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2009 Degree Day Accumulations

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

Table 1.0 Degree day accumulations as of June 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 5°C)	722.6	573.9	611.4	629.24	603.3
Insect development (Base 10°C)	373.1	282.4	286.2	308.79	288.4

Fruit Development

Fruit drop is well under way as a result of thinning treatments. It appears the drop will be quite heavy which is a good thing given the number of apples that had set on the trees. Remember that you do not need an apple on every fruit spur to have a good crop. If you think that you have over thinned than you likely did a good job.

Diseases

Apple Scab

Although we have seen very little sunshine for the past week only one secondary infection period was recorded at Kentville between June 24th and June 30th. This was the result of a wetting period that began around 4:00 pm on Thursday, June 25th and lasted until noon on Friday, June 26th. The average temperature during this 19 hr wetting period was 22° C. In other areas of the Valley the wetting period may have begun earlier from shower activity. Spray interval should be on the short side 10 days during this prolong period of wet weather.

Fire Blight

In orchard blocks where blossom blight or canker blight infections have been found, daily inspection should be made so that new infection can be removed. Only remove infections during periods of dry weather. Rain and especially wind driven rain will spread fire blight within a tree and into neighboring trees. Shoot infection will not slow down until terminal shoot buds have been set which is usually not until late July or early August.

Brown Rot

Brown rot infection can occur as stone fruit begin to ripen which will be soon for sweet cherry. Two to three fungicide applications beginning approximately three weeks prior to the start of harvest should provide adequate control.

Insects

Codling Moth

The codling moth development model being run by Jeff Franklin, AAFC indicated that the 210 degree day mark was hit on June 24th. This was the point at which the following insecticides could be applied Altacor, Rimon, Calyco, Confirm, Intrpid, Delegrate, and Assail. The 250 degree day mark, the point at which OP applications could begin was met on June 28th. In the warmer area the optimal timing for the application of Altacor, Rimon, Calyco, Confirm, Intrpid, Delegrate, and Assail, has passed and the use of one of the OP's Imidan, Guthion/Sniper and Zolone would provide better control. Application of an insecticide for codling mouth should be based upon trap captures.

Apple Maggot

Apple maggot treatment will not need to be applied until the later part of July and these should be based upon trap captures. Traps will not need to be hung in orchard blocks for at least another week. The traps capture many more flies than just maggot and become cluttered with flies if hung to early making it difficult to see maggot flies. Use at least 3 traps per four-hectare of orchard. The traps should be hung at eye level on the sunny side of the tree and preferable on cultivars that are more susceptible to maggot such as Idared, Gravenstein and early cultivars. If possible choose a location in the block that has a historical problem with maggot or next to boarder source of maggot flies. The traps should be checked on a weekly bases after mid July and continue to do so into mid August. The capture of one or more flies would indicate that a treatment is needed and check later tissue for the timing of treatment. Traps should be cleaned 7 days following treatment and the capture of one or more flies 10-14 days after the initial treatment would indicate a second treatment is required.

Green Apple Aphid

The aphid is continuing to build and may require treatment. Check young trees as high population can have a significant impact on tree growth. Some green aphid on the terminals of mature tree is not an issue however if they can be seen on fruit spur and fruit then treatment would be necessary. Green aphid can cause reddish halos to appear on the fruit surface which result in a reduced pack-out.

White Apple Leafhopper

Check young trees for the presence of this insect. If they are still at the nymph stage then an average of one per leaf is the threshold for treatment. Once they are at the wing stage they are no longer feeding or causing damage. A second generation will occur in early to mid August which would be the time to treat.

Mites

Application of a miticide for the remainder of the season should be based upon mite counts and stage of development. There are a number of miticides that growers can choose, however you should read the labels before use as not all miticides will control rust mite. Also the rate of material can vary based upon the type of mite that needs to be controlled.

Horticultural Tips

The recent rains have promoted weed and grass growth and a second herbicide treatment may be required. A word of caution with regards to herbicide application; the preharvest interval for the application of 2 4-D is 80 days. The application of glyphosate on to root suckers is questionable from now on as it may be moved down into the root system and effect tree growth next year. It would be advisable to remove root suckers prior to applying an application of glyphosate.

Deer Feeding

Deer damage from over winter feeding on fruit buds and shoot tips was more extensive than previous years. This may have been due to the depth of snow in the woods and an increasing deer population. I start seeing deer browsing of new shoot growth by mid June therefore growers should be checking young trees for deer damage. If the browsing becomes extensive it can set young trees back and may even end up dwarfing them. Deer fencing is the most effective means of control. You have spent thousands of dollars in developing a new orchard and the cost of the fence is like buying car or house insurance. If you are a person that does not believe in buying insurance, then you have the options of applying sprays to deter feeding. Thiram applied on regular bases will discourage feeding. The rate of Thiram is 2 kg/ 100 gal (450 L) and should be applied as a dilute spray (to the point of runoff).

Bitter pit

The application of calcium chloride is the most cost effective calcium sprays for controlling bitter pit. The amount of calcium applied will depend upon the severity of the calcium disorder with Pennsylvania recommending a range of 15-50 lbs/ac. Under Nova Scotia growing conditions calcium deficiency is not as severe as those in areas with warmer and longer growing seasons. The application of 20-30 kg/ha (20-30 lbs/ac) per season should be sufficient to control cork spot or bitter pit in most situations in Nova Scotia. The dilute application rate for calcium chloride is 13.5 kg/ha. Concentrate sprays of calcium chloride can be made provided you are able to obtain even coverage. Growers generally cut back on the rate when applying calcium in a spray concentration 2X. Using half the recommended per hectare rate for concentrated sprays should avoid serious fruit and foliage injury. Some foliage burn on the edge of the leaves can be expected but if there is significant damage then the rate should be reduced. When apply calcium at a reduced rate more applications will be required to obtain the desired annual application rate. The calcium has to land on the fruit to be effective so sprays applied close to harvest will be more effective than sprays applied 2 to 3 weeks after fruit set.

NSFAG Orchard Tour

Tour date is Tuesday, August 4, 2009 with the start and stop location being at Noggin's Corner Farm. This year the IFTA tour to Nova Scotia will be joining us on the NSFAG tour as part of their three day tour. Details of the tour stops will be provided later this month.

Contributions and consultations were made in the preparation of this newsletter with the Orchard Outlook Committee and Dr. Rob Smith

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The logo for MOVENTO, featuring the word "MOVENTO" in a bold, yellow, sans-serif font with a slight shadow effect.

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