

GOVERNMENT RESPONSE TO THE
REPORT OF THE STANDING SENATE
COMMITTEE ON AGRICULTURE AND
FORESTRY ENTITLED:
THE IMPORTANCE OF BEE HEALTH TO
SUSTAINABLE
FOOD PRODUCTION IN CANADA

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The Government of Canada is pleased to respond to the Report of the Standing Senate Committee on Agriculture and Forestry (the Committee) entitled: *The Importance of Bee Health to Sustainable Food Production in Canada* (the Report).

The Government commends the members of the Committee, and the many witnesses who appeared before it, for their expertise and commitment to understanding and addressing the factors affecting bee health in Canada. The Government appreciates the Committee's advice that research, communications and knowledge transfer, and stakeholder collaboration are critical factors in supporting the sustainability of the sector. A science-based regulatory process is necessary for effectiveness of these efforts, and we continue to collaborate with partners to provide timely and effective advice, actions and frameworks to support the sustainability of the beekeeping and agriculture sectors.

In 2015, there were 8,533 beekeepers in Canada keeping 721,106 colonies of honey bees, a 3.6% increase in colonies over 2014, and an increase of 8.9% over the average of the previous five years. Honey production of 95.3 million pounds was valued at \$232 million, representing a year-over-year increase in volume of 11.4% and an increase in value of 10.9%. Average prices were stable at \$2.43 per pound. In addition, Agriculture and Agri-Food Canada estimates that the total economic contribution of honey bee pollination to Canadian agriculture is estimated to range from \$3.15 billion to \$4.39 billion per year.

The Government is working with stakeholders to address bee health challenges. Details are provided below regarding our response to the specific recommendations of the Committee in this regard.

RECOMMENDATION 1

RECOMMENDATION 1a

The Committee recommends that Health Canada and the Canadian Food Inspection Agency amend the Honeybee Importation Prohibition Regulations, 2004 in order to allow the importation of bee packages from the United States while developing additional methods and tools to improve the inspection of imported honey bee packages.

The Government of Canada acknowledges the recommendation.

In 2014, CFIA completed a full import Risk Assessment for honey bee packages from the United States (U.S.). The Risk Assessment was circulated for comment prior to it being finalized. The risk of introducing honey bee diseases and parasites from honey bee packages from the U.S. was determined to be unacceptable (i.e., greater than negligible) and the border remains closed.

The Risk Assessment was circulated to all Provincial Apiculturists to determine if mitigating measures could be put in place to safely allow the import of honey bee packages. The majority of provinces replied that there were no mitigating measures available to minimize the risks. One province suggested developing import conditions exclusively for that province; however, this is not feasible given the complexities of the commodity and because import conditions are developed by the Canadian Food Inspection Agency (CFIA) on a national basis.

The *Honeybee Importation Prohibition Regulations*, also called Honeybee Prohibition Order, came into effect in 1987 when Varroa mites were discovered in the U.S. This Prohibition Order effectively closed the border to imports of all honeybees from the U.S. Prohibition Orders are measures put into place in emergency situations (i.e., in case of a disease outbreak in a third country) when there is no other regulatory mechanism to prohibit the entry into Canada of an animal, animal product or by-product that represents a risk of introducing diseases or pests. The Honeybee Prohibition Order was renewed several times. As a result of a risk assessment completed in 2003, the Prohibition Order was amended in 2004 to allow the importation of honey bee queens from the U.S. In 2006, the *Health of Animals Regulations* were amended to include a section regarding the importation of honey bees. As such, honey bees could only be imported into Canada at the discretion of the Minister of Agriculture and Agri-Food, via an import permit. The Honeybee Prohibition Order was allowed to expire in 2006 and was repealed in 2015.

RECOMMENDATION 1b

Agriculture and Agri-Food Canada implement the bee health surveillance project on a continuous basis rather than a four-year period in order to set, in the long term, an overall picture of the health of Canadian bee colonies and in order to take appropriate long term actions to maintain the health of Canadian bee colonies.

The Government acknowledges this recommendation. In July 2014, Agriculture and Agri-Food Canada (AAFC) announced funding (under the Agri-Marketing Program, Assurance Systems Stream) of \$1 million towards a four-year, nation-wide surveillance project to document the health profile of honey bee colonies in Canada. The funding is being provided to the Beekeepers Commission of Alberta, which initiated work on the project during the summer of 2014 in Alberta and Manitoba. Diagnostic work on the study is being led by the National Bee Diagnostic Centre located at AAFC's Research Farm in Beaverlodge, Alberta, in conjunction with Dr. Stephen Pernal of AAFC. The first two years of regionally-based sampling and analyses on this project have now been completed, with results communicated to participating beekeepers and industry stakeholders. In 2016 and 2017, surveillance activities are planned to be fully national in scope, and in the final year, health assessments will also include testing for pesticide residues in pollen stored in bee hives. Collectively, these data provide a comprehensive and systematic baseline assessment of national honey bee health using leading molecular biology techniques, which has never previously been attempted.

These efforts are very much congruent with country or continent-wide bee health surveillance efforts underway in the United States, the European Union, Australia and other countries. In

2016, New Zealand also expressed interest in undertaking a similar country-wide study to address losses of honey bee colonies.

The Government, through AAFC, recognizes the importance of bee health and in 2015, entered into a formal area of collaboration with the United States Department of Agriculture (USDA) on this subject. Currently, analytical techniques for the detection of honey bee pathogens and pests are shared between USDA's Agricultural Research Service laboratories in Beltsville, Maryland and AAFC's national honey bee program in Beaverlodge, Alberta. Moreover, many techniques used in the U.S. and Canadian surveillance projects share common methodology. As pollinator health is an important priority for AAFC, strategic internal funding calls and industry-solicited initiatives will serve as vehicles to support continued surveillance activities in Canada. These, in turn, may integrate with USDA efforts to form a joint continent-wide initiative in honey bee health surveillance.

RECOMMENDATION 2

The Committee recommends that Agriculture and Agri-Food Canada, in conjunction with the provinces and territories, and in collaboration with industry stakeholders, accelerate the implementation of the National Bee Farm-Level Biosecurity Standard through adequate funding and management activities.

The Government supports the recommendation. In the spring of 2010, Agriculture and Agri-Food Canada (AAFC) requested that the Canadian Food Inspection Agency (CFIA) produce a biosecurity standard for the Canadian bee industry, under the Growing Forward policy framework. The standard was to provide guidelines to assist honey bee, alfalfa leafcutting bee and bumblebee keepers in the proactive management of pests and diseases.

Industry partners in the development of the standard included the Canadian Honey Council, the Manitoba Forage and Seed Association, the Saskatchewan Leafcutters Association, the Alfalfa Seed Commission (Alberta), the Canadian Horticultural Council, Koppert Canada and Biosbest Canada. Activities in the development of the standard were guided by a Bee Biosecurity Advisory Committee, with representatives from the producer associations, provincial apiarists, bumble bee industry experts, researchers, and the CFIA. Direct producer input was obtained through on-farm case studies, benchmarking consultations, selected interviews, and selected participation in document review teams. A consulting firm was engaged to facilitate the development process. The advisory committee and consultant identified areas of practical effective controls using an objective, impartial approach that drew on published research, existing regulations, recognized management practice manuals and treatment recommendations.

The standard was published in the spring of 2013. The standard is supported by three sector-specific producer guides (honey bee, alfalfa leafcutting bee, and bumblebee) providing more detailed information on how to reach the target outcomes described in the standard.

In July 2014, the Canadian Honey Council completed another project, funded by AAFC through the Assurance Systems program, to develop good production practices to protect food safety and

quality in honey production, entitled: the *Canadian Bee Industry Safety Quality Traceability Producer Manual - Good Production Practices*.

To bring together the related best practices for biosecurity and food safety into a single practical reference source for Canadian beekeepers, in 2015 the Canadian Honey Council, through AAFC program funding, created the Canadian Beekeepers' Practical Handbook to Bee Biosecurity and Food Safety. The Handbook is a tool to help all beekeepers, regardless of how many colonies they run, maintain biosecure and food safe operations. The Handbook is currently being translated into French for complete national distribution.

This project, which continues through 2017, includes a series of annual workshops taking place during provincial beekeeping association meetings which are attended by both commercial and hobbyist beekeepers and specific directed presentations to hobbyist groups across the country. The project includes a social media component offering direct responses to beekeeper questions.

RECOMMENDATION 3

The Committee recommends that the Pest Management Regulatory Agency accelerate its conditional registration process in order to reduce the current number of conditional registrations granted to neonicotinoid active ingredients.

The Government supports the recommendation to address the conditional registration process to reduce the number of conditional registrations granted.

Since 2008, the Pest Management Regulatory Agency has taken action to limit the number of conditional registrations, which are used only where risks have been deemed acceptable and where additional, confirmatory information has been considered desirable. Currently, one percent of pesticide registrations are conditional in nature; most of these have been conditional for less than five years. Some pesticides have been conditionally registered for longer periods, mainly because the Agency has required information that would take multiple years to generate (i.e., new types of scientific studies to be carried out).

On January 19, 2016, Health Canada published a Notice of Intent Regarding Conditional Registrations to inform stakeholders that the Department intends to discontinue granting new conditional registrations for pesticides as of June 1, 2016. This document was open to public comment for a 60 day period.

For the existing conditional registrations, on a bi-annual basis, the Agency will post a status report, including whether the requested information has been received, the actions that have been taken, and the performance in reviewing the data within the two-year timeline. Where necessary, the Agency will use existing authorities in the *Pest Control Products Act* to ensure that the requested information is provided according to the established timelines.

RECOMMENDATION 4

The Committee recommends that the Commissioner of the Environment and Sustainable Development conduct a follow-up audit to verify whether the Pest Management Regulatory Agency has implemented the recommendations described in its 2008 audit report.

The Government supports the recommendation. The Commissioner of the Environment and Sustainable Development (CESD) completed an audit of Health Canada's Pest Management Regulatory Agency in the fall of 2015. On January 26, 2016, the CESD tabled the 2015 Fall Reports including Report 1 - Pesticide Safety. Health Canada has provided a formal response to the audit, and is addressing the recommendations. Planned actions have been completed, or are underway, with regular updates published on Health Canada's web site.

RECOMMENDATION 5

The Committee recommends that the Pest Management Regulatory Agency take the necessary actions to accelerate its pesticide registration process, especially in relation to new products intended to control mites and diseases affecting honey bees. Any changes in the registration process should also take into consideration the safety of humans, plants, and the environment.

The Government supports the recommendation to take the necessary actions to address the availability of products for mite and disease control in honey bees.

Health Canada's Pest Management Regulatory Agency is responsible for the regulation of pest control products. In the context of beekeeping, the Agency regulates products for the control of invertebrate hive pests (e.g., Varroa mite). The Agency recognizes the significant difficulties from pest problems such as pesticide-resistant Varroa mites. The Agency will consider expedited reviews for submissions for new pest control products for use by the beekeeping industry. The Agency is committed to only registering pest control products that meet stringent health and environmental standards and do not pose unacceptable risks.

Health Canada's Veterinary Drugs Directorate is the federal organization responsible for evaluating and monitoring the safety, quality and effectiveness, setting standards, and promoting the prudent use of veterinary drugs administered to food-producing and companion animals under the authorities of the *Food and Drugs Act* and its regulations. Honey bees are considered "minor species" for veterinary drugs and there are a small number of drug products that have been approved to treat certain diseases in honey bees. The Veterinary Drugs Directorate is committed to expedite the review of drug submissions for minor species like honey bees provided they meet the safety standards and do not pose unacceptable risks for human health.

RECOMMENDATION 6

RECOMMENDATION 6a

The Committee recommends that: The Pest Management Regulatory Agency keep monitoring pollinator mortality during the spring of 2015 to assess whether the protective measures adopted for the 2014 planting season were efficient.

The Government supports the recommendation to continue monitoring pollinator health.

Health Canada's Pest Management Regulatory Agency assessed bee mortality reported during spring 2015. There was a reduction in the number of incident reports associated with neonicotinoid pesticide use during the corn and soybean planting period, compared to 2013 and 2014.

The Agency will continue to assess bee mortality incident reports to monitor the effectiveness of the mitigation measures implemented in 2014, and review an emerging body of scientific and monitoring data of all agricultural uses of neonicotinoid pesticides in cooperation with stakeholders.

RECOMMENDATION 6b

The Pest Management Regulatory Agency conclude, without delay, its re-evaluation of neonicotinoid insecticides based on evidence and sound scientific principles with an objective of protecting the health of bees.

The Government supports the recommendation to complete the re-evaluation of neonicotinoid insecticides as soon as possible.

Health Canada's Pest Management Regulatory Agency is expediting its re-evaluation of all uses of neonicotinoid insecticides in co-operation with the United States Environmental Protection Agency and the *California Department of Pesticide Regulation*, and is collaborating with other national and international partners to examine all the factors that may be affecting bee health.

In January 2016, Health Canada published an overall progress update on the pollinator risk assessment of neonicotinoids. Health Canada also published two documents for public consultation: a preliminary pollinator risk assessment for imidacloprid (one of the three neonicotinoids currently approved for use in Canada), and a value assessment of the corn and soybean seed treatment use of neonicotinoids. The results of the consultation will be taken into consideration before final decision documents are published.

A final assessment for imidacloprid is anticipated in December 2016, with final assessments for clothianidin and thiamethoxam expected in December 2017. The publication of each assessment will include public consultation periods.

RECOMMENDATION 7

The Committee recommends that Agriculture and Agri-Food Canada, Health Canada, and the Department of Finance Canada through the Bee Health Forum, and in collaboration with the provinces and territories, increase the amount and the duration of research funding in order to undertake long-term research projects which contribute to the preservation of pollinator health.

The Government acknowledges this recommendation. The Government recognizes the importance of research in understanding the complexities of bee health and its critical role in supporting the agricultural sector. As such, the Government has increased its efforts to support bee health so as to ensure long term success of the sector. The Government also recognizes the importance of discovery science and innovation in contributing to long term bee health.

Improvements in bee health require action from a wide range of stakeholders including beekeepers, other farmers, scientists, regulators, and agricultural suppliers. Agriculture and Agri-Food Canada (AAFC) has been working with industry and provincial partners on bee health and has provided funding for projects to improve the health and competitiveness of the bee industry. As a result, the Government, through AAFC, is conducting research and has also provided funding for industry-led research projects to improve the overall health of bees. This multilateral approach provides an open and transparent process to address bee health by providing a better understanding for all stakeholders and ensures research is targeted so all participants can potentially benefit. The Government views these partnerships as a key component to improving the health of bees.

For example, in 2014, AAFC established a Bee Health Roundtable to bring together beekeepers, grains and horticulture crop producers, researchers, input suppliers, and provincial and federal government departments to address bee health issues. AAFC has provided funding for the Roundtable to inventory Canadian and international research linked to bee health in order to undertake a gap analysis against Bee Health Roundtable priorities, and to develop a framework for a national bee health research agenda.

Government research, through AAFC, continues to assist stakeholders on the understanding of pesticide residues, native bee diversity, the interactive risk factors associated with colony survival, and determining factors affecting queen reproductive qualities.

The Government, through AAFC, has also made pollinator health a priority area for science collaboration with the United States Department of Agriculture in 2015 in order to advance and share information on bee health issues, such as improving analytical techniques for the detection of honey bee pathogens and pests.

The Government will continue to play an important role in activities to support bee health, including research - whether federally conducted or through key partners - to contribute to the long-term prosperity of the beekeeping and pollination industry. In addition, input from key bee industry stakeholders will form part of discussions during future consultations.

Bee health is very important from Health Canada's perspective. A key component of PMRA's pesticide review and registration process looks at risk factors that focus on the preservation of bee health while ensuring bee keepers have safe and proper tools to protect bee health and to be successful.

RECOMMENDATION 8

The Committee recommends that Agriculture and Agri-Food Canada, through the Bee Health Forum, and in collaboration with the provinces and territories, adopt initiatives aiming to improve management practices of hobbyist beekeepers and growers while minimizing the use of chemical products and ensuring the availability of untreated seeds

The Government acknowledges the recommendation to support improved management practices. Agriculture and Agri-Food Canada (AAFC) has supported the Canadian Honey Council in work to improve management practices of all beekeepers, including funding for food safety and quality resources, education and promotion.

Provincial officials regulate all beekeepers including small operations and hobbyists including those with a single hive. All operations are treated the same by provincial authorities as the risks to bees are shared and practices must be coherently followed for the good of all beekeepers. Many provinces undertake significant 'tech transfer' programs to educate and train all beekeepers including hobbyists.

The Bee Health Roundtable has undertaken projects aimed at updating and harmonizing Best Management Practices of beekeepers. The projects are developing national Best Management Practices for beekeepers with adjustments for regional variations as required by geography or other differing conditions. In spring 2016, a Best Management Practice document will be released to the beekeeping community, including national and provincial beekeeping organizations, to help beekeepers, including hobbyists and small operations, adopt the most up-to-date practices in supporting the health of honeybees.

AAFC's Pest Management Centre Pesticide Risk Reduction Program develops and helps implement strategies to reduce reliance on and risks associated with the use of pesticides in agriculture. The program helps improve availability of novel practices, approaches, and reduced risk pest management products to growers. A number of these strategies are targeted at reducing the negative impacts of insecticide use in crop production, and thus are contributing to Canadian growers' ability to improve their practices with respect to the use of chemical products which may be harmful to bees. Outputs from these strategies include registrations of bio-pesticide products, development and dissemination of decision support tools to minimize unnecessary use of pesticides, recommendations regarding the use of perimeter sprays in orchards, and the use of row covers in brassica vegetable production for insect management.

The Government of Canada acknowledges the recommendation to ensure the availability of untreated seeds. As the federal authority for pesticide regulation, Health Canada is responsible for the registration of pest control products used to treat seed; it has no authority with respect to availability of untreated seed.

Recommendation 9

The Committee recommends that Agriculture and Agri-Food Canada, through the Bee Health Forum, and in collaboration with the provinces and territories, adopt initiatives to improve pollinator habitat such as the planting of selected wild flowering plants on median strips and highway shoulders, and on marginal land around all developments including airports and shopping centers.

The Government acknowledges this recommendation to collaborate with partners to improve pollinator habitat.

Agriculture and Agri-Food Canada (AAFC) has provided funding to the Bee Health Roundtable to undertake a project to gather information and make recommendations to support initiatives to improve bee habitats in Canada. The project aims to harness the collective efforts of Roundtable members to gain a better understanding of what is currently in place, what is planned and what the possibilities are to improve bee habitat. The project will develop a resource with recommendations on how and where to implement best practices which incorporate sound pollinator conservation strategies known to improve bee habitat (including the establishment of diverse floral communities) for use by a full range of stakeholders and potential partners, for communication to interested parties across the country. The project will consider the approaches included in the U.S. Pollinator Health Task Force *National Strategy to Promote the Health of Honey Bees and Other Pollinators*. A final report is expected in late 2016.

While AAFC is not conducting research specific to the increase of habitat (including flora for bees in non-agricultural areas such as airports, shopping malls and highway strips), AAFC is communicating information on creating and maintaining habitat for native bees including the promotion of floral diversity in agricultural landscapes, and is examining the role of landscape pattern, pathogens and pesticides in agricultural systems on the diversity and abundance of native pollinators.