

Orchard Outlook



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Bud Development	Degree Day Accumulations	Diseases
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It is amazing what a week of warm weather has done to the countryside with rapid bud advancement in many areas including on wild trees.

Bud Development

Orchard visits on Tuesday again indicated significant development this week. Advanced buds of Idared were approaching tight cluster on the Middle Dyke Road. Apples range from green tip to approaching tight cluster on the early cultivars in advanced areas (Figure 1). Pears are at bud burst; peach – swollen bud to quarter-inch green; plum – bud burst; sweet cherry – bud burst.



Figure 1: Late half-inch green of apple (left), bud burst of pear (centre), quarter-inch green of peach (right). Photo: <http://utahpests.usu.edu/IPM/htm/fruits/home-orchard-guide/> and <http://fruit.umext.umass.edu/tfruit/clements/2004budstages/03312004/03312004-Pages/Image3.html>.

2015 Degree Day Accumulations

Heat unit accumulation advanced considerably in the past week though it is still well behind average. According to Jeff Franklin (AAFC), we are now about 11 days behind the 5-year-average in heat unit accumulation.

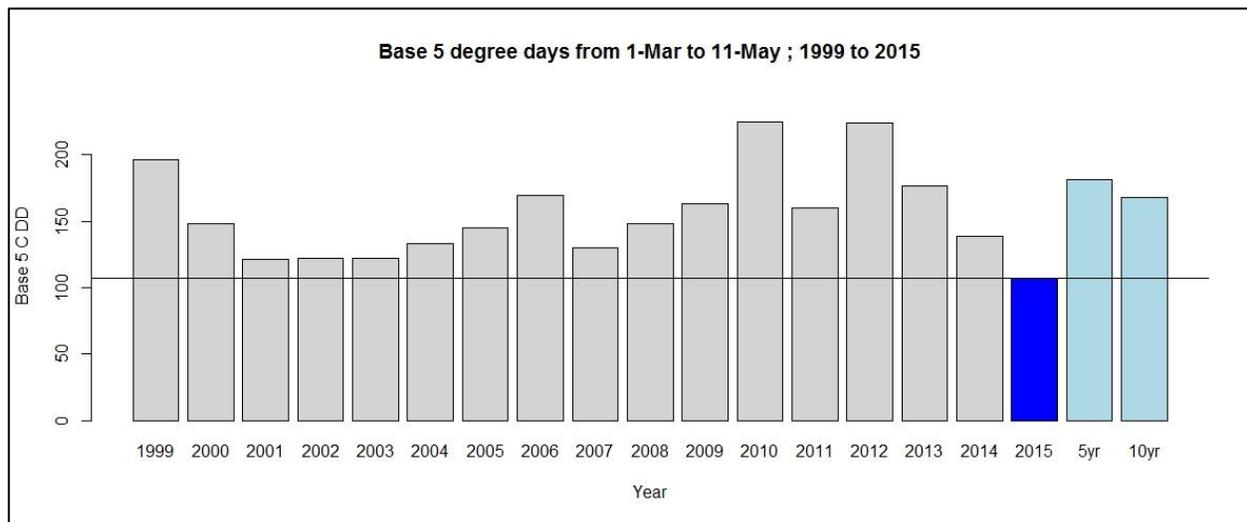


Figure 2: Degree day accumulations from March 1st for the past 17 seasons. Provided by Jeff Franklin (AAFC).

To date heat accumulation since March 1st is (Figure 3):

- About 41% fewer plant development heat units compared to the 5-year average.
- About 23% fewer plant development heat units compared to 2014.
- About 44% fewer insect development heat units compared to the 5-year average.

Diseases

Apple & Pear Scab

A single infection period was recorded at the Kentville Research Centre this past week. The wetting began at 7 pm Tuesday evening and is still ongoing at the writing of this outlook. At an average temperature of about 14°C it is currently a moderate infection. Another light infection period may have occurred on Monday depending on your location. About 12% of the seasonal ascospore load has matured to date and the majority of these spores were released in the current infection period. At this point in the season, renew your fungicide protection for apple scab on about a 7 day interval, with a shorter interval after wet weather or rapid tissue growth. Protectant fungicide residues are washed off leaves with as little as a few mm of rainfall and are generally completely depleted after about 50 mm (2" of rain).

Pears should also be covered for pear scab regularly at this point in the season. Note EBDC's such as Manzate are not registered for pear scab. Captan as well as other single-site fungicides are effective on pear scab. See the Apple & Pear Management Guide for a complete list of products.

Fire Blight

There have been a few early reports of some cankers oozing in the Valley. Fresh fruit blocks should not have full rate copper applied to them after ½" green and the next few days will be your final opportunity to apply this preventative spray for fire blight. Copper should be used cautiously at lower rates after ½" green to avoid any subsequent issues with fruit russetting. Copper

applications should be made to fresh blocks first before finishing with any predominately processing blocks or non-bearing trees. If you have not yet done a copper application for overwintering fire blight inoculum on fresh varieties, plan on one application and make it as soon as possible.

The risk of spreading fire blight by pruning should remain low this week with cool temperatures today and dry weather for the remainder of the week. As we approach tight cluster to pink in the next 10-14 days, begin to consider the risk of spreading fire blight with pruning equipment. Pruning should be done in infected blocks during dry weather only and equipment should be sanitized periodically to reduce potential for moving bacteria between rows/blocks etc.

Ideally, after cankers begin to ooze, mowing brush should be done after prunings are left to dry for a few days in the alley to allow any ooze to dry before being disturbed.

Powdery Mildew

Overwintering inoculum of powdery mildew will begin to infect flower clusters and vegetative shoots typically at about the tight cluster stage of development which many areas will approach in the next week. Erika Bent has observed active powdery mildew this past week. A fungicide that provides control of both apple scab and powdery mildew would be recommended at tight cluster. There are many powdery mildew products on the market now with Luna Tranquility (800 mL/ha for scab; 600 mL/ha for PM), Fontelis (1.5 L/ha) as well as recent registrations of Vivando (750 mL/ha) and Fullback (585-877 mL/ha). All of these are single-site fungicides and would be best used with a protectant fungicide for resistance management. Fullback and Vivando require a full rate of protectant for scab control. Nova is also still an excellent powdery mildew fungicide with no resistance observed in the 2013 survey in Nova Scotia. However, resistance to Nova in apple scab is common. Therefore, one could use Nova as a mildew fungicide but it needs to go with a full rate of protectant to provide protection for apple scab. Remember with solupacks (e.g. Nova) to dissolve the solupack before the addition of oil or boron in the spray tank to prevent problems with dissolving.

The strobilurins (Flint and Sovran) have better uses than to control powdery mildew at this point in the season.

Brown Rot

Japanese plums will likely be approaching white bud in the next week. Fungicide protection for brown rot should begin at the white bud (or popcorn) stage. Maintain regular applications during the bloom period – especially during conditions of wet weather.

There are numerous products available for brown rot control. See the Stone Fruit Management Guide for more information.

Insects

European Red Mite

Full rate oil applications for European red mite have begun in the past week. As trees approach tight cluster in the next week, this should be a good opportunity to apply oil where overwintering populations of European red mite are established. The week is currently forecast to be frost free at Kentville but check forecasts for frost risk before oil application. Erika Bent (APM) reminds growers that oil-sensitive varieties such as Red Delicious, Ambrosia, and Gala should be oiled as soon as possible.

When using oil, remember that oil applied to frost-damaged tissue will greatly amplify any injury so wait 48 hours before and after frost if possible. Never apply captan and oil together or Captan within 7 days (preferably 14) prior to or following an oil treatment. Sulphur applications (e.g. Kumulus) are also not compatible with oil and should not be used within 30 days of oil. For European Red Mite control, use either Superior Oil 70 or Purespray Green Spray Oil at 60 L/ha or 20 L of oil per 1000 L of spray. Oil will not affect two-spotted spider mite or apple rust mite as they overwinter as adults.

Horticulture

- Young Tree Pruning
 - There is still plenty of pruning to be done this year and not all blocks will be able to be pruned. Hours spent on developing tree structure in young blocks and removing fire blight cankers from lightly to moderately-infected orchards are likely your best return on investment if time is limited.
- Fertilizer
 - Nitrogen fertilizer application is best between bud break to bloom. Apply granular fertilizer when time permits in the next two weeks.
- Herbicides
 - Maintaining weed free strips from bud break to 30-days after full bloom has the greatest impact on tree growth and yield. Timely herbicide application will ensure you make the most of the weed free window.
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New Factsheet on Spraying in PPM

This factsheet explains how to calculate the amount of product required to accurately spray at a rate expressed in parts per million (PPM). This is a must read for anyone who intends to use Fruitone, Streptomycin, or Kasumin this year.

This can be downloaded at:

<http://perennia.ca/Fact%20Sheets/Horticulture/Fruit/Orchard%20Fruit/Spray%20PPM%20for%20Web.pdf>

Upcoming Course

Fundamentals of Food Safety – Perennia Course

This series of workshops will provide a solid foundation of food safety principles for anyone new to a food safety leadership role and anyone needing a refresher into the basic elements of a food safety program. It will be especially helpful for small food processors that are required to have a food safety plan in order to sell to a retailer. The workshops will teach you how to prepare and implement your food safety program in an informative, practical atmosphere that is light on lecture and long on learning creatively. There are five sessions that will cover food safety plan basics, prerequisite programs and HACCP plan development.

For more information, see: <http://perennia.ca/foodsafetyfundamentals.php>

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

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