenon has ever been observed.

Botanists at Oregon State University have discovered that a single plant gene can cause resistance to one disease at the same time it produces susceptibility to a different disease - the first time this phenomenon has ever been observed. The finding, published this week in *Proceedings of the National Academy of Sciences*, may help scientists better understand the pathways that genetic disease resistance can take. Plant diseases are a multi-billion dollar problem in agriculture, and scientists for decades have been trying to develop new varieties of plants with resistance to one disease or another.

said Jennifer Lorang, an OSU research associate. "But it also turned out that the same gene can provide disease protection. This is very unusual, and should provide insight into genetic influences on disease resistance and susceptibility." Most work that has been done on plant diseases is focused on disease resistance, the researchers said, and less has been done on the genetic basis for disease susceptibility. Among other things, the study suggests that plants bred for resistance to one disease may inadvertently be changed in ways that make them susceptible to a different disease. It also indicates that the physiological basis for disease resistance and susceptibility may have some similarities.

The research also explains why an epidemic of Victoria blight in oat, a fungal disease, occurred in the United States in the 1940s. The Pc-2 gene in a widely-planted, imported variety of oat provided good resistance to oat rust, which is a costly crop disease. However, the same gene also caused susceptibility to Victoria blight, and its use had to be discontinued as a result. "The blight fungus makes a toxin that causes disease in susceptible plants - that is, only plants that carry this gene,"

The actual plant used to identify these genetic pathways was *Arabidopsis*, a small plant in the mustard family, which is frequently used for genetic research. The scientists put the Pc-2-like gene in *Arabidopsis*, which has a similar function in oat, and were able to determine that it causes disease susceptibility, although it looks like a resistance gene. (*OSU, 8/27/07, Chem Speak., 9/07*).



Petition to Cancel All Uses of Chlorpyrifos

EPA is seeking public comment on a petition by the National Resources Defense Fund (NRDC) and Pesticide Action Network of North America (PANNA) to revoke all tolerances and cancel all registrations for chlorpyrifos (Lorsban, Dursban, etc.)

The petitioners believe this action would be proper application of the

safety standards of FIFRA and the Federal Food, Drug, and Cosmetic Act (FFDCA), section 408 as amended by the Food Quality Protection Act of 1996.

EPA is accepting comments until December 17, 2007. (*Fed. Reg., 10/17/07*)



Farmers Urged to Review New Department of Homeland Security Chemical Guidelines

Farmers and agribusinesses should review chemical guidelines and determine whether they will be affected by a new U.S. Department of Homeland Security regulation, Pennsylvania Agriculture Secretary Dennis Wolff said this week.

In an effort to increase the security of high-risk chemical facilities, the Department of Homeland Security recently released a list of chemicals that, if possessed by a facility in a specified quantity, would require them to complete a Chemical Security Anti-Terrorism Top-Screen assessment. Those required to go through this initial screening must do so before Jan. 21.

Failure to comply with the regulations could result in civil penalties of up to \$25,000 per day or the shut down of the facility.

"... farmers and agri-businesses storing fertilizers, pesticides and other chemicals might be affected by these new regulations, so it is important that they quickly determine if they meet the new federal requirements," said Wolff. "I urge all producers and businesses to review the requirements and contact the U.S. Department of Homeland Security if they have any questions.

Chemicals of interest and quantities that are most likely to affect agriculture include, but are not limited to:

Testing for Pesticide Exposure

Many from the public health and farm worker communities are pressing for the development of diagnostic biomarkers – relative inexpensive tools that measure a biological parameter that serves as an indicator of pesticide exposure.

These tools could also give EPA better data to determine in what circum-

* Chlorine--2,500 pounds (bulk, not bagged or in some other transportation package)

* Chlorine--500 pounds (bagged, on a trailer, or in some other transportation package)

* Anhydrous ammonia--10,000 pounds (4 typical pull behind tanks, completely loaded)

* Ammonium nitrate--2,000 pounds (bagged, on a trailer, or in some other transportation package)

* Potassium nitrate--400 pounds (bagged, on a trailer, or in some other transportation package)

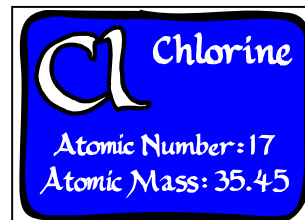
* Sodium nitrate--400 pounds (bagged, on a trailer, or in some other transportation package)

For more information on the U.S. Department of Homeland Security's Chemical Facility Anti-Terrorism Standards, or to view the chemicals of interest list, visit <http://www.dhs.gov/chemicalsecurity>.

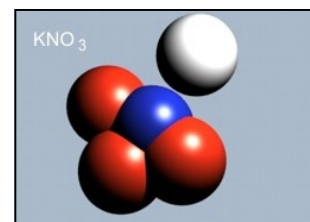
For questions when completing the top screen, call the Chemical Facility Anti-Terrorism Standards help desk at 866/323-2957. (Contact: Kristi L. Rooker, 717/787-5085) (Email from Kevin Keaney, Chief, Pesticide Worker Safety Programs & Pesticide Container / Containment Programs, US EPA)

stances people may be overexposed to pesticides and the effectiveness of protective measures taken to prevent over-exposures.

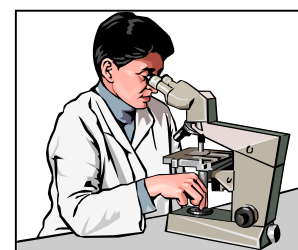
Diagnosing a pesticide poisoning is very difficult because victims of such poisoning often present with [exhibit] symptoms that can also be caused by a variety of other conditions. Further-



"In an effort to increase the security of high-risk chemical facilities, the Department of Homeland Security recently released a list of chemicals that, if possessed by a facility in a specified quantity, would require them to complete a Chemical Security Anti-Terrorism Top-Screen assessment.



www.science.ca/images



“Diagnostic test performance looks great in small populations with a high rate of disease,” Goldstein said. “But if you have a test that is right 99% of the time, and you test one million people in the general population, you are going to generate 10,000 false positives. If the incidence of disease is only one in 10,000, you are going to be wrong 99.995 of the time.”

more, just because someone presents with symptoms and was exposed to a pesticide does not mean the illness was caused by the exposure.

The tools currently available to confirm a pesticide poisoning also provide challenges. Cholinesterase is one of the few biomarkers available. But a baseline cholinesterase level is needed to measure changes, and factors other than pesticides can influence cholinesterase levels.

There are obstacles to diagnostic biomarker development. “The greatest challenge is connecting a biomarker itself with overexposure,” Matthew Keifer (University of Washington) said.

There are other challenges to developing diagnostic biomarkers for pesticide poisoning. According to Dan Goldstein, director of medical toxicology at Monsanto, some pesticides, such as glyphosate and acetochlor, will not have a clinical effect to look for. “There is simply no acute toxicity to be diagnosed at environmental levels of exposure,” he

said.

“Diagnostic test performance looks great in small populations with a high rate of disease,” Goldstein said. “But if you have a test that is right 99% of the time, and you test one million people in the general population, you are going to generate 10,000 false positives. If the incidence of disease is only one in 10,000, you are going to be wrong 99.995 of the time.

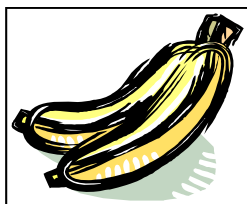
“There is no role for diagnostic biomarkers expect for clinical confirmation of a suspected poisoning. But as a screening tool, they are not helpful,” Goldstein said.

Keifer agreed with Goldstein, but stressed that using it as a screening tool was never the intention of anyone who brought up the idea of diagnostic biomarkers. A clinician would decide when to use a diagnostic biomarker test, he said. (*Pestic. & Toxic Chem. News, 10/29/07; Okla. St. Univ. Pestic. Reports, 12/07*)

Pesticide Registrations, Tolerances, Etc.

Tropical Fruit

* The FDACS has conditionally approved the registration of *Delegate*® insecticide (spinetoram) for use on *banana/plantain, bushberries, citrus, fig, grape, pome and stone fruit, tropical tree fruits, and tree nuts* for control/suppression of caterpillars, leafminer, thrips, and certain psyllids. The EPA Reg. No. for the Dow AgroSciences product is 62719-541. (*PREC Agenda, 12/6/07*).



Tropical Fruit & Vegetables

* (potassium silicate) for use on *food crops*. The EPA Reg. No. for the PQ Corporation's product is 82100-

1. (*PREC Agenda, 12/6/07*).

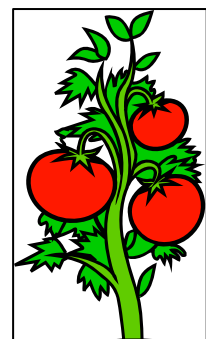
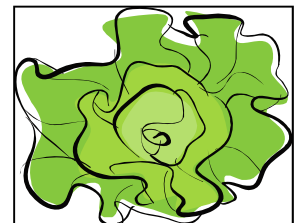
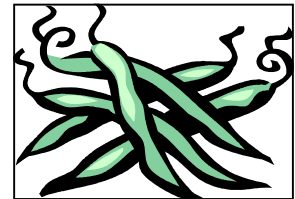
* Based on a request by Dow AgroSciences, the EPA has approved tolerances for the insecticide spinetoram (*Delegate*®/*Radiant*®). Tolerances of importance in Florida include: *acerola, atemoya, avocado, banana, brassica leafy greens (subgroup 5B), brassica head and stem (5A), bushberry, canistel, cherimoya, citrus, sweet corn, cotton, feijoa, fig, grape, guava, herbs, longan, lychee, mango, okra, green onion, papaya, passionfruit, succulent pea and bean (subgroup 6B), peanut, pulasan, rambutan, salal, sapodilla, sapote (all),*

soursop, star apple, star fruit, strawberry, sugar apple, bulb vegetables (group 3), edible podded legumes (subgroup 6A), leaves of root and tuber vegetables (group 2), leafy non-brassicacs (group 4), foliage of legumes (group 7), fruiting vegetables (group 8), cucurbits (group 9), wax jambu, and watercress. (Federal Register, 10/10/07).

Vegetables

- * The Florida Department of Agriculture and Consumer Services (FDACS) has approved a Special Local Needs (SLN) registration for the use of EPTC (*Eptam*® 7-E) herbicide to control weeds such as nutsedge under plastic mulch in transplanted tomato. The registration is FL-070007. (FDACS letter of 10/22/07).
- * The FDACS has approved a SLN registration for the use of lactofen (*Cobra*®) herbicide for pre- and postemergent weed control between rows of fruiting vegetables and okra grown in raised bed plastic-mulch production systems. The registration is FL-070006. (FDACS letter of 9/26/07).
- * The FDACS has conditionally approved the registration of Actara® (thiamethoxam) insecticide for use on brassica leafy vegetables, leafy vegetables, cucurbits, and other crops for control of aphids, whiteflies, and other pests. The EPA Reg. No. for the Syngenta product is 100-938. (PREC Agenda, 11/1/07).
- * The FDACS has conditionally approved the registration of Platinum® (thiamethoxam) insecticide for use on brassica leafy vegetables, leafy vegetables, cucurbits, and other crops for control of aphids, whiteflies, and other pests. The EPA Reg. No. for the Syngenta product is 100-939. (PREC Agenda, 11/1/07).

- * The FDACS has conditionally approved the registration of Radiant® insecticide (spinetoram) for use on bulb vegetables, cole crops, cotton, cucurbits, fruiting vegetables, herbs, leafy and legume vegetables, leaves of root/tuber and legume vegetables, okra, potato, tuberous and corm vegetables, soybean, and strawberry for control/suppression of caterpillars, leafminers, thrips, and certain psyllids. The EPA Reg. No. for the Dow AgroSciences product is 62719-545. (PREC Agenda, 12/6/07).
- * Based on a request by IR-4, the EPA has approved tolerances for the fungicide fluazinam (*Omega*®). Tolerances of importance in Florida include: succulent pea and bean, as well as brassica leafy vegetables (group 5) and edible-podded legumes except pea (subgroup 6A). (Federal Register, 10/24/07).
- * Based on a request by IR-4, the EPA has approved tolerances for the insecticide bifenthrin (*Discipline*®). Tolerances of importance in Florida include: pepino, radish tops, and root vegetables except garden and sugar beets (subgroup 1B). (Federal Register, 10/24/07).
- * Based on a request by IR-4, the EPA has approved tolerances for the fungicide fenamidone (*Reason*®). Tolerances of importance in Florida include: brassica leafy greens (subgroup 5B), brassica head and stem (5A), cotton, nonbell pepper, leafy non-brassicacs (group 4), and fruiting vegetables. (Federal Register, 10/24/07).



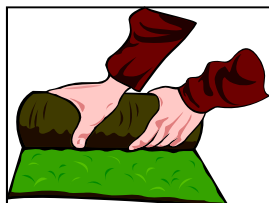
Non food

- * FDACS has conditionally approved the registration of Flagship® 0.22G (thiamethoxam) for use on ornamentals, non-bearing fruit and



nut trees, and other crops for control of aphids, whiteflies, and other pests. The EPA Reg. No. for the Syngenta product is 100-960. (PREC Agenda, 11/1/07).

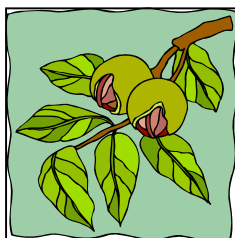
- * FDACS has *conditionally approved* the registration of *Meridian® 0.33G* (thiamethoxam) for use on *turfgrass, residential lawns, sod farms, and other sites* for control of grubs, mole crickets, chinch bugs, and other pests. The EPA Reg. No. for the Syngenta product is 100-961. (PREC Agenda, 11/1/07).



- * FDACS has *conditionally approved* the registration of *Meridian® 25G* (thiamethoxam) for use on *turfgrass, residential lawns, sod farms, and other sites* for control of grubs, mole crickets, chinch bugs, and other pests. The EPA Reg. No. for the Syngenta product is 100-943. (PREC Agenda, 11/1/07).



- * FDACS has approved the registration of *Siesta®* fire ant bait (metaflumizone) for use on *lawns, landscaped areas, golf courses, sod farms, industrial/municipal sites, other non-crop areas, and in nurseries containing non-bearing fruit and nut trees*. The EPA Reg. No. for the BASF product is 7969-232. (PREC Agenda, 11/1/07).



- * FDACS has approved the registration of *Altrevin®* fire ant bait (metaflumizone) for use on *non-bearing citrus, fruit, and nut trees in field or nurseries*. The EPA Reg. No. for the BASF product is 7969-232. (PREC Agenda, 11/1/07).

- * FDACS has approved the registration of *Sil-Matrix®* fungicide/miticide/insecticide (potassium silicate) for use on *turf and ornamental plants*. The EPA Reg. No. for the PQ Corporation's product is 82100-1. (PREC Agenda, 12/6/07).



- * Other Actions

- * On August 10, the EPA announced that it will *not initiate a special*

review for 2,4-D, 2,4-DB, or 2,4-DP based on extensive scientific review of many epidemiology and animal studies that, by weight of evidence, do not support evidence of carcinogenicity. They also will *terminate the special review of oxydemeton* (Metasystox-R®) because mitigation measures are already in place. (OPP Update, 8/10/07).

- * The EPA is due to release proposed crop deletions for *endosulfan*. For *endosulfan, succulent bean and pea, spinach, grape, and pecan* are proposed for *deletion off the label*. Also some of the REIs will increase (melon/cucurbit to three days, lettuce, celery, and radish to four days). There are a number of other minor changes regarding formulation, application, and rate. If you have any questions or want to provide information regarding your use of these materials, call the Pesticide Information Office. (SRIPMC email, 10/12/07).

- * The new label for *dicofol* has restricted entry intervals (REIs) that will greatly reduce the availability of this material in Florida crops that utilize it. The REI for *strawberry is 31 days, cucurbits are 21 days, and peppers and tomatoes are 25 days*. Old materials can be used as labeled. (Jim Price and Cutis Nagle, 10/2/07).

- * EPA has also proposed to cancel all use of carbaryl (Sevin) on wheat, liquid applications to turf, pet applications except in pet collars, and granular use on corn, grain sorghum, alfalfa and sunflowers. Carbaryl use on residential turf will continue but only with ready-to-use (RTU) hose end application for spot treatments. (Pestic. & Toxic Chem. News, 10/1/07)

- * The EPA has completed its *cumulative human health risk assessment* for the *N-methyl carbamate class of pesticides*,

which includes: aldicarb, carbaryl, carbofuran, formetanate, methiocarb, methomyl, oxamyl, pirimicarb, propoxur, and thiodicarb. The Agency has concluded that when considered together with the risk mitigation steps identified in the individual risk management decisions for these pesticides, the cumulative risks associated with this class of pesticides are below the regulatory level of concern established by the Food Quality Protection Act of 1996 (FQPA). EPA also evaluated tolerances - residue limits in food and feed - for cumulative risk and found that tolerances for the N-methyl carbamates meet the FQPA safety standard. The risks associated with the pesticide residues represent a reasonable certainty of no harm. With the reassessment of the remaining tolerances for N-methyl carbamates, EPA has met the goal established by FQPA to ensure that all pesticides used on food in the United States meet the stringent safety standard. All 9,721 tolerances that required reassessment have now been re-evaluated, and related risk management decisions are being implemented. (OPP Update, 9/28/07).

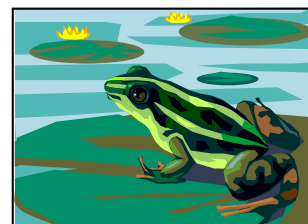
- * The EPA is *proposing to terminate Special Review* for the pesticide *dichlorvos* (DDVP). When the DDVP Special Review was initiated in 1988, EPA identified concerns for cancer and liver effects as well as cholinesterase inhibition. Through the comprehensive reregistration process, the Agency resolved the concerns regarding cancer and cholinesterase effects. The Agency determined that the few remaining uses of DDVP do not present risks that exceed levels of concern, and therefore no additional risk mitigation measures are necessary. (OPP Update, 9/28/07).

- * In October, the EPA will be presenting to the FIFRA Scientific Advisory Panel (SAP) the analysis of the latest data from laboratory and field studies investigating a *perceived connection between amphibian gonadal development and the herbicide atrazine*. Based on this analysis, EPA finds that atrazine does not adversely affect amphibian gonadal development, and believes there is no compelling reason to pursue additional testing of atrazine for amphibian gonadal effects at this time. The Agency is seeking comments and recommendations from the SAP on the analysis of the studies and the conclusions. (OPP Update, 9/25/07).

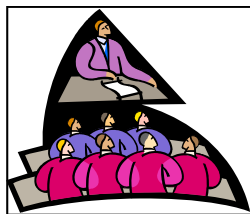
- * The EPA has *clarified its position on the distinction between devices and pesticides* with regard to *ion-generating equipment* and explains why such equipment (such as a silver-generating washing machine) is regulated as a pesticide. The Agency has also invited all interested parties to collaborate with it in identifying data and other information that would be needed to support registration of these products. (OPP Update, 9/21/07).

- * The SLN FL-940003 (Lorsban® for control of worms in sweet corn) has been modified. The maximum number of applications per crop is now 3 rather than 13. (FDACS letter 11/9/07).

- * The USDA's Animal and Plant Health Inspection Service (APHIS) has concluded an investigation into glyphosate-tolerant creeping bentgrass being cultivated by Scotts. Under the settlement agreement, Scotts has agreed to pay a civil penalty of \$500,000 which is the maximum penalty allowed by the Plant Protection Act of 2000. APHIS alleges that Scotts failed to conduct a 2003 Oregon field trial in a manner which



<http://www.ipm.ucdavis.edu/T OOLS/TURF/IMAGES/KEYI MAGES/crbenturf.jpg>



ensured that neither glyphosate-tolerant creeping bentgrass nor its offspring would persist in the environment. Scotts currently is taking monitoring and mitigation actions in Oregon to locate and remove the regulated genetically engineered material that was accidentally released during 2003. As part of the settlement, within one year, Scotts will conduct three public workshops for other

potential developers of genetically engineered plants and interested parties. These workshops will focus on best management practices and technical guidance on the identification and prompt resolution of biotechnology compliance incidents. (USDA Press Release, 11/26/07).

The News in Brief



- * Dr. Marjorie Hoy of UF/IFAS recently returned from Mauritius, where she conducted foreign exploration for predatory mites that suppress red palm mite, *Raoiella indica*, populations. Dr. Hoy returned with predatory mites (Phytoseiidae) that appear to be excellent natural enemies and hopes that colonies can be established for evaluation in quarantine. The red palm mite is an invasive pest in the Caribbean that recently colonized Puerto Rico and [has just been reported in southeastern Florida]. It is a pest of palms and, in the Caribbean, attacks bananas and plantains, as well. (UF/IFAS Entomology/Nematology Dept Newsletter, 10-07).



- * Sap-sucking whiteflies and the diseases they often spread cause some of the world's worst crop problems and are responsible for enormous losses every year. An online resource has been developed and is now available to help growers afflicted by these pests. USDA Agricultural Research Service (ARS) scientists in the agency's Subtropical Insects Research Unit (SIRU) - in

collaboration with the University of Florida, the University of California, the University of Georgia, Texas A & M University and Cornell University, and endorsed by industry groups such as the Society of American Florists, American Nursery & Landscape Association and the IR-4 Project - have developed a website with extensive information about whitefly management. Called "Management Program for Whiteflies on Propagated Ornamentals With an Emphasis on the Q-biotype," the comprehensive online resource can be accessed at: <http://www.mrec.ifas.ufl.edu/LSO/bemisia/bemisia.htm>. Proper use of insecticides is important for whitefly management, particularly with respect to avoiding development of insecticide resistance in whiteflies. The online guide recommends that insecticides be rotated between chemical classes and should be applied a minimum of two times, at a five- to seven-day interval, to allow for egg hatch between applications and ensure that adults, nymphs and newly hatched individuals are all killed. (USDA ARS, 8/22/07).



Happy Holidays!

Enjoy time with friends & family, Mary