

79th Annual New England, New York, Canadian Fruit Pest Management Workshop
Burlington, VT, 24-25 October 2017
2017 REPORT - QUEBEC APPLE ORCHARDS
PEST TYPE: INSECTS AND MITES

G. Chouinard*, F. Pelletier, V. Filion, P. E. Yelle, E. Barriault, K. Bergeron, N. Gagné, S. Beauchamp, V. Decelles, R. Maheux, G. Tremblay, D. Venneman, L. Tétreault-Garneau, S. Brousseau, I. Turcotte, T. Djedjig, F. Gendron, M.-A. Therrien, C. Turcotte, S. Tellier, S. Mantha, M. Courchesne, J. Moisan-Deserres

* reporting, Institut de recherche et de développement en agroenvironnement (IRDA)
Saint-Bruno, Québec, J3V 0G7

A. OVERALL SITUATION :

- Relatively mild winter with good snow cover, very few winter damage
- Cold, wet and rainy spring, bud break occurred at “normal” time of the year (which is unusual)
- Bloom and pollination not affected by any particular event except cold temperatures at the end of the blooming period;
- Nice fruit set for most cultivars, particularly earlier ones
- First two months of the summer were cool and rainy, the last month was in general hot and dry
- Many hail events scattered through time and space at the end of the summer affected the crop
- Very warm temperatures in fall, with little rain, but nice red color for most cultivars, thanks to a providential week of cold nights at the end of August. Later cultivars did not benefit as much from these as the earlier ones, though.
- Overall: average crop volume and color.

B. MAJOR PROBLEMS, UNUSUAL OR STRIKING EVENTS

Brown marmorated stink bug (*Halyomorpha halys*) : No sightings and no catches in any of the ca. 100 traps located in agricultural land. However we can now confirm an established population in Montreal, with outdoor catches starting in early July, with mixed adults and nymphs. Our most prolific 2016 trap (47 individuals) was also our most prolific in 2017, but caught half as much as last year.

Apple curculio (*Anthonomus quadrigibbus*): for the fourth year, high populations and damage observed in some orchards where a “relaxed” insecticide program was used, in coldest and less intensive production areas. More abundant than the plum curculio in one orchard, which raises grower concerns.

Apple leaf curling midge (*Dasineura mali*) : populations are now present in nearly every orchard but no control measures were needed except in new/young plantings.

Rosy apple aphid (*Dysaphis plantaginea*) : usually not a problem in Qc but this year, many orchards were affected due to favorable spring conditions. Good control achieved by registered aphicides (e.g. flonicamid and others)

Potato leafhopper (*Empoasca fabae*) : favorable winds brought those up north during the summer and treatments were occasionally required in young plantings. More common than the white apple leafhopper, which is unusual.

Japanese beetle (*Popillia japonica*) : localized populations present again in the Eastern townships and in the Monteregian Hills. Caused heavy defoliation of some apple trees and also attacked fruit, particularly Honeycrisp.

C. LESS PROBLEMATIC OR AS USUAL

Codling moth (*Cydia pomonella*) : second generation was more important – possibly due to the warmer conditions – but control was achieved relatively well, and this includes results for the area-wide mating disruption program. Quebec government support for MD (70% - 90% of the cost of dispensers) was maintained for the second year in 2017 in all Quebec regions. Nearly 1500 ha of orchards were under MD this year, which represents ca. 42% of the area under production, and 50% more orchards than in 2017. The program was scheduled to end this year, but this may change in light of the good results of the incentive.

Other usual burdens (spider mites, plum curculio, apple maggot) were there, as usual, in variable numbers, but caused no surprise - the usual threat.

Spotted tentiform leafminer (*Lithocolletis blancardella*): for the fifth consecutive year, populations were low and control measures rarely, if ever, necessary.

D. OTHER OCCASIONAL ARTHROPODS IDENTIFIED IN COMMERCIAL ORCHARDS THIS YEAR

Pests	Family	No. cases
<i>Hoplocampa halcyon</i>	Tenthredinidae (Saskatoon Sawfly)	1
<i>Pasiphila rectangulata</i>	Geometridae (Green Pug Moth)	1
<i>Blastodacna atra</i>	Elachistidae (Apple Pith Moth)	2
<i>Orchestes pallicornis</i>	Curculionidae (Apple Flea Weevil)	1
<i>Synanthedon fulvipes</i>	Sesiidae	2
<i>Synanthedon exitiosa</i>	Sesiidae (Peachtree Borer)	1
<i>Podosesia syringae</i>	Sesiidae (Ash Borer)	2
<i>Atractotomus mali</i>	Miridae (Apple Brown Bug)	1
<i>Euschistus servus euschistoides</i>	Pentatomidae (Brown Stink Bug)	33*
<i>Euschistus tristigmus luridus</i>	Pentatomidae (Dusky Stink Bug)	1*
<i>Pammene perstructana</i>	Tortricidae	1
<i>Grapholita packardi</i>	Tortricidae (Cherry Fruit Worm)	1
<i>Xylosandrus germanus</i>	Scolytidae (Black Stem Borer)	1
<i>Contarina pyrivora</i>	Cecidomyiidae (Pear Blossom Midge)	1
<i>Halyomorpha halys</i>	Pentatomidae (Brown Marmorated Stink Bug)	0**
<i>Drosophila susukii</i>	Drosophilidae (Spotted Wing Drosophila)	1***
Beneficials	Family	No. cases
<i>Leucopis</i> sp.	Chamaemyiidae (Silver Fly)	1

* from BMSB traps. Thanks to Jean-Philippe Légaré, agr. entomol., Quebec diagnosis lab/diagnostic clinic, MAPAQ,

** this does not include captures in the city of Montreal and suburbs, which are mentioned in section A of the report.

***in plums (cvs Mont-Toyal, Damas, Lombard)