

## Did You Know?



Honey bees are in trouble, and that means the berries, nuts, fruits and vegetables—the foods that put flavor in our diet—could be in trouble, too. Commercial production of these tasty crops depends on pollination by honey bees.

Beginning every February, almost 2 million colonies of honey bees are trucked across the country, starting the year in the almond orchards of California and then working their way north to finish with apples and cherries in Washington and blueberries in Maine.

But these days, we are losing managed honey bee colonies like never before.

Beekeepers expect some winter losses. But what used to be a 10-15 percent loss each winter has risen to about 30 percent. When parasitic varroa mites came to this country in the 1990s, colony losses went up to 15-20 percent. In 2006, Colony Collapse Disorder came on the scene, and losses started topping 30 percent.

This year, the annual winter survey of managed bee colony losses—done by the University of Maryland, the Bee Informed Partnership and ARS—reported that overall losses were 31.1 percent, just slightly higher than the previous 6-year average loss of 30.5 percent.

It is not that honey bees will disappear completely, but many beekeepers have said that 30-percent losses will make their businesses economically unsustainable. With fewer colonies available to contract for pollination, consumers could end up paying more for many foods.

So what's causing these losses? That's the question that ARS and other researchers have been trying to answer.

They know now it is not just one cause. They expect it is a combination of factors: pathogens and parasites, poor nutrition, narrow genetics and/or pesticides.

Some claim pesticides are the likely culprit, but no pattern showing pesticide residues from any one pesticide or pesticide class has been found in honey bees. ARS scientists are now trying to determine if there are sublethal effects that might either be weakening the honey bee or causing already-weakened colonies to die off.

Cell phones have been another popular villain for honey bee losses. Not only has no evidence ever been found linking cell phones or cell phone towers to widespread honey bee losses, but in the rural locations where most honey bee colonies are kept, cell phone coverage is often not available.

*Written by Kim Kaplan, ARS Information Staff.*

**Executive Editor**  
Sandy Miller Hays

**Managing Editor**  
Tara T. Weaver-Missick

**Writer-Editor**  
Mina Chung

**Designer-Editor**  
Carol Nathan

**Contributors**

Amy Atallah  
Lori Bocher  
Carol Durflinger  
Jennifer Gilbert

Tracy Havermann  
Kim Kaplan  
Kathleen Parker  
Tara T. Weaver-Missick