

NH Integrated Pest Management Newsletter

June 30, 2009

Volume V

No. 7

Next Issue is in Early August

The next issue will be the last planned for this year. I've found that growers get so busy in September that it usually isn't worth it to try to write something. It doesn't get read on time. The Fruit Pest Update telephone will continue weekly until early or mid-September.

Cherry Fruit Fly

Cherries are attacked by two species of flies, the cherry fruit fly, and the black cherry fruit fly. Apparently most of the attacks are from the former. That's the one shown in my photo. They should have started flying (and attacking fruit) about as the first cherries showed some color. Cherries are a relatively new crop to us, so they may become a more severe problem as time goes on.

With all the rain we have had, fruit cracking, brown rot, and birds are severely hitting our cherry crop this year.

Apple Maggot

Apple maggot has just one generation per year. The first flies appear just about now. Usually the pattern is that early in the season, they are attracted to early varieties, and they shift a bit to later ones as the season progresses. The period of activity and the severity of attack varies greatly from orchard to orchard. That's why I've been teaching growers to use apple maggot traps for over 30 years. They help you determine what's going on in your orchard. They should be set out about July 1st.

There are two types of traps available: red sticky spheres and yellow sticky rectangle traps.

Yellow: 1) lighter weight, so they blow in the wind & slap onto nearby stuff more easily 2) last only 2 weeks before need replacement 3) more effective than red spheres for the very early season 4) easy to see & identify the flies against the yellow color

Red Sphere: 1) heavier than yellow rectangles, so blow around & hit stuff less, but need sturdier support 2) more effective than yellow rectangle traps for most of the season 3) can be re-used for many years (I have some I've used for 16 years)

There are odor capsules that you can get to increase the AM catch, but I never use them. For one, the traps work quite well when hung properly. Another reason: our thresholds are based on the unbaited spheres. When you

Cherry Fruit Fly



switch to odor-baited red spheres, the catch goes up by 3 to 10 times. You have to guess a bit where to make the threshold in that situation.

These traps catch flies in the *Rhagoletis* genus, and this includes apple maggot, blueberry maggot, cherry maggot, black cherry maggot, and walnut husk fly. You can tell all of these apart by looking at the shape of the wing bands (see below)

How to Place Apple Maggot Traps

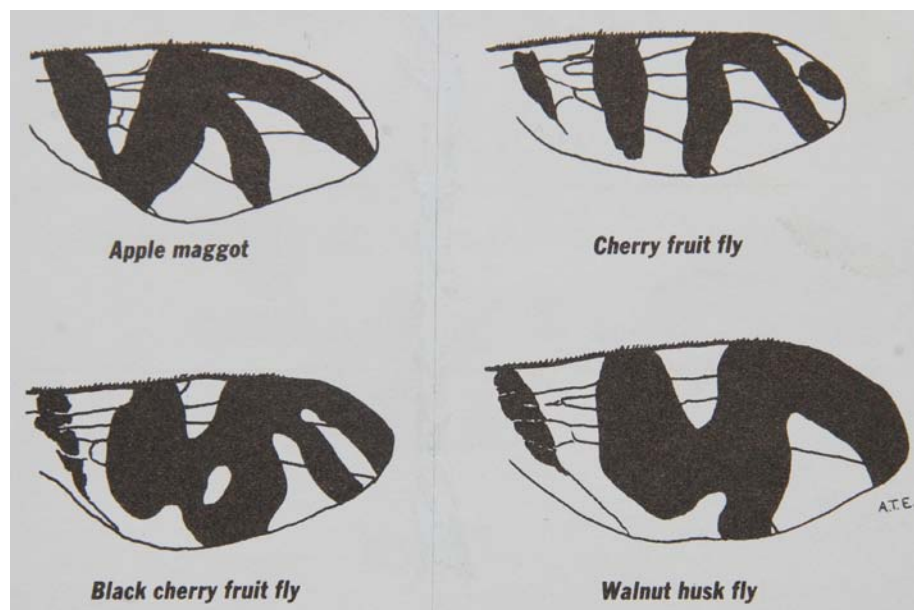
Traps should be hung in a visible spot, not deeply buried in thick foliage. About head height is best. Ideally, there should be some fruit within 18 inches --- to the side or below. I always put a bit of bright flagging on the trees with traps, and I make sure it isn't close enough to reach and get caught in the sticking agent. If you're in a block where apple maggot is well controlled, most (all?) the flies will be arriving from outside the orchard, so you'd focus on the orchard perimeter to place traps. If you've got a possible source inside the orchard, don't neglect the interior. I put 2 traps in a small block, and 3 or more in a very large one. I try to place at least one trap in the earliest variety I have.

If you're re-using old traps, just scrape most of the old tangletrap off the trap, and replace with a thin new coating. I used to remove the old stuff with kerosene, but that gradually darkens/dulls the paint, and it isn't necessary. My old traps are in a box (covered from dust!) in the barn. Now I just scrape off what I can (using curved plastic from an old half gallon milk container). Then I find a spot to hang it, and apply the new coating.

If you've bought new traps, they should come with the sticking agent. It is very stiff to apply when cold, but when warmed in the sun, it is fairly easy. This stuff is hard to remove from clothing or hair!

Identifying Flies on the Traps

The traps capture any insects that happen to land on them, so that includes lots of things that aren't pests. These flies are fairly small. Apple maggots and cherry maggots are about 1/8 inch long. Walnut husk flies are bigger: about 3/16 inch long. Blueberry maggots are the smallest, usually between 1/16 and 1/8 inch. All of these species have a white (or yellowish-white for walnut husk fly) dot on their back (the thorax), between the wings. The wings are marked with heavy bands. The illustration below shows which species has which band pattern.

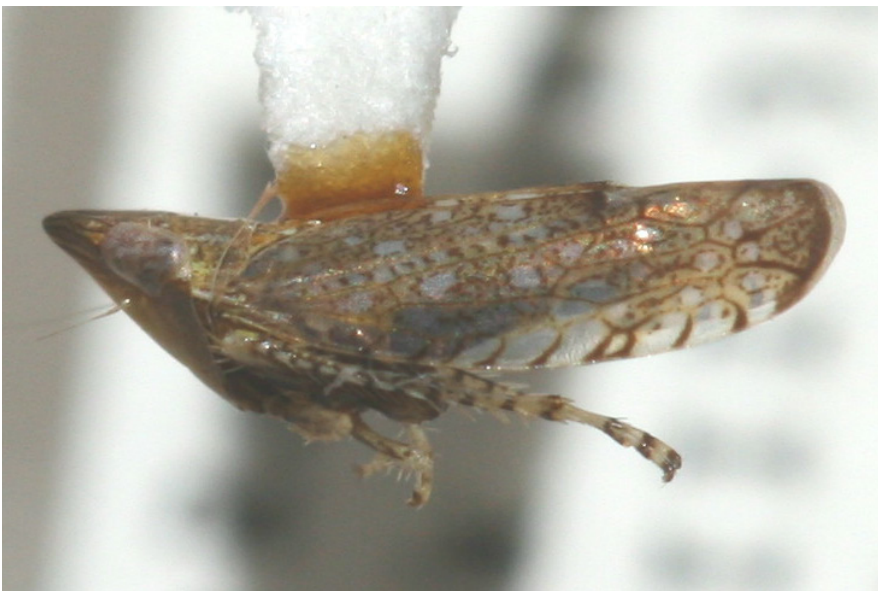


Spotted Tentiform Leafminer and Apple Blotch Leafminer

The second generation of these nearly identical pests should be flying now or soon. In a week or two (?) it will be time to check for the sap-feeding mines. If you treated the first generation with an insecticide, you don't need to look for mines this time. If not, look at the undersides of leaves for slightly silvery patches. It would be a good idea to count leaves in several parts of several trees, across the block. Fifty to 100 leaves would be enough. If you find an average of 2 or more per leaf, it is worthwhile to treat most varieties. McIntosh is quite prone to pre-harvest drop triggered by leafminer injury, so the threshold for McIntosh is an average of 1 mine per leaf. If you plan on treating McIntosh with ReTain, you can use the standard 2 per leaf threshold. ReTain tends to counteract the drop problem. The insects will be vulnerable while they are in the sap-feeding stage. Once they progress to the tissue-feeding stage (when mines become visible from upper side of leaf) they are no longer vulnerable to our pesticides.

X-Disease of Stone Fruit

Peaches are especially susceptible to this fatal disease, and now that we are growing sweet cherries, we need to recognize that sweet cherries are also vulnerable. Affected trees lose their older leaves, with just a tuft of young leaves remaining on branch and shoot tips. The leaves often show irregular holes, sometimes with reddish margins. This combination of symptoms is unique to X-disease. The only way for trees to get the disease is for infected leafhoppers (of certain species) to feed on them. My photo shows the main vector, named *Scaphytopius acutus*. Where do the leafhoppers pick up the disease? Not from infected peaches! They get it from infected chokecherries.



Scaphytopius acutus

About the end of July, choke cherries infected with x-disease really stand out from other woody plants. Their leaves look yellowish or bronzed. They have holes in the leaves. That is the easiest time of year to locate infected choke cherries, and eliminate them (herbicide) from nearby your orchard.

My July 15, 2008 newsletter goes into a lot of detail on this, and shows leaves of choke cherry, compared with the common non-host, black cherry. There are also my photos of infected trees. I won't repeat them in this issue. You can go back and look. I'll wait here.

Blueberry Maggot

Blueberry maggot is almost identical in appearance to apple maggot. The same traps catch both insects. In blueberries, place traps about the last day of June. I look for a "hole" in a bush, where the trap can hang, but still be visible. It is great if there are fruit to the side or below, within 12 to 16 inches. Often growers use overhead wires or other support for the heavy sticky traps.

The traps tell you when the flies appear in your planting, and how severe the problem is. We don't have an established threshold for them.

Japanese Beetle Time

We expect the first adults of Japanese beetle about the first week of July. By July 20, there should be lots of them. Sometimes they can severely defoliate foliage of apples, stone fruit, grapes and brambles. I've even seen problems on blueberries. Sevin is about the most effective of the insecticides for the adults, but it is quite rough on beneficial insects. Several years back we triggered a bad outbreak of woolly apple aphid here at the Woodman Horticulture Farm, by spraying sevin for Japanese beetles. Apparently the spray really nailed the tiny wasps that usually keep woolies in check. Yes, there are lots of other pesticides, too.

Organic growers may have success protecting foliage with Surround. It seems to work fairly well on Japanese beetles, provided you get good coverage. For small plantings, I still think handpicking is useful. I use two old 1 gallon milk jugs, taped together at the neck, with the bottom cut out of the top one. That makes a nice large funnel, leading into the bottom jug. I put a bit of soapy water in it, and tap the leaves on which the beetles rest (in the morning, before it gets too warm). The beetles tumble into the funnel. Very efficient.

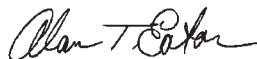
Grower Twilight Meetings

*Thursday, July 2, 2009. **NH Veg & Berry Twilight Meeting.*** Picadilly Farm, Winchester, NH 5:30 - 8:00 pm. Registration begins at 5:30, and the meeting begins at 6. We will cover developing integrated pest management plans for organic diversified vegetable growers, CSA marketing, and more. Information & directions from Carl Majewski, 352-4550.

*Wednesday, July 8, 2009. **Tree Fruit Twilight Meeting.*** Brookdale Fruit Farm, Hollis, NH. Featured speakers this time are Dr. Tracy Leskey, Research Entomologist and Starker Wright, Support Scientist, both at the US-DA-ARS Appalachian Fruit Research Station in Kearneysville, WV. They will be updating us on their current research, which includes work at Brookdale and other NH farms. Brookdale is on Rt 130, just east of the town center. Start time is 5:30 pm.

*Monday, July 20, 2009. **Small Fruit and Vegetable Growers Meeting.*** Spring Ledge Farm, New London, NH. 5:30 - 8:00 pm. Greg Berger is our host. The focus will be innovative growing techniques, and pest management on strawberries and vegetable crops. They are located at 37 Main Street, New London.

*Thursday, August 20, 2009. **NH Veg & Berry Twilight Meeting.*** Blueberry Bay Farm, Depot Rd, Stratham, NH. 6:00 - 8:00 pm. The emphasis will be on pesticide-free growing of mixed vegetables, raspberries and blueberries. For more information call Nada Haddad, 679-5616.



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