USDA APHIS Honey Bee Health Program

Robyn Rose, PhD
National Program Manager
To protect the health and value of American agriculture and natural resources.
PPQ’s Mission

Safeguard agriculture and natural resources from the risks associated with the entry, establishment, or spread of animal and plant pests and noxious weeds to ensure an abundant, high-quality, and varied food supply.
Plant Protection and Quarantine

PPQ

Emergency and Domestic Programs
Plant Health Programs
Center for Plant Health Science and Technology
Eastern and Western Regions
Plant Health Program (PHP)

Permit

- Currently allowed from Australia, Canada, and New Zealand without permit
- Export certificate required
  - Certified that bees are from exporting region
  - Source bees inspected 10 days before export
  - Identify any pests, parasites, diseases detected during the inspection
  - Certified free of Thai sacbrood virus, Tropilaelaps clareae, Euvarroa sinhai, Apis ceranae, Apis capensis
Emergency and Domestic Programs (EDP) initiatives

- Imadiclprid used for Asian longhorned beetle (ALB) control
- Pesticide toxicity testing
- Varroa in Hawaii
- National Survey
Trees are treated with Imadacloprid for ALB control after infested trees are removed

Bee keepers raised concerns of effects of honey bees foraging on treated trees at a public meeting

Environmental Assessment (EA)

- Concluded a finding of no significant impact (FONSI)
Imadacloprid

- Determine expression rates in nectar and pollen of imidicloprid in treated trees and the potential impacts of residues on pollinators.
- Massachusetts and New York
Toxicity Testing

- Science Panel convened to address honey bee pesticide chronic toxicity laboratory and field testing.
- Begin the process of developing standardized testing protocols for chronic and sub-lethal exposures.
- USDA-APHIS, USDA-ARS and US EPA collaboration
Varroa found in Hilo on Hawaii, August 2008

- FIFRA Section 18 request to use Fipronil declined
- Crisis exemption: 15 days; 200 bait stations

Varroa found in Kona, October 2009

Small hive beetle found on Hawaii, April 2010
Training
- Workshops and one-on-one

Pesticide Resistance
- Fluvalinate and Coumaphos

Pollination

FIFRA Section 18
- Formic Acid and possibly Amitraz

National Survey
National Survey

- Farm Bill
  - SEC. 11315. POLLINATOR PROTECTION PROTECTION
    - Pollinator Protection Act of 2007
    - Enhanced funding for research
  - APHIS
    - $2,250,000 for 2008 – 2012
      - Not appropriated
    - Conduct nationwide honey pest and pathogen surveillance program
Pilot Survey (2009-2010)
- Hawaii, California and Florida

Limited National Survey (2010-2011)
- Alabama, California, Florida, (Hawaii), Indiana, Michigan, New York, Pennsylvania, Tennessee, Texas, Washington, South Dakota

APHIS funded from the Farm Bill Section 10201

APHIS and ARS collaboration
National Survey

- 25 apiaries per state
- 8 hives per apiary
- 3 samples
  - Wet/Alcohol Sample
    - Small hive beetle, Nosema, Varroa, etc
  - Bump/Tropilaelaps sample
  - Live Bee Sample
    - Molecular analysis
    - *Apis cerana*, *Apis mellifera capensis*, Viruses
National Survey

- HoneyBeeSurvey@aphis.usda.gov