

Orchard Outlook



Vol. 17, No. 15

July 19, 2017

Diseases		Insects
Horticulture		Events and Notices

The first tree fruit crops of the season are being harvested or approaching harvest with earlier maturing stone fruits such as sweet cherries, apricots, early peaches, and plums. The earliest apples will also be harvested over the next 1-2 weeks.

Diseases

Phytophthora Root & Crown Rot

Several growers have reported nurseries or young plantings with trees performing poorly or suddenly collapsing this summer. Upon examination, it appears many of these trees are in various stages of decline due to Phytophthora infection of the crown and root areas (Figure 2). Phytophthora is a fungal pathogen that thrives in consistently moist or wet soils. It appears the frequent wetting conditions experienced this year have made for perfect conditions for Phytophthora infections, even on some of the best drained soils. Well there are no curative treatments for trees already showing symptoms of Phytophthora, the systemic fungicide Aliette WDG is a preventative treatment that is registered for the control of Phytophthora rots on apples. Aliette can help to reduce further infections of healthy trees. Foliar sprays of Aliette for nurseries can be used at 5 g/L of water. Applications can be repeated at 6 week intervals for up to 3 applications per season. A drench treatment is also an option as an early spring/fall treatment.



Figure 1: A budded nursery tree showing sudden collapse of the growing shoot (left). A poorly growing bud which upon examination with a knife shows a green top with a brown dead bark at the soil line and poorly developed root system typical of Phytophthora infection (right).

Apple & Pear Scab

For the first week this season, there were no scab infection periods recorded this past week at Kentville AAFC. There have been a total of 10 primary and 6 secondary infection periods to date, already exceeding the total for the season in 2016.

Powdery Mildew

Continue to watch for powdery mildew in nurseries and young plantings which can interfere with terminal development and tree growth. As terminals set, the risk for new powdery mildew infections stops. See the Pome Fruit Management Guide for registered products for mildew control.

Fire Blight

Terminal bud set will end the risk for new shoot blight infections this season. Where the number of infections is light and can be manageably pruned from the orchard, removal on a dry day and discarding in the row middles will help reduce secondary inoculum production which might affect nearby blocks or nurseries that are still growing. Sanitizing pruning equipment at periodic intervals is a good practice to eliminate spreading fire blight from block to block. Removal by pruning should not be attempted where the number of infections would make the chance of accidentally spreading fire blight high.

With the presence of ooze a possibility in the orchard, work only in dry conditions in blocks with fire blight as ooze is spread much more easily during wet conditions!

Brown Rot

Stone fruits become susceptible to brown rot infections again as they start to ripen. Regular preharvest fungicide applications are critical, especially during periods of wet weather. With periods of heavy and frequent rainfall, the interval between fungicide applications may need to be as short as 3-5 days. Once brown rot has appeared on picked fruit it is too late to do anything about control. If you are treating more than one type of stone fruit make sure that the product is registered for all the crops that you are spraying. Also check the pre-harvest interval. Check the Stone Fruit Management Schedule for products and rates. Rotate fungicide classes for resistance management.

Insects

Apple Maggot

The first applications for apple maggot have been or will be applied over the coming week. The economic threshold is 1 maggot fly per orchard on a yellow sticky board. Note wing pattern for identification of apple maggot (Figure 3). Apply a treatment 7-10 days after the first fly is captured on a yellow sticky board or immediately after a female is captured on a red sphere. Highly effective products for AM are limited to Imidan (2.68 kg/ha), Assail (160-240 g/ha), Calypso (440 mL/ha), and Exirel (1.0-1.5 L/ha).

Growers that are using Altacor, Delegate, or TwinGuard for CM or OBLR control will also have some suppressive activity on AM, but these products should not be relied upon for control in most situations. Conversely, all registered AM control products will impact both CM and OBLR as well.

In organic orchards, Surround can be used to deter egg laying and GF 120 fruit fly bait can be used for suppression of adult flies. Both Surround and GF 120 should begin to be applied as soon as flies are present in the orchard.

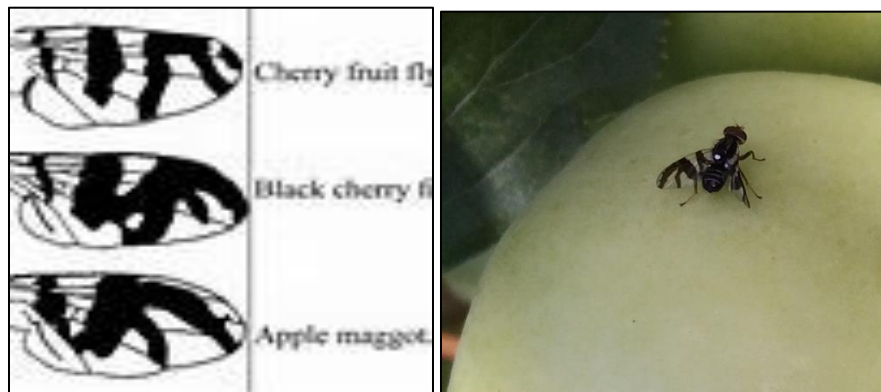


Figure 2: Wing pattern of apple maggot and adult fly on Gingergold apple.

Yellow sticky traps should be cleaned out after application to determine the additional emergence of adult flies. Additional captures when the residual life of the insecticide is complete (14 days depending on rainfall with Imidan) will indicate a second spray is required. With the neonicotinoids (Assail or Calypso) or diamides (Exirel), insecticide residue should be maintained through the end of August and retreatment would be based on rainfall or 10-14

days residual activity. The following article from Michigan State University includes a good reference table of apple maggot insecticides and activity.

http://msue.anr.msu.edu/news/managing_apple_maggots_using_insecticides

Obliquebanded Leafroller (OBLR)

Degree day thresholds for treatment of OBLR were reached over the past week. Where OBLR has been a problem in the past or where there was a high overwintering population, an application of a spinosyn (Delegate, Entrust, Success), diacylhydrazine (Confirm), or diamide (Altacor, Exirel) will provide good control. TwinGuard (Delegate + Closer) could be used as well, particularly if aphids are also a target. Where OBLR pressure has been high in the past, a second application 10-14 days later may be required. Imidan would also have good activity on OBLR if used for apple maggot control in summer cover sprays.

Spotted Wing Drosophila (SWD)

Spotted wing drosophila is a small fly that has caused significant damage to tree fruit crops, notably sweet cherry, in other growing regions such as British Columbia. Deb Moreau (AAFC) has noted that SWD captures have been very early this year. Soft-skinned stone fruit crops such as sweet cherries, plums, and peaches can be at risk as they approach harvest. SWD generally has a preference for small fruit such as raspberries and blueberries over tree fruits. Sweet cherry is believed to be at highest risk of the tree fruit crops. Apple and pear are not a preferred host for SWD. In BC, sweet cherries are sprayed for SWD for the final 2-3 weeks before harvest. It is recommended that growers with sweet cherries monitor their orchards and/or scouting reports for the presence of SWD.

For more information on monitoring, see Monitoring for Spotted Wing Drosophila at <http://www.perennia.ca/wp-content/uploads/2016/04/Monitoring-for-Spotted-Wing-Drosophila-1.pdf>.

For current product registrations for SWD on stone fruits, see:

<http://www.omafra.gov.on.ca/english/crops/facts/swd-registrations.htm>

Aphids

Check the terminal growth for the presence of Rosy and Green Apple Aphid colonies. An aphid control treatment is recommended if 10% of terminals are infested. The list of products for aphid control is long: Actara, Admire, Assail, Calypso, Clutch, Closer, Sivanto Prime, Twinguard, Beleaf, Movento, and Exirel.

Mites

Summer miticide options include Acramite, Kanemite, Nexter, Envidor, and Nealta. Scout your orchards or check your scouting reports to see if there is a treatable population. Mites have many generations per year and therefore have a high potential to develop resistance. For resistance management, it is critical to rotate miticide classes. The use of dormant oil applications will also help to delay resistance selection for European Red Mite. Those growers that make use of a scouting service will need to apply miticides when population thresholds are

reached. In mid-July, the presence of European red mite or twospotted spider mite on 44 of 50 leaves examined will act as threshold for treatment.

Events & Notices

2017 NSFGA Annual Orchard Tour

The NSFGA Annual Orchard Tour will be on Thursday, August 3rd this year starting and returning to Scotian Gold Cooperative in Coldbrook. See the program below.

8:00 am	Scotian Gold Cooperative 220 Lovett Road, Coldbrook	Coffee and Snacks Parking Near Pad #5
8:30 am		Introductions & Greetings
8:45 am	Board Buses	
9:05 to 9:40 am	Pomona Farms 1222 Hwy #341, Canard	<ul style="list-style-type: none"> • Fall Herbicides <ul style="list-style-type: none"> ○ An Effective Option? ○ Sandy Loam vs. Clay Loam
9:40 am	Board Buses	
9:55 am to 10:45 am	Breezeway Acres @ Northville Farm 1158 Steadman Road, Billtown	<ul style="list-style-type: none"> • 1st-3rd Leaf HD Plantings @ 9-10' • Newly Planted Tree Fertility Trial <ul style="list-style-type: none"> ○ Ambrosia on Clay Loam • Young Tree Crop Load Management • Wild Apple Tree Control
10:45 am	Board Buses	
11:05 am to 11:45 am	CAP Farms 127 Coleman Road (Driveway to South), Grafton	<ul style="list-style-type: none"> • Mature Ambrosia Fruiting Wall <ul style="list-style-type: none"> ○ 11' x 2' Ambrosia in 5th-leaf • Crop Load Management • Yield Estimates
11:45 am	Board Buses	
12:00 pm to 1:15 pm	Apples & Spice 23 Bent Road, Waterville	<p style="text-align: center;">Lunch</p> <ul style="list-style-type: none"> • Irrigation Pond • New Plantings
1:15 pm	Board Buses	
1:35 pm to 2:15 pm	Crisp Growers Inc. 220 Prospect Road, Morristown	<ul style="list-style-type: none"> • AgWeather Atlantic Network • Tree Propagation in NS <ul style="list-style-type: none"> ○ Bench Grafts
2:15 pm	Board Buses	
2:35-3:00 pm	Nazinga Farms 1405 New Road, Aylesford	<ul style="list-style-type: none"> • Bud In Place – Feasible Strategy? <ul style="list-style-type: none"> ○ GYO vs. Finished Trees
3:00 pm	Board Buses	
3:20-4:00 pm	Spurr Brothers Farms 1125 Spa Springs Road, Melvern Square	<ul style="list-style-type: none"> • 12x3 Plantings of Ambrosia/Gala in Production • Newly Planted Tree Fertility Trial <ul style="list-style-type: none"> ○ Honeycrisp on Sandy Loam • Topworking - Still Working?
4:00 pm	Board Buses	

4:30 pm	Scotian Gold Cooperative 220 Lovett Road, Coldbrook	Tour Concludes
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Apple Maggot Eradication Program

Elizabeth Nichols is the Apple Maggot Eradication Technician again this year. The apple maggot over-winters as a pupa in soil and adults emerge from late June through September, with peak flight into commercial orchards in August. Emergence is closely linked to soil moisture levels—in dry years, some pupae remain in the soil until the following growing season.

Apple Maggot flies are strong fliers and field studies indicate they fly up to 3 km from alternative hosts. Thus, controlling alternative hosts including American hawthorn or wild apple trees within 300 meters of commercial orchards helps to reduce pressure from migrating flies.

Elizabeth is here to help growers control apple maggot so if you are aware of any hawthorn or wild apple trees within that 300 m radius, please contact Elizabeth at (o) 902-678-1093; (c) 902-670-3599; or enichols@nsapples.com.

Brown Marmorated Stink Bug

Researchers are on high alert for the Brown Marmorated Stink Bug which has damaged apple crops in the US. These pesky bugs have gone from 2 or 3 states in 2010 to 43 states in 2017, wreaking \$37m worth of havoc on the apple industry in the northeastern US alone. They have been found in B.C. and parts of Ontario as well as the Montreal corridor in Quebec.

Researchers in the Atlantic provinces have been keeping an eye out for the insect since 2012. At this time, there have been no captures in Nova Scotia or New Brunswick.

Nova Scotia has one type of stink bug already and if the brown marmorated bug was to do in Canada what it did in the US, it would become a real problem for agriculture, in particular, the tree fruit industry, earning it as much of a bad reputation as the apple maggot.

This stink bug has unique characteristics: distinctive white bandings on its legs and antennae, inward-pointing white triangles between dark markings along the edge of the abdomen, and a smooth edge along the pronotum or “shoulders.”

If you think you’ve found a brown marmorated stink bug, please contact Dr. Suzanne Blatt of the Kentville Research Station, at Suzanne.blatt@AGR.GC.CA. Dr. Blatt is asking all growers to be on the lookout for this pest.

Thank you for your attention to these destructive pests. We want to stay on top of them for the sake of our industry.

Edited by Chris Duyvelshoff