



Bayer CropScience



The Bayer 
Bee Care Program
North America

Of all the insect species that act as pollinators, perhaps none is of greater importance than the honey bee, *Apis mellifera*. Not native to North America, the honey bee was introduced by European colonists and quickly spread as agricultural production expanded westward. **Today, honey bees are responsible for pollinating many of the important fruits, nuts and vegetables necessary for a healthy diet,** and are an important contributor to the rich diversity of flowering plants we enjoy around our homes and gardens.



While it's clear that honey bees are important for modern agricultural production, it's also true that **the demand for pollination has never been greater,** and this has presented unique challenges for farmers and beekeepers alike. Honey bees face many challenges, including inadequate nutrition, parasites, diseases, extreme weather events, reductions in forage areas, genetic characteristics and, in some cases, colony management practices.

With the need to feed an ever-growing human population, we've seen a change in farming practices toward larger field sizes and less diversification in crops. To meet this increased demand, commercial beekeepers frequently move their colonies thousands of miles every season, creating additional stress on colonies. Finding solutions to these factors is critical to food production and agricultural sustainability, which is why Bayer established its Bee Care Program. **The program brings Bayer's extensive bee health experience and knowledge under one coordinated platform.**

Bayer Bee Care Centres

Bayer has established two Bee Care Centres dedicated to improving the understanding and health of pollinators, one at Bayer CropScience global headquarters in Monheim, Germany, and the other at our North American headquarters in Research Triangle Park, North Carolina.

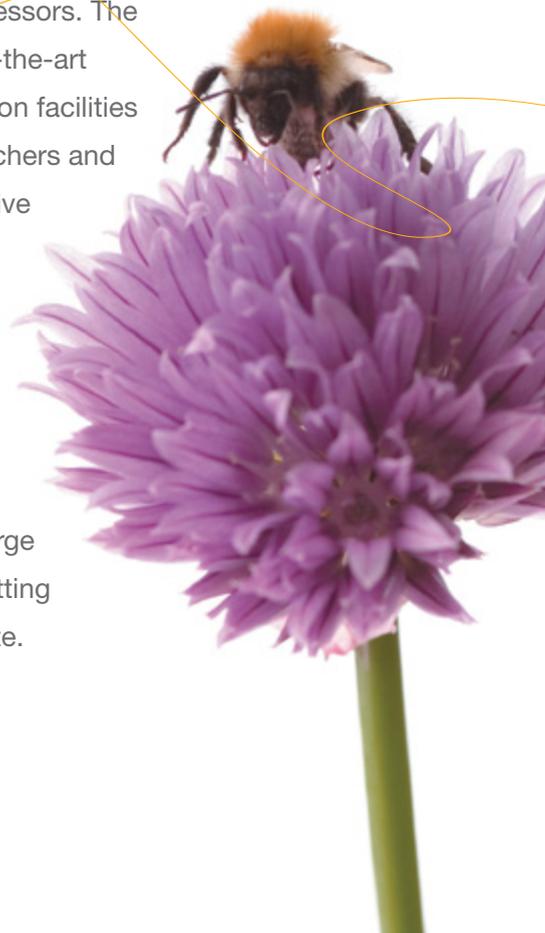
The North American centre includes a full laboratory and research apiary, as well as honey extraction and workshop space needed to conduct bee health research. The research here will focus on integrated management of the multiple factors affecting bee health, including parasites (such as the *Varroa* mite), predators, diseases, and seasonal management and environmental stressors. The



centre will also provide state-of-the-art meeting, training and presentation facilities for beekeepers, farmers, researchers and educators, including an interactive learning centre.

Bee Health Research

Although bee health is a complex issue, it is widely recognized that the *Varroa* mite is a key threat to the health of honey bees in North America. An invasive species, the *Varroa* mite weakens the bee, proliferates rapidly and transmits pathogenic viruses. Just imagine a large insect the size of a platter, sucking blood from your back while transmitting diseases! That's exactly how honey bees are affected by the *Varroa* mite.



For more than 25 years, Bayer has offered a variety of products to combat this and other parasitic mites. We're also developing new solutions to complement our existing product portfolio. Bayer continues to develop, fund and support promising research projects specifically targeted at promoting bee health. Some of Bayer's current research initiatives include *Varroa* management, small hive beetle and ant control trials, and a healthy bee program.



Engagement and Collaboration

Connecting, communicating and collaborating are the best ways to improve bee health. **As part of our ongoing commitment, we're continually looking for ways to work with beekeepers, farmers, government officials, research institutions, educators, non-governmental organizations (NGOs) and the general public.** Through our collaborative efforts with the non-profit Pollinator Partnership (P2) and Project Apis M, Bayer has shared with beekeepers what we're doing for bees, such as supporting the development of foraging habitat through pollinator-friendly gardens.

Bayer routinely participates in global and regional forums where our bee health experts collaborate with leading researchers and policy makers to promote science-based solutions aimed at improving bee health. And Bayer consistently partners with organizations interested in engaging in issues facing bee health, including the U.S. crop protection association, CropLife Canada and CropLife America (CLA). CLA "puts a high priority on bee health and supports enhancing research on bees by working with beekeepers and the crop protection industry."

Barbara Glenn, CLA Senior Vice President, Science & Regulatory Affairs

Bayer's Bee Care Program Is:

-  **Fostering** discussion and sharing of new ideas with beekeepers, farmers and others interested in engaging in the conversation about bee health.
-  **Building** on more than 25 years of providing products to combat bee diseases with an increased focus on research and development.
-  **Working** with partners to develop new technologies to support product stewardship and sustainable agriculture.
-  **Collaborating** with universities and researchers to jointly develop sustainable solutions for bee health.

Millions of acres of canola seed are produced in Canada each year, all of it dependent upon honeybee pollination for hybrid seed production.

Despite many years of commercial use on millions of acres in Canada and the U.S. – including corn, soybean, cotton and canola crops – there have been relatively few accidental exposures to foraging bees and no demonstrated effects on long-term colony health associated with Bayer products.



Stewardship and Biodiversity

Our seed-applied insecticides (also known as seed treatments) help farmers increase their crop yields by protecting plants against destructive pests. Seed treatments also can help reduce potential risks to workers, minimize potential ground runoff to waterways and lower the overall amount of insecticide applied in the environment.

Bayer is firmly committed to the effective stewardship of seed treatments. We perform extensive lab and field studies to investigate the potential effects our products may have on bees and other beneficial insects. We conduct thorough risk assessments and implement appropriate safeguards. Once our products are approved and registered by regulatory agencies and become commercially available, we actively promote product stewardship with our distributors and customers on an ongoing basis.

To ensure farming practices help promote agricultural sustainability we encourage farmers to follow these tips:

- C** **Communicate** planting activities to neighbouring beekeepers when practical and be aware of beehives adjacent to your planting area.
- A** Be **aware** of wind speed and direction during planting, particularly in areas with flowering crops.
- R** **Reduce** risk to pollinators by eliminating or reducing flowering weeds in fields when practical.
- E** **Ensure** seed is planted correctly. To help protect the environment, clean planters and seed boxes as a means to minimize dust release and ensure treated seed is planted at the proper depth.



Always read and follow label instructions. Bayer and the Bayer Cross are registered trademarks of Bayer.
For additional product information, call toll-free 1-888-283-6847 or visit our website at www.BayerCropScience.ca

If you have questions or concerns about bee health, please call 1-888-283-6847.

www.BayerCropScience.ca/BeeCare