



Tree Fruit Update: June 15, 2022

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Do biopesticides work? Can they effectively control insect and disease pests? Which ones? On which crops? The following Microsoft Excel spreadsheets (click on the link below) summarize research done at universities to answer these questions. *If you are not able to open this type of file, please contact [Amara Dunn](mailto:Amara.Dunn@cornell.edu), and she would be happy to get you the information in a format you can access.*

Check out this link from Cornell's IPM program

<https://nysipm.cornell.edu/environment/biocontrol/biocontrol-resources/biopesticide-efficacy-summaries/>

Internal Leps – Codling moth & Oriental fruit moth: I have found quite a bit of this recently. The brown damp frass is easily seen on fruit as well as on leaves right near it. I was lucky with the photo catching the larvae exiting the fruit! These insects feed inside the fruit destroying it. If you are seeing a lot of this or catching more than 5 adult CM or more than 10 OFM adults in traps, an insecticide is warranted (<https://netreefruit.org>). Both insects have multiple generations.



Photo: Mary Concklin



Photo: Mary Concklin

Aphids: With the rain we had last week, a lot of new succulent growth has appeared. And with all the new succulent growth, green apple aphid populations are soaring. Curled leaves are obvious signs, but the populations are also building on non-curved leaves. Aphids feed on the foliage, curling the leaves. Not only do they curl leaves, but the bigger problem is also the honeydew they excrete which lands on the foliage and fruit, which in turn results in sooty mold development. However, on a positive note, beneficial populations, particularly lady bugs, are also building. This is a picture of ladybug larvae feasting.

Check terminals for aphids and predators. The threshold is 50% of terminals with aphids AND less than 20% of those with beneficials. Beneficials include lady beetles, lacewings, hover flies, predatory midges, and more.. If you see predators, give



Photo: Mary Concklin

them a chance to bring the population under control. Where they need help, apply an insecticide that won't wipe out the beneficials/

Mites: I am not seeing a lot of mites yet but with the heat, populations will build fairly quickly. Mites feed on the chlorophyll in the foliage causing them to have a bronze appearance, reducing their effectiveness. Left un-checked, damage can result in small fruit size and poor fruit color.

Scouting: The best place to look for mite outbreaks is on the undersides of leaves on (1) Red Delicious, (2) trees along orchard drives (they can be dusty), (3) suckers on the inside of the tree canopy, and (4) hot spots in the orchard.

The **threshold** through June is 1-2 mites/leaf. In a couple of weeks, the threshold goes up to 5 mites/leaf because there is greater foliage surface to support the populations.

Fireblight or Nectria Twig Blight?

I am not seeing a lot of either so far but where there were Fireblight problems last year, there is some Fireblight showing up this year. Fireblight is caused by the bacteria, *Erwinia amylovora*, while Nectria twig blight is caused by the fungal pathogen, *Nectria cinnabarina*. But the symptoms look similar and can be confusing. To tell the difference look at the base of the shoot that is infected. Nectria infections will have orange pustules while Fireblight infections will not.



Fireblight infection with classic shepherd's crook.
Photo: Mary Concklin



Nectria twig blight with orange pustules.
Photo: Dave Rosenberger, Cornell

After bloom, Fireblight bacteria will enter through wounds (caused by hail, strong winds ripping leaves, pruning tools and any other equipment, animal damage, etc.) during wet weather. When this happens, an application of Strep should be applied – note there is a 50-day PHI for strep. When within 50 days of harvest, an application of Double Nickel plus Cueva or other copper product, although be aware that copper can cause fruit finish issues. Fireblight infected shoots should be pruned out at least 12 inches below any visible symptoms because the bacteria are within the tree. Prune when the weather is dry to avoid moving the bacteria. Disinfect your pruning tools after each and every cut. If the infection hits the trunk you have lost the tree and the whole tree should be removed.

Nectria infections can continue throughout the summer. Sanitation is key to its management – prune out and destroy infected plant material.

Pear Psylla nymphs are active and visible on the undersides of leaves. As they feed, they excrete a honey dew which sooty mold develops on. This makes fruit unmarketable. Look for wet droplets on the leaves and fruit – the nymphs are in it.

Surround (kaolin clay) works at suppressing psylla, but coverage needs to be maintained and for fruit that is not going to be washed, it is suggested that sprays end a month or two before harvest to avoid residue. For complete management options, check out the NE Tree Fruit Management guide at <https://netreefruit.org>



Psylla nymph.
Photo: Mary Concklin



Psylla nymph on pear leaf.
Photo: Mary Concklin

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