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Popular and Profitable Pesticide Found to be Cause of Massive Bee Die-Offs

A recent Harvard study replicated results proving the link between widely-used neonicotinoids pesticides and Colony Collapse Disorder, thought to have destroyed between 30-90% of honeybee colonies since 2006.



A recent Harvard School of Public Health study has found two widely used pesticides, known as neonicotinoids, appear to cause significant harm to honey bee colonies over the winter, especially when the winter is exceptionally cold. Replicating a similar finding from a 2012 study, the research group found that low doses of imidacloprid are linked to Colony Collapse Disorder (CCD), which causes bees to abandon their hives over the winter and eventually die. A second neonicotinoid, clothianidin, has been found in the recent study to have the same negative effect on honeybees.

"The significance of bees to agriculture cannot be underestimated," the study's lead, Chengshen (Alex) Lu, stated on Harvard University's website. "And it apparently doesn't take much of the pesticide to affect the bees. Our experiment included pesticide amounts below what is normally present in the environment."

Besides producing honey, bees play the critical role of pollinating roughly one-third of America's crops, including fruits, vegetable, nuts and livestock feed such as alfalfa, corn and clover. Widespread deaths of honeybees could result in millions of dollars of agricultural losses, not to mention the critical role that these small insects play in fertilizing wild plants.

Lu and his co-authors noticed that incidents of Colony Collapse Disorder began to rise in the early 1990s when imidacloprid was first introduced as a pesticide. Bees become exposed to the toxin through drinking nectar from plants or, commercially, when bee farmers feed the small animals high fructose syrup from corn that has been sprayed with imidacloprid.

The researchers conducted their study in Worcester County, Mass., comparing bees in four different bee yards. After 12 weeks of imidacloprid exposure, all of the bees were still alive, but **by 23 weeks of pesticide treatments, 94% of the exposed hives had died.** Colonies exposed to the highest levels of the poison died first.

Bayer, the exclusive patent holder of imidacloprid from 1988 until recently, has repeatedly denied its product causes CCD, even as the European Commission adopted a proposal to restrict the use of three pesticides belonging to the neonicotinoid family (clothianidin, imidacloprid and thiametoxam) for a period of two years starting in 2013. The company has invested over \$12 million to open a Bee Care Center at the Research Triangle Park of North Carolina, with facilities for cooperative research with beekeepers, universities and others. Bayer, together with Syngenta and Dow Chemical are stepping up their own lobbying efforts to counter calls for a ban on the pesticides in Congress, suggesting that without these chemicals farmers and gardeners would be "forced" to use products that are more harmful.

An estimated 30 to 90% of honeybee colonies have died since 2006. Scientists, beekeepers, farmer and policy makers have ventured many theories for these losses, including pests, pesticides, diseases, and migratory beekeeping. Now it appears that the most likely culprit has been singled out.

According to the EPA, Neonicotinoid pesticides are not currently banned in the US, but are currently being re-evaluated by the EPA to ensure they meet current health and safety standards. The **Saving America's Pollinators Act**, introduced by Representative Earl Blumenauer, directs the Environmental Protection Agency to "suspend use of the most bee-toxic neonicotinoids for use in seed treatment, soil application, or foliar treatment on bee attractive plants within 180 days, and to review these neonicotinoids and make a new determination about their proper application and safe use."

What You Can Do

- **Identify and Avoid pesticides containing neonicotinoids** using this list compiled by Beyond Pesticides.
- **Cite this study on an online review** of any product containing imidacloprid and help inform consumers.
- **Sign a Petition to the EPA via Change.org** to ban the sale of Bayer's neonicotinoid products.



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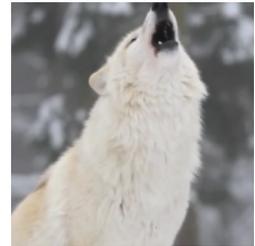
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