New Data Confirm Catastrophic Honey Bee Colony Losses, Underscoring Urgent Need for Action

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Salt Lake City, Utah, April 3, 2025— Newly analyzed data confirm the staggering honey bee colony losses detailed last month of 1.6 million colonies lost with commercial beekeepers sustaining an average loss of 62% between June 2024 and March 2025. Additional survey responses and field analyses now paint an even darker picture, reinforcing concerns about the long-term viability of pollination services critical to U.S. agriculture. Experts warn that without immediate intervention, the ripple effects could drive up costs for farmers, disrupt food production, and shutter many commercial beekeeping operations.

“Beekeeping businesses are facing unprecedented challenges that threaten their survival from colony losses we haven’t seen in nearly 20 years. The swift response from stakeholders and the USDA is critical in providing beekeepers with the data and information to make well informed decisions to sustain their operations,” said Patty Sundberg, President of the American Beekeeping Federation.

“In January 2025, beekeepers across the country began reporting unexpected large-scale honey bee losses—we now know the largest ever recorded in the U.S.,” said Danielle Downey, executive director of Project Apis m. “In response, USDA Bee Labs were among the first to receive reports of these severe losses. To address the crisis, a multi-organizational working group—including Project Apis m., the American Beekeeping Federation, and the American Honey Producers Association—swiftly mobilized to assess the scale and severity of the losses, collect critical management data, and guide research efforts to identify potential causes.”

Administered by Project Apis m., the survey now includes data from a total of 842 beekeepers, with participants accounting for an estimated 1.956 million colonies, approximately 72% of the nation’s bees. More details with the latest survey responses are available here. Findings from the survey confirm:

- **Hobbyist beekeepers** (1-49 colonies) lost an average of **51%** of their colonies.
- **Sideliner operations** (50-500 colonies) lost an average of **54%** of their colonies.
- **Commercial beekeepers** (more than 500 colonies) lost an average of **62%** of their colonies—a reversal of typical trends, where commercial beekeepers generally experience lower losses due to their scale, resources, and skilled management practices.

Around 1.6 million colonies were lost with associated economic impacts on beekeepers are estimated at over $600 million in lost honey production, pollination income, and costs to replace colonies. The impact of honey bee shortages on pollinated crops (including almonds, apples, cherries, blueberries, melons, and pumpkins, among many others) remains to be seen. This could reduce farmer yields, create higher prices and limited availability in the grocery store, and potentially have other impacts on these cropping industries valued at more than $18 billion annually. Collectively, these economic and biological hurdles will likely make it impossible for beekeepers to rebuild, pollinate, and produce a honey crop this year, which could have continued impacts on beekeeping operations and our nation's produce supply.

Investigating the Causes: USDA-ARS Analysis Underway

The U.S. Department of Agriculture's Agricultural Research Service (USDA-ARS) has mobilized researchers to analyze field samples collected from 114 colonies in California, including both failing and surviving colonies. The results of these tests are expected in the near future and will offer crucial insights into the factors contributing to this unprecedented colony loss.

"The US Department of Agriculture is aware of the unusual losses to our nation's honey bee colonies and is concerned about its potential impact on food production and supply," the USDA said in a statement. "USDA Agricultural Research Service scientists are working closely with federal partners, stakeholders, and impacted parties to identify the source of this agricultural challenge. USDA will share more information when data is available."

USDA-ARS Scientists are conducting a four-tiered investigation to determine potential causes:

1. **Pathogen Screening** – Testing for all known honey bee diseases using molecular methods.
2. **Pesticide Residues & Pollen Diversity** – Examining stored pollen for pesticide contamination and plant diversity.
3. **Metagenomic Analysis** – Identifying previously unknown pathogens in colonies with high disease prevalence.
4. **Microbiome & Host-Pathogen Interactions** – Assessing gut bacterial diversity and potential links to colony health.

Additionally, Dr. Scott McArt's laboratory at Cornell University is conducting pesticide residue analysis on bees, wax, pollen, and honey samples collected from affected colonies. USDA-ARS and university labs across the nation are analyzing potential contributing factors, such as:

- **Varroa mite resistance to amitraz**, commonly used to manage Varroa mites.
- **Environmental factors**, including weather conditions affecting colony health.
- **Management factors** such as queen replacement, supplemental nutrition and winter management.
- **Chemical exposures**, including interactions between pesticides and bee immunity.

"The collaborative response from scientists and stakeholders has been impressively swift and thorough. The USDA ARS Beltsville lab mobilized quickly to collect samples in California, and we anticipate results soon," said Steven Coy, President of the American Honey Producers Association President. "These findings will be critical in helping beekeepers make informed management and operational decisions as they navigate rebuilding their businesses. We are grateful for the urgency and dedication shown throughout this process."

About the Honey Bee Health Coalition

The Honey Bee Health Coalition brings together beekeepers, growers, researchers, government agencies, agribusinesses, conservation groups, manufacturers, brands and other key partners to improve the health of honey bees and other pollinators. Its mission is to collaboratively implement solutions that help achieve a healthy population of honey bees while also supporting populations of native and managed pollinators in the context of productive agricultural systems and thriving ecosystems. The Coalition focuses on accelerating the collective impact of efforts in four key areas: forage and nutrition; hive management; crop pest management; and communications, outreach and education.

The Honey Bee Health Coalition is a project of the Keystone Policy Center, a nationally recognized nonprofit that brings together diverse stakeholders to find collaborative, actionable solutions to public policy challenges.