

Pollinator FAQ's

What is the industry doing to make seed treatments safer for pollinators and other wildlife?

Seed treatments, such as those with neonicotinoid pesticides, undergo rigorous testing and review by the EPA prior to being permitted to be used commercially. In addition, industry is constantly evolving to improve seed treatment processes such as:

- Using closed application systems and continuously improving mixing and drying processes to create a better application of active ingredients to the seed.
- Enhancing seed coating polymers to keep active ingredients on the seed and reduce dust-off.
- Creating new flow agents for use with planting equipment to help further minimize the amount of dust-off during planting.
- Implementing an ISO planting equipment standard to better control dust emissions.

Facts about Honey Bees and Pesticides

Fact: Many groups are working to improve bee health.

The crop protection and seed industries are working in a number of areas to protect and improve the health of honey bees. They are partnering with other organizations in the Honeybee Health Coalition which is working to improve pollinator habitat and forage, creating and disseminating hive management tools and developing strategies to control crop pests while safeguarding pollinator health. Companies and organizations are also encouraging people to plant for pollinators in home gardeners and other landscapes. For more information about the Honeybee Health Coalition, visit: honeybeehealthcoalition.org/how-we-help-bees/.

Fact: Neonicotinoid insecticides do not impact colony health when used according to the label.

Hundreds of studies on neonicotinoids and bees indicate that when used according to label instructions, they are not harmful to bee colonies. Large-scale studies in Europe and North America show that poor bee health correlates well with parasites and diseases, but not with pesticides, including neonicotinoids.^{1,2,3,4,5,6} When used in typical field applications and according to label instructions, neonicotinoids do not pose a significant hazard to bees, even though some neonicotinoids, like many insecticides, are toxic to bees. This is because at normal field doses, the potential exposure to bees is far below levels that would cause concern.⁷ Most experts agree that many factors such as parasites, diseases, inadequate nutrition or lack of available forage, adverse weather, pesticides and hive management practices play a role. The Varroa mite is the “single most detrimental pest of honey bees,” according to the USDA.⁸ This parasite weakens bees and helps transmit diseases that can wipe out entire colonies. Beekeepers try to control the mite with insecticides, but effective control is difficult to achieve. Researchers are exploring many ways to help protect bee health, but there is much work yet to be done.

Fact: The number of honey bee colonies is increasing.

Most people are surprised to learn that honey bee colonies actually increased by 45 percent worldwide over the past 50 years.⁹ And in the past five years, as awareness of honey bee health has grown, the number of colonies in the U.S. and Canada has increased by 13 percent and 18 percent, respectively.¹⁰ Annual surveys conducted by the USDA show that the number of honey bee colonies has risen over the past 10 years.¹¹

Fact: Farmers and beekeepers have worked together for decades.

Lost in the discussion of bees and farming practices is the simple fact that farmers and beekeepers depend on each other where bees are needed to help pollinate crops. The farmer gets greater crop productivity and the beekeeper earns a fee for pollination services (and increases the colony's honey production). Commercial beekeepers manage hundreds or thousands of hives, often packing them on tractor-trailers and transporting them thousands of miles to help pollinate various crops throughout the season.

REFERENCES

1. vanEngelsdorp D., et al. (2009) Colony Collapse Disorder: A Descriptive Study. PLoS ONE 4(8): e6481.
2. vanEngelsdorp D., et al. 2010. Weighing Risk Factors Associated with Bee Colony Collapse Disorder by Classification and Regression Tree Analysis. J Econ Entomology 103(5):1517-1523.
3. Rogers REL, and Kemp JR. 2004. Assessing Bee Health in the Maritimes: A survey of pesticide residues in honey bee, *Apis mellifera*, colonies. Final Report, Pei Adapt Council Project Number 319.02. October 15, 2004.
4. Nguyen, B.K., et al. 2009. Does Imidacloprid Seed-Treated Maize Have an Impact on Honey Bee Mortality? J. Econ. Entomol. 102(2): 616-623.
5. Chauzat M-P., et al. 2009. Influence of Pesticide Residues on Honey Bee (Hymenoptera: Apidae) Colony Health in France. Environ. Entomol. 38(3): 514-523 (2009).
6. Genersch E, et al. 2010. The German bee monitoring project: a long term study to understand periodically high winter losses of honey bee colonies. Apidologie 41 (2010) 332–352.
7. Maus C, et al. 2003. Safety of imidacloprid seed dressings to honey bees: a comprehensive overview and compilation of the current state of knowledge. Bulletin of Insectology 56(1):51-57.
8. USDA. 2013. Report on the National Stakeholders Conference on Honey Bee Health. 72 pages.
9. Aizen and Harder, Current Biology 19, 1–4, June 9, 2009 doi:10.1016/j.cub.2009.03.071.
10. Syngenta (January 19, 2015), Bee population rising around the world, AgProfessional.