

# North American Bayer Bee Care Program

# **Bayer North American Bee Care Center**

- The Center brings together significant technological, scientific and academic resources, with the ultimate goal of supporting product stewardship and sustainable agriculture.
- The North American Bee Care Center includes:
  - Approximately 6,000-square-foot building that is fully staffed, including an office space for graduate students
  - Full laboratory and research apiary, as well as honey extraction and workshop space needed to conduct bee health research
  - Active promotion of bee-responsible use of Bayer products along with communication activities worldwide
  - State-of-the-art meeting, training and presentation facilities for beekeepers, farmers and educators to provide resources and an interactive learning center
  - Pollinator-friendly gardens and a LEED certified facility to further Bayer's environmental stewardship

### **Bayer Bee Care Technology Stations**

- The Bee Care Program strives to create new approaches and solutions to benefit bee health and the global food supply at regional facilities across North America. These facilities include:
  - Eastern Bee Care Technology Station (Clayton, N.C.) Nearly 1,200square-foot building dedicated to promoting and protecting bee health with comprehensive extraction and bee hive maintenance areas to conduct research
  - Western Bee Care Technology Station (Fresno, Calif.) Field station "Fencerows for Bees" project works with Project Apis m. to investigate bee-friendly plants for use as forage near almond orchards
  - Northern Bee Care Technology Station (Ontario) The facility focuses on the establishment of a research apiary to monitor overwintering success of bee hives in Eastern Canada and to observe hive health and forager interactions with a wide variety of horticultural and row crops



Bayer Bee Care Center in Research Triangle Park, N.C.



Eastern Bee Care Technology Station in Clayton, N.C.



Fencerows for Bees at Western Bee Care Technology Station in Fresno. Calif.



Bee Health Research Conducted at Northern Bee Care Technology Station in Ontario.

# **Bayer Bee Care Commitment to Research**

- As part of Bayer's ongoing commitment to bee health, it is continually looking for ways to solve the many complex issues affecting honey bees. Bayer understands the necessity for healthy bees as pollinators for food production.
- For more than 25 years, Bayer has been actively involved in finding solutions to improve honey bee health by developing products and services through research. At the Bayer Bee Care Center and Bayer Bee Care Technology Stations, the company will continue:
  - O Developing products to control parasitic mites in honey bee hives
  - O Designing tests to assess safety of crop protection products to bees
  - Fostering education and collaboration in stewardship measures and best management practices





Varroa destructor

# **Bayer Bee Care Research Projects and Priorities**

- Honey bees are important for modern agricultural production and the demand for pollination has never been greater, which has presented unique challenges for farmers and beekeepers alike. Many factors affect honey bee health, including inadequate nutrition, parasites, diseases, extreme weather events, reductions in forage areas, genetic characteristics and, in some cases, colony management practices.
- It is widely recognized that the *Varroa destructor* (Varroa mite) is a key threat to honey bee health as it weakens the bee, proliferates rapidly and transmits pathogenic viruses. Bayer has offered a variety of products to combat this parasitic mite. Bayer's research priorities include:
  - Honey bee Integrated Pest Management (IPM), including monitoring, thresholds, diagnosis and interpretation, tools and strategies
  - Varroa mite and Small Hive Beetle monitoring and management
  - Screening new, active ingredients for control of bee pests and pathogens, particularly Varroa mite

- Healthy bees program (an integrated program relying on biological/temperature-based triggers for management, breaking life cycle of Varroa mite, forage and nutrition)
- Honey bee best management practices
- Early warning and prediction systems (e.g. Sentinel Hives program, remote monitoring systems, survival prediction analysis model)
- Honey bee (and pollinator) habitat and nutrition
- Developed a new lubricant called Fluency Agent to reduce dust levels during planting to mitigate bee's potential exposure to pesticide
- Developing an effective delivery system and resistance management approach for existing Varroa treatments through global development of "Varroagate" concept

Bayer will continue to practice sound product development, stewardship and research that recognizes and respects the important role of bees in our backyards, our communities, in our crop fields and on our planet.







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