US EPA ARCHIVE DOCUMENT

PPDC Section 1A
Update on Pollinator Protection Actions at EPA

October 12, 2011

Pollinator Decline

Multiple Factors (Stressors) Associated with Pollinator Declines:

- Agricultural Practices, e.g., monocultures.

- Disease/Parasites, e.g., varroa mites Nosema.

- Habitat loss, e.g, urbanization.

- Nutrition, e.g., lack of diverse pollen sources.

- Bee Management Practices, e.g., pollination routes.

- Pesticides, e.g., in-hive and agricultural.

Pollinator Decline

Pesticides are one of several factors associated with declines.

- Multiple pesticides have been detected in colonies from national surveys of managed honeybee colonies.
- Three of the most frequently detected compounds are those used by beekeepers to control mites.
  - Coumaphos.
  - Fluvalinate.
- Pesticide exposures not consistently correlated with the incidence of CCD or pollinator declines in general.

Federal focus on pollinator health versus CCD.

Advancing the Science

Status of the Society of Environmental Toxicology and Chemistry (SETAC) Global Workshop on Pollinator Risk Assessment

- Identification of a risk assessment process for consistently quantifying risks to honeybees (*Apis mellifera*) and non-*Apis* bees from pesticides.
  - Reflects a tiered approach progressing from screening level to more refined evaluations
  - Separate tiered processes are proposed for foliarly applied (contact) products and for soil/seed (systemic) products.
  - Proposed higher-tier process includes consideration of non-*Apis* species.
- Identification of exposure and effects data (laboratory and field-based) needed to inform risk assessment process.
  - Includes discussion of larval tests, semi-field and field tests.
  - Includes discussion of exposure estimates and exposure tests (e.g., residues in pollen and nectar).
- Discussion regarding inherent difficulties of field studies, no consensus on how to consistently measure and interpret sublethal effects for quantitative risk assessment.
- Guidance for consistent statistical analysis and interpretation of laboratory and field studies.

Advancing the Science

SETAC continued:

- Executive summary of Workshop proceedings is available at: http://www.setac.org/node/265
- Full proceedings will be published by SETAC in early Spring 2012.

Advancing the Science

- OPP's current approach: qualitative analysis based on hazard, does not include estimates of potential exposure. Includes the following study requirements:
  - Acute contact toxicity; Honeybee toxicity of residues on foliage; and Field testing for pollinators.
- Current set of guideline study requirements provide limited characterization of toxicity

EFED is developing interim guidance for recommending additional pollinator toxicity data to inform ecological risk assessments and regulatory decisions.

- In case-by-case situations, EPA is asking for additional data including:
  - Acute oral toxicity tests.
  - Acute larval toxicity tests.
  - Semi-field tests (chronic; colony-level).
  - Residue tests (in pollen and nectar).

OPP will present a proposed, new process for quantitatively estimating risk to insect pollinators to the FIFRA Science Advisory Panel (SAP) in Summer 2012.

Advancing Risk Management

PPDC Workgroup on Pollinator Protection initiated to examine risk management options for protecting pollinators.

- Identify possible management techniques that can be taken in the short term
- Consider possible risk management techniques that may be appropriate as the science develops

Continue to work with OECD partners through the Pesticide Exposure to Insect Pollinators (PEIP) Workgroup. Workgroup chaired by Canada, France and US. Four focus areas:

- Global incident reporting portal
- Compendium of risk mitigation measures
- Global risk assessment process
- Insect pollinator research clearing house portal

Advancing Risk Management

Solutions to declines in pollinators will involve managing the multiple factors.

- Improved honey bee management (pest and pathogen management), changes in nutritional regimes, modifying land use/habitat restoration, and advances in pesticide risk assessment and regulatory approaches.
- Requires coordination across different federal partners, (USDA, DOI, EPA) States, and stakeholders to ensure a sustained effort that effectively integrates solutions to pollinator declines.

Efforts to reflect the current Federal understanding and response to pollinator declines.

- EPA is working with its federal partners (USDA, DOI) to consider convening a national stakeholder conference on pollinator health.
  - Synthesize what has been learned about the multiple factors associated with pollinator declines, and identify means of managing them.
    - Include recommendations from PPDC
  - Identify new areas of research and actions needed to continue supporting pollinator health.