

83th Northeast Tree Fruit IPM Working Group
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2021 REPORT - QUEBEC APPLE ORCHARDS
PEST TYPE: INSECTS AND MITES

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A. OVERALL SITUATION :

- Relatively mild and snowy winter, no weather extremes
- Early spring: bud break early April (3 weeks earlier than last year!) but frost events late April and late May resulted in significant crop losses in colder sites.
- Blooming period “adequate”, pollination “good”, fruit set “average”, June drop “important”
- Very little rainfall in April and May, subsequently returned to “normal”
- Fruit size “good”, color “normal”

B. MAJOR PROBLEMS, UNUSUAL OR STRIKING EVENTS

Gypsy moth (*Lymantria dispar*): an epidemic in all southwestern Quebec was responsible for exceptionally large populations in many orchards bordering forests. Treatments were required in some areas, and unprotected young apple trees suffered complete defoliation in some orchards (most trees recovered new foliage by August).

Stink bugs (mainly *Euschistus servus*): getting more problematic, as measured by fruit damage at harvest. Most problematic cultivars: Honeycrisp (by far), Cortland, Empire, Gala and Spartan. A few BMSB (*Halyomorpha halys*) found in orchards of the Monteregians. For the first time, also found in the Laurentians and starting as early as June.

Plum curculio (*Conotrachelus nenuphar*): a problem mostly in organically managed orchards, because of a shortage in kaolin supply, which forced growers to increase interval between applications. Once almost inexistent in orchards of Quebec City area and further north, the beast appears to have extended its range and now causes some damage there as well.

Apple flea weevil (*Orchestes (=Rhyngaenus) pallicornis*): first reported in 2017 in a few organic orchards, this pest is spreading in orchards using a relaxed or organic-approved insecticide program. Spinosad treatments recommended at tight cluster in some orchards this year. Definitely something to look closely at in upcoming years

Japanese beetle (*Popillia japonica*): important but localized populations in the Eastern townships, the Monteregian Hills and Quebec city area. Fond of Honeycrisp apples. Tachinid parasitoid *Istocheta aldrichi* common (up to 50% parasitism)

C. LESS PROBLEMATIC OR AS USUAL

Codling moth (*Cydia pomonella*): control was achieved fairly easily, thanks to a) insecticide applications (2-5) and b) the area-wide mating disruption program which supports 70% - 90% of the cost of dispensers. Over 40% of the production is under mating disruption in Quebec.

Apple maggot (*Rhagoletis pomonella*): relatively few catches this year (except for the Quebec City area). Intervention thresholds reached late in the season or were not reached until treatments were not required. A minority of orchards required more than one treatment. GF-120 getting more popular, even in conventional orchards.

Obliquebanded leafroller (*Choristoneura rosaceana*): low populations and little damage this year, which had not happened often in the last decade. Found mainly in organic orchards under mating disruption.

Mites (European red mite, two-spotted spider mite and apple rust mite) developed earlier than usual in spring, as a result of hot temperatures in May and July...Despite this, orchards using mating disruption for codling moth reported only little or no need for miticides. Predatory mites developed in high number in late summer.

Tarnished plan bug (*Lygus lineolaris*): few catches, few damage observed. I am tempted no longer to consider TPB as a key fruit pest of apples in most of our apple growing areas.

European apple sawfly (*Hoplocampa testudinea*): again this year, less present and problematic than usual in most regions (as in the last 3-4 years). Parasitism? Weather? Explanations for this are welcome.

Aphids (mostly *Aphis pomi*, *Eriosoma lanigerum* and *Dysaphis plantaginea*): except for the rosy apple aphid, only a problem when predators or parasitoids were not present to biologically control populations. Rosy apple aphid developed quickly in some areas (Laurentians) and aphicides were recommended in a minority of situations.

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

Pests	Family	No. cases
<i>Euschistus servus euschistoides</i>	Pentatomidae (Brown stink bug)	12
<i>Euschistus tristigmus luridus</i>	Pentatomidae (Dusky stink bug)	2
<i>Halyomorpha halys</i>	Pentatomidae (Brown marmorated stink bug)	3
<i>Synanthedon fulvipes</i>	Sesiidae	4
<i>Clepsis persicana</i>	Tortricidae (White triangle tortrix)	1
<i>Blastodacna atra</i>	Agonoxenidae (Apple pith moth)	1
<i>Pasiphila rectangulata</i>	Geometridae (Green pug)	1
<i>Saperda candida</i>	Cerambycidae (Roundheaded appletree borer)	4
<i>Carpophilus brachypterus</i>	Nitidulidae (Sap beetle)	1

Beneficials	Family	No. cases
<i>Macrocentrus ancylivorus</i>	Braconidae	1

*By the Quebec diagnosis lab, MAPAQ, except for BMSB specimens identified by our lab.