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USDA Pollinator Efforts Underway and an update on CCD

Kevin Hackett and Jeff Pettis  
USDA-ARS

Doug Holy  
USDA-NCRS

# *USDA Pollinator Efforts Underway and an update on CCD*

*Kevin Hackett and Jeff Pettis USDA-ARS  
Doug Holy USDA-NRCS*

- ***USDA Coordination of Response to Pollinator Decline***
- ***Federal Coordination of Response to CCD***



# USDA Pollinator Protection Committee

- *Mission: To more effectively mitigate pollinator decline by coordinating pollination research, conservation, and education among USDA agencies and their partners.*

# USDA Pollinator Protection Committee

- Agricultural Marketing Service
- Agricultural Research Service
- Animal and Plant Health Inspection Service
- Cooperative State Research, Education, and Extension Service
- Economic Research Service
- Foreign Agricultural Service
- Farm Service Agency
- Forest Service
- National Agricultural Statistics Service
- Natural Resources Conservation Service (chair)
- Risk Management Agency
- USDA Invasive Species Coordinator

# USDA Pollinator Protection Committee Activities

- Identified agency roles
- Raising awareness of importance of pollinators within the administration
- Coordinating response to NAS recommendations
- Sharing data
- Exchanging information on conservation programs
- Developing opportunities for collaboration with NGOs

# CCD Response

## CCD Steering Committee

- *Mission: To lead the federal and land grant university effort to find the cause(s) of and mitigate CCD with state, university, and private research cooperators.*

# CCD Response

## CCD Steering Committee

- Federal Agency
  - Department of Defense
  - EPA
  - USDA Agricultural Research Service (co-chair)
  - USDA Animal and Plant Health Inspection Service
  - USDA Cooperative State Research, Education, and Extension Service (co-chair)
  - USDA Natural Resources Conservation Service
- Land Grant University
  - Pennsylvania State University
  - Purdue University



# What is CCD?

- Colony collapse disorder is a syndrome in which:
  - Sudden loss of colonies
  - Bees disappear
  - Laying queens & attendants remain
  - Pollen stores and brood in cells

# Status of CCD: Occurrence in 2007 & 2008

- Losses\* nationwide were ~35 percent of managed hives between September 2007 and March 2008, compared to a 31 percent loss during the same period a year earlier.

\*All causes, not just losses from CCD.

- About 10 percent loss from CCD by self-reporting.

# Survey and Analysis and Our Understanding of the Cause(s) of CCD

- Chemicals
  - Pesticides
  - Toxins
  - Nutrients
- Pathogens
- Migratory Stress

# Major Migratory Routes of Honey Bee Colonies



California almonds require 1.2 million honey bee colonies from January through March each year; that represents almost half of all managed colonies in the U.S.

# Working Hypothesis for CCD

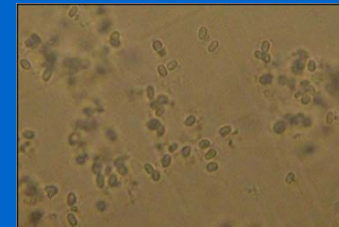
Migratory Stress



Varroa Mites



Management  
Nutrition  
Pesticides



Nosema

Viruses



Fungi

Secondary Pathogens

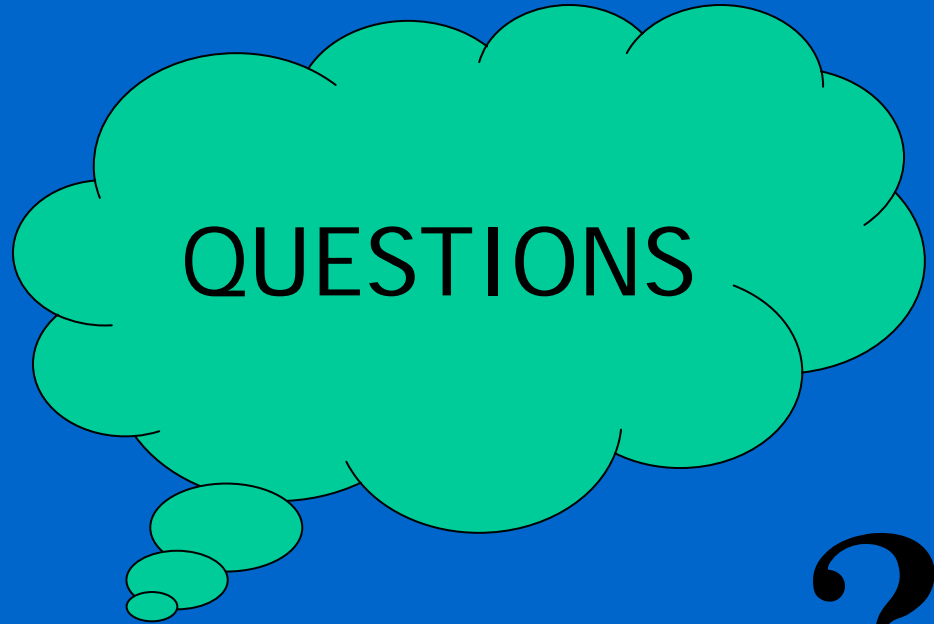


# Future CCD Efforts

- Research and Demonstration Projects
  - CAP
  - Areawide
- Best Practices Guides
- Pesticide Sampling Protocol
- Websites, e.g., e-Xtension
- Develop Alternative Pollinators
- Revise Standards to Protect Pollinator Habitat
- Conduct a National Bee Health Survey

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