

Pollinator Protection in EPA's Office of Pesticide Programs

**Pesticide Program Dialogue
Committee**

October 7-8, 2008



Pollinator Protection in EPA's Office of Pesticide Programs

- Regulatory Programs
- Research Programs
- Voluntary Programs
- Communication and Outreach



Regulatory Programs – Testing for Potential Effects

□ Tiered Testing Approach

Tier 1 Honey Bee Acute Contact Toxicity

- Required for all outdoor uses
 - Results expressed as 48-hr LD50, with extensions to 96 hr
 - Mortality and signs of abnormal behavior reported



Tiered Testing Approach

Tier 2 – Honey Bee Toxicity of Residues on Foliage

- Triggered if Tier 1 48-hr $LD_{50} < 11$ ug a.i./bee
or
use pattern or other data indicate that bees are exposed
- LC_{50} determined after 24 h exposure to treated foliage with 24-h extensions
- Measures time in which residues remain toxic to bees.



Tiered Testing Approach

Tier 3 - Field Testing for Pollinators

- ▣ Required on a case-by-case basis
 - Prolonged foliar residue toxicity
 - Open literature indicates effects to pollinators
- Test conditions resemble those encountered in the field under actual use conditions
- Mortality and behavior of pollinators are recorded



Improved Study Designs

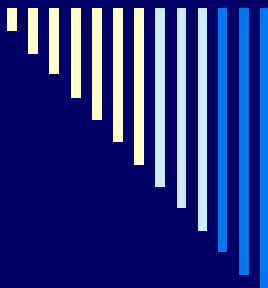
Tier 3 Field Pollinator Studies

- EPA is working with industry, USDA, and academia to develop more refined field pollinator study protocols capable of detecting a range of potential chronic and sub-lethal effects on adult and brood bees.
 - Traditional endpoints (growth, survival, reproduction)
 - Brood survival and development
 - Incidence of disease
 - Over-wintering success
 - Behavior
 - Sub-lethal effects



Regulatory Programs - Risk Assessment

- Last week, Crop Life America met with representatives of OPP to discuss their proposed process for conducting ecological risk assessment for pollinators.
 - Tiered approach
 - Use of existing data
 - Additional data may be required to address potential uncertainties.
 - Recommended 3-day workshop (Pellston) involving Agency science staff and stakeholders.



Regulatory Programs – Bee Precautionary Labeling

- Prohibits application under conditions that may kill bees
 - Based on toxicity and fate of product
 - Includes use restrictions for foraging bees and blooming crops
- Working with stakeholders to improve labeling (NAPPC labeling group)



Research Programs

- CCD Steering Committee and Working Group
 - USDA is the lead federal agency
 - OPP participates in Steering Committee and Working Group meetings.
 - OPP provides advice to Steering Committee and Working Group on pesticide-specific research related to CCD.
 - OPP is reviewing research protocols for studies funded by USDA examining potential role of pesticides in CCD.



Research Programs

- ❑ OPP has conducted site visits to leading research facilities conducting studies on the potential effects of pesticides on pollinators.
- ❑ OPP's BEAD labs are conducting residue analyses in support of several research studies.



Research Programs

- Increasing staff awareness of pollinator issues and research
 - Over the past year, OPP has offered two seminars on the status of research related to CCD.
 - This week roughly 40 OPP staff members participated in a day-long workshop on bee biology/ecology conducted by USDA and Pennsylvania State University.



Voluntary Programs

- Pesticide Environmental Stewardship Program (PESP) - voluntary partnership program established in 1994 to reduce pesticide risk to human health and the environment
 - PESP includes over 150 members who are committed to environmental stewardship
 - Many PESP members have adopted the use of biological pesticides and IPM practices



Voluntary Programs - NAPPC

North American Pollinator Protection Campaign (NAPPC) is a PESP supporter

- Developed action plan for pollinator protection
- Promotes annual conferences
 - EPA will host annual NAPPC meeting in October 2009.



Voluntary Programs - NAPPC

- Developed educational products and special partnership initiatives for reducing pesticide risks to pollinators
 - <http://www.napcc.org/PesticidesMain.html>
 - <http://www.epa.gov/oppbppd1/pesp/about.htm>



Communication and Outreach

- Cooperation and communication is KEY to protecting bees
 - Applicators, growers, extension agents, beekeepers, industry, and state and government officials need to communicate effectively with each other
 - Factors that improve bee safety need to be considered in decisions to apply pesticides



Communication and Outreach

- The Agency is working with stakeholders to encourage greater communication among growers, applicators, and beekeepers.
 - Pesticide selection
 - Integrated pest management
 - Pest management practices
 - Restrictive label language



Communication and Outreach

□ OPP Pollinator Workgroup

- Cross-divisional response to pollinator-related issues.
- Enhance opportunities for communication and research toward limiting the potential effects of pesticides on pollinators.
- Direct communication with beekeeping industry leaders
- Direct communication with regulated industry



Questions for the PPDC

- Given the various activities in which the Agency is engaged, does the PPDC believe that additional effort should be expended in a particular area? If so, where should additional resources be brought to bear and why?



Questions for the PPDC

- Current data suggest that pesticides may not be a direct cause of CCD; however, they may play an indirect role through immunosuppression
 - To what extent does the PPDC believe that the Agency should invest in research that examines the potential sub-lethal and/or indirect effects of pesticides on pollinators?