Early Summer Pest Management

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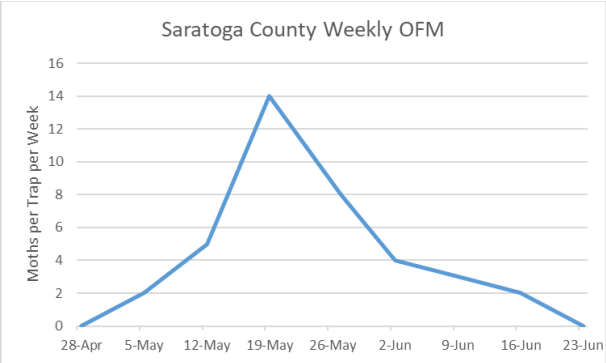
Now that we are getting into July, we can direct our attention to our usual summer suspects. The following is a brief rundown of some pests to keep on your radar, just to help prevent anything from getting out of hand.

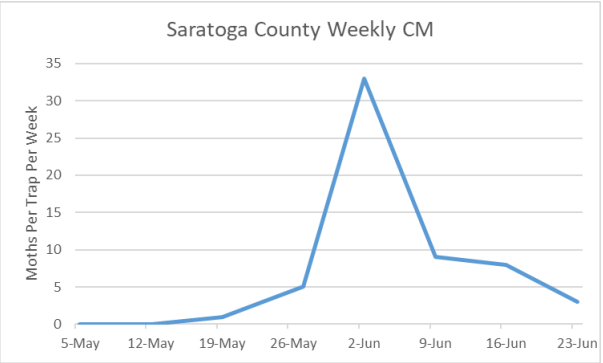
Internal Lepidoptera

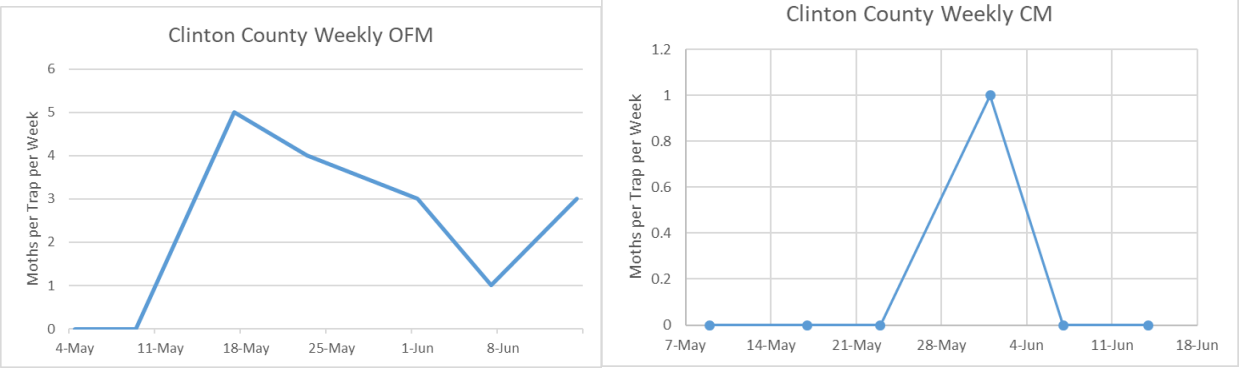
The first brood CM flight is tapering off and we are through the hatch period, although we should remain attentive for any signs of a renewed surge in trap numbers during this time (the often-noted "B peak" that can vex early season management efforts). With this potential “B” peak, most sites with traditionally heavy pressure from these pests should still be subject to first generation larval control needs.

To best determine if you need another protective spray, you should inspect the young fruitlets for early signs of infestation. If weekly adult trap numbers surpass five CM for trap, this is also a good indication additional sprays are needed. Altacor, Delegate, Exirel, Verdepryn, and premixes such as Besiege, Minecto Pro and Voliam Flexi are among the top-ranked options, with virus products such as Cyd-X, Madex, and Virosoft CP4 offering good supplementary activity.

We'll also be looking for increasing captures of the 2nd flight of oriental fruit moth (time management sprays for when catches exceed 10/trap/week), and should note a definite uptick in trap numbers within the next 10–14 days, especially if we have another heat wave.







2022 Weekly OFM and CM trap captures for our Saratoga and Clinton county trapping sites.

Obliquebanded Leafroller

Early instar larvae can likely now be found in Mid-Hudson Valley orchards. We usually expect emergence right around now in the Capital Region, and perhaps the first to second week of July in the Champlain Valley. Orchards with historically high OBLR pressure should normally receive an application of a suitable material during this larval emergence. To fine tune your application windows, enter your first trap catch date into the NEWA OBLR model. Applications should be made at 350DD base 43°F after your first catch date. A follow up application should be made 10-14 days later. Delegate, Altacor, Verdepryn, Exirel, Rimon, and Proclaim are appropriate choices, particularly in cases where the larvae are a bit larger. A B.t. product such as Dipel or the insect growth regulator Intrepid are also options, but these tend to be more effective when applied against the earlier stages. If you are applying any of the diamides (Altacor, Exirel, Verdepryn, plus the various premixes containing the same active ingredients) or Delegate to control lingering first generation codling moth and oriental fruit moth, they will also be very effective against OBLR at this time. Regardless, we have found that this specific spray is the most critical for preventing fruit-feeding damage at harvest from OBLR, so put this at the top of your list of priorities if you have a history of OBLR damage.

OBLR larvae. Photo courtesy OMAFRA.

OBLR terminal damage. Photo courtesy OMAFRA.

OBLR summer fruit feeding damage. Photo courtesy OMAFRA.

Apple Maggot

We expect to start catching adult apple maggot shortly throughout the ENY region, traps are hopefully in place already as the heat waves could speed up AM development. Stings and larval tunneling are likely to be detected in early and favored varieties such as Ginger Gold and Honeycrisp, particularly in the Hudson Valley. If you aren't monitoring in specific orchards and haven't yet made preparations for a protective spray against AM (and aren't using Delegate or Altacor for OBLR, both of which have some

activity on AM), prudence would suggest attention to this pest. Hanging a few volatile-baited sphere traps on the edge of susceptible plantings can provide valuable insight on when (and if) immigrating flies start posing a threat. Growers on a Delegate or Altacor program for leafrollers/internal leps should get some protection against moderate AM pressure. For those not using Imidan in their cover sprays, Assail will provide excellent control of apple maggot as well as internal leps where populations are still OP-susceptible.

Apple maggot adult. Note the "W" markings on the clear wings, and the white dot near where the thorax joins the abdomen. Photo courtesy MSU extension.

Woolly Apple Aphid

Individual nymphs have started to become noticeable as they make their way up into the canopies of infested trees. This pest has increased in prevalence in recent years and if you have seen an increase of WAA, this would be an advisable time to consider a preventive spray program for this pest. WAA is resistant to many commonly used broad-spectrum products, but other insecticides are effective against WAA, including Diazinon (check with your marketer before using this material) and Movento, and some additional products such as Admire, Assail, Beleaf, or Sivanto Prime may be good alternatives. For Movento and Assail, the addition of a non-ionic surfactant (e.g., LI-700 or Regulaid) or horticultural mineral oil will improve activity. (Do not use a penetrant 10 days before or after a Captan application) Good coverage to soak through the insects' woolly coverings is integral to ensuring maximum product efficacy.

Woolly apple aphids on a shoot. Photo courtesy G. Krawczyk.

San Jose Scale

Based on degree day models, the crawler stages of this perennial tiny but irksome pest have already emerged for the first generation, and are likely in the white cap stage. Second generation adults usually start flying about mid-July, with crawlers emerging shortly thereafter. To check for emergence in your orchard, consider wrapping black electrical tape around a limb of an infested tree to see when crawlers are present. Management options against the crawlers include contact insecticides or insect growth regulators that will target the emerging crawlers. Centaur 0.7WDG, an insect growth regulator (IGR; IRAC Group 16), acts to inhibit the synthesis of chitin. Esteem 35WP, also an IGR (Group 7), functions as a juvenile hormone mimic, inhibiting metamorphosis from one stage to another. Movento 240SC (lipid biosynthesis inhibitor; IRAC Group 23) is also effective when applied preventively, as its systemic activity requires some time for it to become established in the woody tissues. Sivanto Prime 1.67SL (nicotinic acetylcholine receptor agonist; IRAC Group 4D) is also systemic in the xylem, and acts by causing feeding cessation; Venerate (microbial, no IRAC group) causes enzymatic degradation of skeletal structures and interference with the molting process.

All these insecticides are most effective when directed against the first appearance of crawlers before whitecap formation. Assail and Admire Pro (Group 4A) are both broad-spectrum neonicotinoids that can be effective when directed against emerging crawlers.

The efficacy of some of these materials (e.g., Movento, Assail, Centaur) is improved by the addition of an adjuvant with penetrating properties; however, Esteem, Sivanto Prime, Venerate and Admire Pro can be used effectively without the use of a penetrant. Remember, rotating classes of insecticides for each generation will delay the onset of resistance. Making multiple applications of the same class or same insecticide at a 14-day interval for the same generation is recommended.

Monitoring for SJS crawler emergence by wrapping black electrical tape around the limb of an infested tree. Photo courtesy Peter Jentsch.

European Red Mite

It would be advisable to inspect the foliage in traditional hot spots and in sensitive varieties like Delicious, Braeburn, and Gala, to be sure they don't blow up with the warm temperatures. During July, we recommend a 5 per leaf threshold of motile stages, and you can use the appropriate presence-absence sampling chart on p. 76 of the 2022 Tree Fruit Pest Management Guidelines to assist in your decision-making. Some ERM materials include Acramite, Apollo, Banter, Envidor, Kanemite, Nealta, Onager, Portal, Savey, and Zeal. Note that Apollo, Onager, and Savey are primarly ovicides, and will have little activity on adult mites.

Green Apple Aphid

Green apple aphids are out on flush terminal shoots. Aphids should be sampled several times throughout the season. Inspect 10 rapidly growing terminals from each of 5 trees throughout a block, noting the number of infested terminals. While no economic thresholds exist, we recommend treatment if 30% of terminals or more are infested. Effective materials include Actara, Admire Pro, Asana, Assail, Aza-Direct, Beleaf, Danitol, Lannate, Movento, Pyrenone, Sivanto Prime, Vydate, and Warrior II.

Looking for Additional IPM Info?

Be sure to check out our online video resources for a quick refresher on orchard IPM. For apples, visit the NYSIPM Apple IPM Intensive Workshop playlist, and for stone fruit visit the ENYCHP Stone Fruit IPM Webinar playlist.