

Multi-Stakeholder Bee Health Workshop

March 25, 2014 – Ottawa, ON

Record of Discussion

Goal:

The goal for this multi-stakeholder Bee Health Workshop, convened by Agriculture and Agri-Food Canada at the request of key stakeholder groups, was to provide a national forum and lens to build on the work done by other jurisdictions and in other fora by identifying specific actions that would respond to risks and opportunities for bee health and ensure a sustainable future for both beekeeping and agriculture.

A Steering Committee composed of representatives of key sectors worked together prior to the meeting to identify key participants and to develop an agenda to engage all participants, with particular focus on gaining a shared understanding and appreciation for bee health from a holistic perspective, as well as the perspectives of different stakeholders.

Participants:

The meeting was Co-Chaired by the Canadian Honey Council and Agriculture and Agri-food Canada, assisted by a professional facilitator. In addition to representatives of the beekeeping and apiary sectors, participants included horticultural, grains and oilseeds and organics producers and representatives of industry associations, as well as agricultural input suppliers (seeds, equipment, chemicals), and researchers. Government officials from 8 provinces participated, as well as staff from federal departments and agencies including Agriculture and Agri-food Canada (AAFC), The Canadian Food Inspection Agency, and Health Canada's Pest Management Regulatory Agency (PMRA). A full participants list is attached to the document.

Discussion:

The meeting began with participants providing updates on work already underway, including the Ontario Bee Health Working Group, The Quebec Bee Working Group, The Canadian Association of Professional Apiculturists and collaborations between the Canadian Honey Council, CropLife Canada, and other partners. Provincial governments highlighted new research funding, new financial and information tools available to the sector, as well as work to improve surveillance and monitoring. Industry suppliers noted the increased collaboration and engagement of stakeholders in identifying priorities and participating in key business processes.

A facilitated discussion followed organized around five agreed themes: 1) Bee care and nutrition, 2) Pests and pathogens, 3) Pesticides in- hive and outside of the hive, 4) Environment and

surroundings; and 5) Agricultural Needs. For each theme, participants explored work underway, identification of gaps or needs, and exploration of what else might be done.

1) Bee Care and Nutrition

It was noted that unlike many other countries Canada does not have a national bee health surveillance program at this time. Provinces take an active role and coordinate information through the work of the Canadian Association of Professional Apiculturists and others. A research proposal from the Alberta Beekeepers Commission which aims to build data that can support a national baseline indicator of pests and diseases present in Canada drew interest.

Participants noted that while the Canadian Association of Professional Apiculturists has worked to develop accurate, comparable, and timely monitoring of overwinter hive losses there is no similar system to monitor unusual hive losses that occur over the productive spring and summer months. The European Union has recently begun to monitor this data.

The effectiveness of Best Management Practices (BMPs) was discussed. Beekeepers across Canada benefit from the guidance provided in a National Bee Farm-Level Biosecurity Standard which supports pro-active management of threats to bee health. There are no national BMPs for beekeepers, however, the variety of different circumstances makes developing a single national BMP a challenge.

Some participants drew attention to emerging issues with honey bee nutrition, and the links to changes in agricultural crops and practices. Pollination of agricultural crops often requires hives to feed on a single concentrated food source for some part of the year which is not always sufficiently nutritious for the colony. It was noted that there have been educational efforts by Soil & Crop Protection Associations and some research centres to better educate crop producers on these issues. Some participants observed that while there is a wide variety of products to supplement bee feeding needed from frost to frost (though no supplemental diets replace natural pollen), a complete ingredient list is not always available, which perhaps suggests a regulatory gap. A lack of basic research in this area was also cited as a challenge and a literature review was suggested to assess the state of knowledge.

2) Pests and Pathogens

Varroa mite control is a major issue for Canadian beekeepers. Products for this purpose must control mite populations while not harming bees or affecting honey. Mites develop resistance to products after several seasons, so a rotation of varroa control products is required. The bee industry would like to see a continuous flow of new varroa control products moving through the approval process. It was noted that there is improved co-operation between researchers and chemical companies; however financial resources for further research and registrations remains important in making progress and challenging given the small size of the sectors.

Beekeepers would like to make more effective use of the Minor Use Program, a joint AAFC/PMRA program which annually develops a short list of priority pesticide uses and supports the accelerated development of the data required for those uses to be approved. The small size of the honey/beekeeping sector also influences approval priority.

Some participants mentioned that current testing of bees and hives can indicate the presence of various pests and chemicals. Since presence alone does not indicate causality, particularly when there are multiple stressors, further work is required to determine what caused/causes hive demise.

Some participants noted that it would be valuable to have a better understanding of what a healthy bee population looks like, to understand what the target is that the group should be trying to achieve to ensure sustainability, as well as to identify what research is needed to determine whether bee populations are “healthy”. Researchers noted work being done on genetic tools. There was discussion of the need for co-ordination of research projects to maximize impact and to involve producers in research efforts. Concerns were also raised regarding variations in capacity for action across the country, and our level of awareness of emerging issues at the international level.

3) Pesticides In-hive and Outside of the Hive

PMRA updated the group on work underway to investigate hive loss incidents linked to exposure to neonicotinoids and the reevaluation of the neonicotinoid class of pesticides. Changes to-date include new labelling requirements and BMPs for use of treated seeds which come into force for the 2014 planting season including new seed lubricants which are expected to reduce pesticide dust release. The current review will look at long-term implications as well as immediate challenges. Officials noted that PMRA’s mandate to protect the environment extends to all pollinators. They also noted that they work with international partners.

In future years, the group expected increased demand for laboratory capacity to analyze pesticide residues in bees as well as test for virus and other disease agents. It was noted by government officials present that research funds have been provided to some government and private institutions to support further work, and that provincial and federal officials are training staff, and collaborating in relevant work, including analysis of specific incidents. There was discussion of capacity and timing challenges for monitoring as well as appropriate processes for triage and analysis. Some work is also being done by chemical companies to track developments through the season including tracking sentinel beehives to monitor their progress through the growing season.

The group discussed the need for and use of seed treatments in agriculture. Some raised the need for criteria to determine appropriate treatments, grower education to properly use products, and the implications for yields and profitability of various scenarios. Discussion included

consideration of adopting an integrated pest management approach using pest detection thresholds to indicate when a pest treatment is required; however some participants indicated this approach is not always possible or ideal.

All parties agreed that enhanced communication between beekeepers and crop farmers was required particularly regarding hive location and seed planting. Drift Watch, a software platform for sharing this kind of information was raised as a good example of approaches to enhance communication.

4) Environment and Surroundings

Both beekeeping and crop farming affect the natural world. It was recognized that diversity in the environment provides best results. Discussions included the consideration of how to measure and protect biodiversity. It was noted that crop producers' primary interest is in yields, rather than the nutritional value of cultivars – but dialogues have begun with beekeepers. The Canola Council mentioned a short series of videos that had been produced to demonstrate practices which would be mutually beneficial to crop producers and beekeepers.

The availability of other tools (including guides for scouting bee sites, extension education workshops, and a variety of 'best practices') was also noted, with interest expressed in how to improve on them and share them across the country. Some limits were also noted in how they could be used (information without advice or resources on what to do next). It was observed that more needs to be done to facilitate exchanges of information across sectors and expertise, with inventories of resources being one suggested approach.

A project currently underway in the United States promotes the use of ditches and roadsides bordering crop fields as a buffer zone for wildflowers and other bee and wild pollinator friendly crops. Currently, Ontario is developing some buffer zones.

5) Agricultural Needs

Demand for controlled pollination is increasing dramatically. Blueberries (east and west), orchards, canola seed production and other crops all create demand for controlled pollinators. The availability of honeybees is becoming a limiting factor for the growth in production of some of these crops. Honey producers/beekeepers noted other challenges to their sector including access to labour and innovation.

Planting equipment suppliers are developing new ISO standards for 2016 which will specify the velocity and direction of air coming off the planters. Potential improvements to planting equipment through the use of filters were mentioned. Manufacturers expect to have retrofit kits available to reduce dust spread from the operation of existing planters.

Action Items

The participants indicated strong support for an ongoing forum to discuss and coordinate actions. Industry participants agreed to issue a press release following the workshop to create awareness that the sectors are working together on this challenge.

A list of potential action items stemming from the days discussions is attached. Generally, action items included research (including inventories, support for key projects and a literature review); identification of targets for success (including healthy bee populations and biodiversity, in the context of a competitive sector); surveillance and monitoring (better tools and a national strategy for surveillance); technology transfer and improved BMPs; and communications & education.

It was agreed that a Steering Committee would meet in May to prioritize the proposed action items and to plan next steps.

Annex 1 – Participants, Bee Health Workshop

Susie Miller, Agriculture and Agri-food Canada (AAFC) (Co-chair)

Rod Scarlett, Canadian Honey Council (Co-chair)

Gerry McKee, Canadian Honey Council

Jean Pierre Chapleau, Canadian Honey Council

Grant Hicks, Alberta Beekeepers Commission

David Jones, Canadian Horticultural Council

Janet Krayden, Grain Growers of Canada

Deb Conlon, Grain Farmers of Ontario

William VanTassel, Fédération des producteurs de cultures commerciales du Québec

Salah Zoghalmi, Fédération des producteurs de cultures commerciales du Québec

Greg Sekulic, Canola Council of Canada

Ashley St Hilaire, Canadian Organic Growers

Kelly McAslan, Government of Ontario

Pierre Petelle, CropLife Canada

Maria Trainer, CropLife Canada

Medhat Nasr, Canadian Association of Professional Apiculturists (CAPA) / Government of Alberta

Rheal Lafreniere, Canadian Association of Professional Apiculturists (CAPA)

Connie Rajzman, Canadian Food Inspection Agency, Animal Health

Lorne Jordan, Canadian Food Inspection Agency, Animal Health

Pascal Moreau, Canadian Food Inspection Agency, Animal Health

Mary Mitchell, Pest Management Regulatory Agency (Health Canada)

Lars Jurgenson, Pest Management Regulatory Agency (Health Canada)

Connie Hart, Pest Management Regulatory Agency (Health Canada)

Pat Curry, Pest Management Regulatory Agency (Health Canada)

Tim Talbot, Canadian Food Inspection Agency, Animal Health Directorate

Steve Pernal, AAFC Science and Technology Branch

Jack Hamilton, Oxford Foods

Debbie Etsell, BC Blueberry Council

Brian Gilroy, Ontario Apple Growers

Dave Cary, Canadian Seed Trade Association

Ron Gerold, Canada Agriculture and Food Museum

Caroline Lafontaine, Canadian Seed Growers Association

Geoff Wilson, Provincial Apiarist - Saskatchewan Ministry of Agriculture

Deb Sikora, Ontario Bee Health Working Group

James Calpas, Alberta Agriculture & Rural Development

Chris Maund, New Brunswick Dept. Agriculture, Aquaculture & Fisheries

Shelley Empey, Northwest Territories Department of Industry, Tourism and Investment

Renalyn Pascua-Matte, Northwest Territories Department of Industry, Tourism and Investment

David Feindel, Government of Alberta

Annex 2- Bee Health Workshop

Action items

A) Research (and Information Gathering)

- Inventory of existing and proposed research work
 - ➔ Would help to understand and prioritize where the needs are (can update recent CAPA work)
 - E.g. Screening for varroacides study, winter kill study, fungicide/miticide interaction, sub-lethal effects of pesticides, queen quality research, IPM, soil pests, predictor
 - ➔ Would facilitate stakeholder partnering in research projects underway
 - ➔ Development of national research strategy
- Literature review on bee nutrition to address lack of knowledge

B) Defining what does success look like?

- targets for # hives required to meet growing demand and alternative sources for bees
- definition of a “healthy” bee or population (e.g. index)
- establishing biodiversity indicators/bee habitats
- successful co-existence - agricultural needs
- succession planning
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C) Surveillance & Monitoring

- establish a strategy for regular national surveillance
- better understand the tools and capacity (capability) for analytics
- tools to help beekeepers with monitoring

D) Technology transfer/Establishing BMPs

- Also including a review of existing BMPs for growers and beekeepers to make informed decisions
- farmer to beekeeper communication (e.g. drift watch)
- Circulate measure compliance

E) Communication/Education

- Industry press release on the Bee Health Workshop
- Review/update the profile explaining the value of honey bees
- Develop a long term communication plan/group (multiple audiences)

- Industry to communicate to AAFC Minister the industry's support for the GF2 proposal
- Educate bee industry on how better to position itself for minor use pesticides approval

Establishment of an ongoing forum to continue to discussion (e.g. establish a Terms of Reference)