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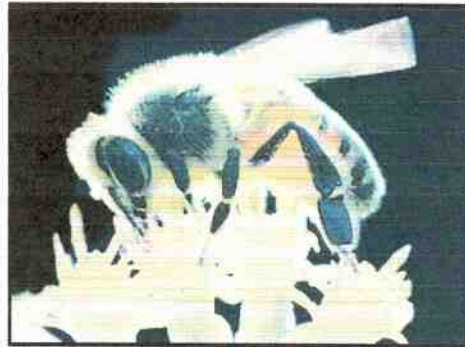
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## News &amp; Events



Ozone may make hives safer for honey bees by breaking down pesticide residues and killing certain insect and disease pests. *Photo courtesy of David Cappaert, Michigan State University, Bugwood.org.*

## For further reading

- [Compound quells bee-killing chalkbrood](#)
- [MegaBee nourishes honey bees](#)
- [Colony collapse disorder research plan announced](#)

10 to 15 hours degraded low concentrations of both pesticides, but 20 hours were needed to break down higher concentrations of tau-fluvalinate.

James also looked at ozone's ability to zap the greater wax moth, a honeycomb pest, in all of its life stages, from egg to adult. Wax moths attack bee young and damage the honeycomb.

Young wax moth larvae and adults were killed by just a few hours of ozone exposure. However, eggs, the most resistant life stage, had to be exposed to the gas for a few days.

Further tests are needed to find out whether the breakdown products of the degraded pesticides pose a hazard to bees, James noted.

In related work, James is finding that ozone can destroy microbes that cause major bee diseases such as chalkbrood and American foulbrood, but much higher ozone concentrations and longer fumigation times are needed.

ARS, along with the [National Honey Board](#), headquartered in Firestone, Colo., and O3Co., Inc., of Idaho Falls, Idaho, provided research support.

ARS is the [U.S. Department of Agriculture's](#) chief scientific research agency.

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Last Modified: 05/14/2008

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