North Central IPM Center

USDA United States Department of Agriculture National Institute of Food and Agriculture

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Program/Resources

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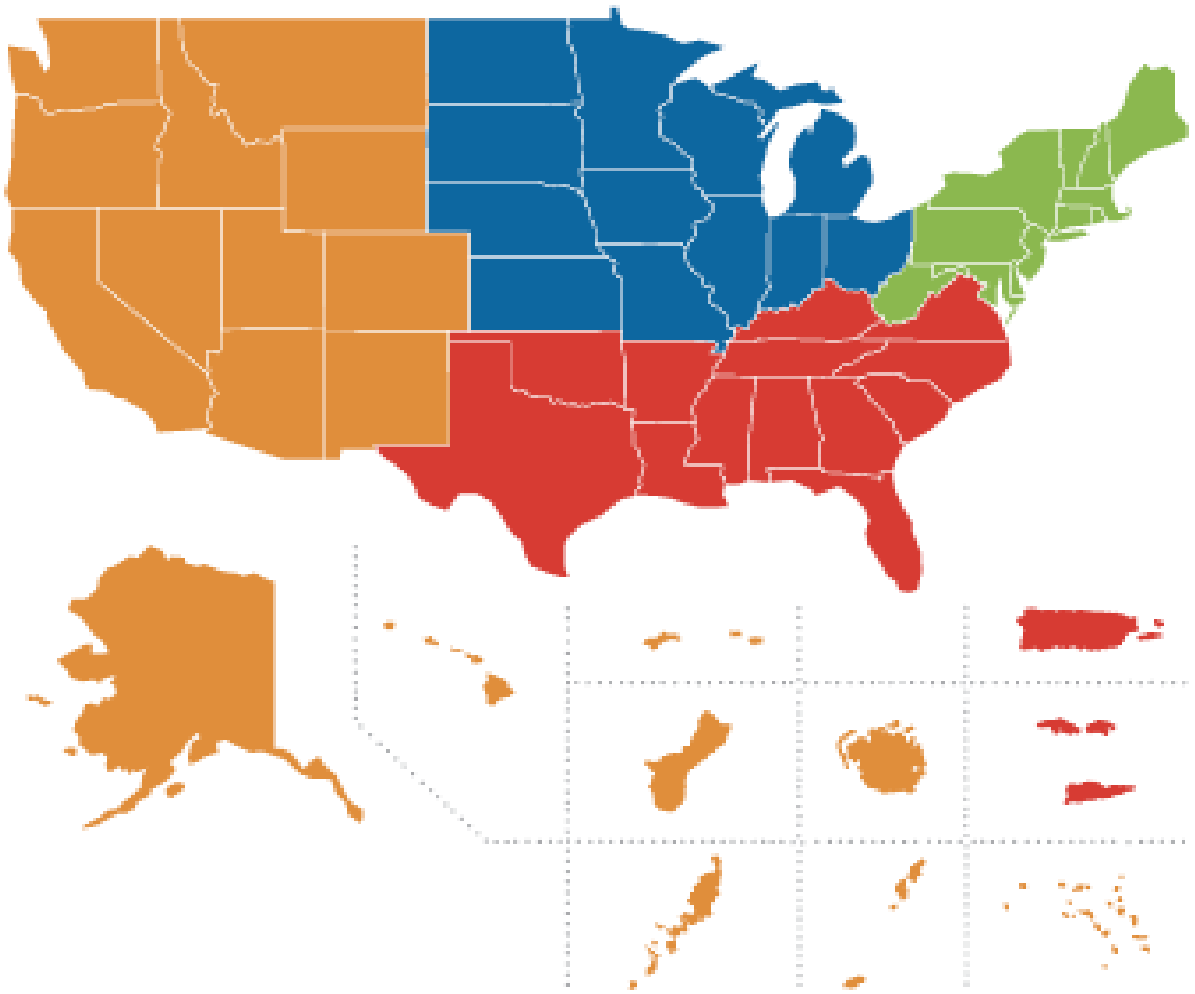
Regional Integrated Pest Management Centers



Crop Protection and Pest Management: **Regional IPM Centers' Objectives**

- **Development and Adoption of IPM**
- **Intra-Regional IPM Collaboration and Cooperation**
- **Inter-Regional IPM Collaboration and Cooperation**
- **IPM Information Networks**
- **IPM Partnerships**
- **IPM Signature Programs**
- **Evaluation of IPM Implementation**

What the IPM Centers do:

- Fund pest-management research to develop more effective and safer ways to prevent and control pests.
- Fund outreach and education to teach farmers, land managers, housing authorities and other pest managers how to mange pests safely and effectively.
- Tackle critical pest challenges facing the country like invasive species, pesticide resistance, pollinator protection and climate change.
- Communicate across interconnected networks to keep everyone informed, minimize duplication and maximize efficiency and coordination.

Resources from the North Central IPM Center

- Working Groups
- Pest Alerts
- Critical Issues Grants
- Special Grants

2017 NCIPMC Working Groups

1. Certified Crop Advisors
2. Field Crop Extension
3. Great Lakes Fruit IPM
4. Great Lakes Hop IPM
5. Great Lakes Urban Ag IPM
6. Great Lakes Vegetable
7. IC-SCOPE Pest Exclusion
8. Midwest Grows Green Lawns
9. North Central Nursery IPM
10. Northern Plains IPM Guide
11. Organic and IPM
12. Public Tick IPM
13. Pulse Crops
14. Rights-of-Way as Habitat
15. School IPM
16. Sunflower Pathology

2013-2015: Invasive Plants in Trade Working Group

- Focused on the IPM Strategy of prevention, working to reduce sales of ornamental invasive plants.
- Goal was to work with stakeholders to address the issue of invasive plants in trade and develop strategies to reduce their sale.

European buckthorn
Ohio Invasive Plants Council

Pest Alerts

- Purpose is to rapidly respond to a new or emerging pest while potential impact of the pest is assessed.
- Do not include specific pesticide recommendations.
- 700-800 words with images/diagrams

Critical Issues Grants

- Not available every year
- Address information, resource and research needs with regional importance
- One-time seed funding to help initiate work requiring immediate attention until other longer-term resources can be secured.

Brown Marmorated Stink Bug

- Detect the BMSB's first appearance in OH, MI, MN and IN in 2011
- Vegetable industry in these states valued at @$500 million
- Used black light and pheromone traps
- One of the most important outcomes was networking and communicating across state lines on effectiveness of different types of traps.
- Project also leveraged other funding.

Evaluation, Refinement and Extension of Invasive Species Predictive Maps – A Success Story

- Determine if habitat suitability models could forecast the spread of an invasive species
- Focused on spotted knapweed and wild parsnip
- Can create a predictive map that suggests areas where the invasive plant has the ability to establish and learn about the combination of factors that are important in determining a suitable habitat.

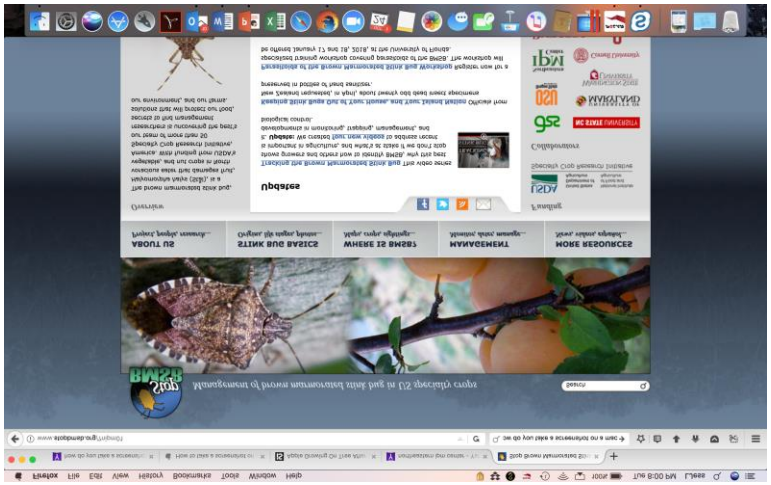
2018 Pollinator Habitat Usage Survey

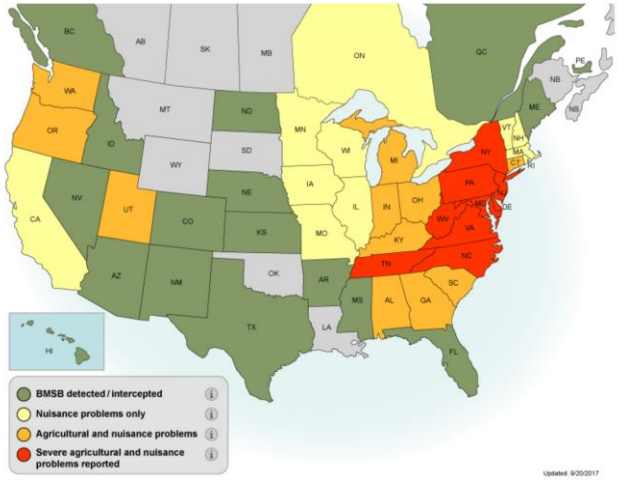
Purpose and Process

- Survey a variety of established habitats to determine how these areas are being utilized by both pollinators and pest species
- Use to develop plans to further improve our pollinator protection efforts while determining how habitats are being utilized by beneficial and pest species
- Conduct survey during the 2018 “growing” season for each state so the period of performance may vary slightly for each participating state due to climatic differences
- Data will be uploaded and archived using the iPIPE system as a central repository

Northeast IPM Center

- Brown Marmorated Stink Bug IPM Working Group
- Spotted Wing Drosophila Working Group
- Invasive Hardy Kiwi Working Group





Southern IPM Center

- EDDMapS – Early Detection & Distribution Mapping System
  - Need description of the invasive species, images to help people identify it, existing occurrence data, and list of people that are qualified and interested in verifying.
- Working Groups focused on invasive species
  - Spotted Wing Drosophila
  - Crapemyrtle Bark Scale
  - Kudzu Bug
  - Brown Marmorated Stink Bug
  - Tawny Crazy Ant
  - Conehead Termites

Western IPM Center

- Funded Functional Agricultural Biodiversity (AKA – Provide Habitat and They Will Come) Work Group
  - Joint venture of Xerces and Oregon State University's Farmscaping for Beneficials Program
  - Embraces a variety of living organisms with beneficial roles on farms and adjacent lands, and the habitats supplying resources to them.
- Invasive Species Signature Program
  - Recently funded work on the South American Palm Weevil – threatens date palm industry
  - Funded a meeting where participants are collaborating to report new weevil findings, conduct educational programs, and find additional funding
- New Work Group – Sudden Oak Death: Prevent and Prepare

Economic Incentive to Install Habitat Examples

- Morandin et al – CA hedgerows import pollinators & beneficial insects into adjacent crop fields; farmers got a return on installation costs of 300 meter hedgerows after 7 yrs due to services the insects provided.

- Blaauw & Isaacs – meadow plantings on blueberry farms increased yields, and plantings paid for themselves within 4 years.

Economic Perspective for Managing Roadsides Examples

- Norcini found limiting mowing to once a growing season, in the fall, reduced mowing costs by $1000 per mile.

- In 1987, MA managed roadsides at cost of $330/A; if every acre was instead managed as wildflowers, nearly $280/A could be saved.

- CA Yolo County estimated roadside native vegetation installation costs (earthwork, tillage, herbicide, seeding) at $522 to $1,433/A of roadside. Maintenance costs est for each of the 1st 3 yrs at $52 to $153/A, with similar costs occurring every 2-3 yrs.

Economic Perspective for Managing Roadsides Examples, continued

- Texas DOT estimated an annual mowing cost savings of $20-$30 million as a result of wildflower establishment.

- University of Florida estimated the value of ecosystem services and functions provided by Florida's roadsides. Pollination was among the ecosystem services identified. Other services roadsides support include carbon sequestration, improved air quality, reduction of invasive species, pest control by wild insects, runoff reduction, ad aesthetics. Estimated total value of these services was over $500 million annually, a value that could be doubled if wildflower areas were designated and sustainable maintenance practices such as reduced mowing were widely adopted.

Thank You!

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