

2019 INSECT, DISEASE, AND IPM REPORT

Location: Western New York
Person Reporting: Art Agnello
Pest Type: Insects and Mites

Following in the tradition of 2018, this has been another one of those split-personality growing seasons for which New York is so well known, and which are vexing to the simplicity-seeking instincts that vainly expect a predictable or at least tolerable progression from 'when does spring arrive?' to 'is it ever going to cool off?' It's fairly apparent by now that radical swings and extreme weather events have become the new normal, so it's a good thing that most NY growers are tough enough to shake it off each year. Similar to what we saw last season, this spring was ultimately very delayed, with see-sawing temperatures and miserable rainy stretches that didn't allow much insect activity but certainly taxed most disease control efforts. By the first week of May, our degree day accumulations began to fall behind those of 2018 as well as the historical averages, and we still hadn't fully caught up by harvest time. It wasn't until we got solidly past mid-June that the rainy pattern seemed to break up and we entered the dry phase of the summer, peppered with some sporadic severe storms that nevertheless didn't do much to maintain adequate moisture. Periods of warm temperatures and low rainfall persisted through most of July and August, until finally succumbing to the late-summer pattern of pop-up thunderstorms and muggy heat that continued well into September, but which moderated with cooler afternoon and night temperatures that signalled some very favorable coloring conditions.

Again, similar to last year, insect pests appeared not to be overly troublesome this season, although there were a few oddities that we may not be certain about how everything will stand once it's all over. As in 2018, **plum curculio** seemed to be addressed adequately by most growers, despite a protracted oviposition period caused by the cool spring temperatures. Outbreaks of **European red mite** threatened briefly but then did not amount to much, again probably thanks to low temps and frequent rainfall. The main curiosity in my view was the healthy and long-lived tortricid moth flights, some of which were still very much in progress in September. Although **oriental fruit moth, codling moth and obliquebanded leafroller** all made their WNY appearances somewhat later than usual (OFM, mid-May; CM, early June; OBLR, mid-June), trap numbers were impressive at various sites around the state, and seemed to persist past the expected flight periods predicted by our 'normality-bound' developmental models. These traditional drivers of most insect management programs have stretched our concept of covering all the bases to avoid last-minute flare-ups, as the trapping and monitoring results were a challenge to translate into a reasonable protective strategy. A noteworthy trend this year was higher-than-normal levels of some foliar insect pests, including **green aphids, potato leafhopper, and Japanese beetle**, all of which seemed to materialize very quickly in July and were slow to dissipate.

First occurrence of **apple maggot** was also uniformly late around the state, and low numbers were reported from most regions outside of the Hudson Valley, so wasn't clear whether we should expect a September flush of adults that should have occurred in early August (and which ultimately didn't seem to arrive). Populations of **San Jose scale** and **woolly apple aphid**

infestations were noted in some orchards, but so far it's unknown how much damage they ended up causing by harvest time.

Our growing entourage of invasive pests also demonstrated some puzzling trends. **Spotted wing drosophila** again started showing up early (June) around the state and sustained catches eventually reached some high numbers in tart cherries, but actual fruit infestations were scarce – although to be fair, the state's crop was quite low this year owing to an April freeze event, meaning that many blocks didn't have a normal harvest. Again this season, **brown marmorated stink bug** was unaccountably difficult to find in even the favored Hudson Valley sites where it's been a frequent challenge, at least until well into September; the adventive samurai wasp parasitoid could be one of several natural enemies contributing to this trend, but a native microsporidium pathogen (*Nosema maddoxi*) should not be ruled out as another potential factor. The **European cherry fruit fly** continued its slow spread eastward, as the massive trap network maintained by USDA APHIS and the NYS Dept of Ag & Markets documented adult occurrence in actual cherry orchards this year, resulting in more of Niagara and Orleans County plantings being placed in a quarantine zone. Finally, the perennial **black stem borer** ambrosia beetle, a primary or at least secondary cause of tree decline and death in numerous plantings around the state, continued to be found in reportable numbers, primarily in sites along Lake Ontario.