

# WHAT'S HAPPENING

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## Be Careful Where you buy Tomato Plants

By Steve Bost

The Salmonella scare in tomatoes may have increased the interest in growing tomatoes at home. Alas, there is something else to worry about: In the May 7, 2008 issue of *Fruit Pest News* (and several issues since), I have reported the widespread incidence of bacterial spot\* on tomato and pepper plants at garden centers in Tennessee. Despite efforts by TDA to gain the cooperation of the offending nursery, infected plants remain for sale at our garden centers. **PLEASE DO NOT BUY THESE PLANTS.** The small, brown spots (Figures 1 and 2) may look harmless enough at the store, but can wreak havoc in the garden. Under favorable conditions, frequent sprays of copper are required to obtain even a moderate level of control. Even worse, these infected transplants pose a threat to our farmers. The bacteria can spread to our commercial vegetable fields. It is recommended that you buy tomato or pepper plants only from local greenhouses until this issue is resolved. By buying from chain stores, you are putting at risk not only your garden but also area vegetable farms. If you must buy from chain stores, inspect all of the tomato and pepper plants for any evidence of leaf spots, and go somewhere else if any are found. Symptom-free plants may be infected but not yet showing the spots.

\* This bacterium is pathogenic only to tomato and pepper plants – it is NOT a human pathogen.



**Bacterial spot on garden center tomato plant.**



**Bacterial spot on garden center pepper plant.**

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## Ornamental Pests

By Frank Hale

Oak lecanium scale crawlers have emerged and moved to the leaves for the summer. The immature scale will move back to the twig in late summer where they will remain until the following spring when the females will mature, mate and lay eggs. Soil applied systemic neonicotinoid insecticides (imidacloprid, dinotefuran, Allectus SC, Discus) applied around the base of the tree will move up to the leaves and provide control. If a spray is to be used, horticultural oil is a good choice since it would be less disruptive to the naturally occurring parasitoid wasps that are active now.

Obscure scale on oak is an armored scale that is very damaging to oak and difficult to control. The female scale are mature and should be laying eggs in July with crawler emergence soon after. Since the crawlers often remain beneath the scale cover of the adult female, contacting this susceptible stage with an insecticide spray is problematic. Insecticide tests are on-going to see if the neonicotinoid insecticide dinotefuran (Safari) will control obscure scale when applied as a soil drench, soil applied granular formulation, and as a trunk spray with Pentra-Bark.

Fourlined plant bugs have toxic saliva and their feeding damage can be seen on many annual and perennial plants. While some leaf distortion can occur, the primary damage seen is the many small, discolored, sunken necrotic spots. These could be mistaken for a leaf disease. Phlox plant bugs feed on phlox and their damage tends to look like chlorotic stippling on the leaves.

The Easter freeze of 2007 may have a silver lining. A common shoot borer pest of maple, *Proteoteras aesculana* Riley does its tunneling damage to new shoots in late April – early May. This year, there have been only a few reports of this pest in Tennessee. I have been checking the new growth of red maple and sugar maple trees in Nashville and I have not found any damage from this pest. While maples were not damaged as much from the 2007 freeze as some other types of trees, the several days of unseasonably cold temperatures appear to have broken their life cycle. It will be interesting to see how many years it will take for this pests to again become widespread and common.

While I usually do not make insect predictions for the growing season, I think that a good prediction can be made for Japanese beetles. In many parts of the state, populations of Japanese beetle adults were very low in 2007. The ground was so hard and dry last spring and summer that the Japanese beetles probably had a very difficult time emerging from non-irrigated turfgrass areas. The Japanese beetle adults that were able to emerge then had to find turfgrass with adequate soil moisture for their eggs to be able to hatch and for the white grubs to survive. While irrigated turfgrass could support white grubs through the drought, most turfgrass in Tennessee does not received irrigation. Thus, Japanese beetle populations for most of the state should be low in 2008.

## Tobacco Blue Mold Control Options

By Darrell Hensley

Tobacco blue mold has recently been reported in Blackstone, VA on 6/09/08. Blackstone is located on the Eastern side of Virginia and the current threat of blue mold to Tennessee producer's is low. However, I highly suggest that producers continue to scout the fields for the presence of blue mold. Remember, blue mold was also reported in Georgia and Florida earlier this year. The origins of the Virginia outbreak are under investigation. Several individuals are working under the assumption that the VA infection is due to airborne transport of spores. Transport events from the known sources in northern FL and southern GA are being generated for the month of May from the ARL data archive. Preliminary results reveal no standout candidates. Work is progressing but may take some time. As always, the presence of an undiscovered or unreported source could greatly change the situation. The North American Plant Disease Forecast Center will present their findings when completed. In the event that the situation for Tennessee changes, I will keep county extension personnel informed via email or through the What's Happening Newsletter. In the event that tobacco blue mold becomes a more serious threat to Tennessee producers, fungicides listed below provide several options available to tackle this disease.

**Actigard:** use 0.5oz. per acre when plants reach 18 inches in height for actively growing burley tobacco or 12 inches for dark types. No more than three applications per season. Multiple applications should be made at 10-day intervals. Thorough canopy coverage is not as critical as other foliarly applied fungicide products. This product should be applied 5 days prior to the onset of tobacco blue mold.

**Mancozeb** (Dithane DF Rain Shield, Penncozeb): apply 1.5 to 2 lbs per 100 gallons of water. Application should be evenly distributed to leaf surfaces to obtain most effective control. This may be achieved using using a high pressure sprayer with drop nozzles. The addition dimethomorph (Acrobat 50W or Forum) will greatly aid in blue mold control. Applications **may not** be made within 30-days of harvest or should not be tank-mixed with sucker control materials.

**Dimethomorph** (Acrobat 50WP or Forum): apply 2 to 7 oz of Acrobat 50WP or 2 to 8 oz of Forum per 20 to 100 gallons of water per acre. This active ingredient **must be applied** with products containing mancozeb to obtain effective control.

**Azoxystrobin** (Quadris): apply 6 to 12 fl.oz. per acre to obtain effective control. This product may enhance weather flecking, however this affect has not been reported to affect yield and/or quality. Product should be applied prior to the onset of tobacco blue mold. Thorough leaf coverage is critical to obtain effective control.

**Fosetyl-AL** (Aliette WDG): apply 2.5 to 4 lbs formulation per acre in 20 to 100 gallons of water. Higher rates should be used during moderate to heavy infection. Do not exceed 5 applications per season. Do not tank mix with copper compounds. Should not be applied within 3-days of harvest. Thorough foliar coverage is critical to obtain effective control.

**Mefenoxam** (Ridomil Gold, Ultra Flourish): Will only provide control of mefenoxam-sensitive strains of blue mold. This active ingredient must be applied as a pre-plant incorporated (PPI) product. Multiple applications directed to the soil may be made if 1 lb of active ingredient is applied as a PPI treatment. Application to the foliage does not provide adequate control. Do not exceed 3 pints of Ridomil Gold/acre.

## Rope, Snake, Worm or Fly Larvae?

By Karen Vail

Through the years I have received inquiries regarding a moving mass of maggots or larval masses moving like a slug on the concrete or a trail of slimy something climbing a wall. The mass looks like a rope, snake or large worm, but upon closer inspection, the individuals look like insect larvae. Closer inspection yet reveals a "rope" of fungus gnat larvae.

Here's an excerpt of an email that Tami Minert and family of Farragut, TN sent to me to request assistance with identification.

"Saturday evening, June 7 we had a tremendous rain storm here in Farragut. The following morning while out walking I discovered these tiny white worms with a black dot in long string-like groups. They appeared to be moving in unison. Those at the front would crawl forward and the others in the middle and end would follow along. I discovered many groups of them all over the neighborhood. One of the strings was as long as my arm!!! Once the sun's rays hit them they died. Two days later, during the night, we had another rain storm and the following morning I found the same type of worms. In one location there were 2 separate groups that crawled together to form one group. I've attached a picture in hopes that you can help me to discover what these interesting worms are."



"Rope" of fungus gnat larvae. Image credit: Tami Minert

Fungus gnat larvae have threadlike, 1/4-inch white bodies with a dark head capsule and typically feed on fungi and decaying organic matter. When larvae are present in "ropes," these "ropes" may be several feet long and can be seen crawling up walls or along driveways where and when rain or moisture has been abundant. The adults are about 1/8-inch long, dark, and slightly resemble a very small mosquito.

Usually we suggest eliminating the food source to control flies. In a case like this, where the maggots are feeding on decaying vegetation or fungus on roots, and are found in moist, shady areas such as leaf litter, the probability of removing all food sources in a yard would be quite slim. By mechanically destroying the maggot "rope" and reducing the amount of decaying vegetation in the yard, the size of future infestations may be reduced, but it is unlikely that this effort will eliminate them. Drier weather should reduce the chance of future occurrences.

More information on fungus gnats can be found in the UT Extension fact sheet, SP341C Fungus Gnats by Frank Hale at <http://www.utextension.utk.edu/publications/spfiles/SP341-C.pdf>.

Another image of a fungus gnat rope may be seen at [http://epfpserver.ag.utk.edu/profiles/disease/fungus-gnat larvae.htm](http://epfpserver.ag.utk.edu/profiles/disease/fungus-gnat%20larvae.htm).

## Stored Grain: Bins, Bins and more Bins

By Russ Patrick

There has been a rapid increase in grain bin storage this year. Primarily because the producers want to hold their wheat crop because of anticipation of an improved price relationship. They are hoping they can store it and make more money when the basis goes lower.

I had a meeting with most of the producers in Lake County this week and they wanting to know what to do to keep insects out of their bins. So, I gave them a protocol to follow:

- 1) Clean out the bin including all old grain.
- 2) Spray the bin with Tempo SC Ultra or WP formulations before putting anything inside the bins.
- 3) Spray the outside perimeter of the bin as well.

Make insecticide applications just prior to binning any grain. This will give Tempo longer to work before it begins breaking down.

We now have two compounds we can use to put on the grain (wheat).

1. Storcide II (chlorpyrifos-methyl + deltamethrin) is labeled to control adults and
2. Dicon II is labeled to control immature insects.

Dicon II will not work on adult pests. It is a insect growth regulator (IGR), which prevents the larvae from becoming adults. It also will last longer than Storcide II. However they are both labeled for wheat.

Please monitor the bins with the Stogard II insect traps and check them every two weeks for signs of insects. This help inform you in the event of problem.



Bruce Steelman inspecting insect trap.



These producers plan to hold their grain in bins until December hoping for a better basis.

I will be monitoring several bins in the State to determine efficacy of Dicon and Storcide used as stand alones and in combination.

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**OTHER UT NEWSLETTERS WITH PEST MANAGEMENT INFORMATION**

**Fruit Pest News**

<http://web.utk.edu/~extepp/fpn/fpn.htm>

**Tennessee Crop and Pest Management Newsletter**

[http://www.utextension.utk.edu/fieldCrops/cotton/cotton\\_insects/ipmnewsletters.htm](http://www.utextension.utk.edu/fieldCrops/cotton/cotton_insects/ipmnewsletters.htm)

**Ornamental Pest and Disease Update**

<http://soilplantandpest.utk.edu/publications/ornamentalnwsltr.html>

**Tennessee Soybean Rust Hotline - 877-875-2326**

**USDA Soybean Rust Web Site**

<http://www.sbrusa.net>

**This and other "What's Happening" issues can be found at**

<http://eppserver.ag.utk.edu/Whats/whatshap.htm>

**Entomology and Plant Pathology Web Site**

<http://eppserver.ag.utk.edu>

**Precautionary Statement**

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.

**Disclaimer**

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others that may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author(s), the University of Tennessee Institute of Agriculture and University of Tennessee Extension assume no liability resulting from the use of these recommendations.

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