UN QUÉBEC POUR TOUS

Neonicotinoids in Québec

August 19, 2013

Québec

Presentation Overview

- Facts observed
- Position of producer groups
- Actions undertaken
- Committee for protecting pollinators
- Support for producers
- Conclusion

Importance of the Apiculture Industry

	Canada	Québec
Number of beekeepers	7,000	268 (41 407 hives)
Honey production	34,091 tons	1,305 tons
Pollination value	$2.2 billion	$50 million

Taken from: Canadian Honey Council, 2010, *Statistics Canada, Institut de la statistique du Québec, beekeeping industry surveys 2003 to 2012*

Results of Ongoing Projects

Monitoring of honey bees and native pollinators during the planting of crops treated with neonicotinoids – Université Laval et al.

In 2012

- 29 bee poisoning cases in the Montérégie region (mortality > 150 individuals over a 48 hr period) in six monitored apiaries
- 9 cases with chlothianidin and/or thiamethoxam above the detection thresholds
- 10 water samples analyzed (water from puddles in treated fields): 100% contained chlothianidin and 60% contained thiamethoxam residues

Results of Ongoing Projects

Monitoring of honey bees and native pollinators during the planting of crops treated with neonicotinoids

In 2013

- 2 cases of bee poisoning in the Montérégie region (mortality > 150 individuals over a 48 hr period)
- Analysis results forthcoming
- 15 water samples analyzed (water from puddles in treated fields: 87% contained chlothianidin and 73% contained thiamethoxam residues

In 2012–2013: Increase in the average mortality rate of apiaries exposed to treated crops vs. unexposed apiaries.

Results of Ongoing Projects

Impact of insecticide seed treatments on soil pest insects and agronomic parameters in grain corn production - CEROM

Average yield on large plots

Treatment	kg/ha*
Treated	10,300
Untreated	10,151

* Nonsignificant difference

Season 1 results**: No increased yield with the use of coated seeds** However, a number of the tested sites were at high risk for finding soil insects (e.g., plowed grasslands).

MAPAQ Monitoring

Voluntary reporting by beekeepers

Actual cases may be underreported:

- The beekeeper enters into an agreement with producers to place apiaries in their fields—for the sake of “harmonious co-existence”: no reporting of mortality cases.
- The beekeeper visits his or her apiaries on a sporadic basis—he or she may not notice cases of abnormally high mortality.
- Only cases in which significant mortality is noted are reported (acute exposure to corn planting dust).
- Any chronic exposure may lead to the manifestation of various colony problems and disorders that are not reported, since it is often hard for the beekeeper to observe them.

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MAPAQ Monitoring

2008 results: Four reports (four beekeepers) in which weakening of colonies (increased daily mortality of bees) near cornfields during the spring planting season was noted. However, the analysis results are inconclusive.

2009 results: One case of an apiary located near a cornfield during the planting season. One day after planting, 20% of hives dead and 50% of nuclei dead. Clothianidin detected in the dead bees (20% of LD50). Reported to the PMRA.

2010 results: Two incidents with a high bee mortality rate near cornfields during the spring planting season: clothianidin and/or thiamethoxam detected in the analyzed bees. Reported to the PMRA.

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MAPAQ Monitoring

2011 results: An incident with an abnormally high bee mortality rate in an apiary near a cornfield during the planting season: thiamethoxam detected in the dead bees analyzed. Reported to the PMRA.

2012 results: An incident with an abnormally high bee mortality rate in an apiary near a cornfield during the planting season. Clothianidin and thiamethoxam detected in the dead bees. Reported to the PMRA.

A number of cases of bee poisoning by pesticides other than neonicotinoids have been reported since 2008.

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Results of Neonicotinoid Monitoring in Quebec Watercourses

RIVERS/STREAM	SAMPLING FREQUENCY (N)	FREQUENCY OF DETECTION (%) CLOTHIANIDIN	THIAMETHOXAM	IMIDACLOPRID
Chibouet	30	100		
Hurons	29	90		
Saint-Régis	30	97		
Saint-Zéphirin	30	100		
L'Assomption	11	64	73	36
L'Achigan	11	91	90	80
Chicot	11	73		
Chaloupe	11	73	80	70
Châteauguay	11	100	100	73
Rouge	10	100		
Tortue	11	100		
Delisle	11	64		
Bayonne	11	91		
Point-du-Jour	28	100	100	100
Chartier	27	100	100	100
Blanche	24	100	100	100

MDDEFP -2012 Results not yet published

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Position of Producer Groups

Fédération des apiculteurs du Québec (FAQ - Quebec Beekeepers Federation)

Resolution adopted on May 15, 2013

> The FAQ asserts that the current use of neonicotinoid pesticides in field crops is harmful to pollinators and creates environmental problems whose importance largely exceeds their eventual benefits. Therefore the FAQ asks the Pest Management Regulatory Agency (PMRA) to ban their use on field crops.

The FAQ also adopted a communication plan to raise awareness among farmers to reduce the use of neonicotinoid

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Position of Producer Groups

Fédération des producteurs de cultures commerciales du Québec (FPCCQ)

Their comments following an article published in *La Terre de chez nous:*

"Obviously, the way the issue of neonicotinoids is addressed raises concerns at FPCCQ given the various stakeholders and media outlets taking advantage of the momentum to release information that is incomplete if not biased, which does not necessarily help advance thinking on the subject."

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The Québec Agricultural Phytosanitary Strategy 2011–2021 (MAPAQ, MDDEFP, MSSS, and UPA)

Objective: **Accelerate the adoption of an integrated pest management approach** and **reduce the risks that pesticides pose** to human health and the environment, while ensuring the economic viability of agricultural production.

Health Component

Environment Component

Direction 3 – Maintain biodiversity in agricultural environments and promote beneficial organisms

Objective 3.3 - Protect pollinators and nontarget organisms

Agronomy and Economic Component

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Neonicotinoids in Québec

Committee for protecting pollinators from pesticides

Mandate

Step up integrated pest management efforts with a view to protecting pollinators from pesticides in agricultural environments

Composition

MAPAQ, MDDEFP, PMRA (Health Canada), UPA, Specialized federations (FAQ, FPCCQ), researchers (CÉROM, ULaval, UQAM), CCAE, CropLife Canada, Syngenta, Bayer CropScience, Association des marchands de semences du Québec, Association des fabricants de machinerie agricole du Québec

4 meetings held since 2011

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Committee for protecting pollinators from pesticides

Actions in progress

- Raise awareness of farmers and advisors on the risks of insecticides for pollinators and for human health and on the principles of integrated pest management with regard to the systematic use of neonicotinoids (~ 25 presentations and publication of the *Protégeons les abeilles des applications de pesticides* leaflet)

- Mixed results for the 2012 awareness campaign on seeds not treated with insecticides (very few requests).

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Committee for protecting pollinators from pesticides

Actions in progress (cont.)

- Assist with pesticide monitoring in watercourses
- Ask seed companies to provide access to seeds not treated with insecticides
- Publish *Guide des ravageurs de sol en grandes cultures*: decision-making support tool for using insecticide seed treatments when necessary (CÉROM, MAPAQ)
- Agrirécup pilot project in the Montérégie region: recovery of empty seed bags

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Availability of untreated seeds

According to sales managers at three companies, hybrids that are not treated with insecticide are available early in the fall, prior to the growing season.

Companies	No. of hybrids	No. of hybrids not treated with insecticide
Pride Seeds	56	56
COOP fédérée	31	31
Syngenta	29	3

Support for Producers - MAPAQ

- Funding for the monitoring of soil insects to promote **sound integrated pest management**.
- Creation of a seed pest insect monitoring network as part of the Field Crops network of Réseau d'avertissements phytosanitaires (RAP)

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Conclusion

What we think?

Do soil pest insects problems in Québec require the widespread use of neonicotinoids on more than 500,000 ha?

Judicious use of neonicotinoids must be based on integrated pest management principles.

The bee health issue is not exclusive to Quebec and Ontario, it is a concern that should be across Canada

What we are doing?

The Committee for protecting pollinators will continue his work.

Québec has already asked PMRA to speed up the review process so that an informed decision may be taken on the use of these products.

Québec also plans to send letters to those concerned to improve access to untreated seeds.

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