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Crystal Snodgrass
Extension Agent, Vegetables
Happy Holidays!

November/December 2008

(Also available online at www.manatee.ifas.ufl.edu/vegetables)

November 14-23 Farm City Week: "Tomatoes are King" is the theme for this year's Farm City Week celebration. For more information on Farm City Week events go to http://manatee.ifas.ufl.edu/farm_city_week/fcw_calendar.shtml

December 4 Vegetable Industry/Growers' Meeting: Will be held on December 4th in the Palmetto/Bradenton area to discuss hot topics in irrigation. Time and location TBA.

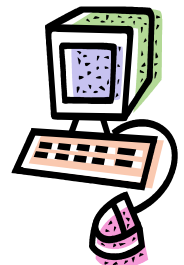
December 9 CORE training: Is offered on principles needed to pass the CORE exam. The exam will be administered directly following the course. The course will be held at the Manatee County Extension service from 9-11am. CORE CEU's available, for more information contact Jennifer at (941) 722-4524.

January: A thrips workshop will be given in the area. Date, time and location TBA.



Publications/Websites of Interest

- ❖ **Speaker presentations from the 2008 Florida Ag Expo** will be posted in PDF format following the event. Information will be posted at the following website <http://www.floridagrower.net/agexpo/about.html>
- ❖ **The 2008 Proceedings of the Tomato Institute** are available at <http://grec.ifas.ufl.edu/TomatoProceedings08.pdf>
- ❖ **The 2007-2008 Vegetable Production Handbook** is available on EDIS! http://edis.ifas.ufl.edu/TOPIC_VPH



- ❖ **"Annual Cover Crops in Florida Vegetable Systems:"** A 3 part document that discusses incorporating cover crops into farming systems. Part 1 gives an overview and discusses the benefits of using cover crops. Part 2 discusses how to choose a cover crop specific to your farm and gives management guidelines. Part 3 discusses purchasing cover crop seeds and gives contact info for retailers and wholesalers. Each part can be found at the following addresses:
 Part 1: <http://edis.ifas.ufl.edu/HS387>
 Part 2: <http://edis.ifas.ufl.edu/HS389>
 Part 3: <http://edis.ifas.ufl.edu/HS390>

- ❖ **"Drip-irrigation systems for small conventional vegetable farms and organic vegetable farms":** a comprehensive overview of the use of drip irrigation systems on small farms It is available on EDIS at: <http://edis.ifas.ufl.edu/HS388>

FARMS Program

The FARMS program, a public / private partnership, has allowed the Southwest Florida Water Management District (SWFWMD) and Florida Department of Agriculture and Consumer Services (FDACS) the opportunity to assist the agricultural community in implementing best management practices (BMPs). FARMS or Facilitating Agricultural Resource Management Systems is a cost-share reimbursement program providing incentives that address water quality and/or water quantity benefits with reimbursement of 50 - 75% of the total project costs. Resource benefits include reducing upper Floridan aquifer withdrawals, improving water quality and/or conserving, restoring or augmenting the area's water resources and ecology. SWFWMD administers the FARMS program, and FDACS administers a program called MiniFARMS that assists smaller farmers. This program can provide up to 85% reimbursement for water quality/quantity improvement projects up to a maximum of \$8,000. MiniFARMS is facilitated through most local Soil and Water Conservation Districts and involves a simple application process. Funding may be limited and the program currently encompasses Citrus, Desoto, Hardee, Hernando, Highlands, Hillsborough, Pinellas, and Polk counties. For more information, visit SWFWMD's website, listed below.

FARMS funding is available to agricultural operations within the District's jurisdictional area and are in compliance with all applicable SWFWMD rules and regulations. FARMS projects submitted for funding consideration must be approved by the District's appropriate Basin Board as well as the Governing Board and are contingent on available funding. Project recipients are required to fund the project and then request reimbursement. Some of the projects the program will consider funding include: tailwater recovery reservoirs, soil moisture sensors, alternative irrigation sources including surface and reclaimed water, and tools that support improved irrigation management such as onsite weather stations and computerized support systems.

The long term goal of FARMS is to offset 40 million gallons per day (mgd) of water by 2025. The successful program is well on its way with the 31 current operational projects offsetting 4.9 mgd.

If you're interested in learning more about the FARMS program and if your agricultural operation may be eligible for cost share funding, please contact:

Bill Orendorff
Manager
FARMS Program
941 / 377-3722 x6529

Rand Baldwin
Outreach Coordinator
FARMS Program
813/ 728-9405

Or email us directly from the contact link at the SWFWMD website:

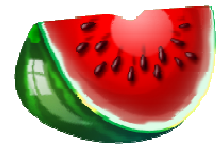
www.watmatters.org/agriculture

If you're interested in learning more about the MiniFARMS program, please contact:

Noel Marton, Manager
FDACS
941/ 377-3722 x6519

Jessica McCoy, Environmental Specialist
FDACS
813/ 987-7481 x2125

Whitefly-Transmitted Viruses in Cucurbits



By: Gary Vallad, UF/IFAS GCREC, Wimauma
Crystal Snodgrass, UF/IFAS Manatee Co. Extension
Scott Adkins, USDA/ARS, Fort Pierce

While tomato growers are quite familiar with the need to manage whitefly populations to minimize the impact of viruses like Tomato yellow leaf curl virus (TYLVC), now cucurbit growers need to be vigilant as well. Several new whitefly-transmitted viruses are now present in Florida, and include *Cucurbit yellowing stunt disorder virus (CYS DV)*, *Squash vein yellowing virus (SqVYV)*, and *Cucurbit leaf crumple virus (CuLCrV)*. All cucurbit crops are susceptible to these viruses to varying degrees. However, these viruses pose little, if any, threat to solanaceous crops, such as tomato or pepper. An outbreak of *CYS DV* and *SqVYV* was already identified in early September in Manatee County. The following descriptions are meant to aid in the recognition of some of the disease symptoms associated with these viruses. Growers are strongly encouraged to submit suspect samples to a county extension office for an accurate diagnosis, since some symptoms can easily be confused with nutritional disorders or other diseases.

Cantaloupe infected with *Cucurbit yellow stunting disorder virus (CYSDV)*:

Causes a range of symptoms in various cucurbits including stunting, deformation of leaves, interveinal chlorosis, leaf mottling and spotting. Symptoms often start on older leaves and then progress to the younger leaves.

Watermelon vine decline caused by *Squash vein yellowing virus (SqVYV)*:

Most severe in watermelon, causes a sudden decline of the plant near harvest that includes chlorosis and necrosis of the leaves, necrosis and collapse of petioles, and ultimately a collapse of the vine. Although fruit may appear normal from the outside, the rind is often found to be discolored (necrotic) when cut and the flesh may have a bitter taste.

Summer squash infected with *Cucurbit leaf crumple virus (CuLCrV)*:

On squash, causes stunting of the plant and a thickened distortion of the leaves that give them a curled or crumpled appearance. CuLCrV also causes an uneven ripening and distortion of squash fruit, often giving them a distinctive striped appearance.

Management of these viral diseases is similar to the recommendations made for TYLCV control in tomato, focusing on the management of whitefly populations:

- Start with healthy transplants free of whitefly and virus.
- Employ a whitefly management program based on frequent scouting of crop and a proper rotation of systemic insecticides and insecticidal oils and soaps.
- Use silver reflective mulch.
- Destroy crop residue immediately following harvest.
- Avoid planting new cucurbit crops near older symptomatic crops.

Also be aware that mixed viral infections can occur, which can have a big effect on symptom development among the various cucurbit crops.

For pictures please see the online version of this newsletter at:

www.manatee.ifas.ufl.edu/vegetables

Additional References:

Whidden, A., J. Polston, P. Gilreath, and S. Adkins. Triple threat for cucurbits. The Vegetarian, UF/IFAS Horticultural Sciences Department Newsletter, December 2007, <http://www.hos.ufl.edu/vegetarian/07/December%2007/Triple%20Threat%20for%20Cucurbits.htm>

Webb, S.E., F. Akad, T.W. Nyoike, O.E. Liburd, and J.E. Polston. Whitefly-transmitted cucurbit leaf crumple virus in Florida. EDIS, Fact Sheet ENY-477, <http://edis.ifas.ufl.edu/IN716>)

COOL Veggies

By: Crystal Snodgrass

COOL or Country of Origin Labeling came about with the 2002 Farm Bill but has just been implemented for vegetables and other commodities on September 30, 2008. The law was developed to promote U.S. grown food and to help consumers make informed choices. All meats, fish, and fresh and frozen vegetables will have to be identified with the country of origin posted on a label, sign, or placard. A six month phase-in period is allowing producers, suppliers, and retailers to prepare for the change.

The law seems almost necessary with the vegetable industry's history of food born illnesses. However, it is met with mixed emotions because it affects everyone who touches the commodity from farmers, packers, shippers, retailers, and consumers. Farmers hope that the law will increase demand for U.S. grown fruits and veggies. Many consumers are all for the new law but are concerned that food that are "processed" are exempt from the law. This means that any fruit or vegetables that are canned or mixed are not included.



One can see how such a long paper trail might cause a headache for those along the way. With the 6 month phase-in period some retailers are getting a head start and are meeting some resistance. Some chain stores are demanding immediate compliance from suppliers and are supposed to turn down produce that is not correctly labeled. However, it is unknown whether or not they are actually turning down the product.

The COOL law is also rejected by some due to cost. The USDA estimates it will cost \$2.5 billion to implement the law. The meat industry is the hardest hit because animals may be shipped between states and even countries. It will be extremely costly to track animals and keep up with so much paperwork. The produce industry is in a better position because 60-70% of grocery store produce is already labeled. In the coming months labels will start to show up on store shelves and we hope to see a growing demand for U.S. commodities.

Sources: The Packer: Retailers send COOL Message with Rejections by Tom Karst; and USA Today: Food Now Gets Label of Origin by Elizabeth Weise

Grower Compensation Turned Down

By: Crystal Snodgrass

Most local tomato growers vividly remember the recent Salmonella Saintpaul outbreak. Although no tomatoes were found to have the bacteria, a wild goose chase caused tomato growers in Florida, California, Georgia, South Carolina and Arkansas to loose an estimated combined total of \$140 million. Rep Tim Mahoney, D-Fla., introduced a bill that would provide \$100 million in relief but was not approved by members of the House of Representative's Agricultural Committee or by Senator Bernie Sanders, who is blocking Senate



compensation. The problem is linked to an issue between a group of senators and the Florida Tomato Committee regarding the Coalition of Immokalee Workers to have workers paid an extra penny per pound by fast food industries. The perception is that farm workers are not treated or paid fairly, but the issue has nothing to do with losses from the outbreak. In fact, most Florida growers who lost significantly during the outbreak are a completely separate audience than those involved in the worker issue. A statement from Sanders' office stated, " Florida Tomato Growers Exchange came to Washington for a government handout. Senator Sanders is less than sympathetic to bailing out an industry which pays its workers abysmal wages, has been involved in a number of cases of human slavery and continues to adamantly oppose all effort to improve the lives of some of the most exploited workers in America. The FTGE needs to clean up its house before it asks for a tax payer bailout." Reggie Brown commits to "explore all avenues" for growers to get compensation for their losses.

To Drip or not to Drip

By: Crystal Snodgrass

Many tomato and citrus growers have made the switch to drip irrigation. Benefits of a drip system include reduced water usage due to water being delivered almost directly to plant root systems, the ability to deliver chemicals and fertilizer in calculated amounts, and higher yield and quality. The negative aspect of using drip irrigation is that it can be labor intensive and costly. The estimated cost per is \$500-\$1200 per acre. The system also requires maintenance and a high degree of monitoring. However, for many the benefits outweigh the costs. Some growers are hesitant to switch for several reasons, one being they are worried about clogs in the system which are hidden under plastic. Others just have a system that works and choose not to change that system. However, in this day and age of water conservation drip may be the way to go. It is estimated that in 2025 U.S. farms will need to provide 8 billion people with food, fiber and fuel. Experts expect growers to continue to accept using drip. As more growers continue to make the switch, better systems and system cleaners are being developed. "Acid and chlorine was the old approach to break up plugging" says Kevin Watts, director of marketing at Flo-Tec. Now there are more and more environmentally friendly products becoming available. Researchers are working hard to make drip irrigation more beneficial so that yield is increased and cost and labor are minimized.



Source: Citrus + Vegetable Magazine: The Ongoing Shift to Drip by Steve Heisler

Label Updates/Changes

- On August 28, the Florida Department of Agriculture and Consumer Services (FDACS) conditionally approved the registration of Dupont's insecticide chlorantraniliprole (Coragen®) to control lepidopteran pests, whiteflies, leafminers, and other insects on brassica leafy vegetables, cucurbits, cucumbers, squash, melon, fruiting vegetables, lettuce, and other crops. The EPA registration number is 352-729. (FDACS PREC Agenda, 10/2/08).
- On August 28, the FDACS conditionally approved the registration of Dupont's insecticide chlorantraniliprole (Altacor®) to control lepidopteran and other insects on grapes, pome and stone fruit, cotton, potato and other crops. The EPA registration number is 352-730. (FDACS PREC Agenda, 10/2/08).
- On August 27, the FDACS approved the registration of Bayer CropScience's herbicide tembotrione (Laudis®) to control annual broadleaf and grass weeds in sweet/seed/pop/field corn and silage corn. The EPA registration number is 264-860. (FDACS PREC Agenda, 10/2/08).
- Based on its own initiative, the EPA has approved time-limited tolerances for the insecticide chlorantraniliprole (Coragen®/Altacor®). Tolerances of importance in Florida include okra, green onion, strawberry, sugarcane, and leaves of root and tuber vegetable (group 2). (*Federal Register*, 10/1/08).
- Based on a request by IR-4, the EPA has approved tolerances for the fungicide fludioxonil (Medallion®). Tolerances of importance in Florida include avocado, canistel, citrus oil, mango, papaya, sapodilla, black/mamey sapote, star apple, tomatillo, tomato cucurbit vegetable (group 9), leaves of root and tuber vegetables (group 2), root vegetables except sugarbeet (subgroup 1B), and tuberous and corm, except potato (subgroup 1D). (*Federal Register*, 9/10/08).

Pesticide Potpourii

- In late September, a CA jury awarded a Santa Cruz County organic herb grower \$1 million in damages after ruling that an applicator's pesticide violated the organic growers rights when its chemicals drifted with the fog onto organic crops. As a result, organic growers throughout the state can seek redress should pesticides, even those properly applied, somehow end up on their plants. The defendant, Western Farm Service was not cited for violations by the Santa Cruz Agricultural Commissioner's Office and is deciding whether to appeal. (*Monterey Herald*, 9/30/08).
- In an effort to improve fruit yield, some growers have used a pollination product. One such product touts continued movement of auxin to the flowering part of the plant which maintains later-developing flowers and holds more flowers and fruit, improving the physiological properties of the fruit and overall plant growth. "The product naturally increases the level of auxin in all flowers, increasing their ability to self-pollinate," explains researcher Dr. M. Orzolek of Penn State University. (prweb.com, 9/16/08).
- Honeywell chemical company announced in September that it has found a way to render nitrogen fertilizer useless as an explosive and improve its value to some crops. The company has patented a method for combining ammonium nitrate fertilizer with a second type of fertilizer, ammonium sulfate. Ammonium nitrate can be soaked in diesel fuel to produce a powerful bomb, but when chemically tied to the ammonium sulfate, its chemical structure is changed so that it is no longer explosive. Chemists had been looking for ways to render ammonium nitrate nonexplosive since the Alfred P. Murrah Federal Building in Oklahoma City was destroyed by a truck bomb in 1995, killing 168. In 2006, Canadian authorities arrested 17 people who they said were planning to use such bombs in Ontario. The Department of Homeland Security has certified the new fertilizer, which Honeywell calls ammonium sulfate nitrate, under a federal program devised to encourage such innovations by offering the manufacturers immunity from liability, according to Honeywell. (*New York Times*, 9/23/08).

