

Beekeeping

Department of Entomology

HOW TO MINIMIZE PESTICIDE DAMAGE OF HONEY BEES

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Honey bees and wild bees are important pollinators of crops and wildflowers but honey bees have experienced declines in the past two decades caused by parasitic mites and disease. This fact sheet is designed to provide information to help avoid bee kills and sublethal effects of pesticides.

Bees are very sensitive to pesticides and are vulnerable when foraging.

It is a label violation to apply pesticides toxic to bees when bees are foraging on the crop.

Honey bees will forage only during the day and forage more on sunny days than cloudy days.

Applying pesticides in the evening will reduce impact on honey bees, provided the pesticide used has less residual activity the next day.

When bees are used to pollinate a crop, there should be a plan agreed upon between the grower and the beekeeper to minimize pesticide damage.

Cucurbit pollination: Crops like melons, cucumbers, squash and pumpkins have flowers that are only open for one day but new flowers are produced daily so bees are needed for extended periods. Applying pesticides after the flowers close for the day will reduce the impact on bees. However, many systemic insecticides and pesticides with long residuals can have a longterm impact on bee health, especially when present in pollen stored in the comb.

It is important to use application practices that minimize pesticide drift.

It is important to be aware of beehive locations before applying pesticides. Some locations of beehives can be found at Driftwatch <<http://www.driftwatch.org/>>.

GMO crops have not been linked to bee mortality in scientific studies. The proteins and compounds produced by Bt crops and Round Up Ready crops (such as some corn and soybeans) are relatively pest-specific, and are relatively non-toxic to bees.

Be aware of the relative toxicity of the pesticide you are applying and the residual activity. Dusts are more hazardous than liquids to bees and should be avoided. More information on pesticide toxicity and effects on bees can be found in Protecting Bees from Pesticides <<http://extension.entm.purdue.edu/publications/E-53.pdf>>.



Honey bee flying in corn anthers
(Photo Credit: John Obermeyer)

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