Fruit IPM
Dean Polk, Fruit IPM Agent and David Schmitt, Eugene Rizio and Atanas Atanassov, Ph.D., Program Associates, Tree Fruit IPM

Peach
✔ Oriental Fruit Moth (OFM): According to the Skybit degree day accumulations, spray dates for the first generation are as follows:

<table>
<thead>
<tr>
<th>County / Region</th>
<th>1st Spray Date</th>
<th>2nd Spray Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gloucester – Southern</td>
<td>past</td>
<td>4/26</td>
</tr>
<tr>
<td>Monmouth – Central</td>
<td>4/17-19</td>
<td>About 5/3-8</td>
</tr>
<tr>
<td>Hunterdon - Northern</td>
<td>4/23-27</td>
<td></td>
</tr>
</tbody>
</table>

All of the first timed treatments should have been applied in southern and central counties. Treatments in northern counties are due this week. Growers in Northern Counties may be seeing trap counts increase. This is a normal occurrence in the emergence pattern just before the first insecticides are applied. We do not use a treatment threshold for the first flight. Sprays are timed by the degree day model in coordination with the first sustained trap captures as seen in the pheromone traps. After two full degree day timed insecticides are applied, then an action threshold of 6-8 moths per trap may be used for the remainder of the flight. Under normal conditions, trap captures should ‘bottom out’ 10 days to 2 weeks after the second application.

✔ Tarnished Plant Bugs (TPB) and Stink Bugs (SB): Native stink-bugs have been active near wood lines. TPB adults and nymphs can usually be found in weedy groundcovers by now. If catfacing insects are present then insecticides effective for those insects should be included in the tank, but groundcover should be managed to minimize TPB and SB populations. Clover and other weedy groundcovers are an invitation for catfacing injury, and therefore require increased insecticide use.

✔ Brown Marmorated Stink Bug (BMSB): Growers have observed BMSB in orchards at low levels while string thinning in Southern Counties. Injured fruit at this point will most likely abort. In 2011 the first injury was observed about mid to late May.

✔ Plum Curculio (PC): Adults are active and fresh injury was first found on 4/23. Although activity should peak in early to mid-May, it usually does not end until sometime in June. See last week’s newsletter for a summary of materials, or the Tree Fruit Production Guide.

SEE IPM ON PAGE 2
Green Peach Aphid (GPA): Most orchard blocks have populations that are still below treatable levels. A few blocks have high populations near woodlines. At this time of year, tolerate no more than 2-3 colonies per tree, or 1 colony per tree in nectarines, or if the trees are in their 1st or 2nd year.

Bacterial Spot: Fruit at this stage is very susceptible to bacterial spot. Favorable conditions for epidemics include persistent winds along with heavy rains or long periods of moisture or humidity. This is an important time for control. Coppers or Terramycin should be applied any time wet and windy weather is expected. Special Warning on Phytotoxicity: Be very careful when tank mixing Captan and coppers. Captan/copper combinations should be avoided after long periods of overcast skies, since we have previously experienced moderate to severe phytoxicity following several days of cloudy weather. Also be careful with buffering solutions in tank mixes.

Lesser Peachtree Borer (LPTB): Adults should start flying soon. Growers who wish to employ mating disruption for lesser borer control should begin placing dispensers in orchards during the next week or two.

Aphids (Spirea and Apple Aphids, and Rosy Apple Aphids): The apple aphid complex of green and spirea aphids is starting to become active. A threshold of 50% terminals infested should be used to determine the need for treatment. If predators are present, treatment can be delayed unless aphid populations are very high. A few rosy aphid colonies have been seen above treatment threshold. The rosy aphid threshold for treatment is an average of one colony per tree. We have seen some early predator populations that can suppress aphid growth. If using Assail or Calypso for Codling Moth control later, then aphids will be controlled at that time, since these materials will do “double duty” for both Codling Moth and aphid control. Any premix like Voliam Flexi that has a neonicotinoid in it will also control aphids when used for Codling Moth a few weeks from now.

Spotted Tentiform Leafminer (STLM): Very few leafminers have been seen to date. We generally do not want to treat at this time unless the mine count exceeds .5 mines per leaf.

Plum Curculio (PC): Of the newer insecticides, Actara, Calypso, and Avaunt give good control, and Imidan still works well. Voliam Flexi (Rynaxypyr + Actara), Voliam Xpress (Rynaxypyr + Warrior), and Leverage (Provado + Baythroid) are broad spectrum and will control all key pests at this growth stage. Since Voliam Express and Leverage are premixes with pyrethroids, they need to be used at the high rate to achieve PC control. Therefore, they cost a little more than you may want to spend this early in the game.

European Red Mite (ERM): Petal fall to first cover is a good time to apply the miticides Apollo or Savey, especially if you plan on using a harsh pyrethroid program. These miticides should be included in a rotation program for mite resistance management. Onager has the same active ingredient as Savey, but Onager is a 50% WDG, and Savey is an 11.8% EC. Zeal has a similar mode of action as do Apollo, Savey and Onager, so it may work best early in the season. Envidor should also be used on young developing mite populations, but has a different mode of action than the previously mentioned products. Several Red Delicious blocks in southern counties already have mite populations above the 2 mites/leaf treatment threshold, which is likely a result of pyrethroid use last season.

Apple Scab: Scab has not been found in any blocks to date. The wetting period we just experienced was the first major infection period during the last several weeks. We have a prediction for a second infection period this coming weekend through Monday. Remember to also include materials that are effective for Cedar Apple Rust at this time of year.

Fireblight: Fireblight is a concern anytime there is wetting or high humidity combined with warm tempera-
tures. Where blossoms are still present in northern counties, effective antibiotics should be applied whenever conditions are suitable for infection.

**Scouting Calendar**

The following table is intended as an aid for orchard scouting. It should **not** be used to time pesticide applications. Median dates for pest events and crop phenology are displayed. These dates are compiled from observations made over the past 5-10 years in Gloucester County. Events in northern New Jersey should occur 7-10 days later.

<table>
<thead>
<tr>
<th>Pest Event or Growth Stage</th>
<th>Approximate Date</th>
<th>2012 Observed Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Bloom Peach (Redhaven)</td>
<td>April 16 +/- 7 Days</td>
<td>March 26</td>
</tr>
<tr>
<td>Full Bloom Apple (Red Delicious)</td>
<td>April 20 +/- 9 Days</td>
<td>April 11</td>
</tr>
<tr>
<td>Petal Fall (Redhaven)</td>
<td>April 21 +/- 9 Days</td>
<td>April 10</td>
</tr>
<tr>
<td>Petal Fall (Red Delicious)</td>
<td>April 27 +/- 13 Days</td>
<td>Not yet observed</td>
</tr>
<tr>
<td>Shuck Split (Redhaven)</td>
<td>April 29 +/- 7 Days</td>
<td>April 18</td>
</tr>
<tr>
<td>Tufted Apple Bud Moth Biofix</td>
<td>May 4 +/- 10 Days</td>
<td>Not yet observed</td>
</tr>
<tr>
<td>Plum Curculio Oviposition Begins</td>
<td>May 5 +/- 16 Days</td>
<td>April 21</td>
</tr>
<tr>
<td>Oriental Fruit Moth – 375 DD target</td>
<td>May 10 +/- 10 Days</td>
<td>April 26</td>
</tr>
<tr>
<td>Codling Moth Biofix</td>
<td>May 14 +/- 16 Days</td>
<td>April 19</td>
</tr>
</tbody>
</table>

**Blueberry**

✔ Cranberry Weevil (CBW): Although the weevil does not really pose a risk at this point, they are still present in our samples. We found them at low numbers in 26% of beating tray samples.

✔ Lepidoptera larvae (Worms): Beating tray samples have shown 25% positive for various species. The most common larvae are several species of green Fruitworm. All levels are under treatment levels. One field was seen with slightly higher numbers of sawfly larvae.

✔ Plum Curculio (PC): About 9% of samples are positive for PC adults. As expected this is an increase since last week, and should increase until insecticide use is resumed after bees are removed.

✔ Thrips: Beating tray samples of blossom clusters have been done at many locations. Thrips are present, but at very low numbers.

✔ Aphids: These are just starting to show up, and are not a concern.

✔ Cranberry Fruitworm (CBFW): The first adult moths were captured on 4/17 in Burlington County. Only a small number of sites are showing early activity.

✔ Mummy Berry: No shoot strikes have been seen in scouted fields as of this writing.

**Trap Counts – Southern Counties**

<table>
<thead>
<tr>
<th>Week ending</th>
<th>STLM</th>
<th>TABM-A</th>
<th>CM</th>
<th>AM</th>
<th>OFM-A</th>
<th>DWB</th>
<th>OFM-P</th>
<th>TABM-P</th>
<th>LPTB</th>
<th>PTB</th>
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<tbody>
<tr>
<td>3/24</td>
<td>2</td>
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<td>3</td>
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<td>11</td>
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<td>2</td>
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**Trap Counts – Northern Counties**

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<th>Week ending</th>
<th>STLM</th>
<th>CM</th>
<th>TABM-A</th>
<th>AM</th>
<th>DWB</th>
<th>OBLR</th>
<th>OFM-P</th>
<th>TABM-P</th>
<th>LPTB</th>
<th>PTB</th>
<th>BMSB</th>
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</table>

**Blueberry Insect Trap Captures**

**Atlantic County**

<table>
<thead>
<tr>
<th>Week Ending</th>
<th>CBFW</th>
<th>RBLR</th>
<th>OBLR</th>
<th>SNLH</th>
<th>Or. Beetle</th>
<th>BBM</th>
<th>BMSB</th>
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<td>4/21</td>
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**Burlington County**

<table>
<thead>
<tr>
<th>Week Ending</th>
<th>CBFW</th>
<th>RBLR</th>
<th>OBLR</th>
<th>SNLH</th>
<th>Or. Beetle</th>
<th>BBM</th>
<th>BMSB</th>
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</thead>
<tbody>
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<td>4/7</td>
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<tr>
<td>4/21</td>
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</table>
Preparing Your Farm
Food Safety Plan
Part 1 - Developing Your Farm
Food Safety Mission Statement

Meredith Melendez, Mercer County Senior Program Coordinator, Agriculture and Wesley Kline, Ph.D., Cumberland County Agricultural Agent

Having a farm food safety plan that is specific to your operation makes good business sense. Publicity about illness outbreaks traced back to the farm has created a public that pays much more attention to food safety than they used to. Developing your own farm food safety plan can help to reassure your customers about food safety on your farm and potentially increase your market opportunities. A farm food safety plan will help prove to your customers dedication to on-farm food safety and show them the measures you’ve taken to ensure a safe quality product.

The first step in writing a farm food safety plan is to create a food safety mission statement for the farm. This statement should be brief, consisting of several paragraphs and explain your company’s commitment to food safety, food quality, food sanitation and worker hygiene. This mission statement is specific to food safety only, and is separate from the mission statement of your farm business plan.

The first paragraph of your mission statement should focus on the general philosophy of the farm in regards to food safety and indicate who at the farm is responsible for the food safety program. This first paragraph should include the following statements:
1. The most important mission of the farm is food safety.
2. Management and employees at the farm are committed to producing and marketing safe product through good agriculture and handling practices that focus on principles of food safety and quality.
3. Indicate who on the farm oversees the food safety program.
4. Indicate, when possible, what food safety training the supervisor has had.

The second paragraph of your mission statement should describe through broad statements how food safety is ensured. Statements should show that the following are priorities:
1. Making sure there is no immediate safety risk present in areas where the produce is grown, processed and packed.
2. Making sure product is not at risk for contamination by insects, rodents, birds and pets.
3. That employees are appropriately following heath and hygiene practices.
4. That all information and paperwork is documented in an efficient and truthful manner.

And that:
6. Maps are available in the food safety plan of the farm and water movement.

The third paragraph should focus on documentation, the organization of this documentation and the annual review of the food safety plan. Statements can include:
1. The food safety plan will be reviewed annually and updated as needed.
2. All documentation referenced in the food safety plan will be kept on file for a minimum of two years.
3. Employees will be familiar with the food safety plan and will be trained annually and as the farm food safety plan is updated.

Next week: Farm Maps. □
Calendar of Events

April 24, 2012  Blueberry Twilight Meeting – Atlantic Blueberry Company, 7201 Weymouth Rd. Hammonton, NJ. For commercial growers only. Sponsored by Rutgers Coop. Ext. NJAES. Contact Gary Pavlis, 609-625-0056.

April 28, 2012  10:00 am – 4:00 pm, Ag Field Day at Rutgers Day – George H. Cook Campus, New Brunswick, NJ. For more information: http://agfieldday.rutgers.edu.


May 8, 2012  1:00 pm, Twilight Meeting for Fruit Growers, Lancaster/York Counties – Lancaster/York Co. Contact Tim Elkner, 717-394-6851, fax: 717-394-3962, tee2@psu.edu.

May 9, 2012  3:00 pm – 5:00 pm, Twilight Meeting for Fruit Growers, Adams County- McCleaf’s Orchard, 104 W. Guernsey Rd. Biglerville, PA. Contact Tara Baugher 717-334-6271, tab36@psu.edu.

May 24, 2012 Twilight Meeting for Fruit Growers, Southeastern, PA. Contact Rick Kaufmann, 610-378-1327, fax: 610-378-1327, rsk5@psu.edu.

May 29, 2012 - Blueberry Twilight Meeting, Philip E. Marucci Blueberry/ Cranberry Research Center, 125A. Lake Oswego Rd., Chatsworth, NJ. Sponsored by Rutgers Coop. Ext. NJAES. Contact Gary Pavlis 609-625-0056.

2nd North Jersey Fruit Meeting
Thursday, May 3, 2012
6:00p.m. – 8:45 p.m.
Phillips Farms
91 Crabapple Hill Road
Milford, NJ 08867 (Hunterdon County)

Meeting will be held rain, snow or shine

6:00 p.m. Orchard Tour - Leaves promptly at 6:00 p.m.
Tour of tree fruit, small fruit and new packing house loading dock, cold storage, Marc Phillips – Owner Phillips Farms and Win Cowgill, Area Fruit Agent
Featured will be 30 plus acres of tree fruit- peaches (15A) apples (12), Asian pears (2), plums (1.5A), cherries (2) European pears (1) and 15 acres of small fruit-including brambles (8A), Blueberries (4A), strawberries (5A), currents and gooseberries. Phillips Farms also grows over 200 acres of vegetables, some double cropped.

Disease Development and Control in Multi-Crop Settings - this talk will be particularly adapted to all producers with multiple crops and multiple marketing venues, Dr. Norm Lalancette, Specialist in Tree Fruit Pomology

Update on Herbicide Options for Tree Fruit - Dr. Brad Majek, Specialist in Weed Science

7:30  p.m. return inside
Chemical Thinning Update in a difficult season-Win Cowgill, Area Fruit Agent

Update on Pesticide Regulations for 2012 - Peter Nitzsche, Agricultural Agent of Morris County

Insect Control Update – Dean Polk, Statewide IPM Agent

BMSB biology and management on diversified farms – Dr. Ann Neilson - RCE Extension, Specialist in Entomology

Crop Insurance Update and Freeze injury – Dave Lee, RCE of Salem County

NJ and PA- PESTICIDE RECERTIFICATION CREDITS. Awarded at the end of the program

Registration Donation: $10.00 –checks made payable to Rutgers, the State University. Please RSVP to register with Diana Boesch at 908-788-1339 or boesch@njaes.rutgers.edu. Program questions contact Win Cowgill.

Directions from North Jersey: Phillips Farm, 91 Crabapple Hill Road, Milford, NJ 08867. From I-78 West, take Exit 11 for Pattenburg/W.Portal. Keep left at the fork in the ramp. Merge onto NJ-173 W. Immediately enter next roundabout and take 2nd exit onto CR-614 West/Pattenburg Rd (basically cross over route 78). CR-614/Pattenburg Rd. becomes CR-614 West. Stay on CR-614 West for 2.5 miles until a 4-way stop. Continue for 2 more miles and make a sharp left turn at the Little York Inn, staying on CR-614 West. Continue on CR-614 West for another 2.5 miles. CR-614 turns into Spring Mills Rd. At the stop sign, turn right onto CR-519 North/ Milford Warren Glen Rd. Make your first left onto Church Rd. and continue for 2.5 miles. Turn left on Crabapple Hill Road, Phillips Farms farm driveway will be on the right- travel up the hill to the buildings.
PLANT & PEST ADVISORY
FRUIT EDITION - CONTRIBUTORS

Rutgers NJAES Cooperative Extension Specialists
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Norman Lalancette, Ph.D., Tree Fruit Pathology
Bradley A. Majek, Ph.D., Weed Science
Peter Oudemans, Ph.D., Small Fruit Plant Pathology
Cesar Rodriguez-Saona, Ph.D., Cranberry/Blueberry Entomology
Daniel Ward, Ph.D., Pomology

Rutgers NJAES
Joseph Goffreda, Ph.D., Breeding

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Pesticide User Responsibility: Use pesticides safely and follow instructions on labels. The pesticide user is responsible for proper use, storage and disposal, residues on crops, and damage caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact RCE in your County.

Use of Trade Names: No discrimination or endorsement is intended in the use of trade names in this publication. In some instances a compound may be sold under different trade names and may vary as to label clearances.

For back issues, visit our web site at: www.rce.rutgers.edu/pubs/plantandpestadvisory

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