Fruit Pest News

Volume 10, No. 4  April 23, 2009

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.

Text appearing in blue or red can be clicked to link to other web sites. Be aware that much of the linked information is produced in other states and may not be applicable to Tennessee.

In This Issue:

1. Current Conditions
2. Vegetables: Cutworms and Armyworms
3. Catfacing Insects on Stone Fruits
4. Oriental Fruit Moths
5. Peach Leaf Curl Reports
6. Grape: Optimum Timing for Black Rot Control
7. Disease Infections Periods
8. Pheromone Trap Catches

1. Current Conditions

We have had more than our share of cloudy weather this spring, but the long, slow rain of April 19 and 20 was one of only a few of the type that we've had this spring. No doubt, some disease infections occurred during that time. Most apples are at petal fall, and the susceptible period for fire blight blossom blight is over. Do not use streptomycin at this time unless tag-on blooms remain. Early varieties of blackberries are already beginning to bloom, and some plasticulture strawberries are beginning to ripen. (SB)

2. Vegetables: Cutworms and Armyworms

There have been several reports via distance diagnostics of cutworms in gardens. Transplants have been clipped at or near ground level. Many of the cutworm species including claybacked cutworm, sandhill cutworm, dusky cutworm, and bristly cutworm overwinter as larvae. Thus, they are usually some of the first caterpillars detected in the early spring. Since cutworms are nocturnal feeders, insecticide applications should be directed down the row at the base of the plants in late afternoon.

Black cutworms overwinter as pupae in the Gulf Coast states. Once the moths emerge in the spring, many will migrate north into Tennessee and other states. Both the black cutworm and the common or true armyworm were caught as adult male moths in pheromone traps in Nashville on April 8. The black...
cutworm trap was put out March 30 while the armyworm trap went out April 3. The initial armyworm moth activity probably occurred prior to when the trap was placed. In fact, armyworms had been detected in pheromone traps in nearby Princeton, Kentucky since the March 2-6 time period. Thus, scouting for armyworms should be well underway in cereal grains, corn, pastures and other grasses. The larvae are their most damaging after they are full grown. Black cutworms should be hatching from their singly laid eggs so be on the watchout for this important pest. (FH)

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3. Catfacing Insects on Stone Fruit

Stink bugs and plant bugs cause scarring of fruit with their piercing-sucking mouthparts. These sucking insects are attracted to many types of flowering plants including annual broadleaf weeds and fruit crops. The control of the flowering weeds in the orchard usually results in lower pest populations on the orchard floor that would be available to move up into the fruit trees and do damage. Insecticide sprays should begin at petal fall and be repeated every 7-10 days. (FH)

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4. Oriental Fruit Moths

In Nashville, the first Oriental fruit moths (OFM) were caught in a pheromone trap on April 2. Using this date as the biofix, one computer model shows egg hatch starting at 185 Degree-Days (DD) or April 22, 2009. Note that OFM activity may be even more advanced since the first moths were caught April 2 which was only a few days after the OFM trap was put out on March 31.

In low OFM-density orchards, a single insecticide application can be applied against OFM at 600 DD after biofix. In the more commonly occurring moderate to high-density OFM orchards, two insecticide applications are applied 14 days apart, the first at 500 DD after biofix. (FH)

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5. Peach Leaf Curl Reports

The cool, wet weather that occurred during bud swell and early leaf expansion has resulted in several reports of peach leaf curl. Spores of the causal fungus, which overwinter on bud scales and bark, wash onto the young leaf tissue in wet weather and initiate infections. Leaves become less susceptible as they age, and very little secondary spread of the disease occurs. Infected leaves become puckered, curled, thickened, and often show pink or reddish areas. Later in the season, upper surfaces of infected leaves turn gray. Infected leaves may wither and fall off in warm, dry weather. Fruit yields are often reduced because the tree’s energy is diverted into forming new leaves.

Applying a fungicide now will not be helpful, since no significant spread will occur. The disease can be
controlled by a single fungicide application (bordeaux, chlorothalonil, copper) in the fall, after leaf drop. The application can also be effective when applied in late winter, but only if separation of the leaf scales has not been caused by a warm period during the winter. The most effective fungicides are ferbam (see the following article), chlorothalonil, thiram, ziram, and copper. In severe cases, try to improve tree vigor by reducing the fruit load and providing water during dry periods. (SB)

6. Grape: Optimum Timing for Black Rot Control

Many grape vines are showing early development of blossom clusters; however, they are not yet at the "prebloom" stage of development, in which the clusters loosen and the blossom buds prepare to open.

Grape spray recommendations have traditionally included beginning the fungicide program at the 1 to 2-inch shoot stage of growth. You may have noticed that few black rot lesions appear on leaves in the spring, even if you don't spray. That's because environmental conditions are not favorable at that time of year for much infection. Ascospores of the fungus are available, but only a low percentage of them are able to cause infection. The key period for black rot control is near or at the start of bloom through 4 weeks after that. Black rot can cause the most yield loss during this period of time, because of the susceptibility of young berries, and the fact that it coincides with very favorable weather conditions for infection by the fungus. A fungicide application at immediate prebloom, followed by additional applications at 2 and 4 weeks later should provide excellent control of the berry rot stage of black rot. After about 6 weeks after the start of bloom, the fruit become resistant. Leaf and shoot infections can occur after that, but are not as damaging as fruit rot.

When following this program, use a fungicide with proven curative activity, such as Rally (Nova), which has 6-day kickback activity against black rot. That is, it will prevent lesion development in infections that have occurred within the last 6 days. It will even significantly reduce spore production in fresh leaf lesions. This is the fungicide used in research that has shown that sprays prior to the prebloom stage do not improve black rot control.

Note that fungicide applications are needed prior to prebloom for control of other diseases, and for black rot, in plantings in which the overwintering supply of black rot inoculum is high. (SB)

7. Disease Infection Periods

Infection periods for the first 23 days of April are presented below. The weather data upon which this information is based was collected on a Spectrum WatchDog system placed in Nashville, TN. This information may familiarize you with this method of timing the application of fungicides in an effort to improve control while reducing the number of sprays. Each disease is based on a different "model," or
system of predicting infection. Both models are based on the length of time the leaves stay wet at each temperature. They can be used to apply curative fungicides after infections occur or, by entering weather forecasts, to time fungicide applications for best effect. (SB)

### Infection periods for apple scab since April 1

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<th>No.</th>
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<th>Infection level</th>
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<tr>
<td>2</td>
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### Infection periods for grape black rot since April 1

<table>
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<td>April 19-20</td>
<td>heavy</td>
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### 8. Pheromone Trap Catches and Biofixes (FH)

Nashville (Davidson County) Pheromone Trap Catches for 2009

Oriental fruit moth (OFM), redbanded leafroller (RBLR), obliquebanded leafroller (OBLR), codling moth (CM), grape berry moth (GBM), variegated leafroller (VLR), black cutworm (BCW), diamondback moth (DBM), armyworm (AW), beet armyworm (BAW), squash vine borer (SVB), fall armyworm (FAW)
Rutted Apple Bud Moth (TABM)

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<thead>
<tr>
<th></th>
<th>OFM</th>
<th>RBLR</th>
<th>OBLR</th>
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*Biofix for RBLR in Putnam County estimated as prior to March 16 (trap not out early enough).*

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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