Maine Apple Newsletter
Friday, August 26, 2011 Vol. 19 No. 16

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Goodnight Irene
If storm force winds knock trees over, all is not lost. An article in the Summer 2000 NY Fruit Quarterly by Schupp, Marini, and Barden discusses recovery options. The article is available at http://www.nyshs.org/pdf/fq/00summer/FQSummer00.pdf, with the following key points:
1. Prop tipped trees promptly (notched 2x4 works well)
2. Tamp the soil around the roots
3. Prune minimally in dormant season following the storm
4. Apply B and N to soil early next spring to stimulate rooting
5. Irrigate to prevent soil moisture deficits

<table>
<thead>
<tr>
<th>Wind speed mph</th>
<th>Name</th>
<th>Conditions on Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-24</td>
<td>Fresh breeze</td>
<td>Small trees begin to sway.</td>
</tr>
<tr>
<td>25-31</td>
<td>Strong breeze</td>
<td>Large branches move, wires whistle, umbrellas are difficult to control.</td>
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<tr>
<td>32-38</td>
<td>Near gale</td>
<td>Whole trees in motion, inconvenience in walking.</td>
</tr>
<tr>
<td>39-46</td>
<td>Gale – See map #1 below</td>
<td>Difficult to walk against wind. Twigs and small branches blown off trees.</td>
</tr>
<tr>
<td>47-54</td>
<td>Strong gale</td>
<td>Minor structural damage may occur (shingles blown off roofs).</td>
</tr>
<tr>
<td>55-63</td>
<td>Storm – See map #2 below</td>
<td>Trees uprooted, structural damage likely.</td>
</tr>
<tr>
<td>64-73</td>
<td>Violent storm</td>
<td>Widespread damage to structures.</td>
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Excerpt from “How Many? A Dictionary of Units of Measurement”
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Wind speed projections as of Friday afternoon from National Weather Service at http://www.nhc.noaa.gov/refresh/graphics_at4+s.shtml?tswind120?large#contents indicate that for south coastal Maine there is a 50+% chance of 39+ mph Gale winds and a 40–50% chance elsewhere in Maine.

The forecast for 58 mph winds has almost all of Maine in the 10-20% probability zone.
Spray after the storm?

Sanford and Monmouth weather forecasts call for 4+ inches of rain from Irene this weekend. This will completely remove any residual protection from captan, Topsin M, or phosphite fungicides. Even though Pristine and other strobilurins have “translaminar activity” by which they absorb into leaf tissue, that effect may be less influential with regard to fruit protection. So fruit protection is considered gone after 2+ inches of rain for Flint and Sovran, and after 2.5+ inches for Pristine. If we get 4+ inches of rain, the safe assumption is that fruit are no longer protected by previous fungicide applications. The same goes for residual insecticide protection.

Assuming fruit are unprotected after August 28, does that mean you need to reapply fungicide soon afterwards, or it August 29 close enough to harvest not to worry about needing renewed protection? The answer is the usual “It depends.” Here are some things to consider.

FUNGICIDE

Apple scab has been low in almost all of the Extension – Maine State Pomological Society Scouting Coop orchards this summer. If your orchard has fewer than 6 scabby leaves per 100 shoots, then there isn’t too much too worry about regarding a late season scab blow up. Apple leaves and fruit naturally get more resistant to new scab infections in late summer, and longer wetting periods are required for scab spores to initiate infections. For what it’s worth, the 6–10 day forecast for September 1–5 estimates below average amount of rain.

If there are more than 15 scabby leaves per 100 shoots, then the scab level is at a point where going without protection until harvest could be hazardous. And keep in mind that the level of scab in the tops of bigger trees can be substantially higher than in the limbs you can reach at ground level. As a songwriter once said, “When gravity’s getting you down, Look up!”

For Pick-Your-Own and direct retail growers, if scab infections do spread, they will need at least 9 days at a minimum to appear as new lesions before harvest, and more like two weeks as temperatures begin to cool in mid-September. Growers putting apples into long-term storage need to consider the potential for pinpoint scab to develop in storage for apples on which new infections started too late to be visible at harvest, but that can keep growing in storage.

And of course, cultivar susceptibility and orchard history are key factors to consider.

Flyspeck also varies with block history, and varies greatly within different sections of the same block. The risk of flyspeck on late cultivars and thick canopy trees growing near the woods line or in a low area where morning dew collects is much higher than for earlier cultivars, smaller trees, or trees with better sun exposure and air drainage.

The Orchard Radar flyspeck model for latest safe harvest date based on final spray date estimates than even if flyspeck infections begin Monday August 29, they won’t have enough temperature and leaf wetness hours to develop visible colonies before Oct. 19 in the Sanford area, and not until after Oct 31 in the Monmouth area. (Which essentially means never, because even if apples are still on the tree that late, temperatures are generally too cold after Oct. 31 for additional flyspeck development.)

You need to know that those estimates are my own concoction derived from a laboratory research study done in NC on the relationship between temperature and flyspeck colony growth.
think that relationship is real or I would not use it to affect the estimates made by Orchard Radar. The research observations that have led to the assumed relationship between leaf wetness hours and flyspeck development are based on the temperatures that occur in the first month or so after Petal Fall. Petal Fall is later in Maine and so temperatures in that period are about the same in Maine as they are in other apple growing areas. So no correction is needed to use the same LW threshold in Maine during June – August. In Maine however, temperatures start falling well below that range as we approach and pass the fall equinox in September. A correction factor does seem to be needed to account for this to extend the flyspeck LW relationship into September. It makes sense, but this use of a temperature relationship to modify estimates of flyspeck development has not been subjected to validation testing. In other words, it’s an educated guess.

Ignoring that temperature effect gives earlier “Latest Safe Harvest Dates” than the Orchard Radar model. Using forecast cumulative leaf wetness hour for August 29 – September 2, and climatic average LW hours afterward, flyspeck infections presumed to begin on August 29 would have enough time to develop visible colonies **starting October 6 (same date for Monmouth and Sanford)**.

**INSECTICIDE**

Apple maggot trap counts this past week are not much different than previous weeks. And because it is so site-specific, the only relevant apple maggot information is what is going on in your orchard.

As general rule, a final insecticide application in mid-August is late enough to prevent problems with apple maggot. But 4 inches of rain on August 28 isn’t part of the general rule. If you have traps up, it would be worthwhile checking them at least one more time on September 5. If you find more than 1–2 per trap, a final insecticide application is worth consideration for cultivars that are going to on the tree for more than 10 days after that. With the expected maturity dates expected to be close to or perhaps a bit later than the average this year, that includes most cultivars. If you do not have traps, orchard history and market considerations are your only guides.

Earlier sprays should have reduced the threat from codling moth and leafroller larvae. Knowing block history is the key. As for leafhoppers and mites, 4+ inches of rain should reduce their threat level.

**Apple maturity report**

At the University of Maine Highmoor Farm Agricultural Research Station in Monmouth, Paulareds were being harvest on Thursday August 25, and Zestar were ready for a first pick (with hopes they will last through high winds on Sunday).

Starch index on spur-type McIntosh was 2.0 (too early for picking).

The next starch index test will be done on Thursday, Sept. 1. Once McIntosh reach SI 3.0, testing will be done twice a week on Mondays and Thursdays.
Closing Words

“The only way to do great work is to love what you do. If you haven’t found it yet, keep looking. Don’t settle. As with all matters of the heart, you’ll know when you find it.”
- Steve Jobs

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Orchard Radar weather and pest tracking models at [http://pronewengland.org/AllModels/DecisionModels.htm](http://pronewengland.org/AllModels/DecisionModels.htm)

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