

CAPA Report for the Apiary Inspectors of America - 2013



Canadian Association of Professional Apiculturists
L'Association Canadienne des Professionels de l'Apiculture





CAPA - Canadian Association of Professional Apiculturists

- Provincial Apiarists
- University Researchers
- Federal Researchers
- Extension Staff
- Apiary Inspectors
- Graduate Students



Working Partnerships

- Canadian Food Inspection Agency
 - Honey Sampling / Food Safety
 - Imports / Exports / Diseases Status of Honey Bees
- Pest Management Regulatory Agency –
 - Registration of new miticides and antibiotics
 - Health issues concerning pesticides used in agriculture
- Agriculture and Agri-Food Canada
 - Market and Industry Services - Statistics on the Industry
- Canadian Honey Council
 - Industry at a national level
- Apiary Inspectors of America



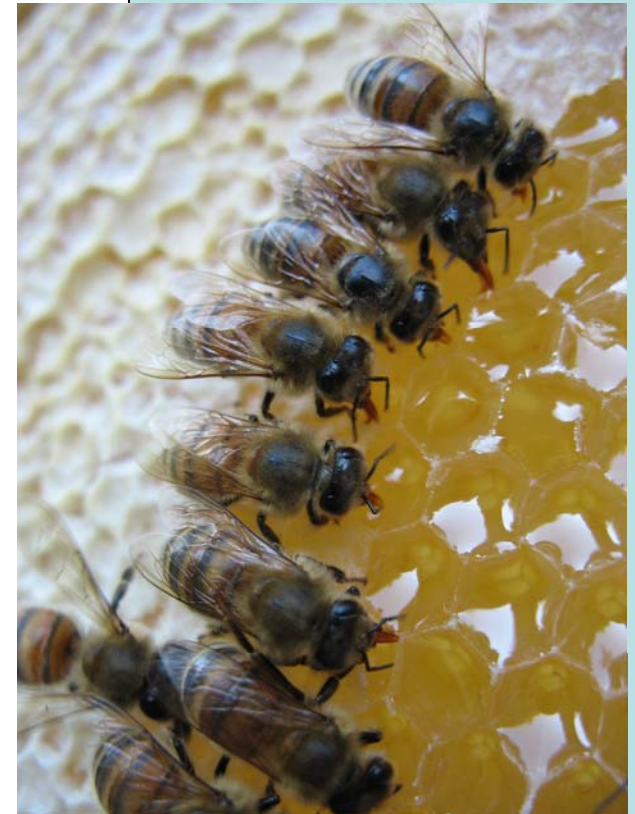
Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada



Committees

- Executive Committee
- National Survey
- Provincial Apiarist's Reports
- Import Committee
- Chemical Committee
- Research Committee
- Non-Apis Committee
- Disease Publication Committee
- Communication Committee
- Africanized Honey Bee Committee
- Bee Biosecurity



Updating Named Pests and Diseases in Bees Act and Similar Legislation – Harmonize Amongst Provinces

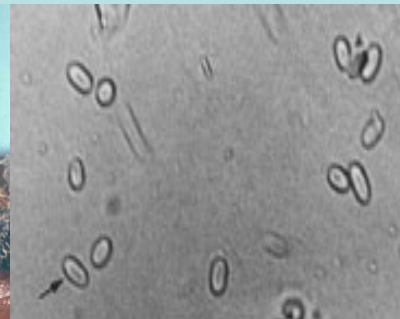
- Africanized honey bee and its hybrids (*Apis mellifera scutellata*)
- Cape honey bee (*Apis mellifera capensis*)
- Asian honey bee (*Apis cerana*)
- Asian nosema (*Nosema ceranae*)
- Asian hornet (*Vespa mandarinatoria*)
- Asian mite (*Tropilaelaps spp.*)
- Small hive beetle (*Aethina tumida*)

- Authority to sample
- Authority to order prescriptive action – Quarantines, destruction, etc.

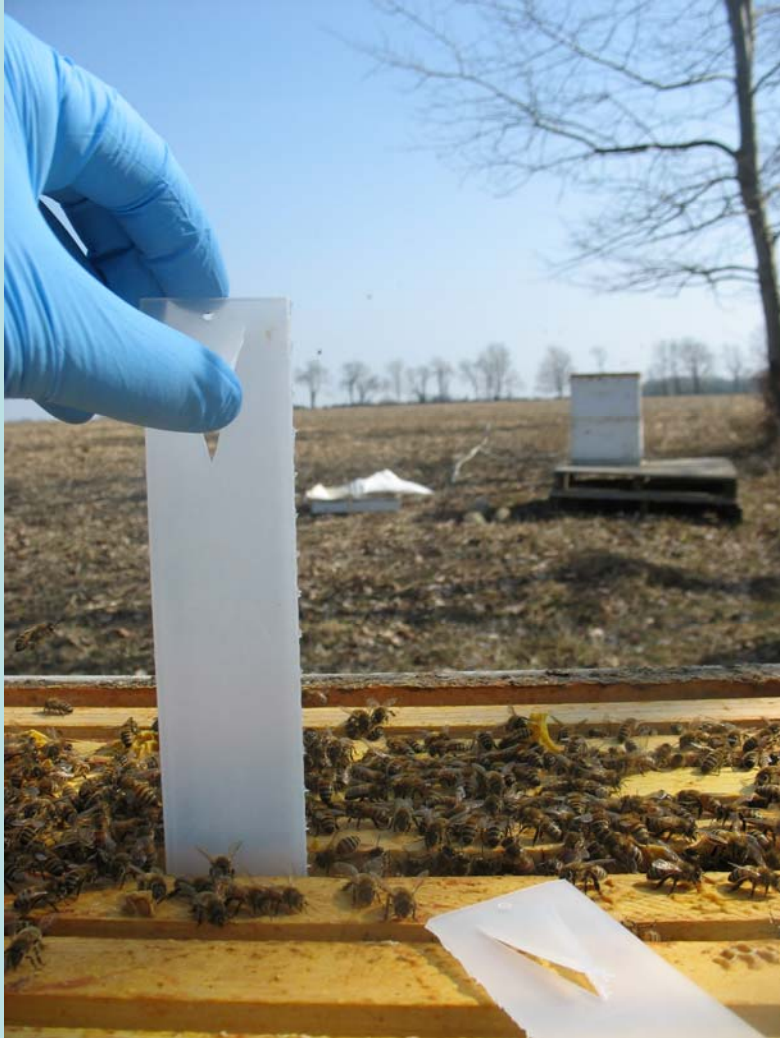


CAPA – Pest and Disease Publication

- Updated – Should be available for the next beekeeping season



Chemical Committee



- Testing of new products / formulation under different regional and seasonal conditions
- Working with industry and CFIA on residues in honey / bee repellents
- Developing rationales for the requirement of new products and expanded uses
 - PMRA
 - Pesticide Minor Use Co-ordinators
- Tracking pesticide incidents

Varroa Control - What Are the Options?

- Hard Chemicals:
 - Apistan® (Fluvalinate)
 - Checkmite+™ (Coumaphos)
 - Apivar® (Amitraz)
- Soft Chemicals (Organic Acids):
 - Formic Acid
 - 40 ml multiple applications
 - Slow release method 250 ml
 - Mite Away Quick Strips
 - Thymol
 - Thymovar
 - Oxalic Acid

- Bayverol® -(flumethrin)



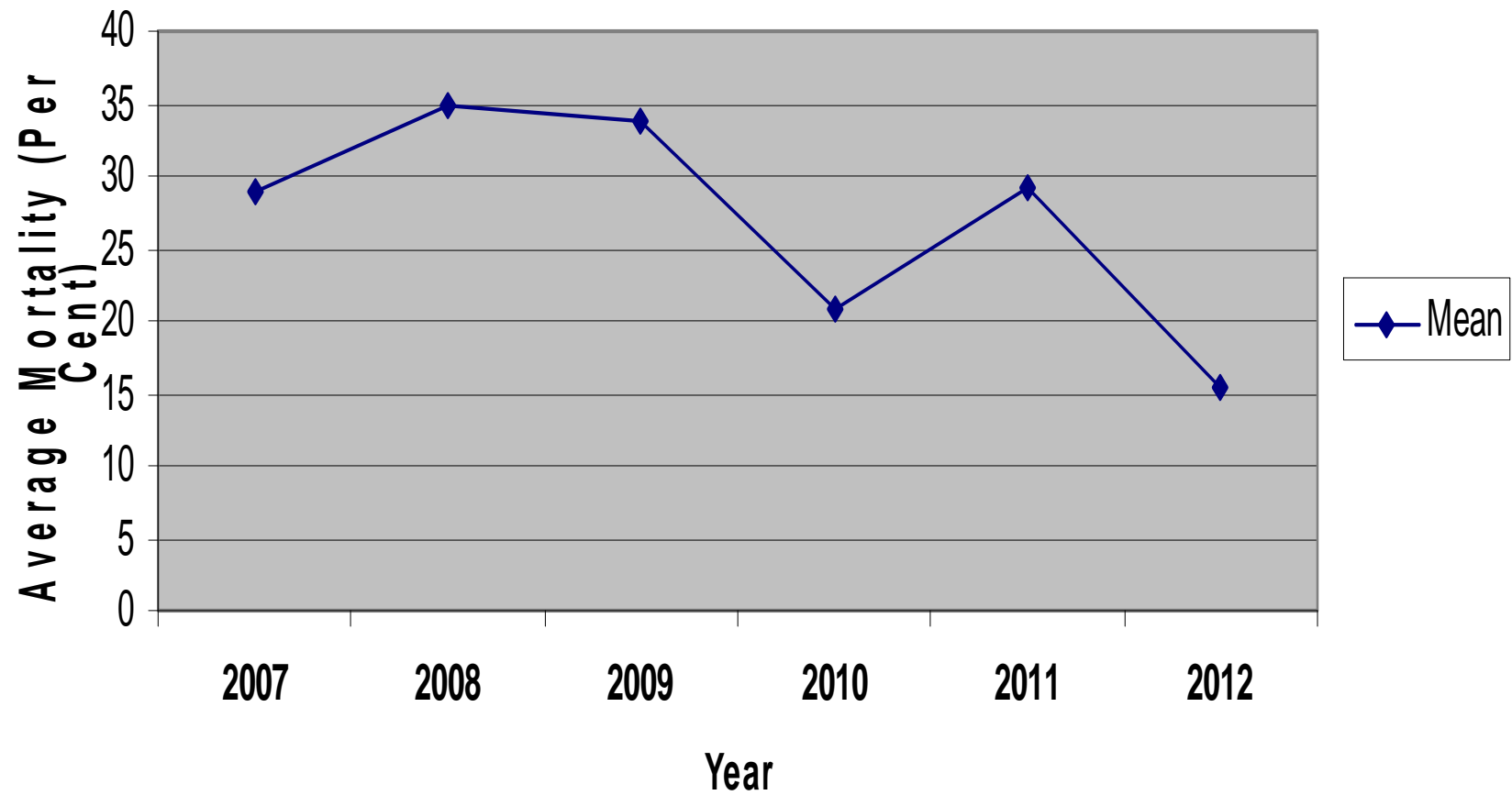
Chemical Committee

Registration of new compounds for varroa and other pests

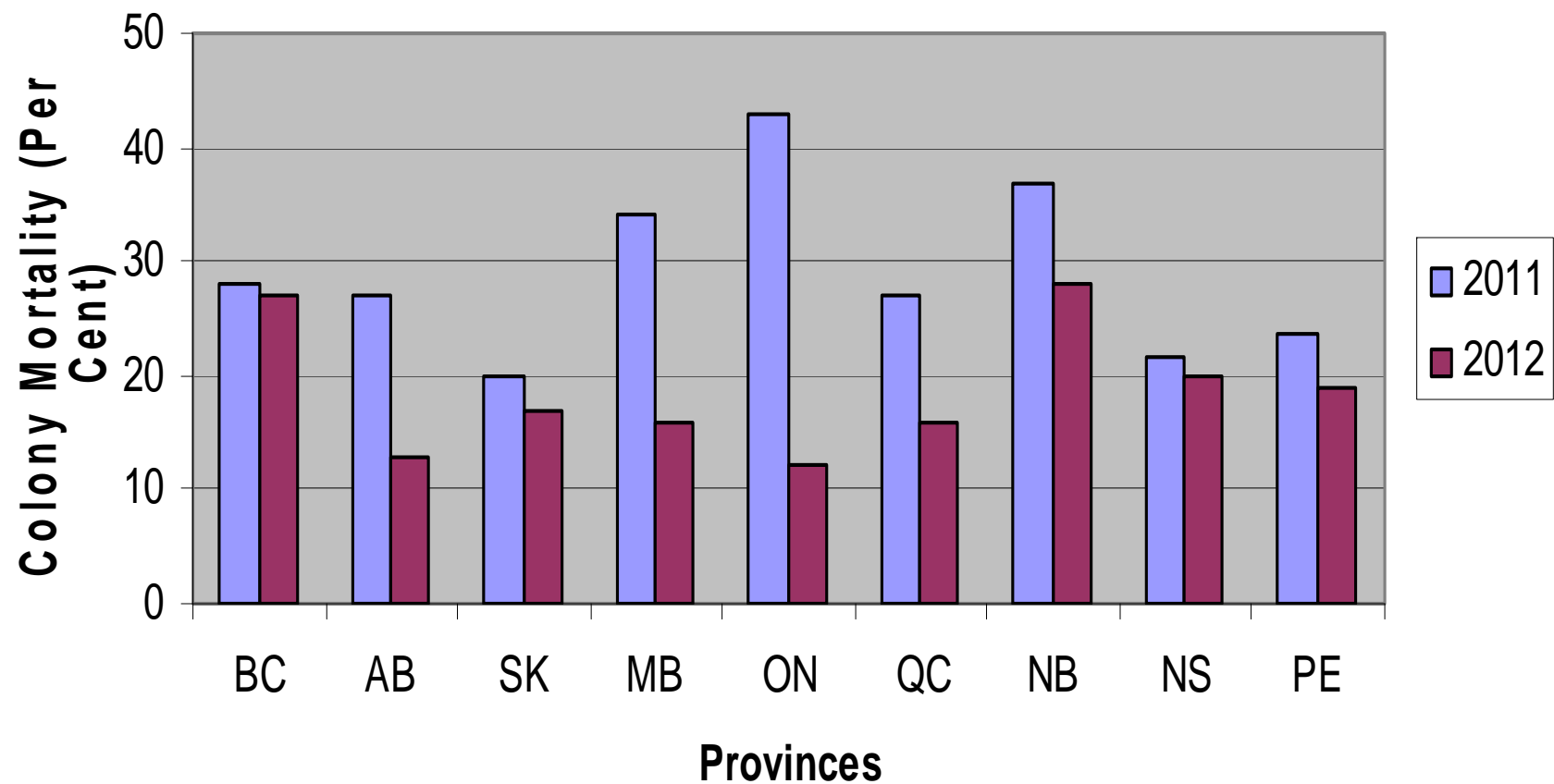
- **Mite Away Quick Strips** (formic acid) –
 - Reported incident to the PMRA (queen loss)
- **Apivar®** (amitraz) – full registration
- **Bayverol®** (flumethrin) – moving forward – same class in use and established resistance
- **Permanone®** (Permethrin) – ground drench for SHB
- **Acetic Acid** – fumigant for sterilization of equipment
- **Tylosin** – alternative to Oxytetracycline



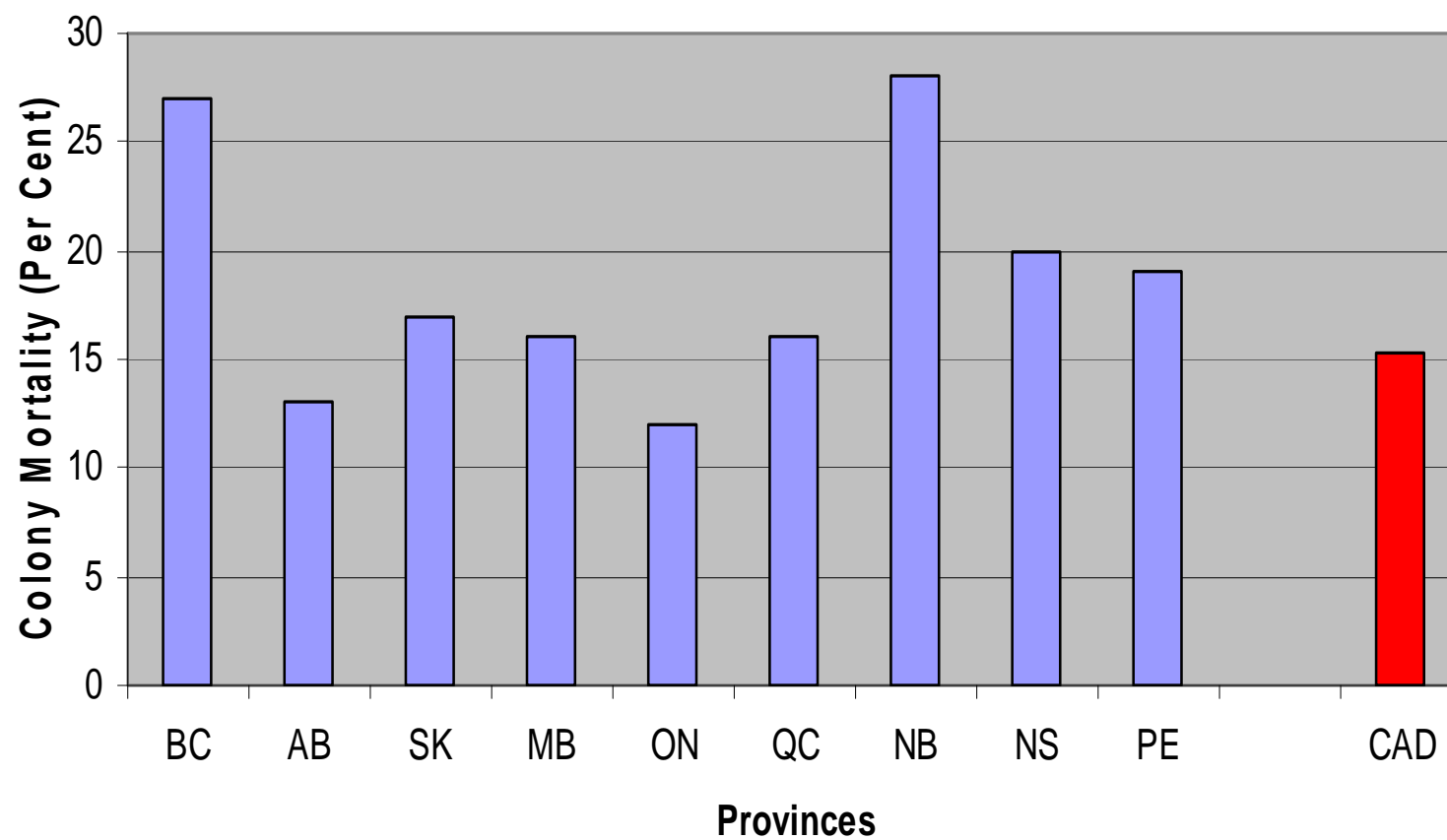
Honey Bee Colony Mortality in Canada



Honey Bee Colony Mortality in Canada - 2011 / 2012



Honey Bee Colony Mortality in Canada 2012



CAPA National Winter Loss Report

Varroa

- **Relying on legally registered chemical control (Apivar, organic acids, still use of Apistan)**
- **Pursuing new methods of varroa control**

Nosema

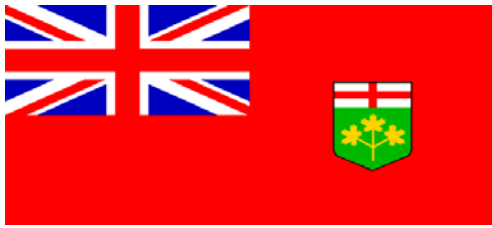
- **Still a concern**
- **Major initiatives to address this in Alberta**
- **Ongoing research in Ontario**

Pesticides

- **Concern regarding systemics**
- **Acute incidents – report and document**
- **Sublethal – ongoing research – University of Guelph**

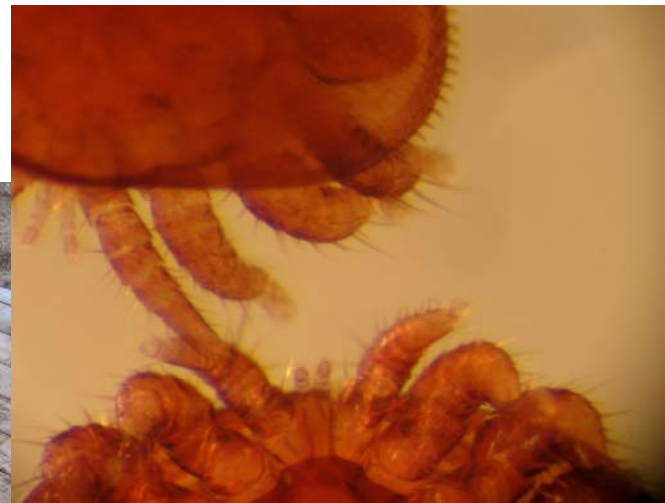
CCD Disorder

- **The specific conditions of CCD have not been described in Canada**
- **Categorized as elevated levels of mortality (varroa)**



Ontario Losses in Beekeeping

- 2010. *Varroa destructor* is the main culprit for the death and reduced populations of overwintered honey bee (*Apis mellifera*) colonies in Ontario, Canada.

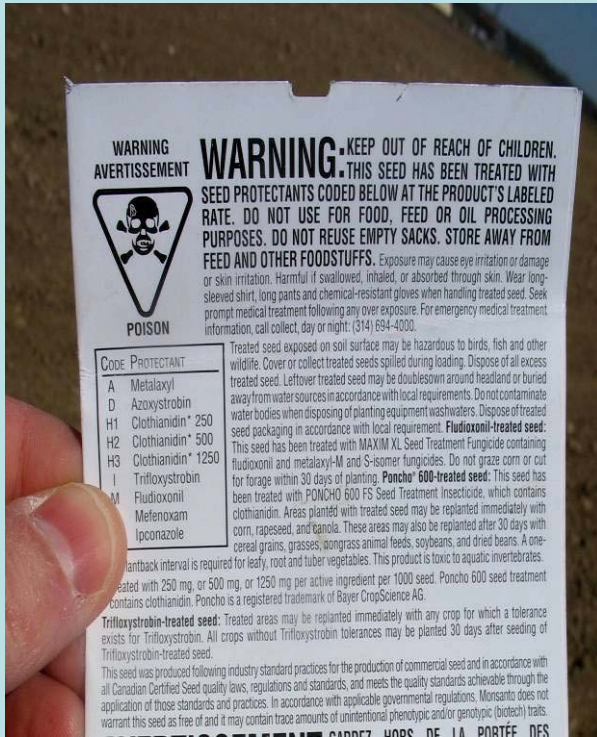


Guzman-Novoa, E.; Eccles, L.; Calvete, Y.; McGowan, J.; Kelley, P.G.; Correa-Benitez, A. 2010. *Varroa destructor* is the main culprit for the death and reduced populations of overwintered honey bee (*Apis mellifera*) colonies in Ontario, Canada. *Apidologie*. *In press*.

Bee Kill Incidents in Ontario – Spring 2012

- **Bee Kill incidents reported to the Apiculture Program, Ministry of Environment and Pest Management Regulatory Agency (Health Canada)**
- **From mid April to mid May and into the start of June**
- **Similar Reports of bee kill incidents in Quebec since 2009**
- **Samples of dead bees submitted and analyzed by the PMRA**
- **Speculation around the corn seed treatments (Thiamethoxam and Clothiandin)**





Bee Kill Incidents in Ontario – Spring 2012



- **“Multiple Routes of Pesticide Exposure for Honey Bees Living Near Agricultural Fields”**
 - Christian H. Krupke, Greg J. Hunt, Brian D. Eitzer, Gladys Andino, Krispn Given
 - Department of Entomology, Purdue University, West Lafayette, Indiana, University

- Quebec – working group with industry, growers, beekeepers, chemical companies, agrologists
 - Province is largely leading – equipment modification / access to untreated seed
- Ontario – working between PMRA, MOE and OMAFRA
- National – Canadian Honey Council has a working group to address the issue



Bee Kill Incidents in Ontario - 2012

- Over 200 reported and documented incidents of bee kill incidents suspected to be pesticide damage
- 40 beekeepers impacted
- Reported in close association (timing and proximity) to corn seeding
- It is suspected that insecticide dust used to treat the corn seed was responsible
- Reported incidents had symptoms of acute pesticide poisoning (large piles of dead bees, twitching bees)
- Ministry of Environment (provincial), Pest Management Regulatory Agency (PMRA) – Health Canada (federal) conducted inspections for pesticides while the Ontario Ministry of Agriculture, Food and Rural Affairs – Apiary Program (provincial) conducted inspections for bee health, bee diseases and provided technical and advisory support
- Samples of dead bees collected and analyzed
- 70% of the samples analyzed were positive for clothianidin
- The PMRA will give a final report in early 2013
- Meeting between Ontario Beekeepers Association and PMRA took place in October, 2012 – EPA was in attendance

Bee Kill incidents in Quebec – 2009 to 2012

- Pesticide poisoning has taken place in Quebec since 2009
- The province has been leading much of the response and has formed a multi-stakeholder working group
- University researchers have current and upcoming research projects to address impacts of neonicotinoids on honey bees
- Proposed strategies have included:
 - Greater availability of untreated seed with IPM strategies by growers
 - Modification of air seeding equipment
 - Greater communication between growers and beekeepers
 - Sampling and analysis of cases suspected to be pesticide poisoning
- Final reports are available through the PMRA
- Here are the links to the final reports and conclusions from Health Canada on the incidents in Quebec, Canada:
- <http://www.hc-sc.gc.ca/cps-spc/pubs/pest/decisions/erc2010-4374/index-eng.php>
- <http://www.hc-sc.gc.ca/cps-spc/pubs/pest/decisions/erc2010-3100/index-eng.php>
- <http://www.hc-sc.gc.ca/cps-spc/pubs/pest/decisions/erc2010-3391/index-eng.php>
- <http://www.hc-sc.gc.ca/cps-spc/pubs/pest/decisions/epir-edirp2011-4412/index-eng.php>



Health
Canada Santé
Canada

Your health and
safety... our priority.

Votre santé et votre
sécurité... notre priorité.

Report Pesticide Problems

Coughing? Headache? Skin rash? Vomiting?

Have you, your pets or your livestock ever had any of these or other health problems after using pesticides? Then you may have experienced a pesticide incident. If so, it's important that you report it to Health Canada or the pesticide company.

What is a pesticide incident?

A pesticide incident is a negative effect to humans, animals or the environment that can result from being exposed to a pesticide. Common types of pesticide incidents include:

- effects to humans (e.g. skin rash or headache),
- effects to a pet or a farm animal (e.g. vomiting),
- effects to the environment (e.g. dead fish or birds), or even
- problems with pesticide containers.

How do I report a pesticide incident?

There are two ways to report them:

1. Contact the pesticide company using the information on the product label. They are required by law to report all incidents related to their products to Health Canada.
2. Go to www.healthcanada.gc.ca/pesticideincident and fill out one of the forms under the section called "How to report a pesticide incident." If you have any questions about the forms, or need help filling them out, call Health Canada at 1-800-267-6315.



Did You Know?

If you experience
a pesticide incident
it is important that
you report it.



Canada

Why do I need to report pesticide incidents?

Health Canada is in charge of registering pesticides in Canada. Reporting problems helps Health Canada identify possible unexpected issues. For example; if an issue related to the eyes is identified with the use of a pesticide, Health Canada may add a condition to the product label requiring the use of protective glasses.

IMPORTANT!

Health Canada will not contact your employer. You do not need to provide Health Canada with any personal information (name or address) when you report an incident. You may view the report on the Health Canada website.

More information is available at:

www.healthcanada.gc.ca/pesticideincident

or by contacting Health Canada at:



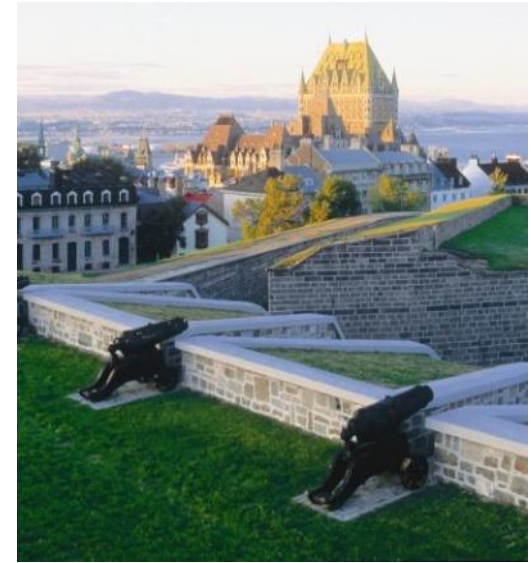
The Pest Management Regulatory Agency
2720 Riverside Drive
Ottawa, Ontario
A.L. 6606D2
K1A 0K9
(Attention: Pesticide Incident Reporting Program)



Within Canada: 1-800-267-6315
Outside of Canada: 1-613-736-3799 (long distance charges apply)



PMRA-Incident-ARLA@hc-sc.gc.ca



Apimondia Symposium 2012

November 16-17

**Élevage de reines, sélection et pathologie de
l'abeille mellifère**
Queen breeding, selection and honey bee health



Canadian Honey Council



Canadian Association of Professional Apiculturists
L'Association Canadienne des Professionnels de l'Apiculture



Centre de référence en agriculture
et agroalimentaire du Québec

