



United States
Department of
Agriculture

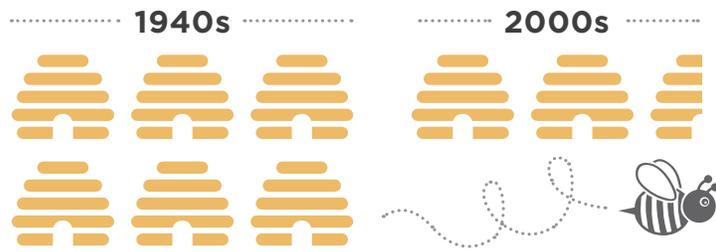
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NIFA Advances White House Pollinator Health Initiative

Insect pollination ensures a plentiful and diverse food supply. Due to recent declines in pollinator populations, the White House launched an initiative to protect pollinator health. As part of this initiative, the USDA National Institute of Food and Agriculture (NIFA) supports pollinator health research, education, and extension through its Agriculture and Food Research Initiative (AFRI), Crop Protection and Pest Management Program, and the Specialty Crop Research Initiative (SCRI).



There were about **6 MILLION U.S. HONEY BEE HIVES** in the 1940s. Today there are only about **2.5 MILLION**.

CALIFORNIA ALMONDS REQUIRE MORE HONEY BEES THAN ANY OTHER INDUSTRY



The **800,000** acres of California almond groves require **1.6M** managed bee hives (2 hives per acre) for pollination—roughly **60%** of all commercially available hives. With honey bee declines increasing hive prices, pollination costs the almond industry roughly **\$320M**.

BEES: OUR PRIMARY POLLINATORS

Many insects and bats pollinate America's crops, though managed honey bees are the primary pollinators. Since 2006, honey bee colonies have globally experienced historically high, unexpected losses caused by colony collapse disorder (CCD). CCD and other stressors, such as parasitic mites, diseases, and transport, hinder commercial beekeepers' ability to meet U.S. agriculture's pollination demands.



FIVE MAJOR CROPS HEAVILY DEPENDENT UPON INSECT POLLINATION



almonds



apples



blueberries



melons



squash

35%
OF ALL
CROP
PRODUCTION
REQUIRES
INSECT
POLLINATION



POLLINATED CROPS
CONTRIBUTE

\$29
BILLION

TO FARM INCOME
IN THE



NIFA INVESTMENTS: FINDING SOLUTIONS

A prevalent and serious bacterial disease that affects honey bees is American foulbrood (AFB). **University of Nevada** researchers used AFRI funding to identify a virus that attacks the AFB bacterium. Experimental trials using the virus to treat AFB infections significantly reduced AFB levels and increased overall honey bee colony health.

A team led by **Michigan State University** researchers is developing sustainable pollination strategies through the Integrated Crop Pollination project, funded by NIFA's SCRI. One project objective is to evaluate the effects of farm wildflower enhancements to increase wild bee diversity and crop yields.