Fruit Pest News

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An online newsletter providing all interested persons with timely information on diseases and insects of commercial fruit and vegetable crops in Tennessee.

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1. Spray Guides: Where to Find

Some of the fruit and vegetable spray guides that we commonly use in Tennessee have been revised and are now available.


- The 2012 Vegetable Crop Handbook for the Southeastern U.S. - This is a sponsored, no-charge publication and print copies are in limited supply. The handbook may be downloaded from http://media.thegrower.com/documents/prd-gr-2012_SEVG.pdf.


- The home fruit publication, Disease and Insect Control in Home Fruit Plantings, is available online at http://www.utextension.utk.edu/publications/pbfiles/PB1622.pdf. You may have to enter "1622" in the search box. Print copies are not available.

(SB)

2. Be Prepared for Tomato Spotted Wilt Virus
The incidence of tomato spotted wilt virus varies from year to year. Historically, this disease, which is transmitted by thrips, is worst in summers that follow dry springs. Since the weather was dry in most of the state during the early spring, we can expect spotted wilt problems this growing season. To make matters worse, we had a very mild winter, which should favor a high overwintering population of thrips. Tomato and pepper growers should be prepared for the worst. Many of the recent tomato varieties have spotted wilt resistance. However, this resistance level is not high, and even these varieties will probably need assistance from insecticides with thrips activity. Don't underestimate the damage potential of spotted wilt. The 2000 growing season (12 years ago) is still fresh in the minds of Lauderdale County tomato growers who were in business then. Most areas of the state have had bouts with it over the years. (SB)

3. Vegetable Disease Control Recommendation Changes for 2012

All of the following products are registered in Tennessee and most are included in the 2012 recommendations for Tennessee.

*Peppers, lettuce, broccoli, and cabbage are crops that were left with no labeled EBDC products when maneb was taken off the market. **Mancozeb** can now be used on these crops, which are found on supplemental labels for Dithane DF, Dithane F45, Manzate Pro-Stik, and Penncozeb 4FL, and on the specimen label for Overall. Mancozeb was also recently cleared for use on pumpkins, winter squash, and ginseng.

**Fontelis**: New fungicide (penthiopyrad, Group 7) for peanuts; onions; leafy and heading brassicas; cucurbits; peppers; tomatoes; eggplant; spinach; succulent beans and peas; root vegetables, including turnip, carrot, and ginseng. In greenhouse production, Fontelis can be used on tomatoes, peppers, and edible-peel cucurbits. See Article 5 for diseases controlled.

**Inspire Super** (cyprodinil plus difenoconazole, Groups 9 and 3): Added tomatoes (early blight, black mold, gray mold, powdery mildew, Septoria leaf spot, target spot, anthracnose, leaf mold).

**Quash** (metconazole, Group 3): Supplemental label for potatoes (early blight, powdery mildew, white mold, black dot, brown spot).

**Luna**: New fungicide (fluopyram, Group 7) that comes in three formulations (see Article 6 below). **Luna Experience** is registered for use on watermelon, while **Luna Tranquility** is for potatoes.

**AgriPhage-CMM**: New strain of phage (bacteria-killing virus) from Omnilytics, specific for the pathogen causing bacterial canker of tomato.

4. New Fruit Disease Product Registrations

These products are registered in Tennessee. Some are included in the 2012 recommendations.

**Fontelis**: New fungicide (penthiopyrad, Group 7) for strawberries, stone fruits, apples, and pears.

**Fireline 17WP** (oxytetracycline, antibiotic): Tennessee registration, for control of bacterial spot of peaches and nectarines and for fire blight of apples and pears.

**Inspire Super** (cyprodinil plus difenoconazole, Groups 9 and 3): Added stone fruits (brown rot, scab, Alternaria, rust, powdery mildew, anthracnose) and strawberries (anthracnose, gray mold, powdery mildew).

**Quash** (metconazole, Group 3): Supplemental label for blueberries (anthracnose, Botryosphaeria stem canker, Phomopsis twig blight, Botrytis, mummy berry, leaf rust, Septoria leaf spot).

**Luna**: New fungicide (fluopyram, Group 7) that comes in three formulations (see Article 6 below). **Luna Experience** is registered for use on grapes, while **Luna Sensation** is for apples and cherries.

**Quadris Top** (azoxystrobin plus difenoconazole, Groups 11 and 3): For stone fruits (brown rot, scab, Alternaria, rust, powdery mildew, anthracnose) and strawberries (anthracnose, powdery mildew).

**Vivando**: New fungicide (metrafenone, Group 3) for grapes (powdery mildew).

5. **Fontelis**: A New, Wide-spectrum Fungicide for Vegetable and Fruit Crops

Fontelis is a new fungicide from Dupont that was recently registered for several vegetable and fruit crops. Fontelis is a 1.67SC formulation of penthiopyrad, a FRAC group 7 compound. Fontelis is unusual among modern fungicides in that it has activity against a wide range of pathogens, including Botrytis, Sclerotinia, Rhizoctonia, and some powdery mildew and rust pathogens. The broad spectrum of activity is evident in the crops for which Fontelis is labeled:
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- Bulb vegetables - Botrytis, purple blotch, powdery mildew, Stemphylium
- Cucurbits - powdery mildew, Alternaria leaf spot, gummy stem blight
- Non-brassica leafy vegetables (lettuce, spinach, etc.) - Sclerotinia spp., Septoria, Alternaria, Botrytis, rust
- Brassica leafy and heading vegetables - Alternaria, Botrytis, powdery mildew, Sclerotinia
- Root vegetables - Alternaria diseases, Cercospora leaf spot, gray mold, powdery mildew, white mold, rust, southern blight
- Fruiting vegetables - Septoria, target spot, early blight and other Alternaria diseases, anthracnose, powdery mildew
- Legume vegetables (succulent only) - Alternaria, angular leafspot, anthracnose, Ascochyta, Cercospora, Botrytis, rusts, Septoria, white mold, Rhizoctonia
- Strawberry - Botrytis, powdery mildew
- Apple, pear - Alternaria leaf blotch, scab, powdery mildew, rusts
- Stone fruits - Brown rot, scab, cherry leaf spot, powdery mildew, Alternaria rot, Botrytis rot, shot hole, rust

Like most modern fungicides, however, Fontelis is subject to resistance development and must be incorporated into a resistance management program. No more than two consecutive applications are allowed before rotating with a fungicide with a different mode of action (FRAC code). FRAC group 7 also contains Endura, Pristine, and the newly registered Luna series.

Fontelis can be applied as a foliar spray or through sprinkler irrigation. Although it has activity against Rhizoctonia, the label does not allow application through drip irrigation or as a soil spray at this time.

In greenhouse production, Fontelis can be used only on tomatoes, peppers, and edible-peel cucurbits (cucumbers and summer squash). Although the label does not prohibit greenhouse use on other crops, the fact that certain crops are specified on the label indicates that use on other crops is not allowed.

Fontelis has been incorporated into the 2012 Tennessee recommendations found in the Commercial Vegetable Disease Control Guide (in article 2, above) and in the Redbook. By the time of registration, the 2012 Vegetable Crop Handbook for the Southeastern U.S. had already gone to press, so Fontelis is not included in the regional recommendations. It will be added next year. (SB)

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### 6. Luna Fungicide Receives First Registrations

Bayer has obtained initial registration for its fluopyram product, Luna, and is marketing it as three versions, each with a different pre-mix partner. These products are profiled in the table below. Luna is subject to resistance development, so there is a limit of two consecutive applications of any of the Luna products before alternating with a fungicide from a different FRAC group. The Luna products are applied only as foliar sprays.

<table>
<thead>
<tr>
<th>Brand name</th>
<th>Active ingredients</th>
<th>FRAC code</th>
<th>Labeled crops</th>
<th>Diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luna Experience</td>
<td>fluopyram, tebuconazole</td>
<td>7, 3</td>
<td>grape</td>
<td>black rot, Botrytis bunch rot, powdery mildew, Phomopsis cane and leaf spot</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>watermelon</td>
<td>gummy stem blight, powdery mildew, Alternaria leaf spot, belly rot, anthracnose</td>
</tr>
<tr>
<td>Luna Sensation</td>
<td>fluopyram, trifloxystrobin</td>
<td>7, 11</td>
<td>apple</td>
<td>scab, rust, powdery mildew, sooty blotch, flyspeck, bitter rot</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>cherry</td>
<td>brown rot, powdery mildew, cherry leaf spot, shot hole, rusty spot, scab, anthracnose</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Fruit</th>
<th>Disease/Infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>watermelon</td>
<td>Alternaria leaf spot, anthracnose, powdery mildew</td>
</tr>
<tr>
<td>apple</td>
<td>scab, powdery mildew</td>
</tr>
<tr>
<td>potato</td>
<td>early blight, powdery mildew, Botrytis, white mold, black dot</td>
</tr>
</tbody>
</table>

Luna Tranquility fluopyram, pyrimethanil 7, 9

Luna has been incorporated into the 2012 Tennessee recommendations found in the *Commercial Vegetable Disease Control Guide* (in article 2, above) and in the Redbook. By the time of registration, the 2012 Vegetable Crop Handbook for the Southeastern U.S. had already gone to press, so Luna is not included in the regional recommendations. It will be added next year.

(SB)

7. **Insect Trap Catches**

It always amazes me how early pest activity can begin especially with such a warm winter and early spring. Not sure that my redbanded leafroller pheromone trap was out early enough since it went out March 2 and had 29 moths in the trap when checked on the 6th. The Oriental fruit moth trap went out March 14 and two were caught on March 16. Use the first catch dates at your orchard for your biofix. Lesser peachtree borers (LPTB) are clearwing moth borers that attack the branches of Prunus species such as peach, cherry and nectarine. The LPTB trap was deployed March 15 and first catch was March 19. Note that this catch date corresponded with the first blooms on our Golden Delicious apples in Nashville. Two plum curculio weevils were caught in an unbaited Tedders trap on March 21 that stood next to a peach tree. The first black cutworm moth was caught March 26. The first dogwood borer moth was caught March 30 while the first obliquebanded leafroller moths were caught April 19. I have not been catching any armyworms here but it was reported in the March 20, 2012 Kentucky Pest News by Doug Johnson that 49 moths were caught for the week ending Friday March 9. According to Doug, "This is the earliest capture date and the largest initial capture for this insect in 19 years of trapping." (FH)

8. **Tennessee Fruit Growers Need to Put out Traps for Spotted Wing Drosophila**

The spotted wing drosophila (SWD) is a damaging invasive pest from Asia. This tiny vinegar fly is different than other Drosophila species because it can lay its eggs in sound fruit using its serrated ovipositor. The resulting maggots and decay organisms can quickly make the fruit unsalable. This pest can devastate many types of fruit crops including strawberry, blueberry, cherry, apple, pear, peach, nectarine, plum, persimmon, fig, raspberry, blackberry and other Rubus if control options are not taken. For some positive news, Dr. Hannah Burrack, NCSU entomologist, told me that SWD is not likely to be a primary pest of grapes. She has only seen them in split fruit in the southeast. In the northeast, she thought that grapes were only damaged when grapes were softened by tropical storms. Thus, SWD has not been added to the 2012 Regional Bunch Grape Guide or the Muscadine Grape Guide. Dr. Burrack thought it extremely unlikely that muscadines will be attacked by SWD unless otherwise damaged. It is essential that SWD growers monitor for this pest. Currently, we do not know the distribution of this pest in the state other than it was found in Tennessee for the first time last summer attacking blueberries in Unicoi County. If the adults are caught in traps prior to fruit ripening, weekly insecticide applications are recommended to protect this and subsequent crops. Fruit growers should put out apple cider vinegar baited traps to monitor for this pest. Traps should be put out at least two weeks before fruit will be ripe. Two instructive videos developed by North Carolina Cooperative Extension should be viewed at: [http://ncusmallfruitsipm.blogspot.com/search/label/SWD](http://ncusmallfruitsipm.blogspot.com/search/label/SWD). One video shows how to check traps after they are in the field. The other video demonstrates how to construct a monitoring trap from a clear plastic cup and a few other common items. Hopefully, the distribution of this pest in the state will still be limited in 2012. Fruit growers need to remain diligent and continue to monitor for this pest each year until found at your farms since it is predicted to spread quickly. (FH)

The *Fruit Pest News* URL is: [http://web.utk.edu/~extepp/fpn/fpn.htm](http://web.utk.edu/~extepp/fpn/fpn.htm)

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