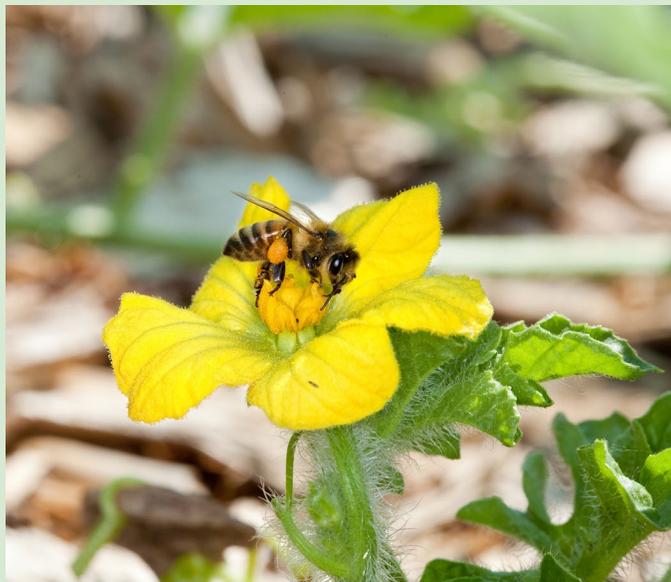


## Did You Know?



You've probably heard that the honey bees are in trouble in this country. About one out of three of our managed bee colonies has been dying each winter for the last few years.

There is good news on the honey bee front this year. Losses this winter were down to 23 percent of managed colonies, compared with 30.5-percent losses for the winter of 2012-2013, according to a survey of beekeepers co-authored by Research Leader Jeff Pettis at the ARS Bee Research Laboratory in Beltsville, MD, and Dennis vanEngelsdorp, an assistant professor at the University of Maryland and the director of the Bee Informed Partnership.

But you can't count a one-year decline in losses—even one as notable as this—as solid improvement. Losses the year before last were 22 percent, so the numbers have been up and down.

Yearly fluctuations in the rate of losses like these only demonstrate how really complicated the whole issue of honey bee health has become. Since the 1980s, honey bees and beekeepers have had to deal with a whole host of new pathogens from deformed wing virus to nosema fungi, new parasites like varroa mites, pests like small hive beetles, nutrition problems from lack of diversity in pollen sources, and even sublethal effects of pesticides. These

problems, many of which honey bees might be able to survive if it was the only one, often are hitting in a wide variety of combinations and weakening and killing honey bee colonies.

There is also the mystery problem—Colony Collapse Disorder (CCD)—which is defined as a dead colony with no adult bees or dead bee bodies, but with a live queen and usually honey and immature bees still present. No one has been able to prove a cause for CCD, despite a number of claims in the media from a variety of sources.

ARS is one of USDA's lead agencies when it comes to finding ways to help honey bee health. Our scientists are looking to the DNA of honey bees and their pathogens and pests to develop long-term solutions. Other ARS research is working on enhancing epidemiological monitoring, finding biological or chemical disease and pest controls, developing better artificial diets to improve nutrition, and creating best management practices.

*Written by **Kim Kaplan**, ARS Information Staff.*

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