

Pesticides Can Mess Up How Bees Fly

Scientists test pesticides to see how they affect bees.

Karin Heineman, Executive Producer

(Inside Science) -- Pesticide use has become widespread in modern agriculture. But the pesticides used to kill the annoying, pesky insects also kill the good insects -- like bees. Now, scientists at UC San Diego have a unique way to test how pesticides affect bees.

Simone Tosi is a biologist at the University of California, San Diego. He studies bees and how things in the environment, such as pesticides, affect these tiny foragers.

“Simone is studying the effects of a new pesticide. And what's interesting about this pesticide is it's advertised as being bee safe. So, we're testing this claim. And what we're trying to do is to see if it affects the ability of bees to fly. Flying is an integral part of the biology of bees. It's how they go and find food sources. And if a bee is unable to fly as well, that will reduce the amount of food they can bring back to their colony,” said James Nieh, professor of biology at the University of California, San Diego.

“What Simone will be showing is basically how we take bees, we harness them, and then we fly them indoors inside this flight mill. And the reason for doing this is that we can control all the conditions, temperature, humidity, and light, and have a way of looking at 'what is the effect of this pesticide on the ability of bees to fly,’” said Nieh.

In a recent study, Tosi showed that a bee's ability to fly can be harmed by commonly used pesticides called neonicotinoids. Exposed bees couldn't travel as far, stay in the air as long, or fly as fast as non-exposed bees.

“Pesticides kill insects. Bees are insects,” said Nieh. “Not just honeybees, but also native bees, will be affected by pesticides. So, it's something important to think about.”