

NH Integrated Pest Management Newsletter

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Just Barely Time Left for Leaf/Nutrient Sampling, Tree Fruit

Tree fruit growers who want to take leaf samples, to guide their fertilization program should do so from “late July through early August”. I’ll attach a link to our form, and the instructions for sampling (when, how) are at the bottom. “*Sample 5 leaves from each of 10 trees from late July through early August. Select shoots at eye-level from around the outside of the trees that make a vertical angle of 45 -60 degrees from the ground (avoid water shoots or suckers). Collect leaves from the mid-portion of new shoot growth.*” The form goes on to tell how to dry them, fill out forms, figure payment, and where to send them. [Commercial Fruit Tissue Test Form](#).

Mites on Apples

Late August is the time of year when apples can withstand the heaviest mite populations. I’m referring to European red mite and two-spotted spider mite. As the weather gets hot and dry, they can rapidly build up in numbers. At this time of year (after Aug 15), the threshold is an average of 7.5 mites per leaf, but if you use the simplified method explained in the chart, you only have to count whether or not a leaf has any active mites on it. Yes, it requires good light, and some form of magnifier. The chart can be found on the last page of this newsletter.

Leafminers on Apples

In southern NH, time is running out for growers who might need to treat for spotted tentiform leafminer/apple blotch leafminer on apples. The susceptible stage is the sap-feeding larva, and many mines are now past that stage, in Rockingham and Hillsborough Counties. If you treated for leafminers earlier this year, normally you wouldn’t need to do so now. For McIntosh, the threshold is an average of 1 mine per leaf. For all other varieties, it is an average of 2 per leaf.

I NEVER recommend treating for the third generation of leafminers, which will begin in two weeks or so. It is too late to avoid the injury, and the third generation is usually heavily attacked by parasites.

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Apple Maggot

The threshold for treating for apple maggot is an average of 1 or more per trap. Many blocks should have exceeded that level by now. At UNH, we are close. We eliminated all nearby apple trees several years back, and the number of apple maggot flies we trapped immediately went down after removal. It has stayed fairly low for us. Apple blocks vary greatly in their AM pressure and pattern, which is one reason that I don't report monitoring results here. The red sphere traps are really effective at monitoring this pest, if they are hung correctly. The risk continues until harvest time.

Red-humped Caterpillar and Fall Webworm on Apples



Both of these caterpillars are sporadic, gregarious late summer foliage feeders. Red-humped caterpillars do not make webs. They eat all of the leaf, except the mid-rib. I notice them by the leafless branch on a tree. The photo on the left is from the UNH Woodman farm. Fall webworm is very easy to spot when the webs are large, but tougher when the webs are small. The caterpillars are also different...quite hairy.

Both chemical insecticides & *B.t.* - based insecticides are effective on these. For fall webworm, the challenge is getting the spray to penetrate the web. A wetting agent really helps. I think coarse droplets and higher water rates also help.

Raspberry Cane Borer



Primary raspberry canes that are double-girdled near the tip are the work of raspberry cane borer. See photo on the left. This insect has a two-year life cycle that starts with the adult beetle girdling and laying an egg in the new cane. If you prune out that cane, the borer will die. Pruning is the recommended control. If you have lots of canes that get attacked, destroy nearby unmanaged brambles. They are usually the source of the beetles.

Blueberry Fruit Fly

We are continuing monitoring BFF with yellow sticky traps at a number of Hillsborough, Strafford, Merrimack and Rockingham county sites. Catches are going down now, but flies should still be actively laying eggs for a while longer. This fall, I'll summarize the results, and finish my fact sheet on using traps to monitor this insect.

Yellow-Necked Caterpillar on Blueberry

This is another gregarious defoliator that we see in August and September. Appropriately, the caterpillars have a yellow "neck" just behind the head. They are hairy caterpillars. Some growers spot-treat them as they

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find them, using one of the B.t.-based insecticides. You could also use chemical insecticides, but then you'd have to keep pickers away from treated bushes for the pre-harvest interval (length of time varies with product). Some growers do not spray, but when customers ask, they point to the defoliated branch (or fall webworm webs) as proof that they "don't spray pesticides". Sometimes the defoliation can be heavy. Of course, you can hand pick & squash them. That's what happened to these that I photographed last week in the lakes region.

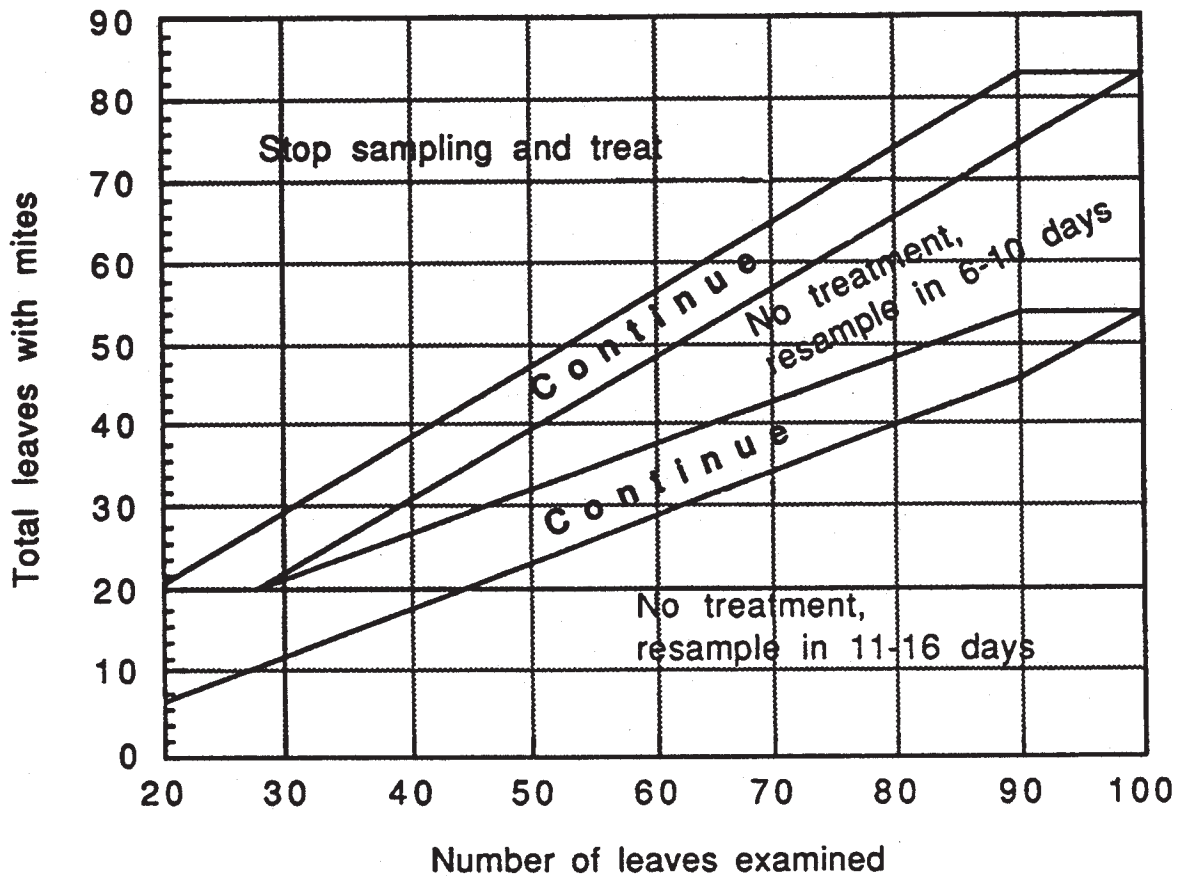
Upcoming Fruit-Related Meetings

*Monday Aug 22, 2011. **Twilight Meeting and Field Day.*** UNH Woodman Horticulture Farm, Spinney Lane, Durham. 4-7PM. You'll be able to learn about a wide range of fruit, vegetable and ornamentals projects at the farm. I'm hoping Becky will allow taste-testing of her tomato trials. For more information call 862-3200.

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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.