

# Farmers & Honeybees

A Farmer's Guide

bees  matter

We all depend on honey bees. They pollinate our crops, they help plants grow the fruit that we eat, and they provide us with honey.

When farmers—and neonicotinoids—are blamed for hive losses, it can be hard to respond to the criticism of the things we do every day in a way that explains our commitment to the environment.

This guide aims to help us answer some of the questions we get on a frequent basis.

## Q. What factors affect Canadian honey bees?

Every spring, beekeepers in Canada expect some losses in their hives after the winter. When honey bees have health issues outside of the normal spring losses, they are as a result of a number of factors.



### Parasites

The varroa mite (*Varroa destructor*) is the biggest threat to Canadian honey bee health. Said to infect nearly all domesticated hives, the mite is a parasite that feeds on the blood of the bee, spreading disease and weakening the insect.



### Inadequate nutrition

Without enough high-quality pollen collected during the summer months, a beehive won't have enough food to survive the overwintering process.



### Weather and wind

Honey bees are not native to North America, and were actually brought here from Europe in the 1600s for honey production. That means that they're susceptible to extreme cold, like in parts of Canada that experience particularly harsh winters. Harsh conditions like wind can also affect crops and reduce the food supply for honey bees.



### Pesticides

Though they're designed to be effective against pests that feed on the tissue and sap of the living plant itself, there's always a risk that pesticides could affect pollinators like honey bees. This risk, however, is manageable, and all farmers—and members of the agricultural industry—are keenly aware of what they can do to help.



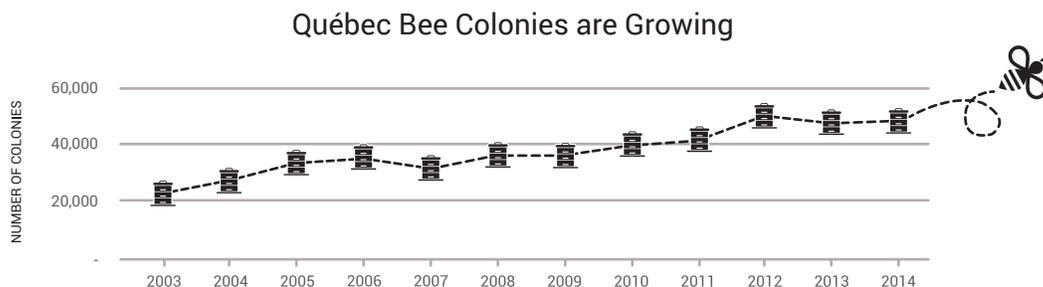
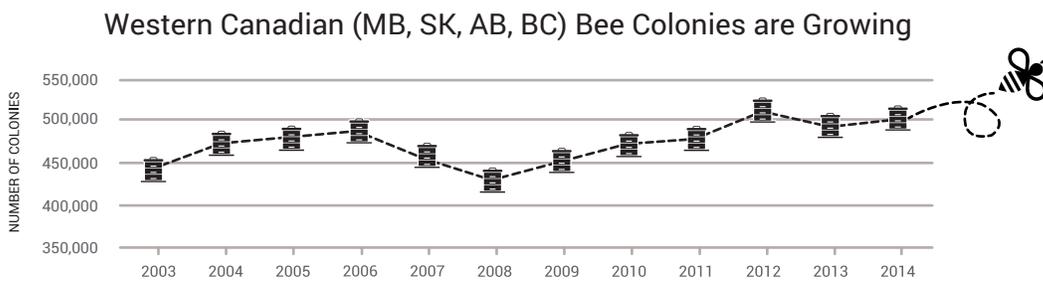
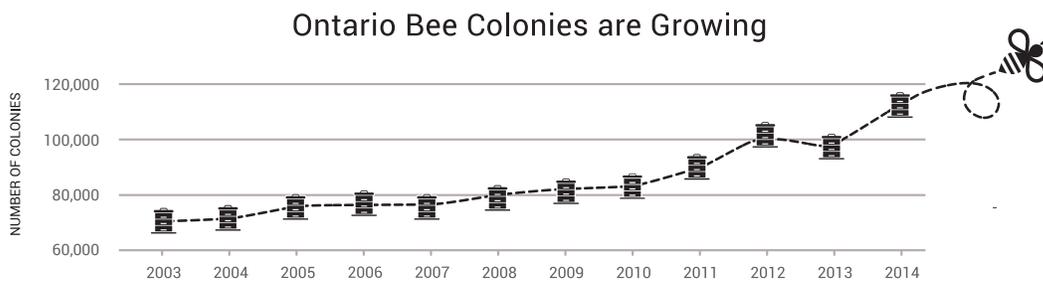
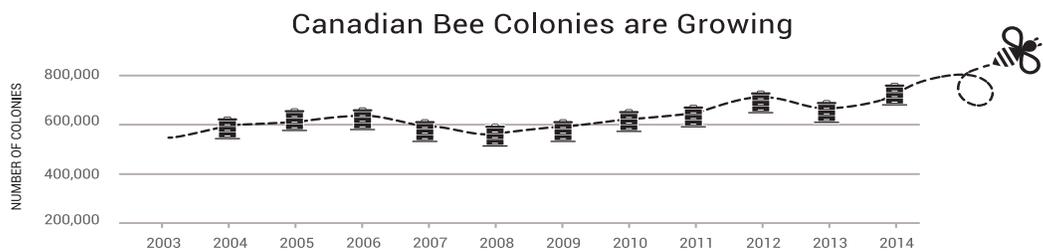
### Disease

Like humans, honey bees can be affected by numerous viruses and bacteria. Some bacterial infections, for example American Foulbrood, can infect—and usually kill—bee larvae. Worse, its spores can remain in honey and beekeeping equipment for up to 40 years. In fact, the recommended treatment for hives infested with American Foulbrood is destruction by burning in order to eliminate the spores.

In fact, scientists are constantly researching new pesticides to control new pests or to better manage existing pests. Modern pesticides are now so effective and targeted that farmers often only need to apply very small amounts. Neonicotinoids are one example of a new innovation that was developed to lower the risk to honey bees.

## Q. Are honey bee populations declining?

Statistics Canada data shows that the number of hives farmed in Canada is actually rising although there have been isolated honey bee health issues in some regions of Canada. As farmers, we are committed to protecting honey bee health. After all, pollinators are an important part of agricultural success in Canada. In fact, they are largely responsible for one in every three bites of food we eat.



## Q. How are farmers protecting bees?

Farmers practice integrated pest management to control pest pressures in their fields. We do it in several different ways including mechanical tools, biological and cultural controls and pesticides. Integrated Pest Management is about knowing when to use the right tool for the job. Pesticides are only used when they're the best way of controlling pests, but in other situations, for example, the right tool could be a crop rotation strategy.

Farmers are always careful with the amount of pesticides they use. IPM strategies take into account what's best for our land and what's best for the wildlife and pollinators living on our land.



### Working with Professional Organizations

But we don't work alone. Whether we grow corn, soybeans, canola or any other Canadian crop, we work with our peers to develop new best management practices. Here are a few of our many initiatives dedicated to supporting the health of pollinators like the honey bees.

#### The Bee Health Roundtable

The Bee Health Roundtable was formed to allow for dialogue between members from the agricultural industry, the government, beekeepers and academia to devise a national approach to pollinator health. Throughout the discussion, they have created and adopted several initiatives to support honey bees, called the National Bee Health Action Plan.

#### The Bee Healthy Roadmap

In partnership with the Honey Bee Health Coalition and CropLife Canada, farmers have worked with numerous organizations to develop the Bee Healthy Roadmap, a dedication to improve honey bee health by using the power of collective action.

#### Norfolk Restoration Project

As part of a partnership with Nature Conservancy Canada, CropLife Canada worked to restore 10 acres of farmland in Norfolk, Ontario to pollinator-friendly habitat.

#### Honey Bee Health Surveillance Study

Sponsored by Agriculture and Agri-Food Canada, this country-wide study will take place over four years to document the health of Canadian honey bees.

## Q. How is the agricultural industry protecting bees?

In recent years, farmers and scientists have worked more closely with beekeepers to protect their hives. Whether this has meant developing new products to benefit honey bees or altering the way they use products to protect honey bees, the results have been innovative and collaborative strategies to mitigate risk.



### Seed treatments

Insecticide seed treatments are among the safest insecticide applications ever developed. Because the product is applied directly to the seed, the amount used is considerably less than would be needed if the farmer had to spray an entire field. The seed is then planted directly into the ground so that beneficial insects, like honey bees, are not exposed to the product.



### Fluency agents

The innovative creation of products like fluency agents—technologies to aid in seed lubrication—allow us to significantly lower the rate of dust released during planting by 65 per cent to ensure the treatments remain on the seeds. This further reduces the risk of exposure to honey bees.



### Regulations

Health Canada's Pest Management Regulatory Agency (PMRA) is responsible for regulating all pesticides in Canada, including insecticide-treated seeds. With one of the most rigorous evaluation

processes in the world, they do a comprehensive scientific review and risk assessment of over 200 separate studies that test a range of health and environmental impacts before they will approve a pest control product for sale and use in the country. And even afterwards, the PMRA continues to look at all available scientific evidence to ensure the products continue to meet modern regulatory standards.



### Best Management Practices

There are also a number of precautions we take on a regular basis that protect honey bees and other wildlife. They include:

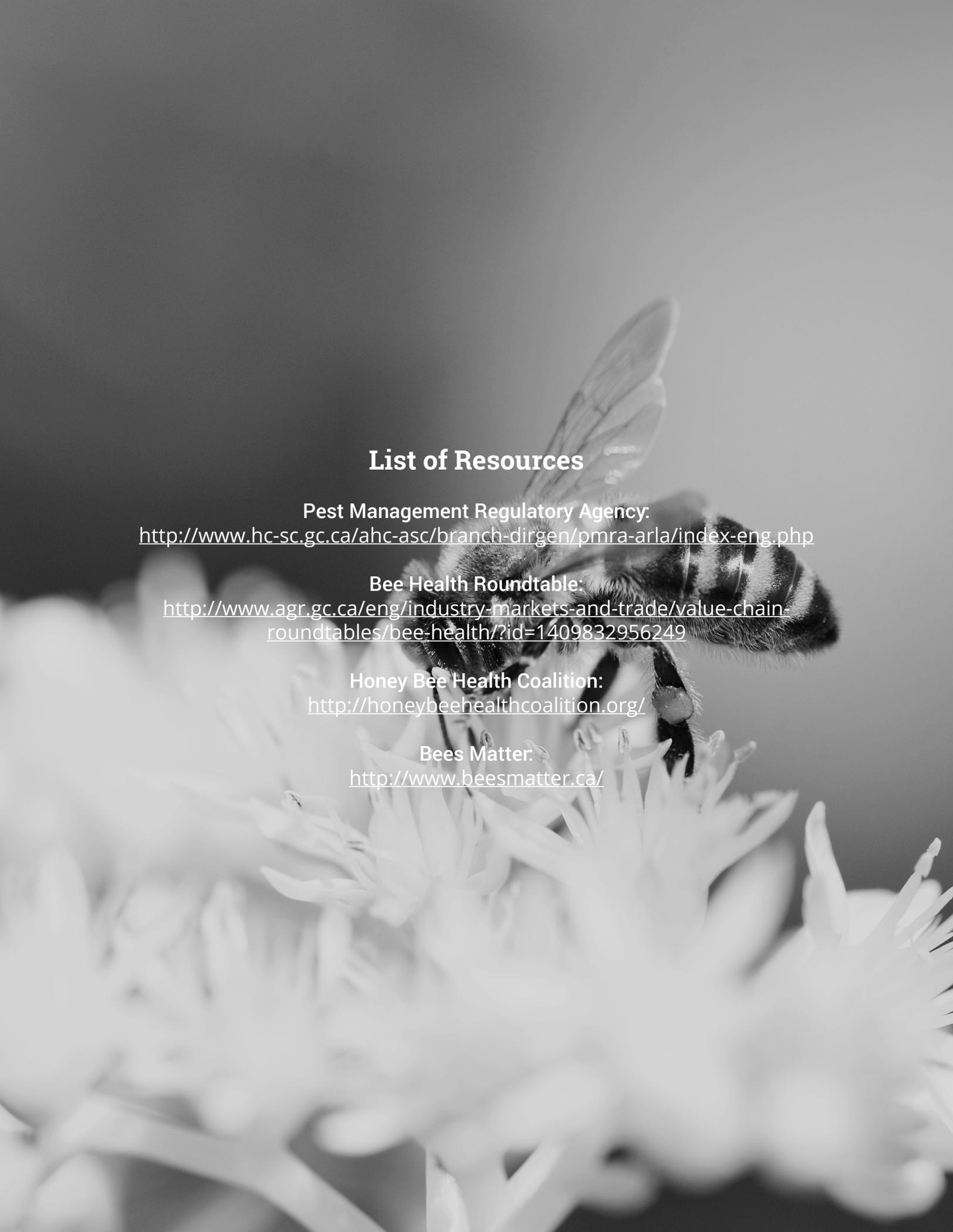
- Removing flowering weeds before planting to prevent bees from being attracted to our fields when we treat them;
- Providing honey bee habitats away from treated crops;
- Monitoring weather before we plant treated seed to avoid dry, windy conditions;
- Taking every available precaution when handling treated seeds to avoid generating dust; and
- Communicating with neighbouring beekeepers.

## **Know your neighbours**

The best way to ensure our neighbours know what we're doing is to talk to them. Whether we're crop farmers or beekeepers, we're all Canadians who want the best for our environment. Extending a hand is an important way of making sure we're heard, and making sure the work we do to preserve and boost honey bee populations is known.

And since beekeepers, whether commercial or hobbyist, often keep apiaries in farmland where their bee livestock have access to a natural environment, it's important for us to begin the conversation about how we can work together to keep those hives thriving.

Getting to know your neighbours means being able to form a solid relationship, which means being able to discuss our management practices and continue the conversation about our relationship with honey bees.



## List of Resources

**Pest Management Regulatory Agency:**

<http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/pmra-arla/index-eng.php>

**Bee Health Roundtable:**

<http://www.agr.gc.ca/eng/industry-markets-and-trade/value-chain-roundtables/bee-health/?id=1409832956249>

**Honey Bee Health Coalition:**

<http://honeybeehealthcoalition.org/>

**Bees Matter:**

<http://www.beesmatter.ca/>