

# Manatee Vegetable Newsletter

June/July 2008

Calendar

Publications & Websites

Methyl Bromide Alternatives

Increasing Populations of Western Flower Thrips

Farm Bill Update

Label Updates/Changes

Pesticide Potpourri

The Tomato Recall: What It Means for You

"Fresh from Florida" Program

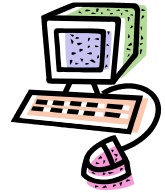
Tomato Purple Leaf Disorder



Crystal Snodgrass  
Extension Agent, Vegetable

## Publications/Websites of Interest

- ❖ The Florida Division of Forestry has issued a daily wildfire report. The report can be found at [http://www.fl-dof.com/wildfire2008/wf2008\\_pdf/Daily\\_Wildfire\\_Report.pdf](http://www.fl-dof.com/wildfire2008/wf2008_pdf/Daily_Wildfire_Report.pdf)
- ❖ Buckwheat: A Cool-Season Cover Crop for Florida Vegetable Systems by Danielle Treadwell and Pei-wen Huang provides an overview along with the biology and benefits of using Buckwheat as a cover crop for Florida vegetables. <http://edis.ifas.ufl.edu/HS386>
- ❖ Sunn hemp (*Crotalaria juncea* L.): A summer cover crop for Florida vegetable producers by Danielle Treadwell and Mike Allgood describes the benefits of using sunn hemp as a summer cover crop for Florida vegetables. The article focuses on the sunn hemp's ability to increase plant available N in the soil. <http://edis.ifas.ufl.edu/HS376>
- ❖ Critical Issues for the Tomato Industry: Preventing a Rapid Postharvest Breakdown of the Fruit by J. A. Bartz, S. A. Sargent and P. R. Gilreath discusses origin and possible causes of postharvest breakdown in tomato fruit. Postharvest breakdown may be caused by a combination of factors including, temperature, moisture, and physical damage during harvest. The article also discusses ways to avoid postharvest breakdown. <http://edis.ifas.ufl.edu/HS363>
- ❖ Sample Submission Guide for Plant Diagnostic Clinics of the Florida Plant Diagnostic Network by A.J. Palmateer, C.M. Stiles, P.D. Roberts, R.E. Cullen, H. Dankers, R.J. McGovern, N. Peres, P.F. Harmon. and C.L. Harmon outlines the purpose and services provided by the Florida Extension Plant Diagnostic Clinics (FEPDC). Clinics are located in Quincy, Immokalee, Homestead, Gainesville, and locally, GCREC in Wimauma. The publication gives instructions on how to submit different types of samples (fruit vs. blights of leaves or flowers) to achieve the best diagnosis. <http://edis.ifas.ufl.edu/SRO07>



- ❖ Exclusion Methods for Managing Greenhouse Vegetable Pests by R.C. Hochmuth and R.K. Sprenkel describes 7 integrated pest management tactics to keep pests of greenhouse vegetables including aphids, silverleaf whitefly, and western flower thrips, out of the greenhouse. <http://edis.ifas.ufl.edu/IN730>

## Methyl Bromide Alternatives

Methyl bromide is becoming scarcer and if you haven't already, it may be time to consider alternative fumigation sources. Methyl bromide was supposed to be completely phased out by Jan. 1 2005 but with the availability of



critical use exemptions (CUE's) many growers have been given a little more time to find suitable alternatives. The proposed amount to be used in 2009 is 16.7% of the 1991 baseline. That means we will soon be seeing a shortfall and will be forced to take action. Current methyl bromide alternatives are undergoing re-registration by the EPA.

When re-registration is complete fumigants including methyl bromide may be subject to stricter PPE requirements and the implementation of buffer zones. The good news is that it is possible to achieve effective control without methyl bromide. The bad news is that there is no silver bullet. With the use of a new fumigant there are many considerations. These include possible equipment changes such as the use of smaller tubing and new flow meters. Application techniques such as chisel vs. drip applied fumigation, choice of high barrier vs. regular mulch, soil and fumigant properties, the use of a supplemental herbicide program and cost effectiveness. These factors may seem overwhelming at first, but your distributors and representatives are extremely knowledgeable and can guide you through the application.

## Increasing Populations of Western Flower Thrips

Ever feel a sting and not see anything? You could have been the victim of a tiny insect called a thrips. There are over 5,000 species of thrips and 87 are pests of commercial crops. They can feed on multiple plant parts including fruits, leaves, and flowers reducing marketability. One species of thrips, the western flower thrips (*Frankliniella occidentalis*), is the key vector of Tomato Spotted Wilt Virus (TSWV). Until recently, western flower thrips were

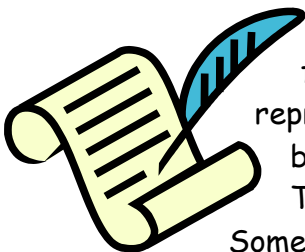


considered a problem only in north Florida. In 2006 they became serious pests in south and central FL. Large populations have been identified in Palm beach County and growers in Manatee County indicate that thrips populations have been the heaviest they have seen.

Local growers need to start paying more attention to thrips control to avoid outbreaks. The best way to control thrips is through the use of an integrated pest management system. First, identify the species of thrips present. The most common thrips in our area is the Florida flower thrips (*Frankineilla tritici*) which is considered non-damaging. It even displaces the western flower thrips through competition in large numbers. You may want to have the thrips identified because they look very similar. Plant refugia such as sunflowers is a source for the natural enemy the minute pirate bug. Unfortunately, minute pirate bugs do not prefer tomatoes. If western flower thrips exceed economic thresholds rotate insecticides with different modes of action. SpinTor is being replaced by Radiant. Radiant is a spinosyn insecticide from Dow and has the same mode of action as Spintor. Monitor from Valent USA Corp., Walnut, Creek CA and Radiant are in different chemical classes and have been shown to be efficacious on western flower thrips. Resistance has been an issue with western flower thrips. They are resistant to most broad spectrum insecticides and some tests have shown a mixed population of thrips resistant and susceptible to Radiant. Some insecticides, especially pyrethrins have even been known to enhance development and reproduction of thrips. Lastly, the use of reflective mulch can reduce thrips populations. With the use of all these tools we hope to beat the thrips at their own game. (Joe Funderburk and Tony Weiss, Citrus + Vegetable, April 2008)

## Farm Bill Update

The farm bill that is passed by Congress every 5 years has been of little interest to Florida's specialty crop farmers until now. Tom Nassif, president and chief executive of Western Growers said, "Specialty crop farmers have never sought direct subsidies even though we represent half of the total crop farm gate value in this country." The bill passed both the House and Senate with an overwhelming majority. The president issued a veto which was then overturned by the Senate. Some highlights of the farm bill include:



- \$1.02 billion to expand the fresh fruit and vegetable snack program to all 50 states

- \$466 million to enhance specialty crop block grants that focus on local efforts to enhance a producers' ability to compete in the marketplace
- \$377 million to create a new pest and disease program focused on combating invasive pests and disease
- \$230 million to establish the specialty crop research initiative to develop and disseminate science-based tools to address the needs of specific crops and their regions

A word about the Farm Bill from Jack Creighton, USDA:

Congress has passed the new Farm Bill. It appears that there are new things for vegetable growers, particularly in the area of research dollars. The conservation programs such as the Environmental Quality Incentive Program (EQIP) appear to be much the same. Watch this newsletter or contact the NRCS office for an announcement of the sign-up date for "rebates" on upgrading your irrigation system, constructing tailwater recovery ponds, and performing irrigation water management.

They must often change, who would be constant in happiness or wisdom.

**-Confucius**

## Label Updates/Changes

### Food related actions

- On May 1, the Florida Department of Agriculture and Consumer Services (FDACS) approved the registration of Valent U.S.A. Corporation's fungicide fluopicolide (Presidio®) to control oomycetes and downy mildew in leafy vegetables, cucurbits, fruiting vegetables, and sweet potato. Fluopicolide is a member of the acylpicolides, and it has translaminar and systemic properties. In addition, several new tolerances were approved for this fungicide, such as head and stem brassica (subgroup 5A), bulb vegetable, leaves of root and tuber (group 2), and root vegetable except beet and carrot (subgroup 1A). (FDCAS PREC Agenda, 6/5/08 & *Federal Register*, 5/28/08).
- Based on a request by IR-4 and Valent U.S.A. Corp., the EPA has approved tolerances for the insecticide pyridalyl. This insecticide has a new mode of action especially against thrips and lepidopteran pests while being of low toxicity to beneficial organisms. Tolerances of importance in Florida include turnip greens,

mustard greens, head and stem brassica (subgroup 5A), fruiting vegetables (group 8), and leafy vegetables except brassicas (group 4). (*Federal Register*, 5/7/08).

- Based on a request by DuPont, the EPA has approved tolerances for the insecticide chlorantraniliprole. Tolerances of importance in Florida include cotton, brassica leafy greens (subgroup 5B), head and stem brassica (subgroup 5A), fruiting vegetables (group 8), cucurbit vegetables (group 9), and leafy vegetables except brassicas (group 4). (*Federal Register*, 5/7/08).
- Based on a request by BASF, the EPA has approved tolerances for the fungicide metconazole (Caramba®). Tolerances of importance in Florida include pecan, peanut, rye and soybean. (*Federal Register*, 4/28/08).
- Based on a request by IR-4, the EPA has approved tolerances for the insecticide buprofezin (Courier®/Applaud®). Tolerances of importance in Florida include acerola, atemoya, avocado, banana, canistel, cherimoya, citrus, custard apple, grape, guava, jaboticaba, mango, okra, papaya, passionfruit, non-bell pepper, sapodilla, sapote (black and mamey), star apple, starfruit, fruiting vegetables (group 8), cucurbit vegetables (group 9), leafy vegetables except brassicas (group 4), and wax jambu (*Federal Register*, 4/9/08).

### **Other actions**

- Due to an inadvertent EPA cancellation, the special local needs registration for the use of Pursuit® (imazethapyr) on lettuce and escarole/endive grown on high organic matter soils (SLN No. FL-050008) has been reissued as SLN No. FL-080009. (FDACS PREC Agenda, 6/5/08).
- Bayer CropScience has requested the cancellation of Di-Syston® 15 G on broccoli, commercial ornamentals, and potato (no EC use on potato either). (*Federal Register*, 5/21/08).
- Bayer CropScience has requested cancellation of all registrations containing fenamiphos (Nemacur®). This includes special local needs (SLN) registrations. (*Federal Register*, 4/23/08).

### **Pesticide Potpourri**

- According to a recent CBS News/*New York Times* poll, 53 percent of Americans say they won't buy food that has been genetically modified and 87 percent of consumers would like genetically-modified ingredients to be labeled. (CBS Evening News, 5/11/08).

- A 34-year-old Japanese farmer who committed suicide by drinking chloropicrin regurgitated the pesticide at a hospital before he died. The fumigant caused 54 doctors, nurses and patients to develop breathing problems and eye sores. The doctors were not wearing protective gear and were unprepared because the paramedics who brought the farmer to the hospital had not identified the pesticide, said a local police official. The incident came amid a string of suicides in Japan by people mixing household chemicals to create lethal fumes. Many bystanders in recent months have been sickened by fumes that escaped into adjoining rooms, apartments or homes. (*International Herald-Tribune*, 5/22/08).
- A member of BASF's board of executive directors stated that the German chemical company may take legal action against the European Commission if approval of its genetically modified (GMO) potato is not issued soon. After an inconclusive meeting in mid-April with EU Environment Commissioner Stavros Dimas, BASF sent him an open letter - printed across German media, the *Financial Times* and other newspapers - demanding that the Commission approve its Amflora potato "without any further delay." If approval is given, it would be the EU's first authorization of a GMO product for cultivation in a decade. Only one GMO crop may be grown commercially in the EU, maize made by U.S. biotech company Monsanto and approved in 1998. Previously, BASF wanted approval by April for farmers to plant its potato for the 2008 harvest - now no longer possible. (*Reuters*, 4/17/08).
- All three U.S. presidential candidates were invited by a bipartisan group of Nobel laureates and other scholars called ScienceDebate 2008 to step on stage at the Franklin Institute in Philadelphia and explain how they will ensure that America continues to support the sciences. All three candidates declined. (*Wall Street Journal Opinion*, 4/17/08).

For a complete listing of pesticide articles please see the Chemically Speaking newsletter <http://pested.ifas.ufl.edu/newsletter.html>

### **The Tomato Recall: What It Means for You**

By Samantha Kennedy, M.S.

Recently, tomatoes grown in 17 states have been linked to more than 167 confirmed cases of *Salmonella saintpaul* infection. Florida is not listed as one of those states whose tomatoes are linked to the outbreak, but federal investigators have not ruled out the possibility that tainted tomatoes may have come from some Florida counties, primarily Collier and Miami-Dade.

However, tomatoes grown and harvested in Manatee County have been cleared by the Food and Drug Administration (FDA) and are considered safe.

While the source of the tainted tomatoes has yet to be pinpointed, it is recommended that consumers avoid red plum, red Roma, and round red tomatoes. Cherry tomatoes, grape

tomatoes, tomatoes still attached to the vine, and homegrown tomatoes have not been linked to the outbreak and are considered safe to eat.

Tomatoes from Mexico are still under investigation as well.

Not associated with the outbreak are red plum, red Roma, and round red tomatoes from these states: Alabama, Arkansas, California, Georgia, Hawaii, Louisiana, Maine, Maryland, Minnesota, Mississippi, New York, Nebraska, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, West Virginia.

Imported tomatoes from Belgium, Canada, Dominican Republic, Guatemala, Israel, the Netherlands, and Puerto Rico have also been deemed safe to eat.

Grocery stores around the nation have pulled all suspect tomatoes from their produce displays. Deli departments and many restaurant chains, including fast-food restaurants, have stopped serving fresh tomatoes until the mystery is solved. That means “hold the tomato” when you order that cheeseburger. Also, don’t expect fresh salsa with those tortilla chips the next time you visit a Mexican restaurant.

Salmonella infection can lead to moderate to severe fever, diarrhea, nausea, abdominal pain, and vomiting in individuals who are otherwise healthy. In more at-risk populations such as young children, elders, pregnant women, and those individual suffering from other illnesses or a compromised immune system can suffer a more severe or longer-lasting illness. For these individuals, more chronic symptoms such as arthritis are also more likely.

The symptoms of a Salmonella infection generally appear within 72 hours after ingestion of the bacterium.

If you are suffering from any of these symptoms, especially if you’ve recently eaten raw tomatoes, contact your health care provider immediately. All Salmonella infections should be reported to state or local health authorities.

Here are some general food safety tips to keep in mind when handling any raw produce:

**Wash your hands.** Always wash your hands with hot, soapy water for at least 20 seconds before handling any raw fruits and vegetables and after handling raw meats and poultry. Be sure to scrub between your fingers and around your fingernails.

**Always wash your produce.** Wash all fruits and vegetables under cool running water or use a dilute bleach solution (8-10 drops of bleach per quart of water). If you use a bleach solution, be sure to rinse thoroughly with clean water. Use a vegetable brush for fruits or vegetables with tough skins.

**Sanitize surfaces and utensils.** Before and after handling raw produce, be sure to properly sanitize all knives, cutting boards, and other food contact surfaces



with a bleach solution or sanitizers meant for restaurant use. Always follow the label instructions regarding dilution and contact time for each sanitizer.

And remember, if you suspect your tomatoes may be contaminated, THROW THEM OUT. It's better to be safe than sorry.

For more information, please contact Samantha Kennedy, Family & Consumer Sciences Agent, at (941) 722-4524 ext. 242.

Also, for the latest on the Salmonella outbreak please visit the FDA website [www.fda.gov/oc/opacom/hottopics/tomatoes.html](http://www.fda.gov/oc/opacom/hottopics/tomatoes.html)

## Bronson's "Fresh from Florida" Program

In an effort to assist with the sale of Florida tomatoes now that the areas in production have been declared safe, the Department will offer "Fresh from Florida" labels and/or point of purchase materials upon request. Anyone involved in the production or sale of Florida tomatoes can call the Division of Marketing and Development at (850) 488-9948 or e-mail <mailto:fapc@doacs.state.fl.us>.



The logos are also temporarily being placed on the Department's web site, [www.florida-agriculture.com](http://www.florida-agriculture.com), for distributors and retailers to download. There will be no charge for the requested materials or for shipping. The material will be available for ten days. For continued use of the "Fresh from Florida" logo, businesses are encouraged to contact the Division of Marketing and Development for information about Florida Agricultural Promotional Campaign (FAPC) membership.

On Tuesday, the Food and Drug Administration put the areas of Florida currently in tomato production on the "safe to eat" list indicating they could not be the source of a salmonella outbreak that has impacted predominantly western states. Tomato harvesting is currently under way in the Quincy, Palmetto and Ruskin areas.

Bronson says he wants to be proactive in getting the word out that these tomatoes are safe, wholesome, and grown under the strictest regulations in the nation. He says by using the logos, retailers can show consumers that the tomatoes came from Florida.

"We want to reach out to make sure our tomatoes not only make it to the retail shelves but also into consumers' shopping carts," Bronson said. "When they see the "Fresh from Florida" logo, they will know exactly where the tomatoes were grown."

The Department's Division of Fruit and Vegetables has been busily issuing certificates with each shipment of tomatoes, indicating the harvest date and location. Nearly four million 25-pound cartons have been certified since Tuesday afternoon.

"That is indicative of the popularity of Florida tomatoes," Bronson said. "I'm pleased these tomatoes were put on the 'safe to eat' list. It would have been a tragedy if they had been wasted." Source: press release distributed by FDACS on June 13, 2008

## **Tomato Purple Leaf Disorder: a New Virus or Viroid?**

Tomato Purple Leaf Disorder (TPLD) has been detected in tomato fields in south and southwest Florida since 2006. However, now it is getting more attention among researchers and growers alike.



Symptoms of TPLD are similar to symptoms of phosphorus deficiency. In both cases, leaves develop a purple hue. However there are some differences that may help to distinguish TPLD. Phosphorus deficiencies generally develop from the base of the plant and work their way up. Leaf veins are the first to turn purple before whole leaves are affected. TPLD is different in that it can first appear seemingly random on the plant and affects leaf surfaces first without touching the veins before moving over the entire leaf. In lab tests TPLD leaves were not deficient in phosphorus. Another interesting piece to the puzzle is that leaves affected by the disorder seem to be photosensitive. A partially covered leaf will show symptoms on the portion exposed to the sun. Infection patterns tend to point to mechanical transmission.

Tests have been conducted for known pathogens of tomato and have all turned out negative. However, the appearance of mechanical transmission suggests the causal agent may be a virus or viroid. Further studies are being conducted.

Yield reduction due to TPLD is currently unknown. However, leaves affected by the disorder appear to decline prematurely. Since we do not know for sure what

the causal agent is or the scope of damage caused by TPLD, it is important to take precautionary measures. The most important thing you can do to stop mechanical transmission is sanitize equipment and require field workers to use gloves when handling plants. To deter continuation of the disorder to subsequent seasons, destroying all plant residues including roots is suggested. Also the use of cover crops and crop rotation to non-Solanaceous crops can help reduce incidence of TPLD.

Source: The Vegetarian Newsletter June 2008 issue Tomato Purple Leaf Disorder: A New Challenge for the Tomato Industry in Florida by Gary E. Vallad, Bielinski M. Santos, Jane E. Polston, David J. Schuster, Andrew W. MacRae, Jeremy D. Edwards, and John W. Scott  
Complete article with photos available at:  
<http://www.hos.ufl.edu/vegetarian/index.htm>

Manatee Vegetable Newsletter

June/July 2008