

Study shows pesticide can impact generations of bees. Here's what you can do

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A recently released study by researchers at the University of California, Davis revealed that pesticides can have lasting effects on bee health, reducing their reproduction rate.

According to the findings, published in the *Proceedings of the National Academy of Sciences*, multiple generations of bees may be needed to recover from one pesticide application.

Here's a rundown of the study and what you can do to save the bees.

What is the study and its conclusions?

The study was conducted by exposing blue orchard bees to imidacloprid, a common insect control [chemical](#), with the label's recommended amount. The bees were given one application for two years, which is a standard level of [exposure](#), according to the UC Davis article.

"Repeated exposure across two years had an additive negative effect on individual reproduction, which led to a really dramatic reduction in population growth," said Clara Stuligross, the study's lead author.

Researchers concluded that bees that came into contact with insecticides as larvae and as adults produced 44% fewer brood. And bees that were exposed to the chemical two years straight had a 72% reduced [population growth](#) rate, compared to bees that did not have any level of exposure.

The study only looked at one pesticide

The research was based on the use of imidacloprid, an insecticide that mimics nicotine, which is toxic to insects. This chemical is the most widely used for insect control.

Stuligross, who is a UC Davis Ph.D candidate in ecology, said that because there is a large variety of insecticides in the market, you can't extrapolate the study's results. But she thinks the effects of imidacloprid

on bees will be reflective across similar types of pesticides.

"It also helps us understand, generally, the effects of multiple exposures to pesticides," she said.

Importance of bees

According to Planet Bee Foundation, an [environmental education](#) non-profit based in San Francisco, bees are the most efficient pollinators in the world. As pollinators, these buzzing insects help plants survive, which, in turn, provides for our food supply, wildlife and environment.

"They're really important for our ecosystem," Stuligross said. "And so understanding how this pesticide exposure affects bees over time is important for understanding how to actually support them and how to continue supporting our healthy and sustainable food systems."

What you can do

Stuligross said that the most important thing people can do is reduce their pesticide usage around bees as much as possible.

This means not using these chemicals when crops and flowers are in bloom because bees are generally attracted to plants that are flowering with nectar and pollen.

If you must spray an insecticide on a crop, Stuligross said you should reduce any drift of the chemical to nearby plants that are blooming.

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