Agra Point
ORCHARD OUTLOOK
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This issue contains:

2009 Degree Day Accumulations

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

Table 1.0 Degree day accumulations as of July 28, 2009 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, 2009.

Category	2006	2007	2008	2009	5 year average
Plant development (Base 5ºC)	1223.5	1014.9	1099.2	1034.0	1051.6
Insect development (Base 10º)	722.9	576.0	624.1	565.6	597.4

The following weather information just confirms what we already know about the weather during the month of July. It was wet and cool, more like spring than summer. The mean temperature for the month was 19.2° C which was below the five year mean of 20.6°C and last year mean of 21.5°C. Total rain fall was 112.1mm more than double of that for last year's 49.4 mm and well above the five year average of 74.5 mm. To date August has been more like summer.

Apple Scab

The following are the infection periods that were reported in the Orchard Outlook from April 29 to July 15th.

May 2 - 3rd 18hrs - heavy
May 5 - 6th 16hrs - light
May 7 - 8th 24hrs - heavy
May 9-10th 14hrs - moderate
May 17-18th 17hrs - moderate
May 19-20th 15hrs - light
May 25-26th 16hrs - light
May 27-28th 12hrs - light
May 29-31st 36hrs - heavy
June 10-11th 15hrs - secondary
June 11-13th 36hrs - secondary
June 20-21st 18hrs - secondary
June 22-24th 48hrs - secondary
June 25-26th 19hrs - secondary
July 4 - 5th 22hrs - secondary
July 6th 9hrs - secondary

Needless to say there were additional secondary infections the second half of July. Given the number of infection periods and amount of wet weather during the later part of June and all of July growers for the most part have done a good job in controlling apple scab. The success this year can be attributed to good control of the primary infection.

Late summer and early fall can still be a period for apple scab infections which show up as pin point scab prior to harvest or post harvest as storage scab. In the case of storage scab the infection takes place prior to harvest, however the lesions do not develop until the fruit has been placed in storage. Infection does not actually take place in storage. A late summer or early fall spray of Maestro/Captan will help to control pin point scab as well as some of the storage rot. With the amount of rain fall during July resulting in reduced residue levels a late season fungicide application would be a good investment by growers. The pre-harvest interval for Maestro/Captan is 7 days.

Fire Blight

I came across an interesting article in the August issue of the Fruit Growers News on fire blight written by Bill Shane of Michigan State University. The title of the article was "Puzzling out a fire blight episode in Southwestern Michigan". Fire blight infection was observed in southwest Michigan on Jonathan and Rome however, the Maryblyt prediction model only predicted one infection on April 29th prior to these two cultivars coming into bloom. Maryblyt uses four factors (open blossom, temperatures above15.5°C, a rain event and the presence of bacteria) to predict the risk of infection. The risk of infection is rated as being low medium or high when one, two, three or four of the infections are met. The buildup of bacteria on the pistils of the flower is calculated using heat units and the term used for this is the epiphytic infection potential (EIP). When the EIP reach a level of 100 it is considered that the bacteria have built to a sufficient level to cause an infection. Working backward from the first date that blossom infection was observed in Michigan it was calculated that the infection took place on May 6th or 7th with a light rain fall on the morning of the 6th and evening of the 7th. On May 6-7th the EIP did not exceed 50th thus it was assumed that an infection did not take place. The concluding line in the article was "In high risk orchards, local conditions can easily exceed the conditions predicted by the Maryblyt model". I think I am correct in saying that the most severe fire blight infection in Nova Scotia took place in orchards that were high risk due to the fact that fire blight cankers were present from last year's infections.

Apple Maggot

Continue to monitor traps and treat when additional flies, 10 to 14 days after a treatment, are caught. Keep in mind that Guthion and Calypso have a 30 day pre-harvest interval, while Imidan has a 14 pre-harvest interval. Delegate which has suppression of maggot on its label has a 7 day pre-harvest interval. Regarding the question of how long into the season do you treat for maggot? Speaking with Dr Rob Smith he recommended that treatments for maggot control should go on into at least mid August if required. Although maggot flies are caught into the early fall, they have had little impact on maggot infestations.

Mites

Warm weather the last week of July and the first week of August have promoted mite populations. Now would be a good time to determine the need for a miticide treatment. Waiting until your trees are bronzed to apply a miticide does not provide the economic impact that properly timed miticide has. The best miticide options at this point in the growing season are Acramite, Envidor and Kanemite. Both Envidor and Kanemite are effective against two spotted and European red mites applied at a rate of 2.1L/ha for Kanemite and 0.75L/ha for Envidor. Acramite is more effective against two spotted mite than European red mites. The Acramite for just two spotted mite is 2 pouches per 2 acres while the rate for European red mite is 3 pouches per 2 acres. The pre-harvest interval is 7 days for both Acramite and Envidor and 14 days for Kanemite

Soil Fumigation

Just a reminder that, replant sites should be in preparation for soil fumigation. In order to do a good job of fumigation the site should be in seed bed condition. This means no roots, rocks or clumps of sod or soil. If you are planning to fumigate a site for next spring's planting then you should contact Blake Sarsfield prior to the start of September. Those growers that were not ready to have sites fumigated last fall and had it done in the spring had to worry about fire blight infection until the end of June. Late planted trees had blossoms on them into late June.

Summer Pruning

The introduction of Apogee to control vegetative growth has diminished a lot of the need for growers to summer prune to improve fruit colour and control vegetative growth. In orchard blocks which were not treated with Apogee or in those that were and shoot is still excessive, summer pruning should be used to improve fruit colour and control tree growth. Summer pruning should be conducted in a manner to expose the fruit to more sunlight thereby improving fruit colour. Keep it simple restricting the majority of pruning cuts to one and two year old wood. Concentrate on the upright shoot growth particularly in the shoulder area of the tree and on the bottom scaffold limbs. Leave the weaker side lateral to supply the fruit with carbohydrates. Avoid leaving short stubs as they will produce two or more shoots next spring. Over pruning can reduce fruit size. The removal of strong vegetative shoot growth will also help to reduce the movement of calcium from the fruit to the vegetative growing points.

2009 Crop Estimate

The following estimate was done in mid July and is based upon orchard visits and discussion with several packers.

Cultivar	2009	2008
	Bushels	Bushels
Gravenstein	90,000	100,000
McIntosh	830,000	960,000
Cortland	264,000	380,000
Red Delicious	95,000	90,000
Spy	350,000	320,000
Spartan	45,000	40,000
Idared	150,000	185,000
Honeycrisp	120,000	90,000
Gala	46,000	NA
Others	210,000	200,000
Total	2,200,000	2,365,000

Contributions and consultations were made in the preparation of this newsletter with the Dr. Rob Smith and Larry Lutz from Scotian Gold

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