



## BEST MANAGEMENT IPM PRACTICES

### SIX THINGS GROWERS CAN DO TO PROTECT HONEY BEES

The Ontario Beekeepers' Association has developed this six-step reference guide as part of our commitment to work with growers to minimize environmental risks to bees and other pollinators. This guide is intended to prevent a recurrence of the incidents of 2012 involving the acute and chronic neonicotinoid poisoning of honey bees by encouraging a set of best management practices for Integrated Pest Management (IPM) for this class of systemic insecticides until such time that they have been replaced with ones that will not harm honey bees.

IPM is a proven approach to pest control that considers all management options including physical, biological, behavioural and chemical to maintain pests below an economic injury level. This document is not intended to serve as a comprehensive guide to IPM, but rather to provide specific actions toward replacing or reducing neonicotinoid pesticides, a substance increasingly linked to weakened or destroyed bee colonies.

1. DO NOT USE NEONICOTINOID PESTICIDES AS A PRIMARY PEST CONTROL MEASURE. Research has shown that there is no safe level of exposure for honey bees: even very small quantities of neonicotinoids affect pollinator species leading to weakening and decline.
2. RESTRICT USE OF NEONICOTINOID SEED TREATMENTS TO CONTROL GRUBS ONLY, and never use treated seeds for these pests during the first year of growing corn in a field, or after crop rotation.
3. APPLY IPM PRINCIPLES TO REDUCE OR ELIMINATE NEONICOTINOID PESTICIDE USE:
  - a. Monitor pest levels in the fall and apply treatments only when necessary.
  - b. Practice crop rotation to decrease pesticide use: if corn is planted every second or third year, pest levels should remain low enough that treatments are not required.
  - c. Consider controls that do not contain systemic insecticides such as neonicotinoids.
4. ASK FOR SEEDS TREATED ONLY WITH FUNGICIDE. Seed companies are able to comply with these requests, but may not be willing to do so for popular varieties. You may need to insist that untreated seed be made available at the same price or less than treated seed.
5. IF YOU MUST USE TREATED SEED, DO NOT USE IT IN THE SAME FIELD FOR CONSECUTIVE YEARS: this causes the active ingredients to accumulate in the soil, as neonicotinoids are systemic and persist in soil for a long time. They will also kill beneficial organisms like earthworms and predatory insects.
6. AVOID APPLICATION NEAR STANDING FIELD WATER, PUDDLES OR AREAS THAT RUNOFF INTO DITCHES. Spring is a peak water collection foraging time for honey bees that coincides with seeding time. This is a high-risk point of contact.

For comprehensive information on IPM practices or additional resources please contact your OMAF crop specialist.

Supporting References:

- Existing Scientific Evidence of the Effects of Neonicotinoid Pesticides on Bees. Environment Agency Austria (EAA) et. al., 2012
- Taking Steps Toward Reducing the Risk to Pollinators. Tracey Baute, Field Crop Entomologist, Greg Stewart, Corn Specialists, OMAF
- Integrated Pest Management, OMAF <http://www.omafra.gov.on.ca/english/crops/insects/ipm.html>
- Monitoring practices, OMAF: <http://omafra.gov.on.ca/english/crops/pub811/1other.htm#fFigure12>