Monday, July 17, 2017 Vol 24:14

Insect Pest Update

Apple maggot flies have begun emerging. So far, we have only caught AM on just a few of the ca. 200 traps deployed in 20 orchards. But AM will start showing up in higher numbers over the next two weeks.


We use traps without odor lures. Adding lures add $2 per trap, thus increasing the cost of monitoring supplies from virtually nothing (we already own traps and a 25 lb. bucket of tangletrap goes a long way) from almost zero to $2 each. For our purposes, the trap without lure is simpler, faster and gives us what we need. Also, there is concern about the lure actually bringing more AM into the orchard. However, the lures are useful if you are using traps for a trap-out strategy instead of as a monitoring tool. The lure makes trap about 5X more effective.

Apple maggot flies emerge from the soil and spend about 10 days feeding, mating, and growing eggs before the females starting looking for fruit in which to lay eggs. The red ball traps are effective at detecting egglaying activity.

This is the time to check vegetative shoots and fruit clusters for greenish –yellow obliquebanded leafroller larvae. If you find more than 3 larvae per 100 shoots/fruit clusters, then a treatment is recommended. The larval threshold is more than 3 larvae per 100 shoots/fruit clusters. Look for greenish yellow larvae feeding on leaves or on fruit. Effective materials include Altacor, Exirel, Delegate, pyrethroids (Danitol, Tombstone etc.) Belt, and Proclaim; as well as Bt products and the growth regulators Intrepid and Rimon.

Except for Belt, Proclaim and the Bt products, those insecticides will also serve as a first application against apple maggot. Despite its “Good” rating, I do not recommend Asana against apple maggot because it does not seem to hold well to summer heat and sunlight for residual control.

White apple leafhopper are noticeable in some locations. The adults are harder to kill than the nymphs. Second generation nymphs will begin appearing in early August, which would be the best timing for an application.
Highmoor Farm / Pom. Soc. Field Day

Wednesday, July 26, 2017, 8:30 AM to 3:00 PM
Highmoor Farm, 52 US Route 202, Monmouth, Maine 04259
Registration fee is $25.00 (includes lunch). Preregistration is strongly encouraged.

Register online at https://extension.umaine.edu/highmoor/blog/2017/06/20/highmoor‐farm‐field‐day‐july‐26‐2017/ or contact Pam St. Peter at pamela.stpeter@maine.edu or 207.933.2100 to preregister. Please register as soon as possible to give us an accurate count for lunch.

This year's field day will include tours of current research projects in tree fruit, vegetables and small fruit. Special guest speaker will be Dr. Gennaro Fazio, apple rootstock expert at the USDA‐ARS Plant Genetic Resources Unit, and Adjunct Associate Professor at Cornell University.

You are welcome to attend the whole day, or just come for the morning or afternoon programs and tours. Whichever you decide, please plan to be there for lunch to share some time and informal discussion with fellow farmers, research and Extension staff, and state officials. Thank you to our sponsors, Crop Production Services, Maine State Pomological Society and Maine Vegetable and Small Fruit Growers Association.

8:30 am Registration coffee and donuts courtesy of Crop Production Services
9:00 am Welcome and Opening Remarks
   – Fred Servello, Maine Agricultural & Forest Experiment Station
   – John Rebar, University of Maine Cooperative Extension
   – Erin Roche, UMaine Crop Insurance Education Program
9:15 am Food Safety Modernization Act Update – David Handley
9:45 am Break
10:00 am Apple Rootstock Research - Specialty Crops Research Initiative
   – Gennaro Fazio, Cornell University & USDA/ARS
11:00 am Hiring and Retaining Good Employees – Farmer Panel Discussion
11:45 am Maine State Pomological Society Business Meeting – Aaron Libby, President
12:00 pm Lunch
1:00 pm Concurrent Experiment Station Research Tour
   Tree Fruit Tour – Renae Moran, Glen Koehler, and special guest Gennaro Fazio.
   New Geneva apple rootstocks; pruning techniques for high density apple, peach and cherry orchards.
   Berry & Vegetable Tour – David Handley and Mark Hutton.
   Pumpkin, sweet corn, broccoli and grape variety trials; pest update; reduced tillage in organic systems and permanent beds; high tunnel tomatoes, cucumbers and strawberries; compost application rates in high tunnels
3:00 pm Adjourn

Directions to Highmoor Farm, 52 US Route 202, Monmouth, Maine 04259 (207.933.2100)

Traveling North on I-95: Drive north on the Maine Turnpike (I-95) and take Exit 86 in Sabattus. Turn left onto Route 9/Middle Road. Travel about 2 miles on Route 9 East, then turn left onto Route 132. After 4.5 miles, turn left onto Leeds Junction Road. Travel about 2.8 miles, then turn right onto U.S. Route 202 and travel about 1.3 miles up the road until you see Highmoor Farm on the right.

Traveling South on I-95: Take Exit 109B in Augusta. Continue west on U.S. Route 202 and travel about 15 miles. Highmoor Farm will be on the left.
Leaf and Soil Tests

Mid July is the right time to collect leaf samples for next years’ fertilizing. Samples will be analyzed in late fall with results available in early winter. The charge for leaf tests is $22. The charge for a soil test is $12 with the winter discount. You may bring samples to the Summer Tour July 26, or mail them to Highmoor Farm. Sample submission forms are also available at soil testing website http://anlab.umesci.maine.edu/soillab_files/forms/index.html. If you would like results within a few weeks send your leaf and soil samples directly to the University Analytical lab in Orono and indicate that you would like results as soon as possible. There is an extra charge for a quick turn around on getting results.

Instructions for Collecting Leaf and Soil Samples

Leaf Samples

1) Samples should be collected in mid to late July. Samples collected too soon or too late will have invalid nitrogen levels.
2) Samples should contain leaves from only one variety. Different varieties should be sampled separately, if possible.
3) Select trees in good health that are typical of the orchard in tree size, age, crop load and vigor. Avoid leaves from weak or sick trees. Avoid yellow leaves on the variety Honeycrisp.
4) Collect 50 to 100 leaves from this year’s shoot growth. Pick leaves that are midway down the shoot from shoots that are one to two feet in length, if possible.
5) The ideal block size is 10 acres or smaller. However, larger areas can be sampled as one sample when tree age, crop load, weed control and soil fertility are the same from one end to the other.
6) Place leaves in a sealed plastic bag marked with the sample name, your name and daytime phone number along with the sample form shown above. To keep the leaves from rotting inside the plastic bag, do not pick leaves when wet, and include a DRY paper towel to absorb excess moisture.

Leaf samples are washed at Highmoor Farm to remove surface contaminants. In order for leaves to be washed, they must not be dried until the washing is complete. Leaves that arrive dried can still be analyzed.

Soil Samples

1) The soil should be a composite or mixture of 10 to 15 separate samplings from the same orchard.
2) Using a sampling tube, augur or spade, take the soil from within the tree row and to a depth of 8 inches. Do not include surface debris from dead leaves.
3) Place the composite sample in a container and mix thoroughly. Transfer soil the a Soil Testing Box and fill it fully. Boxes are available from the Highmoor Farm and from the Analytical Lab.
4) Label the box with the sample name, your name and daytime telephone number. Submit the sample with a completed form. If leaves and soil are sampled from the same orchard, only one form is needed.

Leaf and soil samples can be brought directly to Highmoor Farm or UMaine Analytical Lab. or sent by mail to:

Highmoor Farm
PO Box 179
Monmouth, ME 04259

University of Maine Analytical Lab
5722 Deering Hall
Orono, ME 04469-5722
Lab Use Only:

Leaf Sample No.
Topsoil Sample No.
Subsoil Sample No.

Grower name: ___________________________
Mailing address: _________________________
Daytime phone: _________________________
(Optional) email results: __________________
Sample or block name: ___________________
Variety or strain (indicate if spur or standard): ___________________
Average tree age: ____________
Average tree spacing or number of trees per acre: _______________

Please circle the appropriate one.

<table>
<thead>
<tr>
<th>Crop Load</th>
<th>Pruning</th>
<th>Ground Cover</th>
<th>Soil Drainage</th>
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<tbody>
<tr>
<td>Light</td>
<td>light</td>
<td>sod</td>
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</tr>
<tr>
<td>Moderate</td>
<td>moderate</td>
<td>mulch</td>
<td>fair</td>
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<tr>
<td>Heavy</td>
<td>heavy</td>
<td>herbicide</td>
<td>poor</td>
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</tbody>
</table>

Fertilizer and Foliar Sprays
(check all that you applied):

<table>
<thead>
<tr>
<th>Any problems:</th>
<th>This Year</th>
<th>Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen (grade and lbs. per tree)</td>
<td>Check or list</td>
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</tr>
<tr>
<td>Foliar urea</td>
<td>Biennial bearing</td>
<td></td>
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<tr>
<td>Lime</td>
<td>Bitter pit</td>
<td></td>
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<tr>
<td>Magnesium</td>
<td>Shoot dieback</td>
<td></td>
</tr>
<tr>
<td>Boron (ground or foliar)</td>
<td>Lack of fruit color</td>
<td></td>
</tr>
<tr>
<td>Manganese</td>
<td>Intervernal chlorosis</td>
<td></td>
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<tr>
<td>Zinc</td>
<td>Foliar injury (specify):</td>
<td></td>
</tr>
<tr>
<td>Copper sprays</td>
<td>Other:</td>
<td></td>
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</tbody>
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Neonicotinoids in the News

The dimensions and causes for pollinator population decline probably won’t be fully understood for years, if ever. Studies indicate multiple overlapping causes including habitat loss, varroa mite parasites and mite resistance to miticides, new and old viruses and other bee diseases, pesticide exposures (including fungicide x insecticide synergism and the potential activity of nominally “inert” ingredients), and honey bee management.

Neonicotinoid insecticide seed treatments have been a particular target of scrutiny. Here is a summary of two recent articles that appeared in Science, one of the most prominent science journals, that received a good deal of press coverage.

http://www.nature.com/news/largest‐ever‐study‐of‐controversial‐pesticides‐finds‐harm‐to‐bees‐1.22229

Growers can reduce impact of July and August insecticide applications on foraging bees by
- select pesticides with moderate or low bee impact rating,
- spray only at night when honey bees and many native bees are not actively foraging,
- timing applications such that spray has time to dry before dawn,
- reduce clover, dandelion and other flower plants in the orchard, or mow flower heads off before insecticide sprays,
- provide unsprayed refuge areas with diverse flowering plants where bees can meet their needs for nectar and pollen.

The black lump on the back of this honey bee is a varroa mite, which sucks vital fluids and can transmit viruses and pathogens to the bee. USDA-ARS photo.
Maine Heirloom Apple Camp

The Maine Organic Farmers and Gardeners Association is hosting a Maine Apple Camp, Friday-Sunday August 18-20, at Camp NEOFA in Liberty, ME. This event will bring together folks who are excited about the future of heirloom fruit varieties: How to save them, what to do with them, how to make great cider, and who to work with. Participants will check in for 2-1/2 days and 2 nights of immersive learning and community building.

In small workshops and larger public events, experts on heirloom fruit conservation in Maine and beyond will discuss efforts to preserve Maine apples, pears and other fruit, how those efforts connect to national and international projects, how to research and document heirloom varieties, and how to involve the public in this important work. Some of New England’s most innovative hard-cider makers will cover the ins and outs of making our traditional beverage of choice. Other sessions will cover organic orchard management, creating community orchards, and how forgotten fruits can return to prominence in restaurants, stores and bars as part of Maine’s food renaissance.

The intent is to connect organic and heirloom advocates/growers (including cidermakers) with commercial, conventional growers; and experienced with new explorers of heirloom fruit. For more details on registration, lodging, and agenda see http://mofgastore.org/product.sc?productId=276&categoryId=5

Closing Words

“It doesn’t look damaged, it just looks dead.” ~ Maine apple grower #1

“I can’t stop doing something I’m not doing in the first place” ~ Maine apple grower #2