

PESTICIDES

Bee study contradicts EPA assessment

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Honeybees' flight can be affected solely from exposure to a common pesticide, a new study found. Photo by Laura Hubers, courtesy of the Fish and Wildlife Service.

Exposure to neonicotinoids can hurt a honeybee's ability to fly, said a new study that contradicts U.S. EPA's preliminary risk assessment from earlier this year.

This is the first evidence that exposure to just neonicotinoids, a popular pesticide, can impair the physical ability of a bee to fly.

The study, published today in the journal *Scientific Reports*, looked specifically at thiamethoxam, a type of neonicotinoid that EPA said does not pose "significant risk to bee colonies" ([Greenwire](#), Jan. 13).

Researchers found that exposure can hurt bees' foraging and homing, activities that are vital to colony function.

"Honeybee survival depends on its ability to fly, because that's the only way they can collect food," said author Simone Tosi, a postdoctoral scholar at the University of California, San Diego. "Their flight ability is also crucial to guarantee crop and wild plant pollination."

The study exposed bees to a typical level of the pesticide they would likely experience while foraging. Over one or two days, the bees experienced a reduced ability to fly.

Exposure over less than a day increased flying activity, but although the bees flew farther, they also flew more erratically.

"Bees that fly more erratically for greater distances may decrease their probability of returning home," said author James Nieh, a professor at UC San Diego.

The European Union banned neonicotinoids in 2013 for their effects on bees, but EPA has been reluctant to regulate the chemical.

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