

# Pest Management Alternatives Program (PMAP)

Cooperative State Research, Education, and Extension Service



The Pest Management Alternatives Program (PMAP) supports the development and implementation of pest management alternatives when regulatory action by the U. S. Environmental Protection Agency (EPA), voluntary action by the registrant, or other circumstances results in the unavailability of certain pesticides or pesticide uses. PMAP grants support the development of new pest management tools and techniques to address critical pest problems identified by pest managers and other stakeholders. Projects are typically two to three years in duration. Recently, this program initiated a process to identify and address priorities on a regional basis as identified by stakeholders. PMAP has the broadest eligibility of the IPM competitive grant programs and has supported over 138 projects across the U.S.

Meeting the domestic and global demand for safe food and fiber is dependent on the availability of effective, economical, and reliable pest management systems. High-value crops grown on relatively few acres are particularly vulnerable to the loss of pest management tools.

## Examples Of Projects Supported By PMAP

### IPM for Poultry Production: \$128,814

- University of Arkansas
- Filth flies in poultry production facilities
- Adult flies monitored for disease-causing organisms
- Evaluate biological control agents: wasp parasites, insect parasitic nematodes, pathogenic fungus
- Evaluate alternative insecticide mixtures
- Evaluate attractant/insecticide trapping devices
- Impact: Refined PCR technique to quickly ID pathogens in filth flies; tactics provide rapid reduction in filth fly numbers; reduce environmental contamination



### Blueberry Insect Pest Management in the Southern U.S.: \$117,572

- University of Florida
- Blueberry gall midge, flower thrips, and blueberry maggot on highbush blueberry
- Develop effective monitoring and sampling protocols
- Evaluate pest management alternatives: parasites and predators, reduced-risk insecticides
- Impact: Simpler but effective detection of insect pests; reduced-risk insecticides minimize negative effects on environment; better understanding of pest biology



# Examples Of The Projects Supported By PMAP

- continued -

## Alternative Weed Control in Vegetable Crops: \$149,314

- University of California, Davis
- Weed management in broccoli, lettuce, and spinach: screening of new synthetic and biological herbicides for safer materials; evaluate a mustard cover crop in spinach
- Impact: Labeling oxyfluorfen in broccoli potentially saves growers \$80/acre in hand-weeding costs; reduced back injuries among fieldworkers



## Alternatives to Disease Management on Apples: \$202,693

- Iowa State University (test sites in IA, WI and NC)
- Sooty Blotch and Flyspeck Complex
- Increase reliability of warning-system advisories
- Evaluate reduced-risk fungicides and postharvest dip methods
- Impact: Reduced fungicide sprays by 25-38%; cut input costs by \$165/acre; enhance sustainability of orchards and consumer safety; reduce environmental pollution



## Alternative Control of Varroa Mites on Honey Bees: \$99,572

- Michigan State University
- Varroa mites on honey bees
- Trapping varroa mites in drone brood cells and killing them with heat
- Field tests showed mite suppression
- Impact: physical control method and resistant bees lead to successful control; beekeepers impressed with simplicity



## Novel Strategies to Control Soil Insect Pests of Cranberries: \$48,274

- Rutgers University and University of Massachusetts
- Beetle and moth larval pests on cranberries
- Evaluate four neonicotinoids, methoxyfenozide (IGR), and a new, scarab-specific entomopathogenic nematode
- Impact: New pest management tools lead to increased production



## Replacing OPs on Stored Grain for Food Processing: \$165,009

- Oklahoma State University
- Evaluate low-risk replacements for organophosphates
- Impact: Results with Spinosad and methoprene will be used to support EPA registration; long-term control of insects; implement a monitoring-based IPM system with pheromone traps and sanitation

For more information on PMAP visit the funding opportunities website at:  
[www.csrees.usda.gov/fo/pestmanagementalternativessrgp.html](http://www.csrees.usda.gov/fo/pestmanagementalternativessrgp.html)