White Apple Leafhopper

This minor pest of apples overwinters in the egg stage. The eggs hatch about the time of petal fall, and there's a fairly wide window of opportunity to check your trees for them. Any time from about 5 to 12 days after petal fall is a good time to look. Examine spots where you had significant numbers of leafhoppers last fall. Look at the undersides of CLUSTER leaves. If you find 25 or more of these elongate nymphs out of 100 cluster leaves, it is worthwhile to apply an insecticide to control them. By the way... many growers thin fruit with Sevin. If you do so, the material can do double duty (if you need an insecticide for WALH) if it is applied at the leafhopper rate. Applied at the leafhopper rate, it will also give 5-7 days of control for plum curculio, unless it is washed off by rain.
We have two generations of this insect a year in NH, and the easiest time to check for them (and treat with insecticide, if necessary) is on this first generation. The second generation comes in the summer, and is less synchronous than this one. That makes sampling a little less precise. Also, it is tougher to get complete control by one spray, in the second generation.

**Fruit Bud Development**

Tree fruit buds at the UNH Woodman Horticulture Farm on Monday, May 20th were as follows.

**Pioneer McIntosh Apple** - bloom.

**Peaches** - petal fall to shuck split.

**Japanese & European plums** - fruit set.

**Pears** - fruit set.

**Blueberries** - bloom.

**Plum Curculio**

Experienced apple growers know that this insect has the ability to eliminate 50 to 98% of your crop, if not controlled. The insect must wait until fruit have reached 6mm size (1/4 inch), to begin its attacks. If the weather is humid and very warm, activity goes way, way up. Typically this is done with insecticides. For conventional growers, the most effective options probably include: Actara, Avaunt, Calypso, Imidan, Leverage (a combination of two insecticides), and Voliam Express (another combination product). For backyard growers, the best material that is available and packaged in backyard-garden size is probably Sevin. Most backyard fruit spray mixtures are too diluted to effectively control plum curculio.

Organic growers have a tougher time. Surround is probably the best option, if carefully applied. That means putting on the product in a dilute fashion, so the foliage and fruit are thoroughly covered with a very light film. It usually takes two or more applications to get proper coverage. In the vast majority of cases I’ve seen, the growers are concentrating the material too much, so they get bright white splotches on the foliage. We want a very thin, uniform film.

Typically PC attacks for about 3 weeks, but in some situations (ex: with lots of unsprayed bearing apple trees nearby) it can last longer. Most commercial growers have to spray twice, sometimes more.

For commercial growers there is a predictive model to tell when to apply last PC spray: keep apples protected through 340 degree days (base 50) after petal fall. We expect that some residue will continue to control them for a little while past that. This model hasn’t worked too well in blocks with heavy, long-lasting pressure. I mention it as another piece of information in decision-making...not the one on which you would entirely rely.
Western Conifer Seed Bug

I'm still getting queries on this, from orchardists, greenhouse managers, and homeowners. WCSB moves into buildings in the fall, and usually overwinters within wall voids. In spring, it exits to make a living on conifers. No, it will not bite people. No, it does not attack fruit trees, homes, or furnishings. No, even though it is stinky when squashed, it is not a stinkbug. If you had a bunch of these in your home, office, or storage building, expect more next fall/winter/spring. You can greatly reduce the nuisance problem by properly caulking and sealing at the right time. See one of my publications for more details.

Brown Marmorated Stinkbug

Since I just mentioned stinkbugs, I'll confirm that we now have found this insect in 11 NH municipalities. Other than a significant number of them found in a nursery (on trees imported from Long Island, NY), we have not yet found any specimens of this in an agricultural crop, despite lots of searching. This year we anticipate having ten BMSB traps, probably in Hillsborough, Merrimack and Grafton counties. In May, June and July, BMSB should be mostly in the canopies of trees, especially forest and shade trees. Being so high, most people won't encounter them at that time. The confirmed towns/cities are: Chichester, Concord, Dover, Durham, Greenland, Nashua, Newington, Newport, Portsmouth, Rochester, Stratham. We'll probably discover specimens in another town or two this coming fall/winter.

Pheromone Disruption Ties to Control Borers in Peaches

If you plan to use these to control both species of borers, they should have gone up already. If you are not worried about lesser PTB, you probably have until May 25th to get them up. The ties disperse so much female odor that few males can find the real females, so few or no females mate. Unmated females lay sterile eggs, so this controls the pest without spraying. The system works better in larger blocks, compared to small, or long, narrow blocks. It works for the whole season. The ties are placed at head height on the trees, towards the tree centers, at a rate of 150 lures/A. In a block with heavy pressure (or first year trying this) use 250/acre.

For the first year of mating disruption in a problem block, it may be advisable to supplement with one insecticide spray. Backyard growers? No, this won't work for you --- too small an area.

Apple Scab

As of Tuesday May 21, we had accumulated 574 apple scab degree days Durham since the biofix (April 16), at the Woodman Farm in Durham. That means, according to the model, that about 73% of the season's supply of ascospores should have matured. Recent infection periods included May 9-12 and in some areas a possible light infection period on May 20th (depends on when the rain started). The forecast for Durham predicts showers and thunderstorms through Friday, May 24. A significant number of ascospores are likely to be released. The following is information from Dan Cooley at UMASS: “Application
of protectant fungicides combined with a DMI, strobilurin, or SDHI fungicide [should be applied] prior to infections. Showers may make it difficult to apply fungicides, but it will be well worth putting on an application sooner rather than later.

Please note there’s an error in the New England Tree Fruit Management Guide. The Inspire Super rate is listed as 8 oz/A. This is below the range from trials, which is 8.5 to 12 oz/A, and well below the current label rate of 12 oz/A. Given the potential severity of apple scab infections occurring as a result of the present rain, growers should use the 12 oz/A rate. And as always, mix any SI including Inspire Super with a contact fungicide, mancozeb (3 lb/A), or captan (80WP at 2 lb/A)."

Fire Blight

Models from the weather stations at the Kingman and Woodman research farms in Durham are predicting a high risk of fire blight, particularly at the end of this week (24th). Since many trees still have blooms, a streptomycin application should be considered, particularly in highly susceptible varieties or where there is a history of fire blight.

San Jose Scale

Did you have a section of an apple block that had SJS problems last fall? The damaged fruit are easy to recognize: small reddish dots on the fruit, especially noticeable on fruit that don’t have red skin. If you had a block like that, and you plan on controlling the problem with insecticide, the critical factor is TIMING. To find the correct time for your problem block, record the full bloom date, then measure temperatures daily, and calculate degree days. SJS crawler emergence begins 310DD (base 50) after full bloom. When you reach abt 285-90DD, wrap dark colored electrician’s tape around a branch that you know is heavily infested. About a 2-inch band is good. After wrapping, place a thin ring of Vaseline in the center of the band. Return & look at the tape every day or two. Look for oval, yellow crawlers, about 1mm long. When they start to appear, it is time to spray. This method only works if you are absolutely sure you taped a heavily infested branch. Make one insecticide treatment when the crawlers start appearing, and a second about 10 days later. The 2013 New England Tree Fruit Management Guide has details about insecticide options.

“Clipper” on Strawberry, Raspberry and Blackberry

Strawberry bud weevil attacks the unopened flower buds of strawberries and bramble fruit. The name “clipper” comes from the fact that the female chews the bud pedicel after laying her egg. That causes it to dangle or drop. There’s only one generation per year, so summer or fall fruit on day-neutral varieties is not attacked, because they are so late. Damage is usually worst at the edges of beds.

You can tell if it is worthwhile to treat for clipper by doing some scouting for clipped buds before bloom begins. For some beds, that time has already passed. Instructions for this in strawberries are on page 33 of the 2013-14 New England Small Fruit Management Guide.
A few strawberries compensate for clipper damage, by making the remaining fruit grow larger. In these varieties, there isn't much need to scout (or treat) for clipper. Jewell and Senecca are examples of varieties that compensate well. Lateglow and Primetime are examples of varieties that compensate somewhat, so clipper can be more of an issue. Cavendish, Earliglow, Honeyoe and Northeaster are examples of varieties that show no compensation. To my knowledge, experiments have not been done on this trait, on other varieties.

In raspberries and blackberries, the damage is the same, and many wild blackberries are right now in the perfect stage for injury. There are no thresholds yet worked out for any bramble fruit, to my knowledge.

**Fruitworms on Blueberry**

We have two species of fruitworms that attack blueberry here. In most commercial plantings, the amount of injury they create is too low to worry about spraying hem. But in a few, there is enough damage to make it worthwhile to apply an insecticide. The proper timing is right after petal fall, and sometimes we use a second application 7 to 10 days later. The injury is a small hole in a fruit, with a few pellets of frass falling out. Often, there is a little bit of silk attaching the affected fruit to others in the cluster. Usually, the affected fruit turns blue and shrivels long before it would normally be ripe. Caterpillars of cherry fruitworms are reddish, while cranberry fruitworms are green with dark heads.

The New England Small Fruit Management Guide has details about pesticide options, including those for organic growers. By the way... the damage occurs later, so you decide whether to spray or not based on last year's damage.

**Carpenter Bees**

I have gotten several recent inquiries from fruit & vegetable growers, about carpenter bees attacking a home or farm stand. This is a relatively new problem for some of us. *Xylocopa virginica* hasn't been in New Hampshire for too many years, and is still primarily found in Rockingham, Hillsborough, Merrimack and Strafford counites, but is spreading further north and west. They look like large bumblebees, with shiny black abdomens. They hover a lot, and will aggressively hover directly in front of intruders. They excavate large diameter (about one half inch) tunnels in wood, and prefer relatively soft woods, like white pine and redwood. They'll attack stained or unfinished wood, but they won't attack painted or varnished surfaces. Getting rid of them basically requires plugging up the holes with wood plugs or caulking. If you do this at this time of year, that's all that is necessary. If done later, it helps to squirt a bit of insecticide in the hole first. Otherwise the emerging bee (next year) chews out an escape path, creating new damage. Stop the problem permanently by painting or varnishing the wood surface. That's a problem for some buildings, where a rustic look is desired. More info is in another of my publications. [Check it out!](#)
Spotted Wing Drosophila

I updated my SWD monitoring handouts in time for most of the special SWD meetings we had in April. But in late April a number of pest management workers in New England met to discuss this insect, and I've been modifying my handouts again! Similarly, the pesticide issue is changing as well. I hope to have the new materials on the NH SWD page shortly. Among the things that we learned: adding yeast to baits makes things messy, but significantly increases catch. Another is that adding a black stripe to red traps (and making the entry holes in that black stripe) can improve trapping results. I recommend setting out SWD traps in your vulnerable crops shortly before they begin to ripen, but not before June 25. I anticipate that we'll probably start catching the flies in traps during the first week of July. With crops ripening at a more normal time this year (not as early as last year), we might (?) begin seeing some injury to the latest of our “June” strawberries, and our cherries. Last year those crops escaped injury.

Meetings

Wednesday May 22. Drip Irrigation Meeting and Demonstration at Sherman Farm, 2679 East Conway Road, Conway, NH 03813. 3:00 to 6:00 PM.

Alan T. Eaton
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Integrated Pest Management