86th Annual New England, New York, Canadian Fruit Pest Management Workshop
22-23 October 2024
2024 REPORT - QUEBEC APPLE ORCHARDS
PEST TYPE: INSECTS AND MITES

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A. OVERALL SITUATION:

- Early flower bud development and harvest.
- Warmer winter than usual with no extreme cold (-30^{0}C). A few days in February with temperatures above 10^{0}C. Snow cover lower than normal.
- A few nights of frost (-0.5^{0}C –4.0^{0}C) at the end of April for southern regions during tight cluster stage. No loss of yield.
- Blooming period was longer than usual across several region. Bloom was good but sometimes uneven. Some aborted buds fell off, dried up, or had delayed growth compared to other buds in the Monteregian area.
- Frequent and abundant rainfall except for the month of May and September.
- Good yield and fruit size for all regions.
- High population of apple maggot in most regions. This is not surprising given the frequent rains and heat (+30^{0}C).
- Despite the frequent rain and residue wash-off, generally good control of primary scab but more observations of apple scab lesions, sooty blotch and flyspeck and other summer diseases.

B. MAJOR PROBLEMS, UNUSUAL OR STRIKING EVENTS

Apple maggot (*Rhagoletis pomonella*): Another important year with numerous captures in traps in all regions. Thresholds reached earlier than usual and trap captures continued later in the season. This resulted in up to 2 or 3 treatments in some blocks but in the end, on average, little damage was observed. GF-120 has been used by many growers, often as an hybrid approach with conventional insecticides (IMIDAN, EXIREL, ASSAIL).

Potato leafhopper (*Empoasca fabae*): Significant presence in all regions and early arrival treatments were needed in new apple tree plantings.

Apple scab (*Venturia inaequalis*): First ascospore ejection occurred end of march, two weeks earlier than budbreak. More apple scab lesions were observed in orchards this year. The frequent rain, residue wash-off and excessive growth may have contributed to this increase.

Apple blotch (*Diplocarpon coronariae*): Identified a few years ago, the presence of the disease has spread in the Eastern townships and Monteregian areas. The disease remains localized but increased this year. Early defoliation occured at the St-Bruno (IRDA) orchard (mid-August) in plots without treatments.

Apple blotch at the St-Bruno (IRDA) orchard

Fire blight (*Erwinia amylovora*): Temperatures have been more favorable this year for fire blight infections. Symptom pressure was not present everywhere in all regions. The symptoms were greater on shoots for some regions. Pear trees developed more symptoms this year in some regions.

C. LESS PROBLEMATIC THAN USUAL

Codling moth (*Cydia pomonella*): Control achieved fairly easily thanks to the area-wide mating disruption program which supports 70% of the cost of dispensers. In most orchards where the method has been used for several years, no insecticide treatment or only one treatment was required. Good control was acheived in most orchards under the mating disruption program. Heavy rains in July may also have reduced larval populations. Orchards without the mating disruption program required up to 2-3 treatment this year in some blocks.

Obliquebanded leafroller (*Choristoneura rosaceana*): Populations seemed to have been fewer or under better control this year than in recent years. Perhaps linked to an increase in predators and parasitoids.

Japanese beetle (*Popillia japonica*): Present in all regions and less problematic this year except for the East Monteregian area. Fond of Honeycrisp and Gingergold apples. Localized treatments (insecticides and/or mass-trapping) required in some sites.

Plum curculio *(Conotrachelus nenuphar):* Peripheral and full-block treatments provided good control in IPM orchards. Slightly more present this year in certain regions. The pest remains problematic in organic orchards.

Rosy apple aphid (*Dysaphis plantaginea*): Usually problematic in the Laurentian areas, populations were lower this year except in organic production.

Mites (European red mite, two-spotted spider mite and apple rust mite): Good control and low presence in some regions. Predatory mites frequently provided biological control of developing ERM and TSSM populations in summer. European red mites were more observed this year for some regions.

European apple sawfly (*Hoplocampa testudinea*): This species has been much less present and problematic than usual in most regions for the last years. Few captures and little damage for all regions.

Stink bugs (mainly *Euschistus servus)*: Not a problem this season and little damage was observed. Observed in orchards mainly at the end of the season (late August and September). A few **brown marmorated** stink bug specimens were captured again this year as part of the BMSB monitoring network. Their number was slightly higher this year including more captures early in the season.

D. AS USUAL

As damaging as usual	As minor as usual
Mullein plant bug	Spotted tentiform leafminer
Tarnished plant bug	Green apple aphid
Apple leafcurling midge	Woolly apple aphid
Lesser appleworm	Dogwood borer
European fruit scale	Green fruitworm
	Gypsy moth

E. OTHER OCCASIONAL ARTHROPODS IDENTIFIED IN COMMERCIAL ORCHARDS THIS YEAR*

Pests	**Family**	**No. cases**
Halyomorpha halys	Pentatomidae (Brown marmorated stink b	10
Chinavia hilaris	Pentatomidae (Green stink bug)	4
Xylosandrus germanus	Curculionidae (Ambrosia beetle)	1
Scolytus mali	Curculionidae	1
Bryobia rubrioculus	Tetranychidae (Brown mite)	1

*By the Quebec diagnosis lab 2024, MAPAQ