

# Orchard Outlook



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April 13, 2016

Bud Development	2016 Degree Day Accumulations	Diseases
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## Bud Development

Checking on bud development Tuesday, Idared was at late Silver Tip on the Middle Dyke Road – a historically early block (Figure 1). Signs of bud swell are evident on pear, peach, and plums with sweet cherry still in the dormant stage.



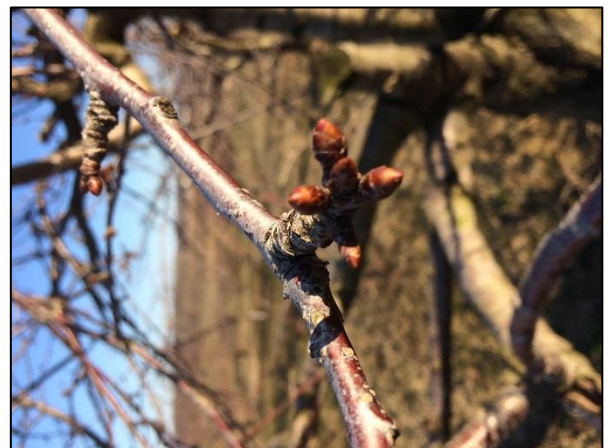
**Apple:** late Silver Tip – Dormant

**Pear:** Swollen Bud – Dormant

**Peach:** Swollen Bud



**Plum:** Swollen Bud



**Sweet Cherry:** Dormant

Figure 1: Tree fruit buds observed on April 12<sup>th</sup>, 2016 in Greenwich and Middle Dyke Road.

## 2016 Degree Day Accumulations

Degree day accumulations from March 1<sup>st</sup> to April 12<sup>th</sup> show that 2016 is currently well ahead of the 5- and 10-year averages (Figure 2). In the past 18 years, only 2000, 2006, 2010, and 2012 have had more accumulated degree days (from March 1) than 2016.

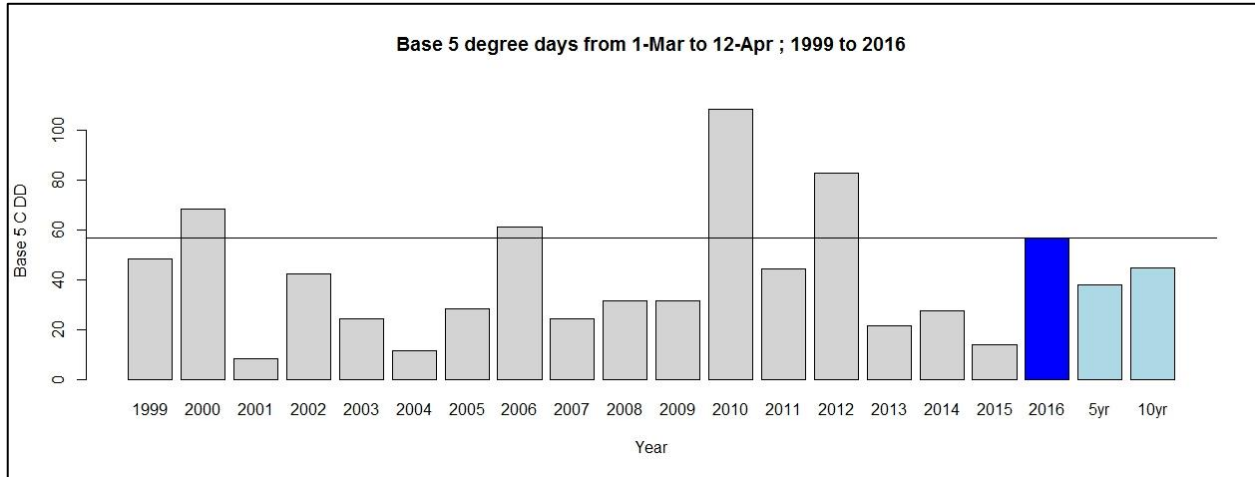


Figure 2: Degree day accumulations from March 1st for the past 18 seasons. Provided by Jeff Franklin (AAFC).

To date heat accumulation since March 1<sup>st</sup> is (Figure 2):

- About 49% more plant development heat units compared to the 5-year average.
- About 308% more plant development heat units compared to 2015.
- About 56% more insect development heat units compared to the 5-year average.

## Green Tip Prediction

As of April 12, Kentville had accumulated 2300 degree hours above 4.4°C since trees had acquired dormancy in mid-December (Figure 3). Green Tip is predicted around 2500 degree hours which will occur this week with the current weather forecast. As you can see in the graph, the model is tracking very close to 2012. In fact, reviewing the Orchard Outlook from April 11<sup>th</sup>, 2012 – we would be at a very similar point as was observed for that issue (<http://perennia.ca/orchardoutlook.php>). The model will likely predict Green Tip slightly earlier than observed this year which has also occurred in New York this season. However, given the forecasted temperatures, Green Tip will probably come in the next 5-7 days especially on the earlier cultivars in the early developing areas.

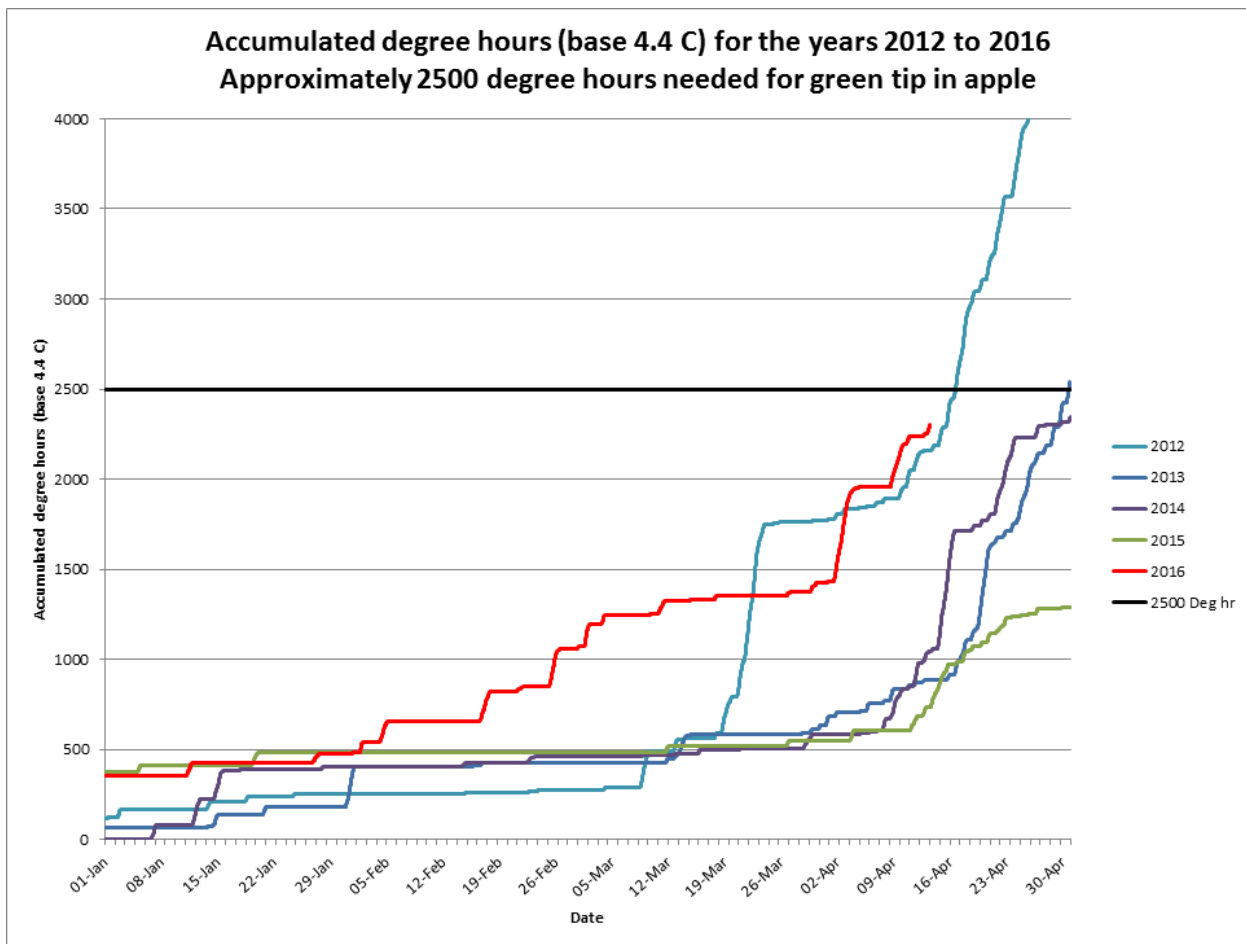


Figure 3: Accumulated degree hours (base 4.4°C) from tree dormancy through April for the past 5 season. The Cornell University model indicates approximately 2500 degree hours are required for green tip (marked by black solid line). Data and graph provided by Jeff Franklin, AAFC Kentville.

## Diseases

### Apple Scab

With Green Tip in apples not far off, they will soon become susceptible to infection from apple scab, *Venturia inaequalis*. Primary infections begin from overwintering ascospores on fallen leaves which are released during wet periods in the spring. Primary infections on spur leaves, base of shoots, and young fruitlets will generate secondary spores called conidia which will continue to infect and generate secondary spores until leaf drop. Good control of primary scab is the best method of fruit protection.

Mature ascospores have been identified by Eric Bevis, AAFC, and therefore can be assumed to be present in the orchard at this point (Figure 4). However, only a small fraction of ascospores (less than 1%) would have matured to date. Since there exists only a very small portion of mature ascospores and nearly zero green tissue exposed to date, rains the past few days would not have provided much opportunity for infection.

Both ascospore maturity and tissue development will advance with the temperatures forecast over the coming week. Some fungicide protection will likely be needed for early developing cultivars as we move into the potential wetting periods next week. Remember, if you plan to use

oil for European Red Mite control later on, Captan should be avoided within 7-14 days of an oil application.

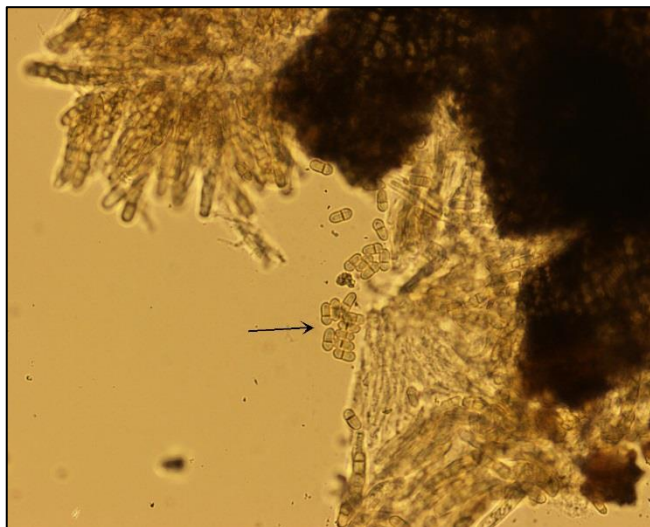


Figure 4: Mature ascospores of *Venturia inaequalis* – apple scab – ready for release to green tissue upon wetting. Photo by Eric Bevis, AAFC Kentville.

## Insects

### Pear Pyslla

Pear pyslla egg laying will likely pick up over the next week as clear days and warmer temperatures favour their activity. Oil applications to delay pear pyslla egg laying activity should be made soon if they are to be effective this season. Freezing temperatures should be avoided within 24-48 hours before and after an oil application so later in the week may offer a better window for application.

## Horticulture

- **Pruning**
  - With bud break just around the corner, ensure that your youngest blocks are pruned to ensure growth is directed into desirable leader and terminal extension.
- **Grafting**
  - This is likely the final week of scionwood collection for grafting as bud break will begin shortly.

## Upcoming Events & Notices

### Fire Blight & Bitter Rot Workshop

Join NSFGA & Perennia for a morning workshop on fire blight control and bitter rot management on **Tuesday, April 26<sup>th</sup> at 9:00 am at Berwick Fire Hall.**

Dr. George Sundin, plant pathologist at Michigan State University will be the guest speaker. George comes with a lot of experience in fire blight research and management and this will be a great opportunity to ask questions you may have on fire blight. Registration is not required for this workshop.

**Apple Fire Blight & Bitter Rot Workshop**  
**Berwick Fire Hall, Berwick**  
**Tuesday, April 26<sup>th</sup>, 2016 – Indoor Session**

<b>9:00 am</b>	<b>NSFGA Introductions</b>	<b>Topic</b>
<b>9:15 am</b>	Dr. George Sundin, Professor Center for Integrated Plant Systems Michigan State University	Fire Blight Management for 2016
<b>10:15 am</b>	Chris Duyvelshoff, Horticulture Specialist Perennia	A Few Burning Questions on Fire Blight
<b>10:45 am</b>	<b>Break</b>	
<b>11:00 am</b>	Dr. George Sundin, Professor Center for Integrated Plant Systems Michigan State University	Bitter Rot Management & Control in Apples
<b>11:30 am</b>	<b>Fire Blight &amp; Bitter Rot Discussion</b>	
<b>12:00 pm</b>	<b>Wrap Up</b>	

PCRP Credit(s) have been applied for.

**Homegrown Success Program Deadline**

The deadline for Homegrown Success applications for on-farm improvements in areas such as manure, water, and soil management is closing on April 30<sup>th</sup>, 2016. See the program guidelines for more information on eligible items at <http://novascotia.ca/programs/homegrown-success/>. Copies are also available at the NSDA Kentville office.

For further information, please contact Agricultural Resource Coordinator, Brian MacCulloch, 902-679-6006, [brian.macculloch@novascotia.ca](mailto:brian.macculloch@novascotia.ca) (Annapolis Valley) or see <http://novascotia.ca/agri/programs-and-services/regional-services/> for a list of contacts for other regions.

**Vivando Fungicide Withdrawal on Pome Fruit**

Due to reports of phytotoxicity when applied to apples in the United States, BASF has voluntarily recommended Vivando fungicide not be applied to apple and pear crops. BASF has made a submission to PMRA to have apple and pear removed from the Vivando label. Vivando was registered for powdery mildew control. It will remain registered and available for use for control of powdery mildew in cherries and peaches.

**PMRA Product Re-Evaluations**

The Pesticide Management Regulatory Agency (PMRA) of Health Canada has federal jurisdiction over pesticide registrations in Canada. The PMRA has recently announced proposed re-evaluation decisions for the following products used in tree fruit (Table 1). Producers and the public may submit comments directly to PMRA at the following link <http://www.hc-sc.gc.ca/contact/cps->

[spc/pmra-arla/pmrapub-eng.php](http://spc/pmra-arla/pmrapub-eng.php) or through other industry organizations such as NSFGA or Canadian Horticultural Council.

**Table 1: Tree fruit products currently under proposed re-evaluation decisions by the Pesticide Management Regulatory Agency of Health Canada.**

Active Ingredient	Products	Proposed Decision (Tree Fruit)	Comment Period End
Captan	Captan, Maestro	Removal of Use	June 29 2016
Chlorothalonil	Bravo, Echo	Removal of Use	June 10 2016
Thiram	Thiram, Granuflo-T	Removal of Use	May 29 2016
Ferbam	Ferbam	Removal of Use	May 29 2016
Ziram	Ziram	Removal of Use	May 29 2016

Links to the various reviews:

Captan: [http://www.hc-sc.gc.ca/cps-spc/pest/part/consultations/\\_prvd2016-13/prvd2016-13-eng.php](http://www.hc-sc.gc.ca/cps-spc/pest/part/consultations/_prvd2016-13/prvd2016-13-eng.php)

Chlorothalonil: [http://www.hc-sc.gc.ca/cps-spc/pest/part/consultations/\\_rev2016-06/index-eng.php](http://www.hc-sc.gc.ca/cps-spc/pest/part/consultations/_rev2016-06/index-eng.php)

Thiram: [http://www.hc-sc.gc.ca/cps-spc/pest/part/consultations/\\_prvd2016-07/prvd2016-07-eng.php](http://www.hc-sc.gc.ca/cps-spc/pest/part/consultations/_prvd2016-07/prvd2016-07-eng.php)

Ferbam: [http://www.hc-sc.gc.ca/cps-spc/pest/part/consultations/\\_prvd2016-05/prvd2016-05-eng.php](http://www.hc-sc.gc.ca/cps-spc/pest/part/consultations/_prvd2016-05/prvd2016-05-eng.php)

Ziram: [http://www.hc-sc.gc.ca/cps-spc/pest/part/consultations/\\_prvd2016-06/prvd2016-06-eng.php](http://www.hc-sc.gc.ca/cps-spc/pest/part/consultations/_prvd2016-06/prvd2016-06-eng.php)

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

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