The buzz about pesticides

Common pesticides affect bumblebee foraging.

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Bees, the most important pollinators of crops, are in trouble. All over the world, their populations are decreasing and scientists and farmers want to know why. In some cases, such as the widely reported colony collapses in North America in 2006, it is probably down to disease. But a blooming crop of research suggests that pesticides are also to blame^{1–3}.

Earlier this year, two studies published in *Science* showed that colonies are severely affected when bees are exposed to neonicotinoid pesticides of the kind commonly sprayed on crops. In one study¹, exposure led to a significant loss of queens in colonies of bumblebees (*Bombus terrestris*). In the other², on honeybees (*Apis mellifera*), the insecticide interfered with the foragers' ability to navigate back to the hive.

Now, in a study published in *Nature*³, researchers at Royal Holloway, University of London, in Egham, UK, show that low-level exposure to a combination of two pesticides is more harmful to bumblebee colonies than either pesticide on its own. The results suggest that current methods for regulating pesticides are inadequate because they consider only lethal doses of single pesticides. As ecologist Nigel Raine explains in the video, low doses of pesticides have subtle effects on individual bees and can seriously harm colonies. He hopes that his work will feed into consultations on pesticide regulations that are happening now in Europe.

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References

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