

NH Integrated Pest Management Newsletter

August 11, 2008

Volume IV

No. 8

This is the Last Issue For This Year

Unless there's something unexpected and important, this should be the last issue of the IPM newsletter this year. Past experience tells me that most NH tree fruit growers get so busy with harvest, they don't have time to read my newsletters in late August, September, and October. The Fruit Pest Update Telephone will continue weekly until about September 10-15. The number is 862-3763, and it is continuously on.

Flyspeck and Sooty Blotch in Apples

We've had quite a bit of rainy weather since my last newsletter. That is good for growth of the fungi that cause flyspeck and sooty blotch. If you are rusty on managing these two diseases, read my information on it in the last issue. Once the black spots start being visible on the fruit, it is too late to do much about it. Infections show up the most on light colored varieties, and the least on dark varieties. Light infections are probably of minimal concern if you grow fruit for PYO sales.

Apple Maggot

As I write this, we are about at the usual peak of apple maggot flight. In some blocks, significant numbers of the flies continue to fly and lay eggs in fruit well into September. In others, things really slow down by September first. Don't rely on an overall average trend to drive your AM spraying. The pattern of attack varies greatly from orchard to orchard. Blocks with lots of nearby unmanaged apples, crabapples or hawthorns tend to have lots of AM flies.

At the UNH Woodman farm, apple maggot pressure is relatively low, and some years we don't capture enough in the traps (avg of 1 fly per trap) to justify spraying for them. It was only a few years back when pressure there was higher. What changed? Bill MacHardy was doing projects on apple scab that required elimination of nearby apple trees (sources of scab-infected leaves). When we eliminated the nearby unmanaged apples, apple maggot pressure went down, and it has stayed relatively low.



Mites in Apples

This week's mite sampling chart (pg 81, 2008 New England Tree Fruit Mgmt Guide and the last page of this newsletter) reflects that the apple trees can withstand relatively high numbers of mites during and after August. Mite numbers usually build the fastest in hot, dry weather. Rain washes some mites right off the leaves, and is favorable for mite-attacking fungi. As we get into August, the evenings start getting quite cool, and this slows down mite growth rates. If you do need to consider a miticide application, please continue to select one that is relatively kind to predator mites. The same goes for insecticides. Some (like most pyrethroids) are long lasting and very harsh on predator mites. Others are narrower spectrum, and allow more of the predators to survive and work for you. The 2008 New England Tree Fruit Guide has much information on the characteristics of fruit insecticides and miticides (pgs 71-73).

Spotted Tentiform and Apple Blotch Leafminers



We have a third generation of these leafminers in NH, and the sap-feeding mines of the third generation usually appear in late August or September. If you have lots of them attacking your apple leaves then, resist the temptation to spray. Why? 1) It is too late to stop the leafminer-caused fruit drop this year. 2) the third generation is usually heavily attacked by parasites. Instead, write a note to yourself for next season, to place leafminer traps at ¼ inch green bud stage. The easiest, most effective and most economical time to treat for these pests is during spring.

Raspberry Crown Borers Lay Eggs in Late August and Early September

Adults of raspberry crown borer look very much like yellow jacket wasps. They lay eggs on the undersides of lower leaves, on raspberry and blackberry. Upon hatching, the tiny caterpillars walk down the stem and bore into the crown at or below the soil line. They bore for over a year, and the fully grown ones pupate in their second July. Then adults fly, in August and September. The caterpillars (borers) are light colored, not hairy.

In New England, Raspberry crown borer feeding often creates swellings near the base of the canes. They may be confused with swellings caused by red-necked cane borer. You can tell them apart by the differences in pattern of injury (ex: is there below ground boring?) and the form of the larvae.

Monitoring: watch for signs of infestation (swellings near the base of canes, bored crowns, borers with legs in the crowns). Suppression: Eliminate nearby untended raspberries. Control: If you discover a significant infestation, apply an insecticide drench. Sniper is still registered for this purpose, even though it doesn't appear in the 2008-9 New England Small Fruit Pest Management Guide. The label lists fall (post-harvest) or spring (pre-bloom) options for timing.

Error: The 2008-9 New England Small Fruit Guide lists Capture 2E as being registered to control raspberry crown borer, but that appears to be a mistake. I looked at all three Capture labels (2E, 2E California and 1.15G. Raspberries are not a legal application site, except for those of you growing in California.

Wasps & Hornets in Fruit



Every year I am asked how to reduce or eliminate yellow jackets and other wasps & hornets that are in fruit. This can be especially bad in raspberries, because the skin is tender and easily chewed open, and they have an odor the wasps detect. Customers don't like arguing with wasps over ownership of fruit. Some growers have noticed yellow jacket traps for sale in catalogs. Unfortunately, they work fairly well on **western species**

of yellow jackets, not our species. The only effective way I know of to reduce wasp & hornet numbers is to locate and treat the nests in the vicinity. In addition to reducing the berry chewing problem, treating nearby wasp & hornet nests reduces the risk of one of your customers or farm workers getting stung. Details are in my fact sheet "Controlling Wasps, Bees and Hornets Around Your Home". Here's a link to it:

<http://extension.unh.edu/Pubs/HGPubs/wasphorn.pdf>



One thing fruit growers can do to reduce the problem is to reduce the odors of ripe or over-ripe fruit in the areas where customers frequent. That can mean keeping fruit picked, avoid stepping on dropped fruit, regularly washing down floors that have spilled juice, and avoiding dumping fruit or pomace nearby.

Fruit Flies in Farm Stands

Many farm stands have problems with lots of tiny brown flies, especially in late summer and early fall. Fruit flies are also called pomace flies and vinegar gnats. They have been used extensively in genetics research, partly because they reproduce rapidly. They're very small, about 1/16 inch long.

The flies are very strongly attracted to the odor of ripe or over-ripe fruit. Anything you can do to reduce these odors in your stand will help prevent the buildup of the flies. Sanitation is your main defense. If you must dispose of spoiled fruit, take it far away. Don't place it in receptacles right behind the stand. If you make cider, don't pile the pomace nearby. Take it at least 200 yards away. Cider operations always have spillage, so frequently wash down the floors and equipment. If you have garbage cans or other containers that are re-used for disposal, rinse them out well and regularly, preferably not close to the stand.

If flies build up despite your sanitation efforts, you might consider adding an insecticide to the battle. Don't rely on insecticide as your main defense. That's a great way to push the insects to develop resistance. Evergreen 60-6 is an example of an insecticide that could help. It is a mixture of pyrethrins and piperonyl butoxide, and is registered for use in buildings. Basically, you cover or remove the fruit, then spray inside the closed room. It can even be used to treat surfaces in the stand. Before buying this stuff, why not read the label, so you can completely understand the restrictions. Spraying in buildings with food is a bit tricky, and the directions are quite specific. I believe it has a 12 hour re-entry period. One place to read the label is the CDMS website at:

<http://www.cdms.net/>

Some Upcoming Twilight Meetings:

August 13, 2008. Pumpkin Diseases Twilight Meeting. Yankee Farmer, 171 Forest Rd (Rt 31) Greenfield, NH. 5:30-7:30 PM. George Hamilton has set up this meeting focusing on diseases of cucurbits. Dr. Cheryl Smith is the featured speaker. Our hosts are Steve and Kathy Siegars. One very unusual feature of this meeting is the demonstration of a huge trebuchet --- an ancient war device used during sieges to throw large objects a loooooong way. Steve's device currently holds the world record for throwing a pumpkin the farthest.

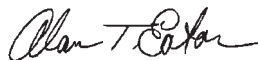
1.5 pesticide recertification credits are offered.

August 19, 2008. High Tunnel Vegetable Production Meeting. Tasseys-Moriah Valley Farm, Shelburne NH. 5:30-8:00 PM. Our Hosts will be the Tasseys, who have been growing high quality produce (Esp tomatoes) and selling to local restaurants. Steve Turaj has set up this meeting, which involves me and Becky Grube.

2 pesticide recertification credits are offered. Directions: Route 2 East from Gorham to Shelburne Village, follow North Road, the farm is on the right after crossing the bridge over the Androscoggin River.

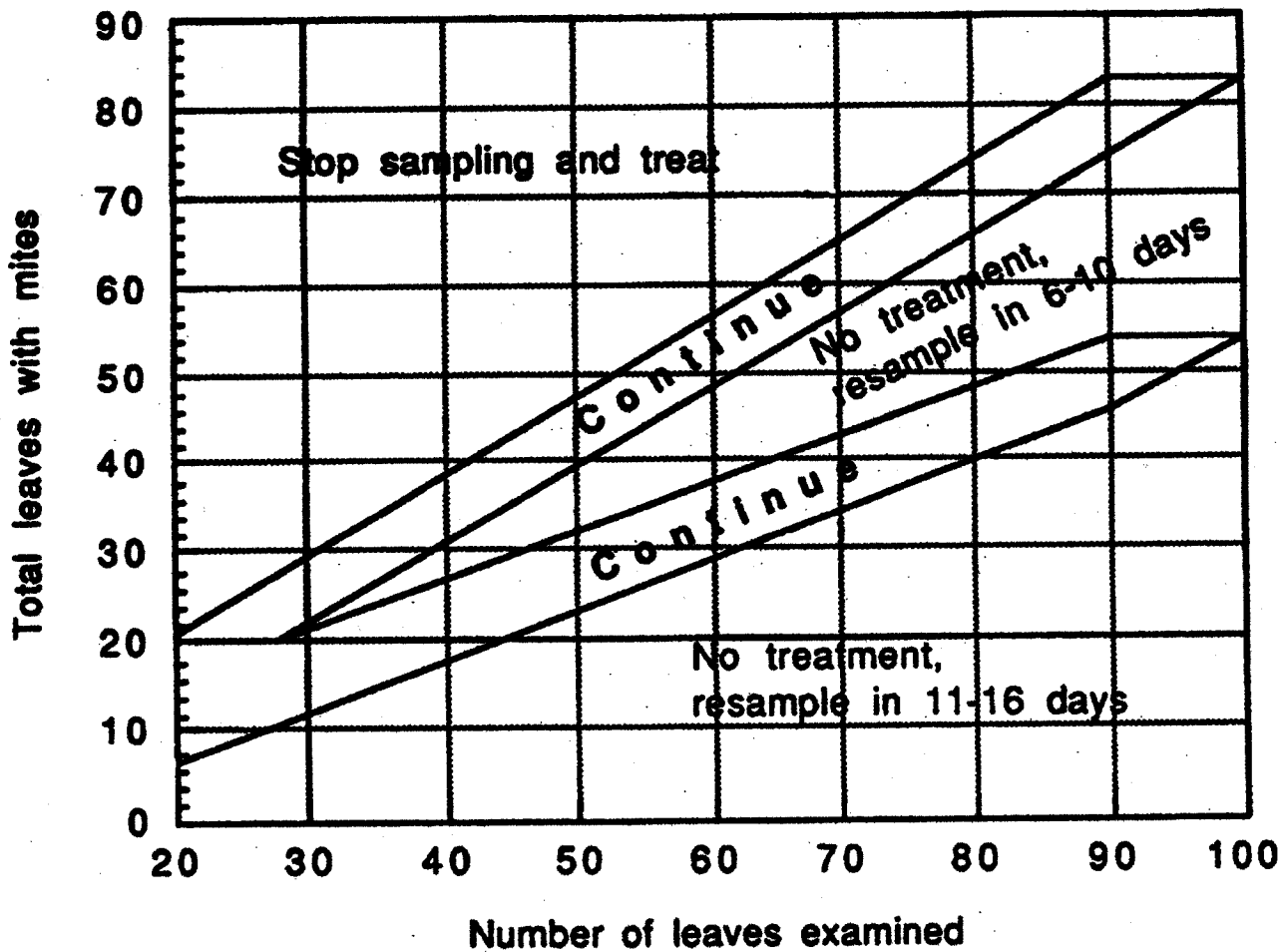
August 26, 2008. Summer Crop Twilight Meeting. Price Family Farm, 18 Shannon Rd, Gilmanton Iron Works. 6:00-8:00 PM. Featured topics include insects in field corn, and management of difficult weeds. Amy Ouellette has set up this meeting, and Carl Majewski is a featured speaker. **2 pesticide recertification credits are offered.**

August 27, 2008. Fruit and Vegetable Research Twilight Meeting. UNH Woodman Horticulture Farm, Durham. 5:30-8:00 PM. You'll get to see ongoing research projects on tomatoes, winter squash, pumpkins, gourds, mint, cantaloupe, orchard weed & soil management and strawberry genetics & production. Several research and extension faculty will be on hand to explain their work. You'll have the opportunity to taste some of the results. **1.5 pesticide applicator recertification credits are offered.** The farm address is: 70 Spinney Lane, Durham, NH, 03824



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Mite Sampling Chart - Threshold = 7.5 mites/leaf (August 16 - September 1)



* This procedure involves examining middle aged leaves for motile mites (any stage except eggs). Use this chart, which corresponds to a mite density of 7.5 mites per leaf, from August 16 until September 1. You will not be counting mites, but will only determine whether they are present or absent on each leaf sampled.

* Starting with a random tree and sampling every other tree, collect 4 leaves in a plastic bag from each of 5 trees, choosing from each quadrant of the canopy. To make sure the leaves are of intermediate age, pick them from the middle of the fruit cluster or foliar terminal.

* Using a magnifier, examine the top and bottom surface of each leaf for motile mites and keep track of the number of leaves containing motile mites. When all 20 leaves have been examined, compare this number with the decision lines on the above chart. If you are in either of the "Continue" zones, take more leaf samples in batches of 10 (5 per tree, for simplicity), adding the number with mites present to your original value while checking the chart again. Continue until you have passed out of the "continue" zone to arrive at a decision. If you reach "Stop sampling and treat", the population is above the threshold and a miticide application is recommended. If you reach one of the "Resample" zones, the population is below threshold, and should remain so for at least the number of days stated. Return at the designated time and conduct another sample. If the resample date falls after September 1, there should be no further need for additional samples or miticide sprays this season.

Modified from: Apple IPM; A Guide for Sampling and Managing Major Apple Pests in New York State. Agnello, A., J. Kovach, J. Nyrop, H. Reissig, W. Wilcox.