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Bee Industry Hosts US EPA for Tour of Almond Pollination Sites

Dead Bees and Empty Hives Show the Extent of the Losses

Oakdale, CA — U.S. Environmental Protection Agency (EPA) Assistant Administrator, Jim Jones spent a day with beekeepers and almond growers to learn more about this year's massive colony losses, and beekeepers' concerns about the role of pesticides in the decline. The National Pollinator Defense Fund (NPDF) Board provided Jones with a view of the disaster from inside the hive. It was not a pretty picture. Dead hives littered the landscape at one bee yard, and even the hives with bees in them were not at full strength.

"I started out last spring in the Midwest with 3,150 healthy bee colonies; of which 992 still survive, and most of those are very weak. More than 2,150 of my valuable bee colonies are now just gone," said Jeff Anderson, third generation beekeeper, and owner of California-Minnesota Honey Farms where the tour began.

Escalating colony losses are making replacement difficult. In the meantime, without bees, they are unable to fulfill pollination contracts or make honey. Beekeepers are not alone—growers of almonds, cherries, apples, pears, berries, melons, and other fruits, vegetables, and field crops stand to lose as well, since their yields will be lower without good pollination. Almond growers are paying a premium price this year for bees. The supply isn't

enough to ensure good pollination and fruit set. "The industry's ability to pollinate almonds this year is severely compromised because of colony failures. I expect that next year may be worse," said Bret Adee, NPDF President, and owner of Adee Honey Farms. "Many beekeepers will just not be able to recover from these losses."

This is EPA's second visit this year to the almond orchards. In early March, Anita Pease, Associate Director of Environmental Fate and Effects Division with the Office of Pesticide Programs, spent the day touring beekeeping operations with NPDF board members Bret Adee, Jeff Anderson, Darren Cox, and Zac Browning. They were joined by U.S. Department of Agriculture bee researchers Jeff Pettis and Dennis Van Englesdorp; American Honey Producers President, Randy Verhoek, and American Beekeeping Federation President, George Hansen, and Board member, Gene Brandi.

The National Honey Bee Advisory Board (NHBAB) and the Almond Board helped the NPDF coordinate Jim Jones' visit. Jones is head of the Office of Chemical Safety and Pollution Prevention (OCSPP) at U.S. EPA in Washington, D.C., one of the 12 main offices under the head of the EPA. OCSPP is the part of EPA that oversees the Office of Pesticide Programs (OPP) that is responsible for registering pesticides, and ensuring that "no unreasonable adverse effects" will result from pesticide use.

In spite of OPP's mandate, pesticides continue to kill bees. Acute kills from illegal sprays on blooming crops or weeds are part of the problem. Jeremy Anderson, fourth-generation beekeeper, noted "Many insecticide labels disallow spraying blooming crops; but if it happens, penalties for violating the rules are few and far between. Just an acute exposure is enough to kill honey bees."

After opening many of the hives and viewing sick honey bees, Jones was able to discern the difference between healthy honey bees, and a sick hive. He also heard from beekeepers there is a serious need for better enforcement of label restrictions. "There are no consequences for applying pesticides near beehives—state lead agencies responsible for enforcement usually do not investigate honey bee kills," Anderson said.

"We're pleased to see Jim Jones visit the almond orchards, growers, and beekeepers. He understands the need for sustainable pollinators. The EPA understands that the bee industry is in extreme critical condition at a tipping point. He is evaluating the way EPA enforces pesticide laws. Pollinators and beekeepers can't continue to be on the receiving end of the losses, or the U.S. won't have a beekeeping industry," said Darren Cox, a fourth-generation beekeeper from Utah who brings bees to California for almond pollination. Jim Jones stated he wants to bring all of the stakeholders together to work on this issue.

Beekeepers are also concerned about pesticide exposures that don't kill the bees outright, but may affect their ability to thrive. The bee industry is concerned several classes of insecticides, including systemic neonicotinoids and pyrethroids, and some fungicides and growth regulators may impair the immune system, causing queen or brood failure, compromising homing abilities of forager bees, and/or disrupting communications within the hive, all of which contribute to colony loss. We strongly urge the EPA to re-evaluate these compounds long term using tier testing protocols that can give us the answers we need to mitigate losses.

Some pesticides are long-lived and persistent in the environment. The pyrethroid pesticides are found in the wax of most hives that have spent time in agricultural areas.

Neonicotinoids are more frequently found in the nectar and pollen stores in the hive. A recent study of more than 800 hives from Pennsylvania State University found an average of six different pesticides, and as many as 39 in a single hive. In the paper, the authors noted: "We concluded that the 98 pesticides and metabolites detected in mixtures up to 214 ppm in bee pollen alone represented a remarkably high level for toxicants in the food of brood and adults. While exposure to many of these neurotoxicants elicits acute and sublethal reductions in honey bee fitness, the effects of these materials in combinations, and their direct involvement in Colony Collapse Disorder (CCD) remain to be determined."

The National Pollinator Defense Fund's mission is to defend managed and native pollinators vital to a sustainable and affordable food supply from the adverse impacts of pesticides. For more information contact us at www.pollinatordefense.org.

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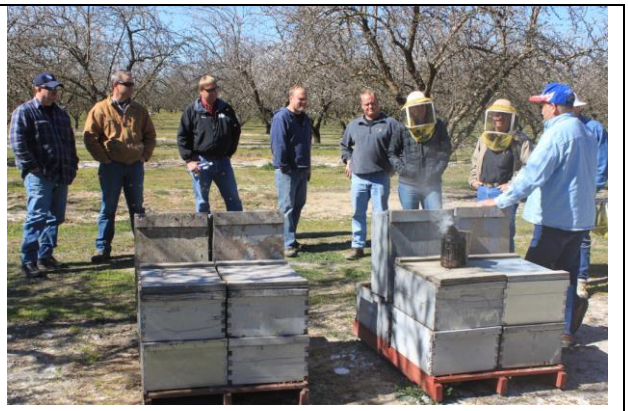
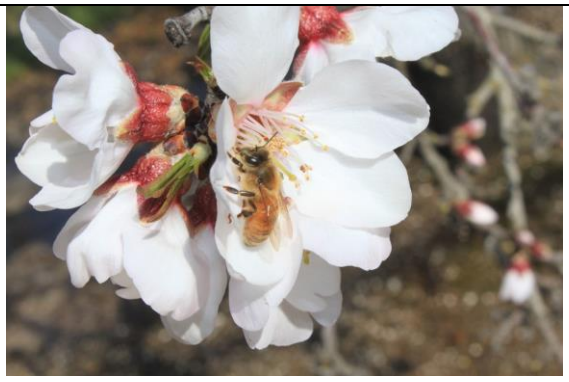
Beekeepers inspect a barn full of dead-outs in Oakdale, CA. (photo Kyle Anderson)



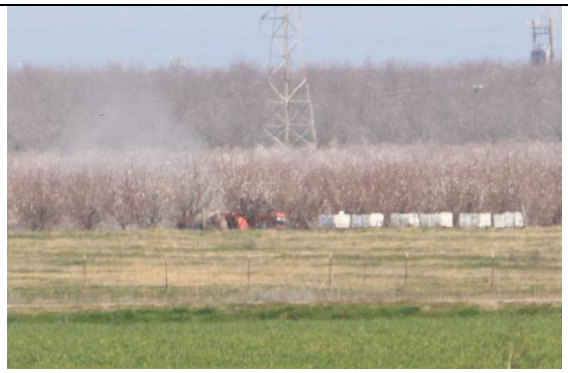
Representatives of bee industry, almond industry, and EPA exam hives in the California almond fields. (photo Kyle Anderson)

Over 800,000 acres of almonds are grown in California. (photo Kyle Anderson)

Hives that weren't completely dead were often weak like this one. (photo Kyle Anderson)



Almonds need pollination to set the crop. (photo Kyle Anderson)



An applicator sprays fungicide on blooming almonds, with beehives right in the line of the spray. (photo Kyle Anderson)