

Late Season Apple Insect Pests

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As harvest preparations are being made, it is worth keeping in mind the late season arthropod pests that can still pop up and complicate life during the dog days of August. Take some time to ensure that your pest management program is not overlooking the following potential problems during this period:

Apple Maggot

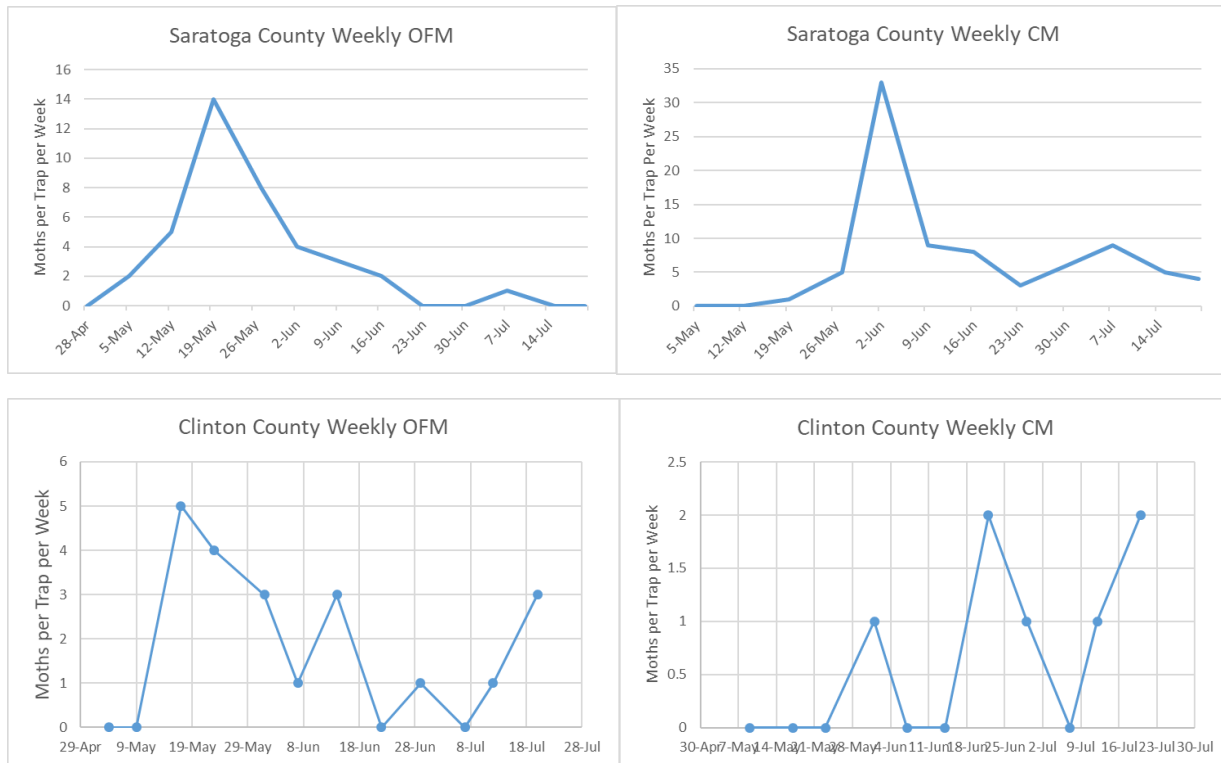
We typically get the highest trap captures during the first week of August. This year our Eastern NY traps began capturing the apple maggot in early July, and treatment thresholds were reached in some blocks starting about mid-July. Continue to monitor your traps carefully, and be ready to apply a preventive spray if necessary. Options include: Imidan, Assail, Avaunt, Delegate, Exirel, certain premixes such as Endigo, Leverage, Besiege, and the pyrethroids.



Apple maggot stings without tunneling larvae. Photo by Harvey Reissig.

Internal Lepidoptera

Currently, the codling moth is in its second generation across NYS. Recommended management options include Altacor, Assail, Delegate, Verdepryn, Exirel, Besiege, and Minecto Pro. Pyrethroids and OPs may be less suitable because of locally resistant populations. This is also a suitable time for Cyd-X granulosis virus applications against codling moth, or Madex HP or ViroSoft CP4 against both OFM and codling moth.



Weekly season long OFM and CM captures in our Saratoga and Clinton county trapping sites.

European Corn Borer

This late season moth can be active until the middle of September, so larvae can be a threat, particularly to later varieties. Delegate is a good option for control, and 1-2 sprays of a B.t. product can also be a useful alternative.

Mites

Our warm temperatures are still capable of promoting flare-ups of mites. The 7.5 mites/leaf threshold (sampling chart on p. 77 in the Cornell Guidelines) would apply now that we have reached August. There are several good rescue materials available, if needed. Check the acaricide efficacy table on p. 66 of the Guidelines for ratings against TSSM vs ERM.

Woolly Apple Aphids

Colonies in the canopy are present and can always increase. It is probably too late for a Movento application to be effective, but Assail (plus a non-ionic surfactant), Admire Pro, Sivanto Prime, or Beleaf could be of use. For fruit not intended for European markets, baby food, or any of the eco/sustainable

fruit program buyers, Diazinon remains the best option on the market. **Let us know if you have any WAA in your orchards, as Dr. Gennaro Fazio is looking for samples!**



Woolly apple aphid colony. Photo by Art Agnello.

San Jose Scale

This old-timer refuses to fade away, and together with white prunicola scale, represents an increasing challenge to fruit quality during the late summer. We began catching adults of the 2nd generation SJS around July 20th in the Champlain Valley, the next batch of crawlers is expected 400 DD (base 50°F) from this adult emergence, which should be close to about August 5 following the degree day model. Alternatively, monitor for fresh crawler emergence using black electrical tape tied around the limb of a tree with a known infestation. Esteem, Centaur, and Sivanto Prime are the go-to choices for problem blocks; for more moderate pressure situations, Assail, Admire Pro (as noted for WAA above), or Venerate are appropriate; the first two options will serve double duty if they're already being used for apple maggot and/or leafhoppers.

Japanese Beetle

This once invasive but now entrenched foliar feeder is having another abundant occurrence in portions of ENY this season, and continues to cause noticeable damage to apples and stone fruits; heavy

infestations can also result in damaged fruit. Check your trees again and keep open the possibility of a(nother) application of an effective preventive/rescue spray. Options include Assail, Sevin, Endigo, or Besiege (in apples) or Admire Pro, Assail, Sevin, Imidan, Endigo, Exirel, Leverage, Minecto Pro, or Besiege (in cherries or peaches).



Brown Marmorated Stink Bug

At this point in the season, BMSB populations are an increasing threat. Trap captures are increasing significantly in the Hudson Valley region and we are also finding them in WNY. We expect their numbers to increase, as they usually start entering the orchard in earnest in late July/early August, if they have not already.

Black pyramid or clear panel sticky traps baited with a commercial lure can be excellent monitoring tools and are effective at capturing BMSB adults and nymphs season-long, even when populations are low. In apples, research in New York, West Virginia, and Maryland has demonstrated that captures in black pyramid traps can be used to trigger a management action. When cumulative captures of adult BMSB in pyramid traps within the orchard or at the orchard border reaches a threshold of 10, an effective insecticide is applied as two alternate-row-middle sprays with 7 days between. This strategy has been demonstrated to reduce the number of BMSB-targeted sprays while maintaining good control of injury. The threshold for clear panel sticky traps has not been determined, but is considerably lower than for the black pyramid traps. Research has demonstrated that BMSB injury to apples at harvest tends to be greatest in fruit from the upper canopy of trees in border rows next to woods, aiding injury scouting efforts during the season. It is recommended that scouting for BMSB injury to peaches and nectarines should include periodically inspecting sampled fruit for internal injury, since it may not be associated with injury on the fruit surface. We are initiating a study this season to investigate damage by BMSB on late season apples and hope to be able to clearly show differences in damage from bitter pit.

One of the most effective tools for use in managing BMSB is the active ingredient bifenthrin, which is available in a number of formulations. Bifenthrin has a 12-hr re-entry interval, a 14-day pre-harvest interval, and a 30-day re-application interval. Brigade 2EC and Brigade WSB are now registered by the EPA and the DEC. Both have approved primary and supplemental labeling covering use on apples

against stink bugs (plus several other insect species). Labels were approved by the DEC on April 5, 2022 and June 17, 2022, respectively. Other management tools for BMSB can be found in the Cornell Guidelines.



Clear panel trap used for catching stink bugs. Photo by Steve Schoof, NCSU.



Late season external stink bug feeding damage at harvest. Photo by Jim Engelsma.

Looking for More Tree Fruit IPM Resources?

For additional **apple IPM** information, we highly recommend reviewing the videos available at <https://www.youtube.com/playlist?list=PLoNb8lODb49vifrm9Tla4GmAVhllL0527>

For **stone fruit IPM** information, visit our video playlist on Youtube at https://www.youtube.com/playlist?list=PLk2Q-bw9Aiu5NUJa7lwl_Obs1V5-RSUGb