

Orchard Outlook



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July 7, 2016

2016 Degree Day Accumulations		Disease
Insects	Horticulture	Upcoming Events & Notices

2016 Degree Day Accumulations

Degree day accumulations from March 1st to July 6th are comparable to the 5- and 10-year averages (Figure 1).

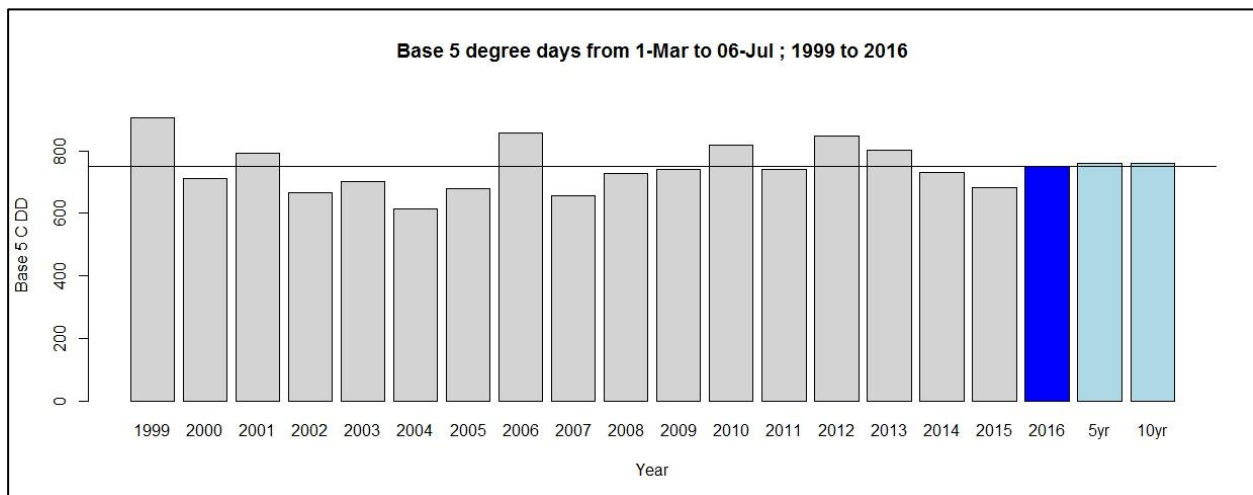


Figure 1: Degree day accumulations from March 1st for the past 18 seasons. Provided by Jeff Franklin (AAFC).

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

- About 1% fewer plant development heat units compared to the 5-year average.
- About 10% more plant development heat units compared to 2015.
- About 2% fewer insect development heat units compared to the 5-year average.

Diseases

Apple & Pear Scab

There were no scab infection periods recorded this week at Kentville AAFC.

Fire Blight

Both blossom blight and shoot blight strikes have been reported in several locations across the Valley. Maryblyt models indicate new shoot blight infections should now be showing symptoms where they have occurred. If you begin to observe fire blight infections and have not yet made any Apogee treatments to the infected and/or neighbouring blocks, you may wish to treat these areas with Apogee immediately to provide some resistance to shoot blight infection in 10-14 days. An application of a copper product could help give some immediate protection while the Apogee begins to work. Antibiotic products such as Streptomycin or Kasumin will not give curative activity to visibly established infections.

Where the number of infections is light and can be manageably pruned from the orchard, removal on a dry day and discarding in the row middles will help reduce secondary inoculum production. Sanitizing pruning equipment at periodic intervals is a good practice to eliminate spreading fire blight from block to block. Removal by pruning should not be attempted where the number of infections would make the chance of accidentally spreading fire blight very high.

With the presence of ooze a possibility in the orchard, work only in dry conditions in blocks with fire blight as ooze is spread much more easily during wet conditions!

PERENNIA IS COLLECTING FIRE BLIGHT SAMPLES AGAIN IN 2016 ON BEHALF OF AAFC FOR STREPTOMYCIN RESISTANCE TESTING AND OTHER RESEARCH NEEDS.

IF YOU LOCATE FIRE BLIGHT IN YOUR ORCHARD, PLEASE CONTACT CHRIS DUYVELSHOFF AT 902-678-7722 OR CDUYVELSHOFF@PERENNIA.CA SO A SAMPLE MAY BE TAKEN FOR RESISTANCE TESTING.

YOUR SPECIFIC FARM OR LOCATION WILL NOT BE IDENTIFIED IN ANY PUBLICATIONS.

Powdery Mildew

Continue to watch for powdery mildew in nurseries and young plantings which can interfere with terminal development and tree growth. See the Orchard Management Schedule for registered products for mildew control.

Brown Rot

Cherries are beginning to change colour, however, it will still be another 2-3 weeks before the bulk of the cherries ripen. Stone fruits become susceptible to brown rot infections again as they start to ripen. Regular preharvest fungicide applications are critical, especially during periods of wet weather. With periods of heavy and frequent rainfall, the interval between fungicide applications may need to be as short as 3-5 days. Once brown rot has appeared on picked fruit it is too late to do anything about control. If you are treating more than one type of stone fruit make sure that the product is registered for all the crops that you are spraying. Also check the pre-harvest interval. Check the Stone Fruit Management Schedule for products and rates. Rotate fungicide classes for resistance management.

Insects

Codling Moth

If populations warranted treatment and no codling moth applications have been made yet, it should be made ASAP. A second application should be made 10-14 days later where there has been heavy pressure in the past. Trap captures in NS as well as other Northeastern areas have been higher in 2016 for unknown reasons. If you use Imidan, Delegate, TwinGuard, Confirm, Intrepid, Altacor, or Exirel for codling moth control you will also control any OBLR at this timing.

Apple Maggot

Apple maggot traps should now be hung in the orchard. Jeff Franklin reported the first possible catch this morning (yet to be verified) which is about average for the first catch. The economic threshold is 1 maggot fly per orchard on a yellow sticky board. Note wing pattern for identification of apple maggot (Figure 2). Apply a treatment 7-10 days after the first fly is captured on a yellow sticky board or immediately after a female is captured on a red sphere. Highly effective products for AM are limited to Imidan (2.68 kg/ha), Assail (160-240 g/ha), Calypso (440 mL/ha), and Exirel (1.0-1.5 L/ha).

Growers that are using Altacor, Delegate, or TwinGuard for CM or OBLR control will also have some suppressive activity on AM, but these products should not be relied upon for control in most situations.

In organic orchards, Surround can be used to deter egg laying and GF 120 fruit fly bait can be used for suppression of adult flies. Both Surround and GF 120 should begin to be applied as soon as flies are present in the orchard.



Figure 2: Wing pattern of apple maggot and adult fly on Gingergold apple.

Obliquebanded Leafroller (OBLR)

If you have noted damage from the obliquebanded leafroller (OBLR) last year, the summer generation of larvae will begin their prolonged hatch in the coming couple of weeks. These larvae will roll leaves together and feed on the surface of the fruit – especially where two apples are touching (Figure 4). Where OBLR has been a problem in the past or where there was a high overwintering population, an application of a spinosyn (Delegate, Entrust, Success), diacylhydrazine (Confirm), or diamide



Figure 3: Surface chewing and late season pinpoint damage to Cortland from summer obliquebanded leafroller (OBLR) in Port Williams in 2014.

(Altacor, Exirel) will provide good control. TwinGuard (Delegate + Closer) could be used as well, particularly if aphids are also a target. Check your scouting reports for timing recommendations. This application would also serve as a second treatment for codling moth. Where OBLR pressure has been high in the past, a second application 10-14 days later may be required. Imidan would also have good activity on OBLR if you're applying it for apple maggot.

Aphids

Check the terminal growth for the presence of Rosy and Green Apple Aphid colonies. An aphid control treatment is recommended if 10% of terminals are infested.

Mites

Summer miticide options include Acramite, Kanemite, Nexter, Envidor, and Nealta. Scout your orchards or check your scouting reports to see if there is a treatable population. Mites have many generations per year and therefore have a high potential to develop resistance. For resistance management, it is critical to rotate miticide classes. The use of dormant oil applications will also help to delay resistance selection for European Red Mite. Those growers that make use of a scouting service will need to apply miticides when population thresholds are reached. In early July, the presence of European red mite or twospotted spider mite on 40 of 50 leaves examined will act as threshold for treatment.

Horticulture

Apple Thinning

Fruit drop has progressed well over the past week with the warm weather and the results of chemical thinning are now becoming apparent. Hand thinning can now begin in blocks where chemical thinning did not adequately reduce crop load.

Summer Return Bloom Sprays

The application of growth regulators to increase return bloom is promoted in some production areas in the US. This strategy can be used on young trees that are slow to bear (e.g. Northern Spy) or on mature trees which are expected to have a poor return bloom (i.e. biennial trees that are currently in an "on" year). Fruitone L (NAA) has been effective in some years in US trials and is registered in Canada.

With return bloom sprays, as you are applying a growth regulator, the response can vary based on a huge number of factors including cultivar, crop load, tree age, tree vigor, nutrient status etc. Results can be as variable as thinning sprays.

Flower initiation in apple is hypothesized to start to occur during or shortly after bloom, lasting until approximately 10-12 weeks after full bloom. The strategy with NAA on a bearing tree is to wait until fruit are out of the thinning window before applying return bloom sprays. Return bloom sprays are suggested to start at 5 weeks after full bloom (WAFB), and then repeated every two weeks at 7, 9, and 11 WAFB. Return bloom products can be added directly to the cover sprays during that period. We are now at approaching 4-6 WAFB for most cultivars.

Summer NAA programs will not impact current season fruit quality and will not cause thinning at fruit sizes above 20 mm. Apply Fruitone L at 160 g per 1000 L (5 ppm).

***This strategy has not been widely tested in Nova Scotia and should be made to limited areas until more experience is gained with summer return bloom sprays.

NSFGA Annual Orchard Tour

The NSFGA Annual Orchard Tour will take place on **Thursday, August 4th** beginning at 8:30 am at the Kentville Agriculture Centre. Tour agenda will be published shortly.

Golden Apple Award 2016 – Best Management of a First Year Planting

Today's new orchards represent the future success of the tree fruit industry in the province. To recognize the importance of successful first-year establishment on future orchard performance, the NSFGA Production Committee has chosen Best Management of a First Year Planting as the Golden Apple Award category in 2016. This award will recognize the efforts of an individual to ensure successful tree establishment and uniform growth of a first year planting. The NSFGA Production Committee would like to request nominations for a recipient of the 2016 Golden Apple Award for this category. Nominations can be forwarded to Candy O'Connor, NSFGA (902-678-1093 or coconnor@nsapples.com). Nominations will be judged by the NSFGA Production Committee.

Entries have to meet the following requirements to be eligible for the Golden Apple Award:

- Be nominated by a peer grower or industry representative
- The orchard is a minimum of 1 acre in area and was planted in 2016

Nominations are to be judged by the NSFGA production committee based on the following criteria:

- Tree survival rate
- Uniformity of tree growth
- Level of weed control
- Adequate insect & disease control
- Crop load management
- Orchard floor management
- Overall general appearance

OrchardMAX Airblast Sprayer Optimization App Available for Free Download!

This handy mobile app will help you optimize airblast applications for apple orchards. It is available for both iOS and Android operating systems. See the link below for more information.

<http://sprayers101.com/orchardmax/>

Reminder: Canada-Nova Scotia Fire Blight Initiative! DEADLINE APPROACHING

This is a reminder that **all tree fruit growers with apple and/or pear acreage** that required additional management as a result of fire blight occurring after tropical storm Arthur can apply for financial assistance under the Canada Nova Scotia Fire Blight Initiative – a Growing Forward 2 Agri-Recovery program.

DEADLINE TO APPLY FOR THIS PROGRAM IS JULY 29!

Funding includes provisions for recovery of additional chemical costs for all growers. Funding is also available for confirmed tree losses where an industry inspection report was completed prior to July 31, 2015.

For more information on the Canada-Nova Scotia Fire Blight Initiative and how to apply, see <http://novascotia.ca/programs/fire-blight-initiative/>. Questions regarding the program or eligibility should be directed to the Programs and Business Risk Management Branch of the Nova Scotia Department of Agriculture at 1-866-844-4276.

Apple Maggot Eradication Technician

The NSFGA has again obtained funding for a summer technician to aid in apple maggot control efforts.

Please contact Elizabeth Nichols to report wild trees to schedule their elimination.

Please also contact Elizabeth Nichols if you have completely removed blocks so records can be updated for apple maggot inspections.

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

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