85th Annual New England, New York, Canadian Fruit Pest Management Workshop
24-25 October 2023
2023 REPORT - QUEBEC APPLE ORCHARDS
PEST TYPE: INSECTS AND MITES

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A. OVERALL SITUATION:

- Warmer winter than usual with a few days with weather extremes (-30ºC).
- Major frost during flowering (May 17-18); temperatures recorded between -1.0º C. and -8.0º C. depending on region. Harvest in some orchards was abandoned and reduced yield as well as various levels of frost damage (frost ring, russeting and misshapen fruit) were observed. Many growers have not used chemical thinning due to the damage caused by frost on flower buds and flowers
- Frequent and abundant rainfall except for the last two weeks of May.
- Good yield and fruit size in sites not affected by frost
- High population apple maggot and leafroller in most regions. This is not surprising given the frequent rains and strong leaf growth.
- Despite the rain, good control of primary scab, but more observations of sooty blotch and flyspeck and other summer diseases. Is this a consequence of the new restrictions on the use of fungicides or very cold winter in 2022?

B. MAJOR PROBLEMS, UNUSUAL OR STRIKING EVENTS

Apple maggot (*Rhagoletis pomonella*): exceptional year with numerous captures in traps in all regions. Thresholds reached earlier in the season than usual. GF-120 is commonly used but its application was more difficult this year due to frequent rain.

Obliquebanded leafroller (*Choristoneura rosaceana*): higher than usual populations of overwintering larvae and subsequent summer generation. More damage than usual at harvest in many sites.

Japanese beetle (*Popillia japonica*): present in all regions, although not in all orchards but its presence this year has expanded in each regions. Fond of Honeycrisp and Gingergold apples. Treatments (insecticides and/or mass-trapping) required in some sites (locally).

Apple scab (*Venturia Inaequalis*): maturation ascospores was ahead this year on the development of the apple tree. Apple scab lesions were observed in orchards which had a history of scab in 2022 and which delayed the start of treatments. The primary scab control as good this year despite the frequent rain and the news restrictions fungicides.

Marssonina Blotch (*Marssonina caronaria*): identified a few years ago, the presence of the disease has spread in the Eastern township and Monteregian areas. The disease remains localized.

C. LESS PROBLEMATIC THAN USUAL

Codling moth (*Cydia pomonella*): control achieved fairly easily thanks to the area-wide mating disruption program which supports 70% - 90% of the cost of dispensers in ca. No or only one insecticide treatment was specifically required in most orchards where the method has been used for several years. Little damage was observed in all regions this year.

Plum curculio *(Conotrachelus nenuphar):* peripheral and full-block treatments provided good control in IPM orchards. The pest remains problematic in organic orchards.

Rosy apple aphid (*Dysaphis plantaginea*): usually problematic for the Laurentian areas, the population was lower this year and required less treatments.

Mites (European red mite, two-spotted spider mite and apple rust mite): oil applications provided good control of ERM and predatory mites frequently provided biological control of developing ERM and TSSM populations in late summer.

European apple sawfly (*Hoplocampa testudinea*): this species has been much less present and problematic than usual in most regions for the last years. It has completely disappeared in East-Monteregian aera.

Stink bugs (mainly *Euschistus servus)*: not a problem this season and little damage was observed. A few **brown marmorated** stink bug specimens were captured again this year as part of the BMSB monitoring network.

Fire blight (*Erwinia amylovora*): Cold temperature during flowering reduced the risk of fire blight. Fewer symptoms were observed in all regions this year.

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
	Green fruitworm
	Gypsy moth

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

Pests	Family	No. cases
Euschistus servus euschistoides	Pentatomidae (Brown stink bug)	3
Euschistus tristigmus luridus	Pentatomidae (Dusky stink bug)	1
Halyomorpha halys	Pentatomidae (Brown marmorated stink bug)	2
Chinavia hilaris	Pentatomidae (Green stink bug)	2
Murgantia histrionica	Pentatomidae (Harlequin bug)	1
Podisus maculiventris	Pentatomidae (Spined soldier bug)	1
Xylosandrus germanus	Curculionidae (Ambrosia beetle)	1
Contarinia pyrivora	Cecidomyiidae (Pear midge)	1

*By the Quebec diagnosis lab, MAPAQ