Fruit Pest News

Volume 10, No. 2  April 2, 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.

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1. Current Conditions

Strawberry growers are having to contend with the usual number of frosty mornings. Much of the state had frost last Monday and more is expected Tuesday and Wednesday mornings, April 7 and 8. At Nashville, peaches are at petal fall, which is an important spray time for prevention of damage from insects. Also, peach scab can begin activity at this time. Golden Delicious apples are in full bloom. Cedar-apple rust galls became active about a week ago, and Thursday's storms have the orange tendrils bloated. Cedar-hawthorne and quince rusts are also active. See article number 5, below, for practices that are needed for insect control at the petal fall stage.

2. 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 2009 Southeastern Peach, Nectarine and Plum Pest Management and Culture Guide (regional publication) - Available for downloading from http://www.ent.uga.edu/peach/PeachGuide.pdf. This pub will not be available in print this year.

The 2009 Integrated Orchard Management Guide for Commercial Apples in the Southeast (regional publication) - The revised copy is not yet available for downloading, but print copies are available at no charge at county Extension offices and from our office. Please let us know if you need one. The electronic copy will eventually be available at http://ipm.ncsu.edu/apple/orchardguide/orchard-management-guide.pdf.

The 2009 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://www.sripmc.org/docs/SoutheasternVegetableGuide.pdf. Warning: this is an 10 MB file.


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 and print copies are available at county Extension offices.

(SB)

3. Insecticide Updates for Grapes

The Southeast Regional Bunch Grape Integrated Management Guide was given a major revision for 2009. 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 adjuvents, 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 spirodiclofen (Envidor 2 SC).

Resistance management is an increasingly important factor that is addressed in the small fruit 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. (FH)

4. Insecticide Updates for the Southeastern U.S. Vegetable Crop Handbook

There are a number of new insecticides available for control of vegetable pests that are being incorporated into the 2009 Handbook. The cyfluthrin insecticide Capture 2E is being replaced throughout the Handbook with the cyfluthrin brand name Brigade. These pyrethroid insecticides are in the IRAC group 3.

Capture LFR is a bifenthrin insecticide formulated for soil insect control. It is applied to soil after mixing directly with a liquid fertilizer.

There are several new insecticides added for control of caterpillars. Spinetoram (Radiant SC) is replacing spinosad (Spintor) throughout the Handbook. Both are IRAC group 5 insecticides. Besides Lepidoptera caterpillars, Radiant SC is also labeled for used against dipterous leafminers, flower thrips, Colorado potato beetle, and suppression of pepper weevil.

The rynaxypyr insecticide Coragen is a suspension concentrate in IRAC group 28. It can be applied via drip chemigation or as a foliar application. It is labeled for use on Brassica leafy vegetables, cucurbit vegetables, fruiting vegetables, and leafy vegetables (non-Brassica). In addition to the various caterpillars on the label, Coragen is labeled for suppression of silverleaf whitefly nymphs and control or suppression of Liriomiza species leafminer larvae.

The insecticide flubendiamide (Synapse) is a 24% WG formulation. It is labeled for control of various caterpillars on cucurbits, leafy vegetables, Brassica leafy vegetables, leafy vegetables, and fruiting vegetables. Synapse is in the IRAC group 28.

One trend that we are seeing is a profusion of new insecticide labels that have two different insecticides
in a pre-mix. Cobalt is a combination of chlorpyrifos and gamma-cyhalothrin. Hero is a combination of bifenthrin and zeta-cypermethrin while Brigadier is a combination of bifenthrin and imidacloprid.

The insecticide spirotetramat (Movento) is an IRAC group 23 insecticide. It is labeled for control of aphids, psyllids, and whiteflies on fruiting vegetables and tuberous and corm vegetables. Movento is labeled for use on leafy vegetables and Brassica leafy vegetables for control of aphids and whiteflies.

The insecticide flonicamid (Beleaf 50 SG) is in the IRAC group 9C. On vegetables, it is labeled for control of aphids, plant bugs, and greenhouse whitefly on head and stem Brassica and mustard greens (0 day PHI), cucurbit vegetables (0 day PHI), fruiting vegetables (0 day PHI), leafy vegetables (0 day PHI), and potato (7 day PHI).

A new miticide in the IRAC group 10B is etoxazole (Zeal Miticide). It has a federal supplemental label for twospotted spider mite control on melons. (FH)

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5. Apple IPM

a. Plants Bugs

A clean groundcover goes a long way in eliminating the need to apply an insecticide for plant bugs. The same insecticides recommended in the 2009 Integrated Orchard Management Guide for Commercial Apples in the Southeast for rosy apple aphid control at Tight Cluster to Pink will aid in plant bug and spotted tentiform leafminer control, if plant bugs are readily seen. If plant bugs are a year to year problem, a second application at Petal Fall will improve control. An insecticide application targeting just spotted tentiform leafminer at Tight Cluster to Pink is questionable since first generation mines rarely exceed threshold levels. (FH)

b. Mating Disruption

Mating disruption pheromone dispensers should be hung before moths begin to emerge so Green Tip to 1/2-Inch Green is a good time to start. Oriental fruit moths are emerging now so the mating disruption pheromone dispensers should have already been put out. Codling moth mating disruption pheromone dispensers can still be put out now (bloom in many areas) with hanging completed by Petal Fall. Do not use mating disruption in blocks of less than 5 acres. Remember that supplemental insecticide sprays will be necessary under moderate to high population densities. (FH)

c. Insect and Mite Control at Petal Fall

A tank mix of Agri-Mek 0.15EC plus a paraffinic spray oil (0.25% or 1 gal/acre) applied at Petal Fall should provide season-long suppression of European red mite, spotted tentiform leafminer, and white apple leafhopper. Do not use captan 2 weeks before or after applying oil with Agri-Mek. Other miticides
(Apollo SC, Savey 50WP, Zeal 72WDG, Portal 0.4EC, Envidor 2SC) can be applied between Petal Fall and Third Cover or when mites reach one adult per leaf. Portal will also control leafhoppers.

The Petal Fall spray is an important one. Plum curculio adults enter before or near petal fall. A preventive spray is recommended to minimize damage on fresh market apples. Cool weather during this period may extend adult activity, which may require a second application 10 days later. Oriental fruit moth is becoming a more important apple pest. An insecticide applied between 500 and 600 degree days (DD) after biofix will control the first generation.

First generation crawlers of San Jose scale tend to be active from Petal Fall through Third Cover. Wrap double-stick tape around infested limbs after bloom and inspect once or twice per week for the yellow crawlers. Make your insecticide application when the crawlers emerge.

Rosy apple aphids can be controlled at Petal Fall if a needed spray was not applied at Pink or if control was poor. If green fruitworms are observed, an insecticide application may be needed. First generation white apple leafhoppers have a threshold of one nymph per leaf. Sevin, if used for thinning, should control leafhoppers. First generation spotted tentiform leafminers have a threshold of one mine per leaf, but it is rare that populations reach this level in early season. (FH)

d. Redbanded Leafroller and Oriental Fruit Moth Pheromone Trap Reports

A pheromone trap in a Putnam County orchard caught ten redbanded leafroller moths on March 16 (biofix date), 31 on March 18, four more by March 13, and six more by March 27. The Nashville trap was put out on March 13 and had caught 29 moths by March 20.

Four Oriental fruit moths were caught in the Nashville trap on April 2 (biofix). (FH)