Agra Point
ORCHARD OUTLOOK
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Vol. 10 No. 15 **July 7, 2010**

This issue contains:

- **Weather**
- **Diseases**
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2010 Degree Day Accumulations
(Temperature data provided by Jeff Franklin, AFHRC, Kentville)

Table 1.0 Degree day accumulations as of July 6, 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	2007	2008	2009	2010	5 year average
Plant development (Base 5ºC)	651.2	716.5	728.8	791.0	724.4
Insect development (Base 10º)	327.0	356.4	373.3	390.6	366.5

Diseases

Apple Scab

On Tuesday, July 6th there was scattered shower activity throughout the Valley which could have resulted in secondary infection period. In Kentville leaf wetness was detected at around 4 pm and it is questionable if the foliage truly dried off until around 9:00 am this morning. The average temperature during this period was 18°C. Fresh scab lesions continue to show up on the foliage and fruit. Orchard blocks where scab is easy to find growers are advised to maintain good fungicide coverage into early August.

Fire Blight

I am still seeing the odd case of fire blight infection. This past week I noted infections in a pear orchard. The infections are often related to over wintering cankers which have caused shoot infections. Growers should continue to be on the outlook for infected shoots. Fire blight will spread during periods of rain to new terminal shoot growth. The risk of infection will be reduced once terminal buds have been set, later this month or early August. Prune out infected shoots during dry weather and remove the prunings from the orchard.

Powdery Mildew

This fungus continues to spread especially under the warm temperatures that we are now experiencing. This disease will be less of a problem once vegetative shoot growth has shut down.

Frog-eye Leaf Spot

It was reported at this morning's Orchard Outlook that frog-eye leaf spot infection is showing up in some orchard blocks. The following is from the June 16, 2010 Orchard Outlook:
This disease is caused by the fungus Botryosphaeria obstua and is consider to be a secondary disease but in some years can have a significant impact on the foliage and crop. Infection form this fungus can appear on the leaves (frog-eye spot) the wood as cankers and the fruit as a brown firm rot. In Nova Scotia we tend to see the leaf symptoms more often than the wood of fruit symptoms. Extensive leaf infection can result in early leaf drop which can adversely affect tree health and impact the crop.

The fungus overwinters in cankers on twigs, branches or tree trunks and on mummified fruit. Mummified fruit is more commonly observed on Cortland and Spy that have been chemical thinned or on tree with fire blight infection. Spore release begins early in the growing season with peak release occurring 4 to 6 weeks after petal fall. Optimal conditions for leaf infections is a temperature of 26°C and 4.5 to 13 hours of wetting, while that for fruit infections is 20-24°C and 9 hours of wetting. Risk of infection is low when temperatures are below 10° C and none when temperatures are below 8°C. Secondary infections can take place during the growing season. The types of fungicide applied for apple scab can have an impact on the spread of this disease. Captan/Maestro, Sovran and Flint are considered to have excellent control while the EDBC have a poor rating along with Nova and Nustar.

Sanitation is also a step in the control of the fungus which involves the removal of black rot cankers during dormant pruning. Brush piles or piles of fire wood within or near the orchard should be removed. Removal of mummified fruit is also suggested but I do not know how practical this would be given the number of mummified fruit that exists in some orchard block.

Brown Rot

Regular fungicide applications are required on ripening stone fruit to control brown rot.

Insect Activity

Apple Maggot

Dr Rob Smith reported capturing apple maggot flies on Monday, July 5th. This is about 5 days earlier than last year. This means that the treatment window needs to be revised over that of last year. Based upon trap captures the first treatment period for early maturing cultivars would be this weekend to early next week and for mid season to late season cultivars mid next week. Remember that the capture of one fly warrants a treatment. Those growers that have to apply a

second codling moth treatment any time after the end of this week would also be picking up apple maggot that was present in the orchard.

Treatment options for apple maggot are: Surround 25-50 kg/ha, Calypso 440 mL/ha, Guthion/Sniper 2.0 kg/ha, Imidan3.75 kg/ha and Zolone 3.00 L/ha. Delegate has apple maggot on its label for suppression. Remember that that Guthion/Sniper and Zolone have a 14 day re-entry interval while Imidan has a 7 day and Calypso 12 hours.

If you haven't picked up your traps from NSFGA, please make sure to do this and hang them out ASAP.

Codling Moth

These calm warm humid nights are ideal for codling moth flights and egg laying. If you have caught an additional 10 moth's since your treatment two weeks ago then a second treatment is required. Continue to monitor traps for a while yet.

Aphids

Rosy apple aphids colonies are starting to diminish while green aphids continue to build. Monitor you young orchards for this pest because it can set tree growth back. In mature trees some green aphid on terminal shoot growth is not a problem but once you start seeing green apple aphid on the fruit clusters it should be treated.

Horticulture

Drop

Much of the drop should be completed by now and growers should be able to access the crop load. Hand thinning where required can begin any time from now onwards. Early mature cultivars that are difficult to chemically thin will benefit from early hand thinning which will improve fruit size. Hand thinning will allow growers to remove some of the trash from the trees, insect damaged, apple scab, russeted etc.

Deer Control

While doing tree count this past week I came across deer browsing in a couple of blocks. Growers should check there young trees for signs of deer damage and if seen take steps to stop or reduce it.

Weed Growth

Lots of water in June and warm temperatures have promoted a good section flush of weed growth. I am debating on buying a machete to hack my way down some orchard rows. If the

season turns dry the weeds will be competing with the young trees for soil moisture which could reduce fruit size and tree growth.

Mice

It was reported at this morning meeting that the mouse population appears to be up this year based upon sightings in orchards. Normally growers only worry about mouse control for the winter month but I have seen mouse damage in the summer months in orchard blocks with a dense weed canopy around young trees. Applying mulch to young trees at this time of the year could also lead to damage.

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

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