IR-4 Pollinator Workshop:
Risk Characterization Summary for Production Ornamentals

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Nursery Production
Risk Factor Characterization

- Insecticide
- Plant
- Pollinator
How innately toxic is A.I. to pollinators?

- **Contributing factor**
  - Pollinator species

- **Measurement**
  - Lab assays
How much residue is in the nectar/pollen?

Contributing factors

- Application rate, timing and method
- Time between treatment and flower
- Insecticide physiochemical properties
- Soil characteristics
- Plant characteristics
- Environmental conditions

Measurement

- Sampling and analytical chemistry
  - Nectar and pollen
How likely will pollinators be exposed?

Contributing factor

- Plant attractiveness
  - Nectar and pollen production
  - Length of bloom

- Measurement
  - Surveys
    - Horticulturists
    - Growers
    - Master gardeners
  - Literature review
  - Foraging studies
How likely will pollinators be exposed?

Contributing factor

- Likelihood of treatment

- Measurement
  - Surveys
    - Growers
    - Entomologists
How likely will pollinators be exposed?

Contributing factor

- Abundance of treated plants

Measurement

- Surveys
  - Growers
  - Retailers
    - Ex. Home depot, garden centers
How likely will pollinators be exposed?

Contributing factor

- Abundance of nontreated, bee attractive plants
  - i.e. Landscape diversity
    - “Dilution effect”

- Measurement
  - Surveys
    - Landscapes
Pollinator Protection Goal

- What is reasonable in an urban landscape?
  - Workers vs colonies
  - Neonicotinoid benefits
  - Risk of alternatives