1) So what is the fire blight risk of Monday rain?

If a flower opened at 7am on Friday May 19, and you had sprayed strep just before that, then that flower would not be protected. Using Sanford temperatures (not too far from you), there were 193 Cougarblight heat units between Friday morning 7am and 5pm on Friday.

After Friday 5pm, heat unit accumulation fell off very sharply. Only an additional 25 units accumulated between Friday 5pm and a rain on Monday May 22 (and no new heat units on Monday). The total number of heat units from Friday 7am to Monday morning would be 221. The Cougarblight threshold for a category II orchard (fire blight within 1 mile within the last two years) to move from Caution to High infection risk is 200 units.

So if that new flower was contaminated right as it opened, then presumably it would have had just above the threshold of heat units to call for another streptomycin application before a Monday rain. That scenario seems unlikely for several reasons. First, almost all of the flowers except perhaps very late blooming cultivars were already open by the time of a Friday morning streptomycin application. Second, the chance that a flower opens at 7am and is immediately contaminated with fire blight bacteria seems low.

If that hypothetical flower had opened at noon on Friday, May 19, then it would have accumulated only 120 new heat units between opening and a Monday rain (no additional heat units on Monday, only 12 new heat units on Tuesday May 23).

All the above is for the assumption that you applied streptomycin after the Thursday night / Friday morning shower, after daily high temperatures of 90 and 93 on Wed. and Thu May 17-18.

If streptomycin was not applied on Friday, then unprotected flowers that are still open during a Monday rain (i.e. not too old for infection) would be at Exceptionally high infection risk because many of those heat units are still considered applicable for a Monday rain.

Note to other Maine growers: Temperatures on Friday were much cooler in Monmouth than Sanford on Friday May 19. By Friday at 5pm in the scenario described above, only 52 Cougarblight heat units had accumulated in Monmouth (vs. 193 in Sanford). While Monmouth has more bloom remaining for a Monday rain, the heat units since Friday just aren't there.

But if you did NOT apple strep on Friday May 19, then a Monday rain would have an Exceptional risk rating, AND that risk would coincide with most apple trees still being in full bloom.

2) What happened to the rule that used to be in Maryblyt that said average temperature on day of wetting had to be at least 60F?

That rule turned out not to be true and has been removed from the Eastern Fire Blight model. Tim Smith (author of Cougarblight) argued against that rule and while I can't remember the specifics there was a case a few years ago in New England where that exact scenario happened: all conditions for blossom infection were met except the "60F on day of wetting" requirement. And fire blight infections occurred.

That said, if a day has an average temperature of less than 60, then no NEW heat units are building up on that day, but <60F is not the kiss of death for bacteria the rapidly multiplied by earlier heat units.

- Glen

Closing words: (submitted by newsletter recipient in reply to previous issue's closing words) "If you keep your head in the clouds, the wind will make your brain whistle."