

Orchard Outlook Newsletter

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The technical information contained in this Orchard Outlook publication is the result of the combined professional opinions of employees of AFHRC and ADI.

Bud Development

Warmer temperatures during the past week have sped up fruit bud development and many of the apple cultivars were starting bloom by the first of this week. Peak bloom of apple on the floor of the Valley will likely occur by late Wednesday or Thursday of this week. This would place bud development 1 to 2 days behind that of last season and above average for apple bloom. Some microclimate effects have been noted: in cooler areas of the valley and on soils that are slower to warm, bud development is a couple of days behind. As a general statement there would appear to be good to heavy return apple bloom. Pears were in full bloom as early as Monday, while stone fruits were at petal fall.



Apple Scab

No infection periods were recorded at Kentville during the past week. I have yet to observe or hear of any scab lesions being observed as a result of early season infection periods. Just a reminder that we are going through the critical period for primary scab infections. Rapid leaf and fruitlet expansion is occurring while heavy spore discharges will occur during wetting periods. This is the period when producers can experience difficulty controlling scab. Stay on top of your fungicide programs and adjust your spray intervals to compensate for the expansion in leaf tissue. The interval may need to be shortened to 4 - 5 days if there has been a lot of new growth.

Calyx End and Dry-Eye Rots

The symptoms of these two diseases are virtually identical, however, the infections occur separately. Infections from these diseases occur from early bloom to 3 weeks after bloom. Infections take place during wet periods with suitable temperatures; the ascospores infect the blossoms and young fruitlets. Many of the broad-spectrum fungicides that are applied for scab control have activity against these diseases. It is felt that Captan containing fungicides has provided the best control of these two minor diseases. To control the disease the fungicide application needs to be applied prior to a wetting period to provide protection.

2002 Degree Day Accumulations

Information supplied through the IFP Initiative Project headed by Michelle Larsen & Dr. Rob Smith

Table 1.0 Degree day accumulations as of May 27, 2002 based on Kentville weather data.

Category	1999	2000	2001	2002	5 year average
Plant development (Base 5°C)	348.8	274.6	183.4	214.7	267.6
Insect development (Base 10°C)	136.3	80.9	50.0	67.8	94.2
EFTB development (Base 14.7°C)	56.2	16.0	7.7	16.8	27.5

European Fruit Tree Borer (EFTB)

Information supplied through the IFP Initiative Project headed by Michelle Larsen & Dr. Rob Smith

A large flight event was observed over the weekend and is expected to continue with the warm weather. Unfortunately, depending on the cultivars within your orchard this may coincide with bloom, and sprays should not be applied during this important period due to the presence of pollinators. Products which worked well against EFTB included Malathion 500EC at a full rate of 1.8L/ha, Zolone FLO at 2L/ha. Half rates worked equally as well as full rates. Bill Craig observed Borers attacking apple trees that had been grafted over this past spring. Sap oozing from the pruning cuts appeared to be attracting the Borers and some were starting to enter the trunk just below the pruning cut. Growers who grafted trees over may wish to check these trees to see if Borers are present.

Rosy Apple Aphid (RAA)

Information supplied through the IFP Initiative Project headed by Dr. Rob Smith.

RAA were observed in very small numbers in 20% (4 out of 20) of commercial orchards. The maximum infestation encountered was one colony out of 60 fruit clusters sampled, well below the pre-bloom threshold of 0.5 colonies per meter of tree height.

Codling Moth (CM)

Information supplied through the IFP Initiative Project headed by Dr. Rob Smith.

Pheromone-baited wing traps were placed in commercial orchards May 27, 2002 to monitor for the first sustained male CM flight, termed 'the biofix'. Traps should be placed in orchards, shortly following the biofix, at a density of 1-2 traps for every 4 hectares of orchard. The first flight is expected to occur within the next week or so. Treatment periods for this insect will be in June and will be published at the appropriate times.

Codling Moth Traps

Traps should be placed in the orchard as soon as they are available. Traps ordered by the NSFGA are in transit and should arrive later this week or early next week. Growers who ordered traps from the NSFGA should call prior to picking up traps to make sure they have arrived.

Tarnished Plant Bug

With warmer temperatures this insect has become more active and AAFC reported that populations of this insect have started to build in the lane ways in orchards under observation.

European Red Mite

Growers who are planning to use Agri-Mek during the calyx period should try to time the application as soon as the petals are off (calyx). This product requires the use of Superior Oil, which is not compatible with Captan or Maestro. A 7 to 14 day interval should be maintained between an oil application and these fungicides.

Pear Rust Mite

This insect will cause fruit russetting starting at the calyx end of the fruit extending upwards to the stem end depending on mite pressure. Growers can tend to forget about this insect until harvest time when they note a serious russetting problem. The miticides listed in the calyx period of the Orchard Management Schedule for Red Mite will control Rust Mite. Pyramite was registered for pears last year and has Rust Mite control on its label. A note of interest, Agri-Mek will also control Pear Psylla.

Pear Thinning

It is anticipated that petal fall on pears will begin later this week and should be completed by late next week. In Nova Scotia Amid-thin has been the most effective thinner for pears. It has been found to work best when applied just after petal fall. The recommended rate of Amid-thin is 10 to 20 ppm. 10 ppm = 120 g/1000L or 396 g/ha while 20 ppm is 240 g/1000L or 792 g/ha.

Weed Control

Heat and moisture are excellent ingredients for weed growth. Weeds compete for nutrients and moisture, and the first step in moisture conservation is good weed control. In mature orchards where weed control is well underway growers should use a knockdown herbicide such as glyphosate and glufosinate (Ignite), along with a residual herbicide such as simazine or terbacil (Sinbar). In newly planted orchards there are a number of herbicides that can be applied as pre-emergence treatments and growers should check their weed guides as to which product best fits their needs.

Up Coming Events

Calyx Insect Check

Dr. Rob Smith will assist me with two one-hour sessions on Monday, June 11 to discuss calyx insects and options for their control. There will be an 11:00 am and a 1:00 pm session. Orchard location will appear in next week's Orchard Outlook.

Fruit Thinning

A twilight meeting will be held on Thursday, June 13 to discuss fruit set and options for thinning. Location for the meeting has yet to be determined but will appear in next week's Orchard Outlook.

Orchard Mechanization

The NSFGA Production Comm. is holding an Orchard Mechanization Day at Lloyd Dyck's farm in Waterville on Sat., June 15th, starting with coffee & donuts at 8:30 am. Demos begin at 9:30 am.

International Dwarf Fruit Tree Assoc. Summer Tour

The IDFTA will be holding their summer tour in NS, June 23 - 25. This is the third time that this world-renowned organization has held their summer tour in NS. Sunday's tour will be a tour to the South Shore while tours on Monday and Tuesday will feature Valley orchards and other points of interest. The deadline for registration is May 31, late registration is June 14, which will cost you more. Non-members can register on-line at www.idfta.org/ or registration forms are available from Bill Craig.

IDFTA 2002 Summer Tour BBQ Buffet

Monday, June 24th the IDFTA summer tour will be stopping at Lloyd Dyck's farm in Waterville for a BBQ Buffet. The menu is a choice of BBQ pork or hip of beef, salads and dessert with entertainment. Local growers are invited to the BBQ to socialize with fellow growers from outside of NS. Tickets can be purchased for \$20.00 from Helen Arenburg at the NSFGA office (678-1093) until June 20th.

Decision Table for determining the most effective pesticides in order of preference for control of pests at the calyx stage of apples in Nova Scotia (rev. May 2002)

1. Stinging bugs: mullein, apple brown & tarnished	Malathion 25WP 3.5 kg or 500E 1.25-1.80 L or Admire 380 mL	For best results apply malathion when temperatures are 20° and higher.
2. Rosy Apple Aphid	Pirimor 50 DF 850g-1.7 kg or Admire 230mL, ** <i>dimethoate 480 products 3.4L</i>	** dimethoate is disruptive to IFP & IPM programs and is not permitted in IFP
3. White Apple Leafhopper	Pirimor 50 DF 1.7 kg or Admire 200 mL or Sevin XLR 2.3L	Sevin XLR applied for chemical thinning will provide control.
4. Rosy Apple Aphid, stinging bugs, White Apple Leafhopper	Admire 380 mL	
5. Pale Apple Leafhopper, Obliquebanded Leafroller	Confirm 240 F 1.00 L or Success 480 SC 182 ml or ** <i>dimethoate 480 products 3.4L or synthetic pyrethroids</i>	Success is only registered for obliquebanded leaf roller, when applied for this insect, trials indicate that it will control other caterpillars.
6. Winter Moth, Fruitworm	An organophosphate (eg Imidan 4.12 kg or Zolone F 2.0L)	Imidan 4.12 kg or Zolone F 2.0L are the least disruptive to IPM and IFP
7. Stinging bugs, Rosy Apple Aphid, White Apple leafhopper, and Leafroller	** <i>dimethoate 480 products 3.4L</i>	** dimethoate is disruptive to IFP & IPM programs and is not permitted in IFP.
8. Winter Moth/Fruitworm, White Apple Leafhopper and/or stinging bugs	** <i>synthetic pyrethroids</i>	Synthetic pyrethroids are disruptive to IFP & IPM programs and their use should be avoided when possible. Not a permitted product in NSFGA IFP program post bloom
9. Winter Moth, Leafroller and Fruitworm	Confirm 240F 1.0L or ** <i>synthetic pyrethroid</i> or an organophosphate (eg Imidan 4.12 kg or Zolone F 2.0L)	Synthetic pyrethroids, see above note.
10. European Red Mite	Apollo 500 SC 300-600ml or Agri-Mek 1.9EC 750 + 10 Superior Oil	

Calyx Pests

Pest	Sampling method	Susceptible varieties	Thresholds
Stinging Mirids (Apple Brown Bug, Mullein Bug)	Tapping tray - tap 20 limbs	Red Delicious/Spy/Spartan/Jonagold	Total of 8 Stinging Mirids per 20 limbs
Tarnished Plant Bug	Visual and white sticky cards		
Winter Moth	Tapping tray - tap 20 limbs	Any	3 or 4
Speckled Green Fruitworm	Tapping tray - tap 20 limbs	Any	1
Rosy Apple Aphid	Search 3 trees; divide number of living colonies seen by total meters of tree height scanned	Gravenstein/Idared/Cortland	1.0 colony/meter of tree height
White Apple Leafhopper	Scan the underside of 100 leaves near tree trunk	Any	Average of 1 leafhopper/leaf
Pale Apple Leafroller Obliquebanded Leafroller	Check 100 terminals	Any	50 terminals infested (young trees)
European Fruit Tree Borer	Based on AAFC traps	Any	Not established

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