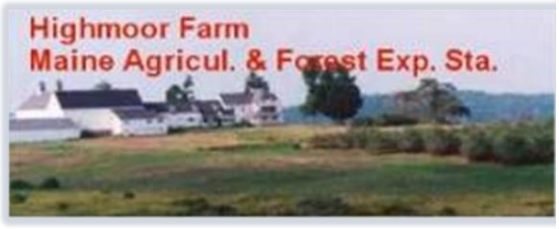
THE UNIVERSITY OF MAINE
Cooperative Extension
Pest Management Unit



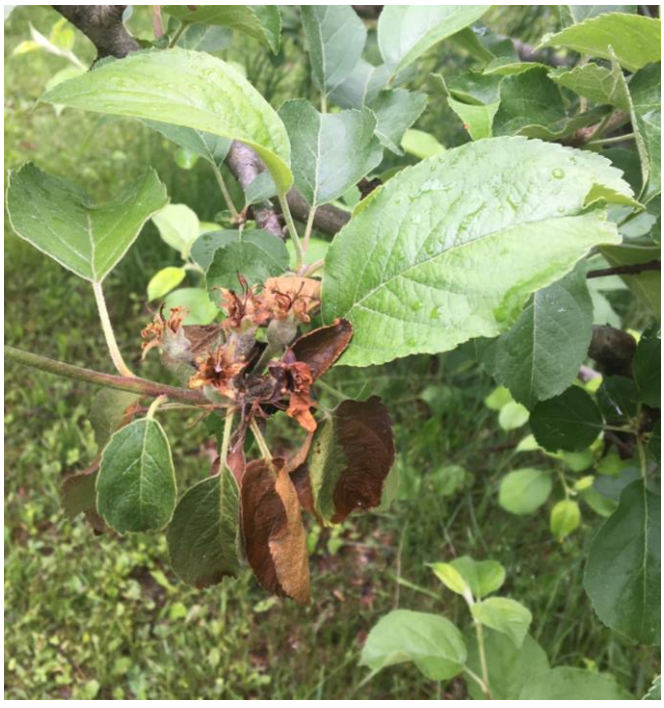
Maine Tree Fruit Newsletter

Friday, June 12, 2020 Vol 27:7

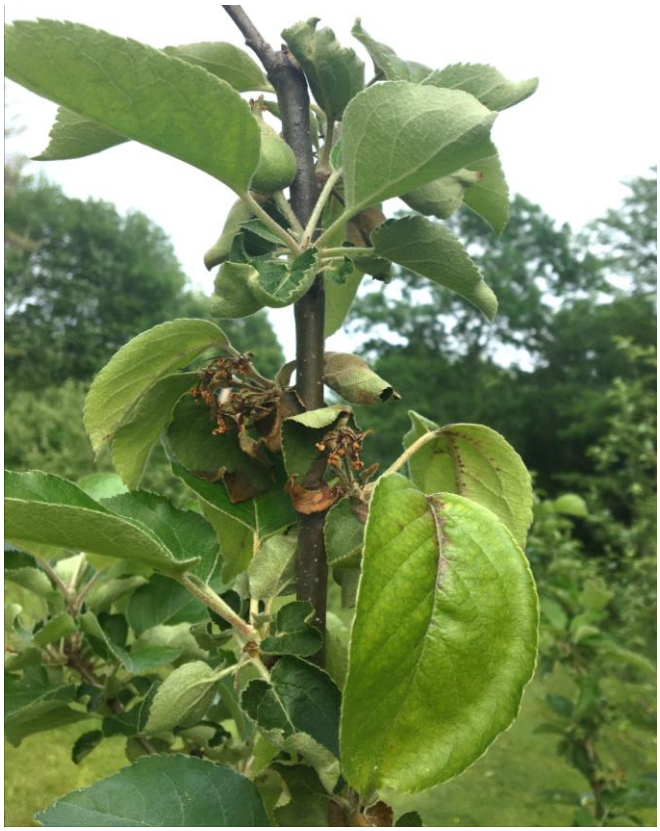
Fire Blight Alert

Observations from Thursday and this morning (Friday, June 12) indicate that there was a strong fire blight infection period on Friday-Saturday May 29-30 (whichever day your orchard received even a very brief shower.

The photos below are from trees that did not receive a protective streptomycin application, but blossom infections have also been found in an orchard that received a full dose, high spray volume, streptomycin application well-timed shortly before a rain shower. Reports from unsprayed orchard show that infection was possible. But observations from an orchard that received the best available protection suggests that infection intensity was unusually high. The sprayed orchard did have a bad fire blight outbreak in 2015, but rigorous sanitation has been in effect from 2015 - 2019. Thus, while inoculum was undoubtedly present, it was not necessarily that much higher than other orchards around Maine.



A.



B.

C. A, B, C = Dead fruit clusters caused by fire blight blossom infection observed June 11, 2020. Infection event was May 30. Photos by Dave Pelletier.

D. Shoot blight in July 2018. Photo by Glen Koehler.

In the sprayed orchard that is showing symptoms, the number of infections is not as bad as 2015. But in 2015 that orchard had heavily infected pear tree as an inoculum source and the no streptomycin had been applied. Moreover, it is still early for the 2020 observations.

As streptomycin had been applied this year, with lower inoculum, it is disturbing to see any infections showing up. Cortland, Gala, Ida Red, Jonagold, and Paulared are the most affected cultivars in that orchard. There are a few infections on Northern Spy, Golden Delicious, Blondee, Grey Permain, and Honeycrisp. No infections were seen on McIntosh, Enterprise, Empire, Frostbite, Macoun, SnowSweet or Baldwin. Because of the heat during bloom, it seems that cultivars were fairly synchronous in reaching Petal Fall from Saturday May 30 to Monday June 1. In other words, there is no apparent relationship between which trees still have blossoms on May 30 and the degree of infection being seen now.

The amount of rain required to launch infection is so low, as little as 0.01”, or even a very heavy dew, and the timing for the showers that did occur in at least some locations (the late Friday night - early morning hours of Saturday May 29-30) means that your trees may have received enough wetting without the rain even being noticed.

Rapid response to remove infection sites makes sanitation more effective. The longer infection sites remain, the more time they have to spread bacteria to tender shoots that are growing rapidly at this time. Shoot growth, and production of new young susceptible tissue, will continue until terminal bud set in mid-late July. Removing infections now can reduce the number of shoot blight infections that show up later in the summer.

Once they start, shoot blight infections can continue to appear across multiple weeks, requiring multiple rounds of cutting to keep the orchard free of dead/dying tissue spreading new infections. Even with rigorous sanitation, a smaller number of fire blight infections can continue to appear, in diminishing numbers, in the following years. The advantage of rapid sanitation is to stop the momentum of fire blight spread before it has a chance to increase.

Sterilization of cutting blades is not necessary as long as the tool is only being used to cut out fire blight. Definitely do sterilize the blades before them using elsewhere. A 1 part bleach to 10 parts water solution can be used to sterilize blades. 70% ethanol or other disinfectant are other options. The best weather for cutting out fire blight is sunny and dry. Do not cut when the foliage is wet, the air is humid and the sky overcast, i.e. poor drying conditions.

Cuttings should be removed from the orchard. If the weather is sunny and dry, cut-out material can be thrown into the row middle to dry and be removed later in order to speed up the cutting operation.

The consensus used to be that application of Apogee to reduce shoot growth was not effective once symptoms were already visible because of the approximate two-week lag between Apogee application and noticeable reduction in shoot growth. But Vincent Philion of the IRDA research station in Quebec found that if Apogee was applied as soon as infections were noticed, it did result in fewer shoot blight infections later in the summer. However, the time window for this approach is limited.

Nitrogen applications are not recommended after Petal Fall anyway, but the presence or possibility of fire blight gives extra reason not to apply late nitrogen – either as soil applications or as foliar nutrient spray. Additional nitrogen increases vegetative growth, which increases the amount of susceptible tissue for shoot blight infections.

Please send fire blight, or any other orchard disease, insect, or weed outbreak observations to glen.koehler@maine.edu

Closing Words

"Nothing travels faster than the speed of light with the possible exception of bad news, which obeys its own special laws.

The Hingefreel people of Arkintoofle Minor did try to build spaceships that were powered by bad news but they didn't work particularly well and were so extremely unwelcome whenever they arrived anywhere that there wasn't really any point in being there." ~ Douglas Adams

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