

Orchard Outlook



Vol. 15, No. 9

June 10, 2015

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Most areas are at calyx now with late bloom notably on Ambrosia, Golden Delicious, Northern Spy and some on Cortland. Later areas such as Medford and Avonport still have substantial bloom remaining. Growers will need to begin considering fruitlet thinning in the next few days, especially in the earlier areas with early varieties such as Gravenstein and Idared.

Fruit Development

Apples range from late bloom to 7-8 mm fruitlets on Gravenstein and early varieties (Figure 1). Pears are 8-10 mm fruitlets; peach – shuck split; plum – shuck fall; sweet cherry – shuck fall.



Figure 1: Apple fruitlets at 6 mm (left), pear at 7 mm (left centre), shuck split/fall of peach (right centre) and shuck fall of sweet cherry (right). Photo: <http://utahpests.usu.edu/IPM/htm/fruits/home-orchard-guide/> and <http://extension.umass.edu/fruitadvisor/healthy-fruit/healthy-fruit-vol-18-no-5-may-4-2010>.

2015 Degree Day Accumulations

Heat unit accumulation at both base 5C and base 10C remains somewhat behind the 5 and 10-year averages but is not far off normal at this point.

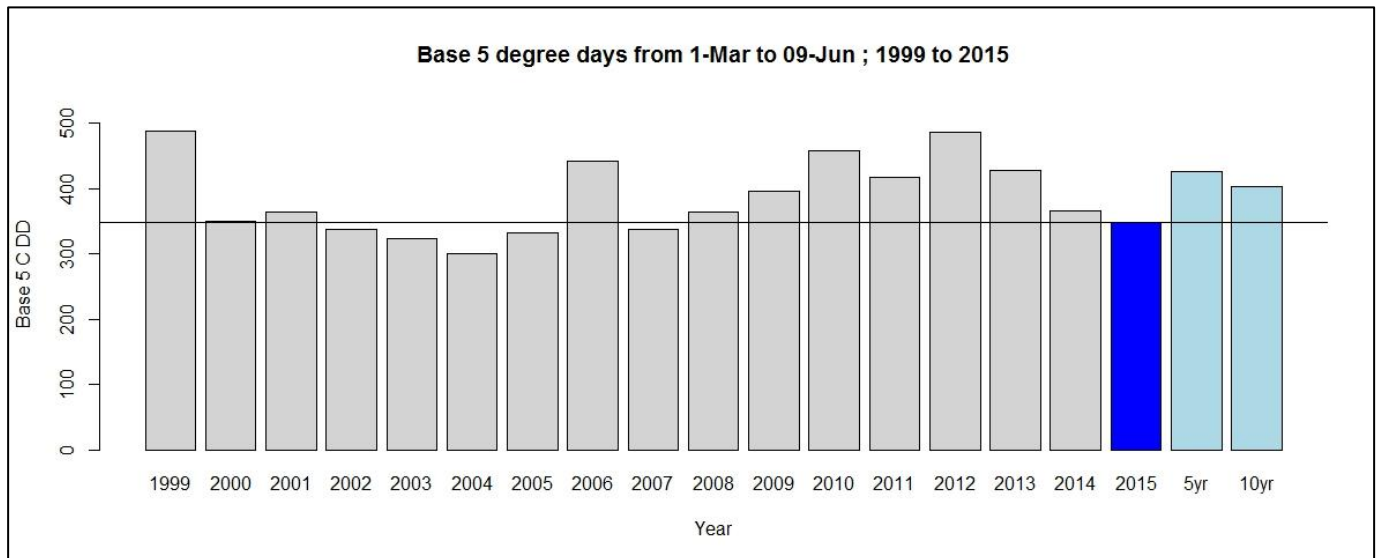


Figure 2: Degree day accumulations from March 1st for the past 17 seasons. Provided by Jeff Franklin (AAFC).

To date heat accumulation since March 1st is (Figure 2):

- About 18% fewer plant development heat units compared to the 5-year average.
- About 5% fewer plant development heat units compared to 2014.
- About 13% fewer insect development heat units compared to the 5-year average.

Diseases

Apple Scab

The large infection period that began last Sunday May 31st ended up lasting into Wednesday afternoon on June 3rd and was a 76-hour wetting period with an average temperature of about 8°C. This was a very heavy infection period by any scale and one of the longest in recent years. A moderate infection was also recorded beginning Saturday June 6th at 10 am lasting 22 hours at 10°C.

The ascospore maturity model has now reached 99% maturity. It is still too early to switch to cover rates and full rate fungicide applications should still be used for now as late maturing ascospores may still be around, especially in the cooler areas.

I have not yet observed an active apple scab infection this season. However, primary scab lesions should be appearing soon in unsprayed orchards – especially from that heavy infection period. Growers should be carefully checking to see if any primary season infections occurred in the next week or two before considering switching to cover rates of fungicide.

Fireblight

Blossom blight risk remains high for the next 3-4 days where open bloom remains. Where 2-3 open blooms remain on a tree, there is still a risk of infection on these blossoms. Where no bloom remains, there is no more risk for blossom blight infection. Watch for newly planted trees coming into bloom as they are just as susceptible to blossom blight as mature trees.

Very simply, if trees still have open blooms, they should be treated with an antibiotic this evening. Wind is supposed to be relatively calm this evening.

If you've applied 3 streptomycin sprays to the same trees you cannot apply another strep according to label directions.

The symptoms of blossom blight infections are expected to be present on Friday in the warmer areas.

Growers can begin checking for any signs of blossom blight into the weekend/next week. After blossom blight develops, the degree-day calculations will begin for development of shoot blight symptoms.

Powdery Mildew

The peak period for new powdery mildew infections is coming to an end. Watch for new mildew infections showing up on terminal growth on non-bearing orchards and newly planted trees.

Brown Rot

After shuck fall, fungicide applications for brown rot should be maintained until June drop in cherries and pit hardening in peaches which occurs early to mid-July in Nova Scotia. Fruit again become susceptible to brown rot infections in the final 3 weeks before harvest. This means that early peaches can be susceptible to brown rot infections nearly all season. Check pre-harvest intervals on these products.

Insects

The petal fall/calyx period is a critical period for insect control in tree fruit with a number of pests that need to be addressed. Insect management programs should be based on grower monitoring and/or scouting reports. Please refer to the table in last week's Orchard Outlook and the Orchard Management Guide for pesticide information.

Stinging Bugs

Check your scouting reports or monitor for mullein bug, apple brown bug, and tarnished plant bug at calyx. Note if you are just treating for mullein bug or apple brown bug, a neonicotinoid would be preferable to a pyrethroid.

Spring Caterpillars and Leafrollers

Jeff Franklin is not finding any more winter moth or green pug moth in clusters, however, there are plenty of leafrollers now present.

European Apple Sawfly

An insecticide for European apple sawfly should be applied at petal fall if it is required. EAS catches are declining now based on the monitoring by Jeff Franklin and Julia Reekie (AAFC).

Rosy and Green Aphid

Both Rosy and Green Apple Aphids are being found in orchards at this point. Watch young trees for green apple aphids in the terminals which can interfere with tree structure establishment. There are a number of insecticides registered for aphid control.

Mites

There are a number of miticides that can be used at calyx for mite control including Acramite, Kanemite, Envidor, and Nealta. Check your scouting reports to see if there is a treatable population. Note Nealta or Acramite do not control apple rust mite.

Codling Moth

Those growers that do their own monitoring for codling moth should have the traps hung in orchard blocks next week. Jeff Franklin and Suzie Blatt have caught some codling moths beginning last week and expect biofix will occur soon. The predictive model for timing codling moth treatments will be run and applications will be required later this month where a treatable population is noted.

Pear Psylla

Applications of Agri-Mek plus oil can now go on pear trees for psylla control. The closer the application is made to calyx the more effective it is in controlling psylla.

Pear Rust Mite

Pear rust mite, which now would be present on pear trees and newly growing pears, can go unnoticed until the producer sees heavy russetting extending from the base to the top of the fruit. Growers that apply Agri-mek for psylla control would also obtain mite control. Nexter or Envidor would be other options for pear rust mite control.

Plum Curculio

A second application for plum curculio should be made approximately 12 days after the initial application on stone fruits. A second application of plum curculio product would also be recommended to control apple curculio in pear.

Black Cherry Aphid

Those growers that have plantings of sweet cherry should monitor for black cherry aphid which can interfere with terminal growth, especially on young trees. There are a number of insecticides noted in the Stone Fruit Management Guide.

Catfacing of Peach

Catfacing of peaches is caused by plant bug stinging. This stinging takes place around shuck fall and one to two insecticide applications may be required to reduce the incidence of catfacing. Apply one to two applications of one of the pyrethroids listed in the Stone Fruit Management Guide.

White Apple Leafhopper

Sevin applications on mature blocks will control leafhopper but monitoring non-bearing plants for leafhopper. If treatment is required, an application of a neonicotinoid would control leafhopper and also pick up aphids.

Horticulture

Apple Thinning

While it is still early in some blocks to check for fruit set, based on visits this week I would say that that fruit set is variable (as it almost always is) depending on block. This likely has a lot to do with when peak bloom occurred relative to the period of cool/wet weather that occurred early last week. Looking in the Greenwich, Kentville and Canard areas yesterday, I observed good initial set on most varieties including Gravenstien, Idared, McIntosh, Gala, Honeycrisp, and Cortland. Ambrosia seems to have had an especially long bloom period and is still a bit early to judge. In these areas 2-3 or more fruit per cluster were common where the sepals are folding up and closing. These will need chemical thinning to achieve a reasonable crop load and high quality fruit.

On average, early cultivars (e.g. Gravenstein, Jersey Mac, Paulared, Idared) have fruitlet size of 7-8 mm in early areas at this point so thinning sprays could begin in the next few days. Looking at the weather forecast for the next 5 or so days, there should not be any periods of particularly high carbohydrate deficits and average thinning is likely to be expected.

As noted in the previous year, the work on crop load management by Douglas Nichols and Charlie Embree is still very pertinent to thinning this season and is worth reviewing. See the final pages for 7 Tips on Apple Thinning Management and 2013 Product Guide for thinning by Doug Nichols and Charlie Embree. Note that Fruitone L is a liquid formulation of Fruitone N and is formulated at the same concentration of active ingredient but is liquid. So 1 mL of Fruitone L is equivalent to 1 g of Fruitone N.

As always, assess fruit set in your own orchard before making any decisions on products and rates.

Note: Sevin XLR is generally safe to mix with fungicides. However, application of Captan/Maestro with surfactants found in other products (which may include oil) can result in leaf injury and fruit russetting in certain circumstances. Think cautiously about mixing captan with other products at this time - particularly on russet-prone cultivars.

Pear Thinning

The majority of pear fruitlets are in the Maxcel thinning window of 8-14 mm. Fruit set looks heavy on Bartlett and lighter on Clapp's Favourite. If your pears require chemical thinning, Maxcel treatments should be applied in the next week to be effective.

Apogee

Apogee applications started in most blocks last week. If you haven't yet applied Apogee and are intending to, the first treatment should be done ASAP to maximize the benefit for shoot growth control and fire blight

suppression. A second application should be made about 14 days later. The Michigan fire blight control program includes a third application about 14 days after the second.

Young Trees

Make an effort to get young trees properly trained (single leaders, removing forking of branches, exceedingly large diameter branches, steep angles) to ensure the best and most uniform growth for your future orchard.

Foliar Nutrients

Magnesium/Epsom Salts – Magnesium deficiency is best corrected with soil applications of dolomitic limestone in Nova Scotia. Foliar application of magnesium should only occur where magnesium deficiency has been confirmed when tissue testing and/or deficiency symptoms indicate it is required. Application of Epsom salts (magnesium sulphate) after bloom at 20 kg/1000 L has been shown to help improve leaf magnesium where required.

Nitrogen/Urea – Foliar urea sprays can be used to supplement soil applications of nitrogen where leaf nitrogen levels are low. For Nova Scotia, this would be below 2.0% leaf N. Post bloom applications are typically 6 kg of urea per 1000 L of spray. If you are applying urea with concentrate sprays in less than 1500 L/ha, reduce the urea rate to 3 kg per 1000 L of spray to avoid foliar burn. Also avoid applying foliar urea during slow drying conditions.

This Orchard Outlook has been published with the input of the Orchard Outlook Committee and Erika Bent (APM).

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