

Canada's Efforts Supporting Bee Health

- With a goal to ensure a sustainable future for both beekeeping and crop agriculture, **the Bee Health Roundtable (BHRT) was established** to provide a national dialogue to identify actions to be taken to address risks and opportunities related to bee health.
- This roundtable is intended to complement, but not duplicate, work already underway at the provincial level and within and between industry sectors
- **Bee health is a multi-dimensional, complex issue** and is affected by many factors including:
 - parasites
 - pests and pathogens
 - habitat loss and food supply
 - queen bee quality
 - weather
 - general hive management
 - exposure to pesticides.
- Evidence suggests that bees are increasingly stressed by **combinations of these factors**
- **Solutions require coordinated, multi-faceted multi-jurisdictional science-based approaches.**
- **Individual additional contributions** to bee health are being provided by researchers, governments and both the apiculture and agriculture value chains

Representatives include:



Focus of the BHRT is centred on **five themes**:

-  Bee care and nutrition
-  Bee pests and pathogens
-  Pesticides in-hive, and outside of the hive
-  Environment and surroundings
-  Agricultural needs

BHRT Actions underway include:

- Increasing the range of management options to control bee pests and pathogens including Varroa mites and other parasites (HopGuard and Lincomycin);
- Actively identifying and promoting ways to reduce exposure of bees to pesticides - both inside the hive and out;
- Improving accuracy of bee health data and information;
- Solutions to support strengthening bee health and increasing Canadian bee populations;
- Development of:
 - models to predict future pollination demand;
 - tools and knowledge for industry to adapt to modern challenges;
 - tools to mitigate pesticide application risk;
 - apicultural research plan;
- Improving communication channels between all stakeholders to improve cohesion and build trust with the industry and the public; and
- Development and maintenance of communication channels between the US and Canada to ensure understanding and resource sharing.

Other initiatives outside of the Roundtable include:

- Health Canada's Pest Management Regulatory Agency (PMRA) implemented mitigation measures in 2014 to reduce pollinator exposure to neonicotinoid insecticides, including:
 - Mandatory use of a dust-reducing seed flow lubricant;
 - Enhanced warnings and advice on how to protect bees on pesticide and seed package labels;
 - Best Management Practices for pollinator protection and responsible use of treated seed;
 - Best Management Practices for protecting pollinators during pesticide spraying;
- Technology applications to improve communication between farmers and beekeepers by identifying the location of hives near fields (DriftWatch, BeeConnected);
- Alberta Bee Keepers project on bee health statistics to determine incidence of pathogens in honeybees, and identify exotic threats;
- Individual and collaborative research initiatives including: In hive treatments; genetics; diseases; spatial relationships; scouting and pest identification methodologies.
- Collaboration with and membership in the US based Pollinator Partnership and Honey bee Health Coalition.

For more information please follow this link to the Bee Health Roundtable Website:

<http://www.agr.gc.ca/eng/industry-markets-and-trade/value-chain-roundtables/bee-health/?id=1409832956249>

Below is a summary of the ongoing work of the National Bee Health Roundtable (BHRT) undertaken over the past 12 months that identify actions which address risks and opportunities related to bee health.

1) Mitigate hive losses from pests, pathogens, pesticides, and other causes; strengthen bee health; and increase bee populations in Canada.

- a. Increase the range of management options to control Varroa mites and other honey bee pests or diseases
 - i. HopGuard II (Varroa mite) & Lincomycin (Foulbrood disease) identified as high priority through AAFC's minor use program for 2015/16.
 - ii. Review underway of potential active ingredients for new registrations for varroa control.
- b. Actively identify and promote ways to reduce exposure of bees to pesticides both inside the hive and out.
 - i. Workplan being developed.
- c. Improvement of information of bee health status.
 - i. Alignment of provincial monitoring activities.
- d. Strengthen bee health and increase population in Canada.
 - i. Two new committees established: improve bee nutrition (products and BMPs), expand bee friendly habitats/environment.
 - ii. Workplan being developed.

Activities underway outside of the BHRT

- Health Canada's Pest Management Regulatory Agency (PMRA) implemented mitigation measures in 2014 to reduce pollinator exposure to neonicotinoid insecticides, including
 - Mandatory use of a dust-reducing seed flow lubricant
 - Enhanced warnings and advice on how to protect bees on pesticide and seed package labels
 - Best Management Practices for pollinator protection and responsible use of treated seed
 - Best Management Practices for protecting pollinators during pesticide spraying
- Determine incidence of pests and diseases in honey bees, and identify exotic threats: Alberta/Manitoba Beekeepers baseline study project developing a snapshot of the current status of bee health underway: Alberta and Manitoba results 2014; adding and British Columbia Ontario for 2015 then, Saskatchewan Québec and the Atlantic region for 2016.

2) Ensure apiculture is a valued and recognized component of agriculture.

- a. Develop information to promote and bring attention to the importance of the industry.
 - i. Economic analysis of bees as crop pollinators completed.
- b. Development of models which can predict future pollination demand.
 - i. Work underway: methodology coordination developed, projections in 2015.

3) Ensure industry expertise.

- a. Development of tools and knowledge for industry to adapt to modern challenges.
 - i. Consolidation of BMPs – communications plan being developed for distribution.
 - ii. Two pest predictor tools in development (east and west).

Activities underway outside of the BHRT

- Development of tools to mitigate pesticide application risk:
- Electronic applications to identify the location of hives to crop protection users:
 - DriftWatch: currently exists with user fee.
 - BeeConnected Geolocation tool: being developed for free distribution.
- Significant investment in development and communication of tools for beekeepers and crop producers (Best Management Practices, biosecurity, education).
- Ministère de l’Agriculture des pêcheries et de l’Alimentation (MAPAQ) Prime-Vert program for soil insects crop scouting and for planter modification

4) Ensure apiculture is a progressive and innovative industry in Canada and that it can meet future pollination requirements of agriculture.

- a. Development and promotion of an apicultural research plan.
 - i. Research inventory in progress, leading to a gap identification and research strategy development.

Activities underway outside of the BHRT

- Multiple individual and collaborative research initiatives: In hive treatments, genetics, diseases, spatial relationships, scouting and pest identification methodologies.

5) Build trust and understanding among all stakeholders.

- a. Develop and maintain channels of communication between all stakeholders and promote communications, both internally and externally, to improve cohesion and build trust with the industry and the public.
 - i. Compendium of Bee Health Activities completed.
 - ii. Communications strategy, targeted at agricultural stakeholders (grower groups and member organizations), Non-agricultural organizations (including NGO`s), governments and the general public being completed.

Activities underway outside of the BHRT

- Multiple collaborative efforts to maintain communication between crop producers, beekeepers, government and the public: Canadian Honey Council, Canadian Seed Trade Association, Canadian Canola Council, Grain Framers of Ontario and Manitoba Corn Growers CHC, CropLife Canada, Provinces.

6) Collaboration with the United States.

- a. Develop and maintain channels of communication between the US and Canada to ensure understanding and resource sharing.
 - i. Initial contact with United States Department of Agriculture (USDA) to identify opportunities for government to government collaboration.
 - ii. Presentation to US based Honey Bee Health Coalition on BHRT action plan.

Activities underway outside of the BHRT

- Some Canadian industry representatives are also members of the US based Pollinator Partnership and Honeybee Health Coalition.
- Corn Dust Research Consortium