

Maine Apple Newsletter  
Friday, May 20, 2011 Vol. 19 No. 8

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Apple Scab situation

The weather forecast for Sanford, Lewiston, Augusta, Fryeburg, Waterville, Bangor, and Presque Isle shows roughly 60+% chance of rain each day for Monday – Friday, May 23 – 27. For Bangor and south, the forecast rain amounts per day are relatively low at 0.10” – 0.25” per day. Temperatures for Monday–Friday next week are forecast to be above normal.

Beyond that, the 8-10 day outlook for Sanford and Monmouth has chance of rain and wet leaves for every hour through Saturday and Sunday, May 28–29, and above normal temperatures.

So it sounds like another week of cloudy, humid, misty, and this time, warm, weather. These are perfect conditions for fungal growth. Fortunately, the amounts of rain forecast day do not indicate rapid removal of fungicide coverage. But with daily rain and elevated temperatures at a time of rapid foliar expansion and during peak apple scab ascospore releases, growers may need to reapply fungicide at least than a 7-day interval.

Fungicide options were discussed in the May 17 newsletter. One thing to add is that a useful characteristic of strobilurin fungicides (Flint, Sovran, Pristine) for a situation like this is that through their ability to absorb into leaf tissue, strobilurins offer 6–7 days forward
protection with less vulnerability to rain wash-off than surface acting “contact” fungicides like captan or mancozeb/Polyram.

Both Sanford and Monmouth areas are in the thick of primary scab season. In Sanford, about 60% of the year’s primary scab infection pressure has already occurred. By next Friday, assuming the rain does occur, Sanford will be at about 90% through primary scab season. Thus, about 30% of the year’s primary scab potential in Sanford will occur in the next week. At Highmoor Farm in Monmouth, cumulative primary scab infection potential will likely increase from 40% to 80% between Friday May 20 and Friday May 27, i.e. about 40% net increase.

This kind of forecast usually results in gaps of no rain and low wind that allow reapplication. Growers would be wise to take advantage of those gaps this week to reapply fungicide as needed. Protection is better than kickback postinfection, and cheaper, and preserves postinfection materials for those times when you really need it. The less frequently used, the less chance there is for resistance to develop. On the other hand, situations like this are the time to use tools you have saved for a “rainy day.” Next week could provide multiple rainy days back to back.

If using a DMI/sterol inhibitor fungicide (Inspire Super, Indar, Rally, Vintage, Procure) it makes sense to always combine it with a full rate of protectant fungicide. The DMIs have the best postinfection activity, but they have short 3–4 day forward protection. Combining with captan or mancozeb/Polyram will provide maximum protection against resistance, and also provide forward protection to go along with the postinfection kickback of the DMI/sterol inhibitor. This is also true for Inspire Super even though it has a tankmix partner Vangard (cyprodinil) built in. Vangard is not as good as captan or mancozeb at forward protection, especially against fruit scab, and especially with temperatures above 60F.

Using a tankmix protectant fungicide partner is also recommended for strobilurin fungicides. While they do offer forward protection, resistance protection alone is worth paying for the combination, and the additional surface protectant fungicide will improve forward protection due to gaps left by imperfect application coverage of strobilurin used alone. Mancozeb, Polyram, and especially captan, are better at redistributing onto emerging new growth better than Flint or Sovran.

Label restriction require than mancozeb and Polyram not be used at more than 3 pounds per acre after bloom. For smaller 200 gal. per acre TRV dilute trees, the 3 pound per acre limit does not prevent making a full dose application. Technically, the 3 lb. limit is less than a full dose on 14-foot tall 300 gallons dilute tree row volume per acre trees. But in combination with another fungicide, it is enough to get the job done. If used at more than 3 pounds per acre before and during bloom, then additional mancozeb/Polyram applications are not allowed after Petal Fall.
As with the other postinfection fungicide options, captan or mancozeb/Polyram should be added to a Syllit application for resistance management. Though Syllit does have postinfection activity, it is not as far reaching as the DMIs or strobilurins. And Syllit is useful for suppressing visible lesions if they do appear, so my guess is that Syllit is best left for that use if needed.

Only the very earliest primary scab infection periods have had enough time and temperature to appear as visible lesions. Starting next Saturday, May 28, roughly 25–40% of the seasons primary scab potential will have had time to appear as lesions. It is never a bad idea to look for apple scab to check on control efficacy, but starting next weekend it will be an efficient use of your time to begin scab scouting.

**Fire Blight outlook**

Highmoor Farm is finally reaching King Bloom. Last year was three weeks early, this year is a week later than average. Climate is just the average of individually variable weather across years, or more poetically, climate is what you expect, weather is what you get. It is variable weather that leads to fire blight.

The fire blight forecast for Monmouth shows blossom infection risk Wednesday–Friday, May 25–27 for orchards with overwintered fire blight cankers from last year providing abundant inoculum, but not for orchards that do not have currently active fire blight.

The risk of fire blight is higher in Sanford where McIntosh will be reaching Petal Fall and the end of blossom infection risk by May 24–27, but there will be plenty of open blossoms on later blooming cultivars including Cortland, Honeycrisp, Gala, and Golden Delicious – all of which are susceptible or highly susceptible to fire blight. Trees on susceptible rootstocks M26 and M9 are especially vulnerable.

Note – Orchard Radar is using the new version of Cougarblight released in August 2010. Unless noted otherwise, other sources referring to Cougarblight are probably using the 2007 version, which uses different heat unit ratings.

Fire blight conditions in the Sanford area for trees still in bloom in orchards with overwintered fire blight cankers are forecast by the 2010 Cougarblight model to be “High” on Tuesday May 24 “Extreme” on Wednesday–Friday May 25–27. The longer-term forecast shows “Extreme” conditions continuing on May 28 & 29, then back to “High” on May 30.

The default setting in Cougarblight is Category II – “Fire blight was present within 1 mile of the orchard last year, but not currently active in the area this year.” For Category II orchards in the Sanford area, the Cougarblight forecast is for “High” infection potential on Wed.–Fri. May 25–27. The longer-term forecast shows “High” conditions continuing on May 28 & 29.
Cougarblight shows no infection risk for Category I orchards (=“No active fire blight within 1 mile of the orchard this year or last year.”) Only go by the Category I ratings if you are confident that statement is true for your orchard.

Where there is risk of fire blight infection, the recommendation is to apply streptomycin before the infection period begins. Postinfection control is less likely to be successful, and is generally ineffective more than 24 hours after the beginning of the infection event. Continued rain may prevent application after rain launches an infection event. It does not take much rain to launch fire blight. In fact, light drizzly rain with warm temperatures is the ideal condition for fire blight bacteria to multiply and be carried into nectaries. Heavier rain can wash out the bacteria. Even a heavy dew can provide enough moisture to start fire blight blossom infections.

The ideal timing is shortly before the wetting that starts a potential fire blight infection period. Streptomycin protection is good for about three days. With multiple days in a row with possible infection periods, and chance of rain on each day, tight timing to get the best effect from a spray application is worth going for even if it is inconvenient to your other plans.

Apogee is not cheap, but in addition to its beneficial effect on reducing pruning needs, it helps reduce susceptibility to shoot blight. It does not help prevent blossom blight, but reducing shoot blight risk is an important attribute. If blossom blight does occur, removing shoot blight can be a time consuming task that must be repeated as new strikes occur.

Because of its effect on reducing growth, Apogee should only be used on trees less than five years old with consideration of the drawbacks of reduced growth in getting trees into full production as soon as possible, and if used, should only be used at reduced rates. But if you have reason to believe that fire blight will be an issue (history of fire blight in the orchard, unprotected fire blight infection periods this year) then Apogee application at late Bloom – Petal Fall, and a follow-up application 3–4 weeks later is an option to consider.

Serenade is an alternative supplement to streptomycin, not a replacement. Serenade has a role in apple growing areas where streptomycin would otherwise be used repeatedly, and thus resistance is a concern. The first blossom blight spray of the year should be streptomycin.

Blossom end rot

Extended warm wet weather during Bloom to Fruit Set can lead to Blossom end rot infections that appear about a month after bloom but start much earlier. This disease is sporadic and not that well understood. Cortlands are particularly susceptible. McIntosh, PaluaRed, and Delicious are also susceptible. Including captan, Tospin M (or other thiophanate methyl product), Flint or Sovran in Bloom to First Cover sprays will provide protection.
Cloudy weather and foliar fertilizer

During extended wet and cloudy weather, plant cuticle development is arrested. As a result, there is a risk of russetting developing on fruit in orchards that are past bloom. It would be best to wait for some sunny weather before applying foliar fertilizers. Fruit scarring, which reduces the value of apples, can occur when fertilizers are applied immediately after prolonged periods of cloudy, wet weather.

European apple sawfly

Insects like tarnished plant bug and apple blotch leafminer do not do well in rainy cool weather. They may not do much better with prolonged wetting even if the temperatures do rise as forecast for next week. There has not been much to say about insects, and too much to say about diseases lately. But with Petal Fall approaching it is time to address those lovable pests with nervous systems. Plum curculio is the major early postbloom pest, but they do not really start causing damage until the fruit start sizing and reach about 7–8mm, so let’s leave them for later. If European apple sawfly need control, the optimum timing is shortly after Petal Fall. The following is an excerpt from the May 9, 2011 Cornell University Scaffolds newsletter written by Dr. Art Agnello.

“This primitive bee and wasp relative shows a preference for early or long-blooming varieties with a heavy set of fruit. This insect is generally a pest mainly in eastern N.Y., although it has been gradually making its presence known in the more western sites, recently progressing as far as Wayne Co. (or beyond). The adult sawfly emerges about the time apple trees come into bloom and lays eggs in the apple blossoms. Young larvae begin feeding just below the skin of the fruits, creating a spiral path usually around the calyx end. This early larval feeding will persist as a scar that is very visible at harvest. Following this feeding, the larva usually begins tunneling toward the seed cavity of the fruit or an adjacent fruit, which usually causes it to abort. As the larva feeds internally, it enlarges its exit hole, which is made highly conspicuous by a mass of wet, reddish-brown frass. The frass may drip onto adjacent fruits and leaves, giving them an unsightly appearance. The secondary feeding activity of a single sawfly larva can injure all the fruit in a cluster, causing stress on that fruit to abort during the traditional "June drop" period.

Certain insecticides that control this pest also adversely affect bees, which can pose a problem at petal fall because certain apple varieties lose their petals before others. In blocks of trees where petal fall has occurred on one variety but not the others, the variety that has lost its petals is likely to sustain some curculio or sawfly injury until the insecticide is applied. Some newer insecticides with activity against both plum curculio and sawfly -- Calypso, Avaunt and Actara -- may have a slight advantage over conventional OPs in this case. Assail represents another option for controlling sawfly; it’s not very active against plum curculio, but will do a good job against rosy apple aphid and spotted tentiform leafminer, as well as sawfly, at this timing. To minimize the hazard to honey bees, apply any pesticide only when no bees are actively foraging on blooming weeds (evening is better than early morning).”
1) **Apple Twilight meeting**

A twilight meeting for apple growers is planned for 5:30pm, June 15 at Pulsifer Orchard in Parsonsfield ME. The rain date is June 16. Attendance will qualify for one pesticide applicator recertification credit.

**Topics of discussion:**
- Scab control this season
- Preventing problems with spray drift
- Current strategies for thinning apples
- Tour of the orchard
- Anything else you want to talk about!

**Directions:** Pulsifer Orchard is located at 24 Pulsifer Orchard Drive (off of Brackett Road). The orchard is located 10 miles south of Kezar Falls just off Route 160. Going south, the orchard is located on the right. The map shown in the previous newsletter was incorrect, and the map at the Maine State Pomological Society website is now correct.  
http://www.maineapples.org/index.php?option=com_mtree&task=viewlink&link_id=53&Itemid=2

The farm and market are owned by Fran Pulsifer, and she can be contacted by telephone at (207) 632-1720.

2) **Vegetable & Berry Growers Twilight Meeting**

The University of Maine Cooperative Extension and the Maine Vegetable and Small Fruit Growers Association will hold a growers meeting at R. Belanger & Sons Farm in Lewiston on Wednesday, June 8th at 5:30 p.m. We will tour Rick Belanger’s new packing and storing facility designed to meet new GAP certification standards, look at some early vegetables and look over the strawberry plantings while discussing pest management strategies for the season ahead. One pesticide applicator re-certification credit will be available for attending the meeting. Please join us! Belanger and Sons Farm is located at 262 Cotton Road in Lewiston.

3) **Highmoor Farm Apple Bid**

The University of Maine Highmoor Farm is inviting interested parties to place bids on our 2011 apple crop from the orchard listed below. “Picking” is defined as removing all marketable fruit on the tree. The successful bidder will pick all specified blocks under the following conditions:

* Pickers must be supervised
* Pickers & supervisors must respect flagged research trees
* No fruit may be removed from research trees without permission

Please submit both an orchard run price and a juice price. Half of the total payment must be paid by December 1, 2011; the remainder must be paid by May 1, 2012. Highmoor Farm reserves the right to reject any or all bids.

Bids should be mailed or delivered in a sealed envelope marked “Apple Bid”, and will be opened at 1 p.m., June 10, 2011, Mail to: Highmoor Farm, C/O Greg Koller, PO Box 179, Monmouth ME 04259. For more information: (207) 933-2100 or gkoller@umext.maine.edu
Please write your bid offers below.

Orchard run apples $ per bushel: ______________

Juice apples $ per bushel: ____________________

Name (Print): ____________________________

Address: _______________________________________________

Phone Number: __________________________

Signature: ______________________________

**Highmoor Farm Commercial Apple Blocks**

<table>
<thead>
<tr>
<th>Block Name</th>
<th>Cultivar/Rootstock</th>
<th>Acres</th>
<th>Spacing Tree x Row (ft)</th>
<th>Trees per Acre</th>
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</thead>
<tbody>
<tr>
<td>75 B I</td>
<td>Macspur, Starkspur Del / MM 111</td>
<td>3.07</td>
<td>12 x 22</td>
<td>165</td>
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<tr>
<td>75 BII</td>
<td>Macspur, Starkspur Del / MM 111</td>
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<td>Cortland / MM 111</td>
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<td>12 x 22</td>
<td>165</td>
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<td>99</td>
<td>Pioneer Mac, Cortland, Royal Court / B.9</td>
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<td>*92 Semi Dwarf</td>
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<td>*92 Vig.</td>
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<td>14 x 22</td>
<td>141</td>
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<td>86</td>
<td>Red Cort / MM111</td>
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<td>10 x 18</td>
<td>242</td>
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<td>79 Bi</td>
<td>Red Mac / M7</td>
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<tr>
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<td>Liberty, Redfree / M26</td>
<td>1.14</td>
<td>6 x 13</td>
<td>559</td>
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<tr>
<td>*94 Liberty</td>
<td>Liberty, Redfree / M26</td>
<td>1.99</td>
<td>6 x 13</td>
<td>559</td>
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<tr>
<td>85</td>
<td>Red Chief Del., Cortland, Macspur, Smoothee Gold. Del. / M7a</td>
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<td>70</td>
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<td>Dwarf Gala</td>
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<td>8 x 14</td>
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<td>98 Macoun</td>
<td>Macoun / B.9, Cortland / M26</td>
<td>0.50</td>
<td>6 x 18</td>
<td>403</td>
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<td>95 Dwarf</td>
<td>Cortland, McIntosh, Macoun</td>
<td>0.44</td>
<td>5 x 11</td>
<td>454</td>
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</table>

**Total Acres: 16.27**

Notes:
*First number of orchard name is the year of planting
*Liberty blocks are not normally sprayed
3) Using Excel on a smartphone

The free Excel pesticide recordkeeping workbook available at the Penn State Tree Fruit Research and Extension Center website (http://frec.cas.psu.edu/) (look on the right side of the page under “Online Resources”) can be run on a smartphone. This allows you to enter the spray log once instead of writing it on paper in the field and then re-recording it back inside on the computer. There are several inexpensive or free software apps that allow using editing an Excel file on a smartphone. The article linked below may be of interest.


4) Orchard Radar on smartphone

Any device with web access and a web browser (Internet Explorer, Firefox, Chrome etc.) can be used to access the Orchard Radar weather and pest tracking models at http://pronewengland.org/AllModels/DecisionModels.htm

At present, the tables and charts are saved at a fixed image size. If things work out as planned, they will soon be saved to use 90% of the screen width of whatever screen is being used to view them. This will make Orchard Radar more convenient to use on smartphones and tablet computers. For folks using desktop computer monitors it will provide a uniform display between different monitor sizes. If you have larger monitor and 90% of the screen width is too big, just shrink the browser display window to less than full screen so that the display at the size your prefer. This change will also allow better resolution and clearer text in saving the tables, and especially the charts for web viewing.

Closing Words

"Music fills the infinite between two souls. This has been muffled by the mist of our daily habits."
~ Rabindranath Tagore

"Technology is so much fun but we can drown in our technology. The fog of information can drive out knowledge."
~ Daniel J. Boorstin

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