

Fruit Pest News

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An online newsletter whose goal is to provide all interested persons with timely information on diseases and insects of commercial fruit and vegetable crops in Tennessee.

In This Issue: New to Blueberries? – Bacterial Canker of Tomato – Soil Fumigants to be Subject to New Safety Measures – Insecticide Updates for the S.E.U.S. Vegetable Crop Handbook and the S.E. Regional Small Fruit Management Guides

1. New to Blueberries?

We have had a number of blueberry diagnostic samples and inquiries this summer. There is a lot of interest in blueberries now, and many growers may not be accustomed to these plants' peculiarities. Following are some of the sights that cause concern but may represent a false alarm:

1) Leaf spots. While fungal leaf spots do affect blueberries and can cause damage, most leaf spots found on blueberries in Tennessee are not fungal (diseases). They can be dead ringers for fungal leaf spots, but are in fact caused by lack of water, in most cases. Blueberries are very shallow rooted and need a consistent supply of soil moisture. Leaf spots that occur in irrigated blueberries are more likely to be fungal in origin.



2) Stem discolorations. How deceiving these can be. Blueberry canes produce a striking contrast in color as they mature and the cane surface changes from a youthful green to the brown, dry, fissured appearance of bark. The bark may even form in patches, resembling a pathogenic canker.



3) Leaf yellowing. Severe cases shouldn't be taken lightly, but blueberry plants frequently produce at least a few yellow, pinkish, or reddish leaves. This may happen despite your best efforts to maintain a proper pH - near 5.0 - using sulfur to reduce the pH as needed. If you're sure your pH is in the proper range, an application of Epsom salts to the soil surface usually helps green up the leaves. (SB)



2. Bacterial Canker of Tomato

Bacteria canker has been found in a tomato field in Tennessee and bears watching, because the disease can be quite destructive. The disease has many symptoms, but the most prominent are a firing of the leaves caused by a necrosis that begins at the leaf margins with no leaf yellowing (see photo), and a wilting of some plants caused by systemic invasion of the bacteria. The systemic phase can lead to the formation of dark streaks and cankers on the stem surface, and to the formation of yellow to brown streaks in the vascular tissue, especially at the nodes. Small, scabby lesions with noticeable white haloes may form on the fruit.



Control: Crop rotation is needed, as the bacterium can survive one winter in plant debris in the soil. Certified, disease-free transplants should be used. Since the bacteria can survive one winter on stakes, sanitation (bleach or steam) or the use of new stakes is needed the following year. Do not work fields while the leaves are wet.

The only effective chemical control is copper. Actigard and AgriPhage, used for control of other bacterial diseases, are not effective against canker. Copper should be mixed with maneb or mancozeb and applied once per week.

Bacterial canker is sporadic in occurrence. Tennessee has seen it in several areas over the years, but growers have usually been able to conquer it, although several years have been required in some cases. Please let me know if you have bacterial canker. (SB)

3. Soil Fumigants to be Subject to New Safety Measures

All who use or plan to use any soil fumigant should be aware of new risk mitigation (safety) measures in the works for these pesticides. These measures are intended to increase protections for agricultural workers and bystanders - people who live, work, or otherwise spend time near fields that are fumigated. For the soil fumigants methyl bromide, chloropicrin, dazomet, metam sodium, and metam potassium, EPA will require a suite of new safety measures. The newly registered iodomethane (Midas) was not included in the review, but will be reexamined in October to determine whether new safety measures are necessary.

The EPA consulted with stakeholders through the Agency's pesticide public participation process, and their decisions are final. However, the EPA believes that stakeholders may be able to provide information on implementation approaches that would be useful to the decisions. Therefore, a 60-day comment period is in effect, ending September 15. After considering new information received during the comment period, EPA may refine plans for implementation of the risk mitigation measures, but not the content.

Product label changes are not expected until 2010. The manufacturers will begin their training and outreach programs in 2009. In late 2009 they will submit their revised labels to EPA. After approval, the labels will begin appearing in 2010.

Following is a summary of the changes included in the decision:

- Users must complete written, site-specific fumigant management plans before fumigations begin.
- Buffer zones (area around treated fields in which no bystanders are allowed). The size will differ by product and will depend on the application rate, field size, application methods, and the use of emission-control measures (e.g., tarps).
- Posting requirements will inform bystanders and field workers about the location and timing of fumigations and associated buffer zones so people do not enter these areas.
- To ensure emergency preparedness, registrants must provide first responders with fumigant-specific safety information and training. Fumigant applicators must monitor buffer zone perimeters or provide emergency response information directly to neighbors.
- Fumigant registrants (manufacturers) must conduct outreach programs to educate community members about fumigants, buffer zones, how to recognize early signs of fumigant exposure, and how to respond appropriately in case of an incident.
- Fumigant registrants must adopt more stringent worker protection measures, and develop training for

fumigation handlers and workers to enhance their knowledge and skills and to promote product stewardship.

- All soil fumigant products will be classified as restricted-use pesticides, to ensure that only specially trained individuals can apply and oversee fumigant operations.

For details of these measures and instructions on how to comment, see the fumigant web page at:

http://www.epa.gov/pesticides/reregistration/soil_fumigants/index.htm .

(SB)

4. Insecticide Updates for the Southeastern U.S. Vegetable Crop Handbook and the Southeast Regional Small Fruit Management Guides

Research and Extension professionals from the Southeast met last week in Fletcher, NC to update the vegetable and small fruit guides. As always, there were plenty of additions made to the guides as well as products removed. Here are some of the highlights to look for in the 2009 small fruit versions. The vegetable handbook revisions will be discussed in a future newsletter. In the comments section of the small fruit guides, we are designating insecticides that are approved for organic use (OMRI [Organic Materials Review Institute] approved). OMRI is found online at: <http://www.omri.org>.

Resistance management is an increasingly important factor that is also addressed in the guides. The Insecticide Resistance Action Committee (IRAC) classifies insecticides by their mode of action (<http://www.irac-online.org/>). The different modes of action have a name and code number associated with each. Many new insecticide labels have this on the label. The key to this resistance management plan is to rotate between insecticides that are in different mode of action groups. The Fungicide Resistance Action Committee (FRAC) and IRAC codes are listed for each fungicide or insecticide in the Comments column.

The bunch grapes guide was given a major update. For grape berry moth, the three insecticides added were spinosad (SpinTor 2SC), methoxyfenozide (Intrepid 2F), and rynaxypyr (Altacor). Three systemic neonicotinoid insecticides were added for aphid and leafhopper control. These are imidacloprid (Admire Pro), dinotefuran (Venom) and clothianidin (Clutch 50 WDG). Note that control of leafhoppers may aid in the suppression of Pierce's disease.

At budbreak for control of climbing cutworms, we added carbaryl (Sevin), fenpropathrin (Danitol 2.4EC), spinosad (SpinTor, Entrust) and *Bacillus thuringiensis* (Dipel). Note that Entrust is OMRI approved.

A new IRAC group 23 insecticide, spirotetramat (Movento) was added for control of mealybugs on grapes. Note that it states on the label that some adjuvants that may be used with Movento have caused intolerable damage to grape berries / clusters when applied alone or in mixes after the initiation of bloom. To minimize the potential damage to berries / clusters associated with some adjuvants, Movento must be applied prior to the initiation of bloom in fresh market or table grapes.

A number of miticides were also added to the bunch grape guide including pyridiben (Nexter 75 WP), hexakis (Vendex 50 WP), bifenazate (Acramite 50 WS), fenpyroximate (FujiMite 5EC), abamectin (Agri-Mek 0.15 EC), and spirotetramat (Envidor 2 SC). (FH)

The Fruit Pest News URL is: <http://web.utk.edu/~extepp/fpn/fpn.htm>

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