



Nova Scotia Fruit Growers' Association
 Agricultural Centre, Kentville, NS B4N 1J5
 Tel: 902-678-1093 • Fax: 902-678-1567
 www.nsapples.com

Orchard Outlook Newsletter

Vol. 6 No. 11

June 28, 2006

This Issue Contains:

- Grower Field Meeting - Fire Blight
- 2006 Degree Day Accumulations
- Fruit Development
- Rain Accumulation
- Apple Scab
- Powdery Mildew
- Fire Blight
- Brown Rot
- Codling Moth
- Rosy Apple Aphid
- Green Apple Aphid
- Obliquebanded Leafroller
- White Apple Leafhopper
- Apple Maggot
- Rust Mite
- European Red Mite and Two Spotted Spider Mite
- Weed Growth
- Deer Control
- Tree Support

The technical information contained in this Orchard Outlook publication is the result of the combined professional opinions of personnel from AFHRC, AgraPoint and industry.

Grower Field Meeting On Fire Blight - Friday June 30th

Bill Craig is holding a grower field meeting to assist growers in identifying fire blight infection, to demonstrate how to remove infection and to answer questions related to these infections. The meeting is being held at Dave Power's farm in Medford and will start at 1:00 PM. Meet by the red barn just west of Dave's house.

2006 Degree Day Accumulations

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

Table 1.0 Degree day accumulations as of June 26, 2006 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, 2006.

Category	2003	2004	2005	2006	5 year average
Plant development (Base 5°C)	547.8	511.0	533.1	686.2	551.9
Insect development (Base 10°)	261.3	229.0	234.4	341.2	262.4

Fruit Development

June drop of apples is well underway and is heavy on some apple cultivars. Thinning treatments have been effective to overly effective. Discussion at this morning's Orchard Outlook meeting indicated that Red Delicious has been over thinned in a number of orchard blocks. It is still too early

in the season to panic over the size of the crop. Think back to last year when growers felt they had a moderate to light crop in July and ended up picking a big crop.

Rain Accumulation

I do not know if a record will be set for the month of June when it comes to rain but as of June 25th the Kentville Agricultural Centre had recorded 214 mm of rain for June. The 44-year average for June is 67 mm and last year there was only 39 mm of precipitation for Kentville. It is a bit ironic that in March there were concerns over the lack of moisture and a summer drought. If it turns out to be a record it is one we can do without.

Diseases

Apple Scab

Yet another wet weekend with 46 mm of rain in Kentville. The wetting period began around 4:00 pm on Friday and lasted until 5:00 pm on Sunday. This 49 hour wetting period would have resulted in a secondary infection. This past week I have noticed lots of fresh apple scab lesions and have started to see it on the fruit. A season that started off with good scab control has turned into one of the worst seasons that I have experienced over my years working with the apple industry. The problem can all be traced back to infection periods in late May and the above average rainfall during June. In order to protect the fruit from scab, continue to apply fungicides on a regular basis keeping intervals to 7 - 10 days and shorter when there has been 25 mm or more of rain. In orchard blocks where scab is easy to find it would be advisable to stick with the pre-cover rates until drier weather arrives. Don't forget about controlling scab in your non-fruiting orchard blocks. I have observed lots of scab on newly planted trees. Scab can result in leaf drop and poor tree growth if the infections become very heavy.

Powdery Mildew

I believe growers can expect humid conditions on warm days as a result of the wet soil conditions which will increase the spread of powdery mildew. Mildew will continue to spread on new leaf growth until terminal buds have been set in late July. Don't allow mildew to get out of control in young orchards as it can have a negative impact on tree growth.

Fire Blight

The Maryblyt© prediction model was predicting the appearance of canker blight shoot infection for June 22nd. The prediction was out by two days as I started to get reports of blossom and shoot infection appearing on June 20th following a weekend of warm temperatures. Up until last week it appeared that growers would get through the season without a major fire blight problem, however this past week has changed that opinion. Growers who applied streptomycin sprays during bloom may not have achieved 100% control but greatly reduced the number of blossom infections compared to last year. The biggest problem this year is in blocks that were not sprayed during bloom and had no history of infections. Now that shoot infections have appeared the control of fire blight primarily becomes a sanitation program in which infections are removed by pruning when they appear. This will mean regular orchard checks for newly infected shoots - once or twice a week, or more often during wet weather. Wind and rain splashing will spread the bacteria within the tree and from tree to tree. Wounding of the leaf tissue will allow the bacteria to enter the growing shoot. White apple leafhopper has been identified as one of the main insects that spread fire blight. The

first life cycle of this insect is nearing completion when there will only be adults on trees. The nymphs will start to appear again in early August and it will be the feeding of these nymphs that will introduce the bacteria into the leaves. Stinging of the shoot tips by tarnished plant bug may also be another source of infection especially in tree nurseries. Aphids have been thought to be a source for inducing infections however research has indicated that they are not. One pest that you may overlook is deer and if deer feed on an infected shoot they will spread the disease to subsequent trees that they feed on.

It appears that fire blight has become well established in Nova Scotia and it will be a disease growers will have to control on an annual basis. The more growers understand about this disease the easier it will be for them to manage this disease.

Brown Rot

As sweet cherries begin to ripen they become more susceptible to brown rot infection. The interval between fungicide applications will need to be shortened as the fruit softens. Check the *Stone Fruit Management Schedule* for fungicide options and always check the pre-harvest spray intervals when selecting the fungicide.

Insects

Codling Moth

Growers who have trap captures of 40 or more moths should have applied an insecticide treatment in most areas by June 25th. On June 25th the degree day total from the biofix date of May 30th was 302. The window for application of the organophosphate spray is 250-300 degree days. Growers who applied codling moth treatments prior to this past weekend's rain should consider retreating the block if they had trap captures of 40 or more moths. The interval between treatment and the rain may not have been long enough to provide adequate control. Growers who use a threshold of below 30 for treatment should not be concerned unless you treated on Friday. Continue to monitor traps and treat blocks as soon as the threshold is reached. In blocks that were treated, clean out traps this week and retreat if 10 or more moths have been caught.

Rosy Apple Aphid

Winged adults have started to appear however there are still lots of young nymphs in clusters. This insect will be around for another week or two. Before treating for this insect check colonies for predators as they may be looking after the problem for you.

Green Apple Aphid

This aphid is moving onto apple trees and can be a problem on fruit trees when they move onto the fruit. On young trees they can severely reduce terminal shoot growth. Pirimor, Assail or Admire can be used to control green aphid.

Obliquebanded Leafroller

Adult obliquebanded leafroller (OBLR) moths were caught in pheromone traps as of June 18th which has been set as the biofix date for calculating degree day accumulation for timing of treatment.

Treatment for this pest, if required, is applied between 170-240 degree day accumulation. As of June 26th the degree day accumulation was at 128 days. Based on the temperatures we have been having, treatment for OBLR (where required) could begin as early as this weekend.

White Apple Leafhopper

Winged adults can now be seen thus the first generation of this insect is coming to an end. The second generation will appear in early August and this would be the next treatment period for this pest. Check orchard blocks in August to determine if a treatment is required.

Apple Maggot

Apple maggot will start to emerge from the soil in early July. The ground is soft from all the rain so there could be a good emergence of flies this year. Treatment periods may also be a bit advanced because of the above average heat unit accumulation to date. **Traps to monitor for maggot can go up late next week.** (Traps are available from the NSFGA Office if you forgot to order them, or think your supply may be inadequate. Please phone 678-1093.)

Rust Mite

This is the time of year to get rust mite under control and not mid to late August when the foliage has become bronzed. Orchard blocks should be checked for this mite and treated when populations are at 100 or more per leaf. Not all miticides control rust mite, however Envidor is rated as being good followed by Pyramite. Kelthane will also control rust mite.

European Red Mite and Two Spotted Spider Mite

Continue to monitor for these pests and follow the recommendation where a scouting service is used. The threshold for treatment by mid July is an average of 10 mites per leaf.

Dr. Mike Hardman made note at this morning's *Orchard Outlook* meeting that the use of Ignite for weed control in orchards did reduce the movement of two spotted spider mite from the orchard floor into the canopy compared to the other orchard herbicides.

Horticultural Topics

Weed Growth

Like disease, weed growth is thriving with all the moisture. The longer you allow the weed growth to grow under trees the more difficult it will be to control with herbicide spray and the greater the danger of herbicide damage to the fruit and foliage.

Deer Control

Deer feeding has been heavy in young plantings this past week. They have that all that new soft terminal growth - it's a salad bar for them. Heavy and repeated browsing will reduce tree growth and may permanently stunt the tree. As stated, many times an electric fence is the most effective means of control. Soap may discourage feeding however once they start feeding it may not be effective enough.

Tree Support

Growers who have planted apple orchard on dwarf trees should have the support systems up and trees tied. The longer this is delayed the greater the impact will be on tree growth and tree losses to breakage. Nursery trees should also be supported. We had some high winds in June that broke trees at the bud union and blew out new shoot growth on budded trees.

***Written and published through a Nova Scotia Fruit Growers' Association/AgraPoint/
Agriculture and AgriFood Canada partnership.***