

2018 New Jersey Fruit IPM Report

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Horticulture

Thinning—we have been advocating split multiple applications of PGRs for chemical thinning for the past several years, the “nibble” approach, starting at bloom. This season most growers that I work with in New Jersey and Pennsylvania had a hard time with weather conditions at thinning time. At least one timing and sometimes multiple applications were problematic.

Across the board growers that began applications at bloom and got a Petal Fall spray on had better thinning results over all and less hand thinning do than growers that waited for “good” weather and missed some later applications or the application was not in a good carb deficit period and did not work.

Excessive rainfall—growers in North Jersey and Eastern Pennsylvania experienced 35–40 inches of rainfall in July, August, and September. Our totally yearly rainfall is normally only 43 inches. Most peaches, and August and September apples, had poor flavor as the sugars were diluted.

Sunburn—We had many days of 90°F + temperatures. Growers that did not apply sunburn materials prior to the head had sunburn. With excessive rainfall in August and September we had rapidly sizing fruit that was exposed as we continued to have 90°F days well into September. Growers how did not have more material (sunburn) on hand or who did not get it applied had excessive sunburn on many varieties, especially if the fruit is exposed on well pruned tall spindle trees.

Bitter rot—was severe in orchards that did not continue fungicide coverage after 2 inches of rainfall. Growers that did reapply were in good shape, but several indicated their spray bill was almost double a normal year. Of note that Bitter rot was not just a problem on Honeycrisp but appeared on cultivars across the board.

Glomerella—was diagnosed by our Rutgers diagnostic lab, from samples from one grower in North Jersey on Pink Lady. I suspect it was present in other orchards as well. It appeared in clusters of trees and seemed to spread from there. On trees that lost significant foliage the fruit ripened prematurely and was discarded.

Three photos of Glomerella on Pink Lady



I received much assistance from Keith Yoder, VPI, Srdjan Acimovic, Cornell—see the links below.

<https://blogs.cornell.edu/fruit/2012/08/31/glomerella-leaf-spot-a-new-disease-affecting-golden-delicious-apples-in-ny/>

<https://treefruitdisease.blogspot.com/search?q=glomerella>

Sara Villani, NC State, has the most recent disease control trial data for glomerella and published an excellent fact sheet “Preparing for Glomerella Leaf Spot and Fruit Rot in 2018” with data and fungicide recommendations.

<http://go.ncsu.edu/readext?523205>

Spotted Lanternfly

Spotted lanternfly was first found in New Jersey in early July in Phillipsburg, Warren County, at a homeowner location.

Then on Friday August 10 on a commercial Hunterdon County fruit and vegetable farm by Rutgers IPM personnel. The insect was found in a Tree of Heaven being used as a trap tree with a plastic catch basin placed around the base of the tree, and the first 5–6 feet of the trunk sprayed with dinotefuran to kill any insects that land on the tree. The dead insects were supposed to fall into the catch basin. They did not. The find was made by looking up into the foliage and seeing the adult stage. To our knowledge this is the first sighting of this insect on a commercial farm in New Jersey. Growers should be particularly aware of any possible activity in trees of heaven that border cultivated plantings. These trees are common in poor and disturbed soil. This capture was made from trees on a hillside that line the border of a power line which runs through the farm. With the amount of spraying that normally goes on in tree fruit, it is not likely that this insect will cause a major problem at this time of the season. However, if these insects are found on trees in close proximity to grapes it can be more problematic. See the July 18 Plant and Pest for an article by Anne Nielsen here

<https://plant-pest-advisory.rutgers.edu/?s=spotted+lanternfly>

In Northern New Jersey we have found spotted lanternfly on 10 commercial farms in Hunterdon County (Muelhbauer). They include several vineyards, two grain farms, several orchards, and a nursery of ornamentals. Most sightings have been of one or two lanternflies, however one grower of ornamental trees in Hunterdon County reported his *Acer rubrum* was loaded with spotted lanternflies. In addition, one orchard has shown significant infestation of the lanternfly on his tree fruit and brambles.

Integrated Pest Management has just begun to be planned/implemented by Rutgers Cooperative Extension through the deployment of pheromone traps. Several farms have been chosen to have sticky bands stapled around vineyard poles and/or the host (Tree of Heaven), and small packs of pheromones were attached. This was just begun in late August, and was not found to be effective in luring/trapping the flies. Our preliminary hypothesis is that these traps might show greater efficacy if they were put out in the spring when the insects are mating instead of the late summer. At this time in the season it appears the lanternflies are looking to

lay their eggs—see picture of partially formed egg mass (Photo credit Janine Tobia, New Jersey Department of Agriculture Intern). Other early observations we have made are that they seem to be looking to lay their eggs on other trees (i.e. *Acer rubrum*) and not the Tree of Heaven as one might suspect.

