

**This issue contains:**

- Weather
- Apple scab

**2010 Degree Day Accumulations**

(Temperature data provided by Jeff Franklin, AFHRC, Kentville)

Table 1.0 Degree day accumulations as of August 3, 2010 taken from Kentville weather data. Degree day accumulations are calculated using the single sine method and are based on a start date of January 1, 2010.

Category	2006	2007	2008	2009	2010	5 year average
<b>Plant development (Base 5°C)</b>	1339.2	1124.1	1196.2	1138.4	1252.6	1177.9
<b>Insect development (Base 10°C)</b>	791.4	655.2	691.1	639.9	707.3	675.5

Heat unit continue to remain ahead of average and with the early start of bud development fruit maturity is ahead of average. We may not set records for the start of harvesting but expect all cultivars to be ahead of average. The starting date for harvesting Clapp’s Favorite pears has ranged from August 17<sup>th</sup> to the 30<sup>th</sup> since 1979. This year there were Clapp’s pears that could have been picked on August 15<sup>th</sup>.

**Apple Scab Infection Periods for 2010**

The following are the infection periods that were reported in the Orchard Outlook from April 14<sup>th</sup> to July 14<sup>th</sup>.

April 18-20	? light	June 4-6	secondary
April 22-23	moderate	June 6-7	secondary
April 28-29	moderate	June 17-18	secondary
April 30	light	June 20-21	secondary
May 7-8	? light	June 21-22	secondary
May 19-20	moderate, secondary	June 23-24	secondary
May 25-27	heavy, secondary	June 28-29	secondary
June 1-2	secondary	July 6-7	secondary
June 3-4	secondary	July 10-12	secondary

Additional secondary infections would have occurred since July 10-12. The incidents of apple scab are up in 2010 which is a bit surprising given the number of infections recorded and the severity of infection periods during April and May. Rain fall recorded at Kentville for April was 35 mm well below the average of 83 mm and Mays total was 26.7 mm also below the average of 79 mm. It would appear that some growers missed these early infection periods with the May 19-20 infection being a good candidate for missed control. Problems that growers may have had from early infection periods were compounded by the weather during June. There were nine secondary infection periods recorded in June and a total rain fall of 183 mm which was well above the average of 69. On four separate occasions more than 25 mm of rain fell which would have had a great impact on fungicide residue levels. Precipitation during July, 93 mm was also above average, 70 mm. If you were cutting rates or extending spray intervals this type of rain fall would have gotten you into scab problems.

The following infection period were recorded by an AAFC weather station located in Morrystown and provide by Dr. Gordon Braun.

- 1) Apr17-4:15 pm to Apr 18 2:45 am then Apr 18 1 pm to Apr 20 8:30 am ~54 h @ 2 °C (interrupted wet period)
- 2) May 19-8:30 pm to May 20 1:30 pm, 17 h @ 10 °C
- 3) June 1-6:00 am to June 2 12:00 pm, 30 h @ 9 °C
- 4) June 3-5:45 am to June 4 10:45 am, 29 h @ 10.7 °C
- 5) June 5-1:30 pm to June 7 10:15 am, 44.75 h @ 15 °C
- 6) June 1- 6:00 pm to June 14 8:00 am, 14 h @ 13 °C
- 7) June 17-7:30 am to June 18 11:00 am, 27.5 h @ 13.6 °C
- 8) June 20-8:15 pm to June 21 3:30 pm, 19.25 h @ 17.5 °C
- 9) June 23-4:15 pm to June 24 1:45 pm, 21.5 h @ 16 °C
- 10) June 28-7:00 am to June 29 10:45 am, 27.75 h @ 15 °C
- 11) July 11-2:45 am to July 12 4:45 pm, 38 h @ 20 °C
- 12) July 14-5:15 to July 15 10:00 am, 16.75 h @ 18 °C
- 13) July 22-3:15 am to July 23 9:00 am, 29.75 h @ 16 °C
- 14) July 25-8:45 am to July 26 7:45 am, 23 h @ 17 °C
- 15) Aug 3-3:15 pm to Aug 4 5:30 pm, 26.25 h @ 17 °C

### **Apple Scab Control**

Given the amount of scab that is present most growers should consider a late season fungicide to fresh fruit cultivars that will be placed in storage. Heavy rains in early August would have reduced fungicide residue levels increasing the risk of pin point scab infections during the later part of the growing season. An application of Maestro/Captan late August to early September would provide apple scab protection and protection against some of the storage rots. The pre-harvest interval is 7 days Maestro/Captan.

## Reducing Over Winter Apple Scab Inoculum

The UMass Extension Factsheet F-134-2009 Reducing Apple Scab and Saving Scab Sprays recommend reducing apple leaf litter to reduce the inoculum it contains.

This can be done in two ways:

- 1) Shredding the leaves on the orchard floor in November or April can reduce the number of scab spores by as much as 85%. The difficulty is being able to shred the leaves under the tree canopy with a flail chopper. If you are only able to flail chop the alleyways you could reduce scab spores by up to 50%. Flail chopping will break the leaves into smaller pieces which allow for a quicker break down and consumption by earth worms. Flail mowing in April will flip over about 50 percent of the leaf peaces which can result in ascospores being released into the soil instead of the air to land on green tissue.
- 2) Urea Treatment: The application of urea prior to leaf fall or after leaf fall will also reduce spore load. Spraying the surface of leaves on the ground can reduce spores by about 66%. The recommended rate is 44 lb per 100 gallons of water. It would be best to dissolve the urea in warm water before putting in the tank because it will be slow to dissolve in cold water. It could be applied with orchard sprayer with only the lower nozzles turned on however a boom-type field sprayer is recommended for best results. The 44 lb rate per acre will supply approximately 20 lbs of nitrogen to the ground so nitrogen application will need to be adjusted.

Best results will be obtained when the two treatments are combined.

## Nova Scotia Apple Crop Estimate for 2010

The following estimate is based upon July observations and discussion with the major apple packers.

Cultivar	2010	2009
	Bushels	Bushels
Gravenstein	80,000	100,000
McIntosh	750,000	810,000
Cortland	300,000	280,000
Red Delicious	75,000	85,000
Spy	350,000	410,000
Spartan	30,000	30,000
Idared	230,000	220,000

Honeycrisp	175,000	160,000
Gala	60,000	55,000
Others	150,000	200,000
Total	2,200,000	2,350,000

*Contributions and consultations were made in the preparation of this newsletter with the Orchard Outlook Committee*

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