



Hunterdon County
Division of Parks & Recreation

News Release



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Be sure to visit the bees at the Hunterdon County 4-H & Agriculture Fair 8/19-23, 2015



WHAT'S WRONG WITH THE BEES?

Bob Kloss, Past President

Northwest Beekeepers Association

Bees are on the decline and no one is sure why. Ever since the arrival of Colony Collapse Disorder (CCD) in 2006, scientists have been trying to identify the cause. With CCD, the bees vanish without a trace leaving the queen, a few larvae and some nurse bees in the hive.

CCD still occurs, although it is happening less and scientists still don't know what causes it. But it's not only CCD that's killing the bees. So what is?

There is no one cause, but a lot of negative factors that, in combination, are affecting the bees. They are the four Ps: Pests and Pathogens, Pesticides and Poor Nutrition.

Pests and Pathogens

The most important pest of the honeybee is the aptly named *varroa destructor*. This mite was introduced into the United States in the late 80's. Varroa has two negative effects on the bees. First, they suck fluids from the developing pupae making the bees weak and compromising their immune system. Second, they transmit bee viruses which cause deformed wings and paralysis. The bees have no natural immunity to the mites and when the mite population reaches a certain threshold, the hive collapses.

Pesticides

Beekeepers have worried about the effects of pesticides on bees ever since their introduction. The beeswax in the hive acts like a sponge, absorbing pesticides that the bees are exposed to while foraging. Recently, the use of a new class of pesticides called neonicotinoids has exploded. These are systemic pesticides which are applied to the seed and become incorporated into all parts of the plant, including pollen and nectar, the bees' main food sources. These insecticides are less toxic to humans and birds, but more toxic to insects.

There have been conflicting studies about the effect of neonics on bees, so scientists are calling for more studies. But since the use of neonics coincides with the decline of bees, it is suspected to be one factor in the decline.

Poor Nutrition

Honeybees can survive lots of stresses such as pests, pathogens and pesticides as long as they get enough good food. Unfortunately, in modern agriculture, more and more farmland is being used to grow just one crop. This is called monoculture. Many plant pollens are not particularly nutritious; therefore, the bees need a variety of plants to stay healthy. Many of the plants that farmers' consider weeds are important food sources for the bees. These native plants are routinely sprayed with herbicides allowing invasive plants (that lack nutrition) to edge out the wildflowers the bees need. The recent drought in the West has also had a major effect on nectar production from annual as well as perennial plants.

So what's the bottom line? Beekeepers and bee researchers generally agree that it is not one thing killing the bees. Some combination of the four Ps is the culprit. www.nwba.njbeekeepers.org