



January 22, 2015

OBA's Response to *Pollinator Health: A proposal for enhancing pollinator health and reducing the use of neonicotinoid pesticides in Ontario.*

INTRODUCTION:

The Ontario Beekeepers' Association has represented the interests of Ontario beekeepers since 1881. Now representing more than 3,000 beekeepers, we are mindful of the unique threat that the overuse of neonicotinoids poses to our environment, our food security, the health of bees and the viability of our industry. Our response to your proposal reflects these concerns but also recognizes that this policy is a significant and positive step forward.

Even after labeling the continued use of neonicotinoids in agriculture as 'unsustainable', Canada's federal pesticide regulator, Health Canada's Pest Management Regulatory Agency (PMRA) has failed to take any meaningful action to restrict these pesticides. The Ontario Beekeepers' Association (OBA) commends the Wynne government for taking a bold step to protect bees and its beekeeping industry with the proposed Pollinator Health Action Plan. In particular, we are encouraged by the adoption of the precautionary principle and the underlying regulatory structure intended to reduce pollinators' exposure to pesticides by ending the overuse of neonicotinoid pesticides on Ontario field crops.

Our comments are consolidated primarily under Section B; however, OBA is committed to the broader issues of pollinator health and looks forward to being actively engaged in the development and implementation of strategic initiatives going forward.

DISCUSSION QUESTIONS: SECTION A

1. *Four key stressors related to pollinator health have been identified. From your perspective, are there any other key pollinator health issues that need to be addressed in order to meet the overwinter mortality target of 15%?*
 - a) It is important to understand that the four stressors are not independent issues, as there are significant interactions and synergies between them. Research shows us that neonicotinoids are related to all of them. By compromising the bees' immune systems, bees are more vulnerable to viruses and find it more difficult to fight off *varroa*; by reducing their navigation skills, neonicotinoids affect the bees' capacity to forage and communicate forage opportunities to other bees; by reducing the availability of a diversity of uncontaminated plants, neonicotinoids compromise nutrition. Bee health issues cannot be addressed in isolation from each other or the impact of neonicotinoids, which is why we believe that the government's commitment to limit these pesticides is central to any strategy to address the survival of honey bees.
 - b) Adopting Best Management Practices by beekeepers should also be recognized as a critical factor in achieving these goals. The OBA encourages good beekeeping management, supports the recommendations of the Provincial Apiarist, and provides access to education through its Tech Transfer Program. Ongoing support by OMAFRA

to the OBA for beekeeper education outreach, research into the practical application of best management practices, and testing of new methods and materials will be essential to enable Ontario beekeepers to continue to be the best beekeepers in Canada. See *QUESTION 8 B* for additional recommendations for knowledge transfer.

DISCUSSION QUESTIONS: SECTION B

1. *What are the positive and negative impacts of this proposed regulation?*

POSITIVE ASPECTS:

- a) **REGULATORY PROCESS.** Ontario's decision to apply a regulatory framework under the Pesticide Act to this commitment ensures that regulations will be enforceable under the law. Ontario's experience developing and managing the current restrictions on the cosmetic use of pesticides will aid in the development of goals, systems and evaluation mechanisms necessary for a new regulatory process.
- b) **TARGETED USE.** The proposed regulatory process recognizes the limited value of these chemicals, but provides flexibility for those few cases that could benefit from it. The preemptive use of neonicotinoid pesticides on over four million acres of corn and soy has made it nearly impossible for beekeepers to avoid the acute and chronic effects of neonicotinoid pesticides. The legislation, which allows for exemptions for those with proven need - if implemented according to intention - will result in significant decreases in the use of these toxins and open up safe lands for beekeepers to place their hives.
- c) **RESTRUCTURING THE SEED MARKET.** Prior to this proposal, farmers had little choice related to seed selection, which provided seed companies and pesticide manufacturers unfettered control of the seed market. Farmers seeking quantities of the latest high-production hybrids could only buy neonicotinoid treated seeds without knowing the cost of the pesticide treatment. By making it a requirement for seed vendors to provide an adequate supply of untreated seed in the high producing hybrids as a default and in a timely manner, the seed market will operate to the benefit of the environment and not to the sole benefit of industry profit. The requirement to report sales of neonicotinoid treated seeds will help assess whether this goal is met.
- d) **FOCUS ON IPM AND TRAINING.** We believe the overriding goal should be a return to farming principles that support the use of any pesticide only when needed. The measures the government is proposing to encourage IPM and to require oversight from licensed agricultural exterminator or 'qualified farmers' is necessary to end the promotion of pesticides as 'cheap insurance'. Similarly proposed voluntary reductions in neonicotinoid dosage by the Canadian Seed Trade Association calls into question past practices by the seed treatment and distribution industry.

These measures will encourage a return to the IPM approach that OMAFRA crop specialists have consistently endorsed. In Italy, where neonicotinoid pesticides were banned for corn (maize) in 2008, the monitoring network, APENET, has found that farmers' untreated maize crops did not suffer reduced yield and that productivity remained high. They concluded that rotating crops and adopting resistant hybrids without using insecticides could achieve a similar reduction in disease incidence. A similar US study also demonstrated slight to no reductions in yields with untreated seeds. Christian Krupke, an associate professor with Purdue University, questions the true agronomic value of these treatments. In 2011 and 2012, Krupke and his colleagues planted corn seed with no treatment, corn with a full rate of Poncho, a Bayer seed treatment, and a third with a lower rate of Poncho. Krupke then evaluated yields, stand count and root damage from the two years of data and said that the findings are clear, "Across the board we found no differences, no statistical difference in any parameter at any location."

- e) CHANGES TO PLANTING PRACTICES. OBA supports the recommended changes and those that have been implemented so far. We understand that the new deflectors and the shift to polyethylene-wax based powder lubricant may reduce the active ingredient in dust at planting time by up to 21%. However, we caution that these BMPs, without the regulatory framework proposed, will not solve the problem. First, there is the issue of compliance with BMPs. Second, the Corn Dust Research Consortium research showed that while reduction in dust was achieved, the toxicity of the dust, itself, is higher. Pollen counts show that even with these improvements, neonicotinoid residues were found and collected by bees from adjoining flowering trees and shrubs. Finally, this same research showed high levels of pesticide on corn pollen collected by bees indicating exposure was not limited to dust at planting. In fact, reduction of dust at planting does nothing to address the mobile, persistent and systemic action of these pesticides.
- f) SCIENCE-BASED. Although we recognize that the Precautionary Principle was an enabling factor in the decision to proceed with the permit system, there is no question that the tenets of this policy direction are based on an abundance of sound, independent science. This year, alone, brought us the Worldwide Integrated Assessment on Systemic Pesticide, a six-year analysis of 600 studies involving 50 scientists that concluded, “The present scale of use, combined with the properties of these compounds, has resulted in widespread contamination of agricultural soils, freshwater resources, wetlands, non-target vegetation and estuarine and coastal marine systems”; as well as an EPA study which showed no value to soy crops; new evidence “that honey bees and native pollinators are facing unprecedented cumulative exposure to these insecticides from combined residues in pollen, nectar and water”, research showing “the chronic impairment of bumblebee natural foraging behaviours induced by sublethal pesticide exposure”; and research concluding that “significantly decelerated growth of neonicotinoid-exposed colonies during the following spring was associated with queen failure, revealing previously undocumented long-term impacts of neonicotinoids”, to share just a few that are collected on the OBA website: www.ontariobee.com/neonics.

NEGATIVE ASPECTS:

- a) ‘ASPIRATIONAL’ GOALS. OBA has concerns with the government’s qualifying use of the word ‘aspirational’ which could give the impression that these goals are merely desired rather than firm and measurable targets. This word implies that a significant shortfall in what is achieved would be acceptable to the government, however much that would *not* be acceptable to beekeepers or the general public. *We request that the word ‘aspirational’ be removed from your policy and talking points.*
- b) PERCEIVED COMPLEXITY OF IMPLEMENTATION. THE success of this policy in protecting pollinators depends on the rigor of enforcement and speed of implementation. In its simplest terms the policy aims to make untreated seed the default option and treated seed only available to farmers who can demonstrate need. While we appreciate OMAFRAs desire to ensure a workable solution, we are concerned that agchemical companies will use process objections to attempt to delay or sidetrack implementation in order to maintain sales at the present level. *The OBA urges the government to be guided by ‘first principles’ and the need to move quickly to protect pollinators. Every planting season under the current situation poses another potential hazard to pollinators.*
- c) THE SCOPE. While limiting corn and soy is a reasonable starting point, we do not understand the rationale for excluding sweet corn and winter wheat, as it is our understanding that winter wheat is a crop with little need for neonicotinoids. Wheat will continue to be a problem for bees as planting coincides with the fall hive build-up and preparation for winter. Sweet corn, too poses a problem as bees are attracted to its pollen. *We request a comprehensive approach extending restrictions to all field crops.*
- d) ALLOWED USES FOR NEONICOTINOIDS. Proposed reductions in neonicotinoid use will not result in the same beneficial effect on pollinator health if they are limited to seed

- treatments and replaced with foliar sprays. *We urge the inclusion of foliar sprays in the legislation.*
- e) ALTERNATIVE PRODUCTS AND STRATEGIES. *Government oversight must include advising and monitoring the indiscriminate use of all pollinator harmful pesticides with a goal of reducing overall pesticide use via the widespread adoption of IPM.*
2. *Is the regulatory proposal sufficient to reduce the acreage of NNI-treated corn and soybean seed by 80% by 2017? Do you have any other suggestions?*
- a) GOALS. It is not clear whether the 80% figure is a combined figure or a goal for each crop. Given that research is indicating that soy may not benefit from neonicotinoids, it is likely that perhaps less than 10% - maybe none - may require treatment. We would like to ensure that the goal for corn is not reduced accordingly. *We recommend that each crop have its own minimum goal of 80%.*
- b) See b, c, d in Q.1.
- c) REALISTIC EXPECTATIONS. It's important to note that the lasting and cumulative impact of neonicotinoids make an immediate 'bounce-back' of colonies unlikely. Neonicotinoid pesticides can linger in soil and water for years and be taken up even by untreated plants that are sowed in contaminated soil. Bees could still experience sub-lethal effects from the pollen and contaminated water. The experience in Italy, though, provides good evidence that within three years the bee populations showed signs of complete recovery from the effects of neonicotinoids.
3. *Are there any alternative conditions of use for NNI treated corn and soybean seed that should be considered?*
- a) No.
4. *Are there alternative management practices or rules for use that could minimize immediate and long-term exposure of pollinators to NNI's that should be included in the regulation?*
- a) Beekeepers within 5 km of farms that have been given a permit should be notified as soon as the permit is applied for. OMAFRA has supported the development of a beekeeper locator app. *This app should also be used to inform beekeepers of the location of hot spots near their bee yards.*
- b) Immediately protect queen-rearing centres. Ontario currently supports a growing and vibrant queen rearing industry that supplies mite resistant stock to Ontario beekeepers and beekeepers in Canada and around the world. The loss of queen rearing stock due to neonicotinoids is destroying genetic material that has taken generations to perfect. *We strongly urge the government to immediately declare a 'no neonicotinoid' zone in a 5 km radius from queen breeding grounds of beekeepers with a permit for queen sales.*
- c) Prevent exposure of 'staging' areas during critical assembly times. Ontario beekeepers often gather their colonies together in 'staging' yards for efficiency in assessment, preparation and loading for moving to pollination sites or summer pastures. In this way they are particularly susceptible to exposure to neonicotinoid applications within 2 – 5 km of these staging areas. *We recommend a 2-5 km 'no neonicotinoid' zone around staging areas.*
5. *Are there other factors such as environmental considerations that could be incorporated into the decision of the need to use NNI insecticides?*

- a) FURTHER USE OF THE PRECAUTIONARY PRINCIPLE. The proposed regulations utilize, in part, the Precautionary Principle as affirmed by the Supreme Court of Canada in their ruling in favour of the Government of Ontario on October 17, 2013. This ruling stated that “This principle of international law recognizes that because there are limits to being able to determine and predict environmental impacts with scientific certainty, environmental laws and policies must anticipate and prevent environmental degradation without waiting for proof that the natural environment has, in fact, been impaired.” *We believe that this principle should be extended to all systemic pesticides including new temporary registrations allowed by PMRA and those used in horticulture for public and private gardens. The vectors of exposure for systemics are the same whether they are neonicotinoids or other pesticides that might be highly toxic to bees.*

7. *What qualifications would be appropriate for third parties to support this regulatory proposal?*

- a) APPLICATION OF STRONG CONFLICT OF INTEREST GUIDELINES prohibiting those with direct, former or current ties to the AgChem or seed industry would be essential for anyone whose role would be to review or recommend exemptions to the prohibition against coated seeds.

8. *Please provide any comments on the proposal or related issues that you feel have not been addressed in the questions above.*

- a) RESEARCH. A comprehensive research agenda should be part of ongoing support for pollinator health. However, any and all research used in decision-making must come from independent sources that are not funded directly, indirectly or in part by parties in obvious conflict, such as GFO, Seed Companies, Crop Science, Syngenta or CropLife. All data used in policy making must be transparent and accessible by all. All data and conclusions on impacts to bee health must reflect both short-term and long-term synergistic exposure levels for LD₅₀.

- b) KNOWLEDGE TRANSFER. Significant resources should be allocated for knowledge transfer strategies that will promote best practices in both crop farming and beekeeping. Research in the field of KT shows that changing behaviours and attitudes require more than the linear provision of information. Speaking on behalf of our own industry, we believe that a comprehensive plan must be developed that provides support targeted to different stakeholders such as those providing pollinator services, honey production, bee breeders, or small or hobby beekeepers. The strategy should address barriers to change, provide a variety of iterative opportunities for learning and practice such as college-level courses, apprenticeships, mentoring, self-audit tools, decision aids, workbooks, workshops, conferences, on-line and extension learning and videos. We believe that with additional resources OBA's role as knowledge generator and broker could be expanded to support the Province's goal of reducing winter losses to 15% by 2020.

- c) ONTARIO POLLINATOR HEALTH STEERING COMMITTEE – there is currently no one coordinating group that brings together and balances pollinator interests and expertise.

The issue of pollinator health is managed through a number of silos representing different facets of the program and even in some cases different departments within OMAFRA. We also suggest that there are credible experts from other jurisdictions such as Europe and the U.S. whose research should be reviewed and whose opinions should be heard. We strongly urge the government of Ontario to strike a pollinator health steering committee comprised of those who have a stated interest in pollinator health. The mandate of this group is to advise and monitor government strategies in accordance with the stated goals for bee health and pesticide use reduction.

(PLEASE NOTE THAT THE OBA DOES NOT SUPPORT THE NATIONAL BEE HEALTH ROUNDTABLE This roundtable was assembled by Agriculture Canada and includes large agricultural

groups and pesticide manufacturers. Despite a direct request to the federal Minister of Agriculture, Ontario's beekeepers are not represented on this roundtable. Therefore, we do not feel that it should be referenced in this policy, as the outcomes of this roundtable are unlikely to be relevant to Ontario's unique situation.)

- d) MEASUREMENTS AND ACCOUNTABILITY. We would like to see a clear evaluation and accountability strategy with detailed interim and longer-term measurements and reports on actions and outcomes. For one thing, this is an opportunity to provide important leadership to other jurisdictions on effective policy, strategy and impact. For another, it provides our collective efforts with information to enable reaction and timely adjustments in strategy.
- e) STRENGTHEN OMAFRA'S APIARY PROGRAM. Ontario's Provincial Apiarist and the apiary inspectors play a crucial role in monitoring and maintaining the health of Ontario's bees through oversight, inspections and education. *We recommend this program be provided with adequate resources to support the ambitious goals embodied in the government's proposal.*

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