



## **OBA'S POSITION ON THE CONTINUED USE OF NEONICOTINOID PESTICIDES**

### **SUMMARY**

Representing Ontario's beekeeping industry, The Ontario Beekeepers Association requests that:

1. Regulators immediately reassess the bee safety of all neonicotinoid pesticide products and suspend all conditional registrations until we understand how to manage the risks posed by these products to honey bees and other pollinators.
2. Beekeepers are compensated by the government (who issued the registration) for losses to crops, bees and equipment caused by deaths, chronic disease, or toxic residues in equipment caused by the use of neonicotinoid pesticide products from the crop year 2012 and forward.
3. Independent research should be undertaken to determine threats of long-term soil, water and pollinator toxicity and whether the substitution of less toxic pesticides or integrated pest management practices can eliminate the threat to honey bees and other pollinators.

### **FULL POSITION STATEMENT: BACKGROUND AND RATIONALE**

In 2012, Ontario experienced widespread losses of hundreds of colonies in various locations throughout the Province. If the experience of 2012 is any indication of future problems, Ontario beekeepers are facing a new threat to the viability of beekeeping in Ontario.

At the time of the poisonings, Ontario beekeepers suspected that the highly bee-toxic neonicotinoid insecticides used in corn seed treatment were the cause of the acute bee poisoning. Observations of weakened hives led to the belief that colonies were also suffering from sub-lethal doses of this relatively new pesticide.

Scientific evidence now supports the opinions and observations of Ontario's beekeepers. With work done in Quebec and in Europe and the recent opinion of Canada's federal regulator, the Pest Management Regulatory Agency (PMRA), the connection between the use of NNIs (neonicotinoids) and damage to Ontario's beekeeping industry has been confirmed<sup>1</sup>:

- *The information evaluated suggests that planting of corn seeds treated with the nitro-guanidine insecticides clothianidin and/or thiamethoxam contributed to the majority of the bee mortalities that occurred in corn growing regions of Ontario and Quebec in Spring 2012.*
- *Clothianidin was detected in approximately 70% of the samples analyzed in Ontario and clothianidin and thiamethoxam were detected in the samples analyzed from Quebec. On a bee yard basis, these residues were detected in approximately 80% of the bee yards where dead bee samples were collected and analysed.*

- *In almost all cases, there was evidence of corn planting near affected beeyards. Information collected from growers confirmed large areas of corn planted near these*
- *yards, and that negative pressure (vacuum) planters and talc seed flow lubricants were used. Information from OMAFRA and Agricorp confirmed a correlation between the bee mortalities and location of corn growers in Ontario.*

PMRA has been responsive to the issue and is reevaluating the registration of these chemicals:

*“To facilitate the evaluation of these chemically similar products, all nitro-guanidine neonicotinoids are being placed under re-evaluation to ensure a comprehensive environmental evaluation, including consideration of new scientific evidence emerging from the research community and to reflect the new methodologies being developed at the international level. Should evidence become available demonstrating reasonable grounds to believe that health or environmental risks of a pesticide are unacceptable, the PMRA will take appropriate regulatory action.”*

However no timetable for a decision or criteria for regulatory action has been published by the PMRA.

Clearly, based on last year’s experience Ontario has been singularly affected by NNI poisoning. In 2012, 67 clothianidin-related honeybee pesticide damage incidents (in total over 230 Ontario bee yard locations) were reported to the PMRA. Of these 65 (or 97%) of all clothianidin poisonings reports originated from Ontario beekeepers. This situation may be due in part to the unusual early spring build up by Ontario colonies and dry weather conditions.

Even if acute bee poisonings are not seen at the same rate in 2013, the issue of pesticide poisoning from NNIs will continue to be of great concern to Ontario beekeepers. Acreage devoted to corn continues to increase and represents almost 25% of Ontario’s field crops. The long-term effect of applying water-soluble NNIs on soil and the water table is not known.

Ontario is extremely sensitive to the health of pollinators. Ontario’s commercial fruit production with a farm gate value of over \$225 million, is an important economic driver and source of jobs at both the farm, processing and distribution centres.

The OBA has considered both Best Management Practices (BMPs) and Integrated Pest Management (IPM) as possible solutions. And for the short term, this planting season, promoting BMPs to farmers will be our best opportunity to contain NNIs and limit the amount of hive mortality. Our dialogue with farmers indicates they are sympathetic to beekeepers situation and most assuredly do not want to harm honey bees. They have and are willing to continue to promote awareness for Best Practices. However, no farm group can guarantee that all members will follow BMP guidelines such as seeding only at night or early in the morning. If a farmer has to seed thousands of acres of corn during unpredictable spring weather and soil conditions, they will be restricted to a narrow window for planning.

BMPs are aimed at reducing the spread of dust during planting. They will not prevent toxic build up in the soil. Nor will they prevent the spread of water soluble NNIs to ponds or other sources of water that bees access during the spring and summer.

The OBA has put forward IPM recommendations. Adoption of this IPM strategy would see crop rotations, the use of untreated seeds where there was no immediate threat of crop damage and other IPM practices that reduce the use of NNIs unless they are absolutely necessary. We have heard that many if not most corn farmers believe that they cannot get the yields they expect without the continued use of treated seeds. Data from other jurisdictions does not support that assumption.

Also, rotating treated with untreated corn seed does not seem possible. An informal survey by the OBA found that popular corn seed varieties are not available as untreated seed.

NNIs are relatively new pesticides and long-term risks are not well known. Experience in Europe has shown that the effects on crop yields are at best mixed on test plots with and without untreated seeds. We will need Ontario research to show that yields are not affected when there is no infestation. And that the risks from continued exposure in terms of resistant mutations may outweigh the benefits of continued use of NNIs.

The future of Ontario's beekeeping industry may be directly threatened by the continued and widespread use of neonicotinoid pesticides. This threat was clearly exposed in 2012 but may be even greater once we better understand sub-lethal effects and soil and water toxicity.

PMRA's report has established the link between bee kills and neonicotinoids used in the planting of corn or other crops attractive to bees or other pollinators like bumble bees. We believe that continued use of these pesticides poses an unacceptable likelihood of serious, imminent harm that is causing or will cause:

- Significant reduction in populations of domestic honey bees, bumble bees or native pollinators.
- Significant decreases in honey production.
- Serious effects on other agricultural systems as a result of decreases in pollination services.
- A reduction in pollination of wild plants in a way that may alter ecosystems.
- The loss or decimation of a viable commercial beekeeping industry in Ontario

Representing Ontario's beekeeping industry, The Ontario Beekeepers Association requests that:

1. Regulators immediately reassess the bee safety of all neonicotinoid pesticide products and suspend all conditional registrations until we understand how to manage the risks posed by these products to honey bees and other pollinators.
2. Beekeepers are compensated by the government (who issued the registration) for losses to crops, bees and equipment caused by deaths, chronic disease, or toxic residues in equipment caused by the use of neonicotinoid pesticide products from the crop year 2012 and forward.
3. Independent research should be undertaken to determine threats of long-term soil, water and pollinator toxicity and whether the substitution of less toxic pesticides or integrated pest management practices can eliminate the threat to honey bees and other pollinators.

We welcome commentary from OBA members and our stakeholders.

[info@ontariobee.com](mailto:info@ontariobee.com)

905-636-0661

---

<sup>i</sup> From: Evaluation of Canadian Bee Mortalities that Coincided with Corn Planting in Spring 2012 PMRA