

Mystery ailment strikes honeybees



By GENARO C. ARMAS, Associated Press Writer

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A mysterious illness is killing tens of thousands of honeybee colonies across the country, threatening honey production, the livelihood of beekeepers and possibly crops that need bees for pollination.

Researchers are scrambling to find the cause of the ailment, called Colony Collapse Disorder.

Reports of unusual colony deaths have come from at least 22 states. Some affected commercial beekeepers — who often keep thousands of colonies — have reported losing more than 50 percent of their bees. A colony can have roughly 20,000 bees in the winter, and up to 60,000 in the summer.

"We have seen a lot of things happen in 40 years, but this is the epitome of it all," Dave Hackenberg, of Lewisburg-based Hackenberg Apiaries, said by phone from Fort Meade, Fla., where he was working with his bees.

The country's bee population had already been shocked in recent years by a tiny, parasitic bug called the varroa mite, which has destroyed more than half of some beekeepers' hives and devastated most wild honeybee populations.

Along with being producers of honey, commercial bee colonies are important to agriculture as pollinators, along with some birds, bats and other insects. A recent report by the National Research Council noted that in order to bear fruit, three-quarters of all flowering plants — including most food crops and some that provide fiber, drugs and fuel — rely on pollinators for fertilization.

Hackenberg, 58, was first to report Colony Collapse Disorder to bee researchers at Penn State University. He notified them in November when he was down to about 1,000 colonies — after having started the fall with 2,900.

"We are going to take bees we got and make more bees ... but it's costly," he said. "We are talking about major bucks. You can only take so many blows so many times."

One beekeeper who traveled with two truckloads of bees to California to help pollinate almond trees found nearly all of his bees dead upon arrival, said Dennis vanEnglesdorp, acting state apiarist for the Pennsylvania Department of Agriculture.

"I would characterize it as serious," said Daniel Weaver, president of the American Beekeeping Federation. "Whether it threatens the apiculture industry in the United States or not, that's up in the air."

Scientists at Penn State, the University of Montana and the U.S. Department of Agriculture are among the quickly growing group of researchers and industry officials trying to solve the mystery.

Among the clues being assembled by researchers:

- Although the bodies of dead bees often are littered around a hive, sometimes carried out of the hive by worker bees, no bee remains are typically found around colonies struck by the mystery ailment. Scientists assume these bees have flown away from the hive before dying.
- From the outside, a stricken colony may appear normal, with bees leaving and entering. But when beekeepers look inside the hive box, they find few mature bees taking care of the younger, developing bees.
- Normally, a weakened bee colony would be immediately overrun by bees from other colonies or by pests going after the hive's honey. That's not the case with the stricken colonies, which might not be touched for at least two weeks, said Diana Cox-Foster, a Penn State entomology professor investigating the problem.

"That is a real abnormality," Hackenberg said.

Cox-Foster said an analysis of dissected bees turned up an alarmingly high number of foreign fungi, bacteria and other organisms and weakened immune systems.

Researchers are also looking into the effect pesticides might be having on bees.

In the meantime, beekeepers are wondering if bee deaths over the last couple of years that had been blamed on mites or poor management might actually have resulted from the mystery ailment.

"Now people think that they may have had this three or four years," vanEnglesdorp said.

On the Net:

Mid-Atlantic Apiculture: <http://maarec.cas.psu.edu/index.html>

Penn State University Entomology Dept.: <http://www.ento.psu.edu/>

American Beekeeping Federation: <http://www.abfnet.org/>

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