

78th Annual New England, New York, Canadian Fruit Pest Management Workshop
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2015 REPORT - QUEBEC APPLE ORCHARDS
PEST TYPE: INSECTS AND MITES

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A. OVERALL SITUATION :

Extreme temperatures variations were recorded during the winter and spring (up to 40 C in a single month), for example from -29 to +11 C in February, from -19 to +17 C in March, and from 6 to 32 C in June). Nevertheless, the winter was relatively milder than usual and spring relatively cooler than usual. Bud break also occurred relatively late in comparison to what had been observed in recent years and no major frost event occurred during bloom. As a result, only low levels of fruit russetting/asymmetry were observed. Hail (sometimes very severe) was however reported in some areas in June and July.

Bloom was abundant and weather conditions were favorable for pollination. Rain was scarce in spring and early summer but generally approached normal figures as summer progressed, which contributed to average-sized apples but generally required irrigation in spring and in September. Crop volume and color was estimated to be "normal" except in one area where extensive pruning was done to control a fireblight epidemic (see our "diseases" report).

B. MAJOR PROBLEMS, UNUSUAL OR STRIKING EVENTS

Spider mites (*P. ulmi*, *T. urticae*, *T. mcdanieli*) : although spring weather was favorable for dormant oil treatments, the dry summer was highly favorable for mite development. Not surprisingly, mites were more prevalent this year but control was generally well achieved by the indigenous predators or by chemicals when needed. The populations of **McDaniel spider mites** were higher this year than previous years in the area where it is most commonly found (southwest of Montreal).

Brown marmorated stink bug (*Halyomorpha halys*) : No sightings in any agricultural crop and no catches in any of the ca. 100 traps located in tree fruit, ornamentals and soybeans. We suspect however an established population in Montreal, because of multiple weekly catches at the end of the summer in one location and in additional locations this fall (all restricted to Montreal). **Our most prolific trap caught adults weekly since its installation on August 25 (for a total of 47 adults as of October 17).** This will be followed closely in 2017.

Other stink bugs (mainly *Euschistus* sp. and *Chinavia hilaris*) : frequent sightings and damage observed at the end of the season, on many cultivars (Honeycrisp, Spartan, Empire, McIntosh...). See also section D below.

Apple curculio (*Anthonomus quadrigibbus*): for the third 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 some orchards**, 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.

Mullein plant bug (*Campylomma verbasci*) : populations were present in many orchards and important damage was occasionally observed (on Gala, Sunrise, Empire, Red Delicious, Ambrosia and Spartan).

Japanese beetle (*Popillia japonica*) : localized populations now present in the Eastern townships in addition to 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*) : less damage observed and less sprays needed but this can be mostly related to mating disruption (MD), as government support for MD (70% - 90% of the cost of dispensers) was implemented in 2016 for MD in all Quebec regions. In general, MD was complemented by 1 insecticide application during the first year. Nearly 1000 ha of orchards were under MD this year, which represents ca. 21% of the area under production, and it is planned that this number will grow next year.

Plum curculio (*Conotrachelus nenuphar*): control was not problematic in most orchards.

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

Obliquebanded leafroller (*Choristoneura rosaceana*): populations as usual and control not problematic in most orchards except in some orchards under mating disruption for codling moth, where a "relaxed" insecticide program as put in place.

Apple maggot (*Rhagoletis pomonella*) : populations returned to "normal" infestation levels in most regions this year, following a lower-than-usual year in 2015.

D. OTHER OCCASIONAL ARTHROPODS IDENTIFIED IN COMMERCIAL ORCHARDS THIS YEAR

Pests	Family	No. cases
<i>Palthis angulalis</i>	Noctuidae (Dark-spotted Palthis)	1
<i>Podosesia syringae</i>	Sesiidae (Ash Borer)	1
<i>Synanthedon exitiosa</i>	Sesiidae (Peachtree Borer)	3
<i>Synanthedon fulvipes</i>	Sesiidae	1
<i>Synanthedon proxima</i>	Sesiidae (Willow Borer)	1
<i>Pammene</i> sp.	Tortricidae	1
<i>Taeniothrips inconsequens</i>	Thripidae (Pear Thrips)	1
<i>Halyomorpha halys</i>	Pentatomidae (Brown Marmorated Stink Bug)	0**
<i>Euschistus servus euschistoides</i>	Pentatomidae (Brown Stink Bug)	99*
<i>Euschistus tristigmus luridus</i>	Pentatomidae (Dusky Stink Bug)	2*
<i>Brochymena</i> sp.	Pentatomidae (Rough Stink Bug)	1*
<i>Chinavia hilaris</i> (=A. <i>hilaris</i>)	Pentatomidae (Green Stink Bug)	4*

* 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, which are mentioned in section A of the report.