Pennsylvania Pollinator Protection Plan

http://ento.psu.edu/P4
WHAT IS THE PLAN?

• **NOT** A LAW or REGULATION

• Is **RECOMMENDATIONS**
  preserve, protect and enhance pollinator health

• Mandated by presidential executive order.
Find at: http://ento.psu.edu/P4

Click on the hyperlinks to hundreds of additional, reliable support sources.
Pennsylvania is home to over 500 species of pollinators that include bees, butterflies, moths, flies and beetles.

...more than just honey bees

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• Pennsylvania has one of the most diverse cropping systems in the United States
Pennsylvania pollinated crops contribute $260 Million in Economic value each year.
Diverse Landscape

• Landscapes span agricultural, suburban and urban
Honey bee Losses

- Pennsylvania beekeepers reported 52% losses in the winter of 2016-2017.

Causes of Decline

• Pests and Pathogens

• Habitat Loss

• Pesticide Use
P4 Task Force

- Penn State University, Center for Pollinator Research
- Pa Department of Agriculture
- Pa State Beekeepers Association
- Pa Dept of Conservation & Natural Resources
- Western Pa Conservancy
- Pennsylvania Game Commission
- Longwood Gardens
- Phipps Conservatory & Botanical Gardens
- State Horticultural Association of Pennsylvania
- Pa Vegetable Growers Association
• Penn State University, Pesticide Education
• Penn State University, Master Gardeners
• Lawn Care Association
• Penn Ag Industries Association
• Environmental Protection Agency
• Xerces Society
• Pollinator Partnership
• Pa State Conservation Commission
• Pa USDA NRCS
• Pa Office of US Fish and Wildlife
• Philadelphia Beekeepers Guild
• Burgh Bees of Pittsburgh
• Pa Farm Bureau
• Pa Council of Farm Organizations
• Ernst Conservation Seeds
• Pa Grower
• Organic Grower and local Government
• Pennsylvania Turnpike Commission
• Pennsylvania Dept of Transportation

P4 Advisory Board
Where do Native Bees nest?  

**Plant Stems**

- **Above Ground**
  - Some trees species can provide pollen and nectar for pollinators
  - Retain some dead branches for nesting
  - Native flowering forbs and shrubs offering blooms all season
  - Access to soil surface for nesting

- **Under Ground**
  - Access to soil surface for nesting
  - Some trees species can provide pollen and nectar for pollinators

**Above Ground**

**Under Ground**

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FORAGE AND HABITAT

• Ensure landscapes contain abundant and diverse array of nesting opportunities and flowering plant species

30% wood and 70% ground nesting
Examples of Special Food Sources

- Milkweed
- Wild parsnip
- Parsley
- Dill
- Queen Anne’s Lace
- Native wild flowers
Urban & Suburban Landscapes

Gardens and Green Space

Urban & Suburban Landscapes

• Ordinances to provide more than grass
• Allow dandelion and clover in lawns
• Mow HIGH
• Use natural methods to manage pests, diseases and weeds

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Pyramid of IPM Tactics for Crops, Lawn & Garden

- **Cultural**
  - site & plant selection, sanitation, rotations

- **Physical - Mechanical**
  - insect traps, barriers, weed, mulch, till, prune

- **Biological**
  - predators, parasites, nematodes

- **Chemical**
  - (Most Risky)
    - soaps, oils, baking soda, repellants, insect growth regulators (IGR), microbials
  - (Less Risky)
    - pesticides that kill on contact

**Intervention**

**Risk**

**Prevention**
Urban and Suburban

• Pesticides needed to control rapid spread of pests and diseases,
• Optimize home garden yield and control human pest and disease.

• Recommend IPM approach

• Remove standing water for mosquitos
IPPM Recommendations

• Only use pesticides when pest/disease levels exceed economic threshold

• Adjust timing ...... spray at night

• Include buffer zones between treatment and pollinator habitat

• Choose tank mixes carefully to avoid synergistic impacts
Beekeeper Practices are managed for pollination services.
• Pennsylvania beekeepers manage about 56,000 honey bee colonies.

of Pa beekeepers have 25 or fewer colonies

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Beekeeper Education

• 30 Local beekeeping organizations

• Recommend Beginner Beekeeping Classes

• Caution when using social media sources

• Voluntary Best Management Practices
Keeping Honey Bees in Pa

Selecting apiary locations

Registration with Pennsylvania Department of Agriculture

http://ento.psu.edu/P4
Keeping Honey Bees in Pa

Managing for Varroa mite control

Disease and Pest Control
Reducing Exposure to Pesticides

• Location consideration for agriculture, industrial, residential and public travel.

• Have a plan to move or cover when pesticides are applied nearby.

• Help growers know hive locations

  Add a BEE FLAG
Penn DOT
Adopt a Highway
CAPITAL AREA BEEKEEPERS ASSOCIATION (CABA)
Dauphin County Farm Bureau Pilot Pollinator Project
Recognizes communities that encourage beekeeping & habitat

http://www.beefriendlypa.org/
Pennsylvania Pollinator Protection Plan

- Pennsylvania-specific recommendations for pollinators in different landscapes across Pennsylvania

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