

## **NIFA Involvement in Invasive Species Issues and Activities - 2012**

### **Overview**

Invasive species constitute one of the most serious economic, social, and environmental threats of the 21<sup>st</sup> century. Nearly every terrestrial, wetland, and aquatic ecosystem in the United States has been invaded by non-native species, with economic losses estimated at \$137 billion per year.

- **Active Engagement.** NIFA is actively engaged in the battle against invasive species through leadership in the implementation of the National Invasive Species Management Plan; through funding from the Section 406 Pest Management Programs and the Agriculture and Food Research Initiative; through the IPM Centers; establishment of the National Plant and Animal Diagnostic Laboratory Networks and the Pest Information Platform for Extension and Education; Hatch funding of Agricultural Experiment Station Projects, Smith-Lever 3(d) Pest Management Programs, and regional coordination of efforts through multi-state committees; and through the administration of special grants concerning invasive species.

### **Invasive Species Advisory Committee (ISAC) Working Groups.**

- **Robert Nowierski** is Co-Chairing the **Control, Management, and Restoration** Working Group for ISAC.
- **Robert Nowierski** and **Michael Bowers** are also members of the **Research** Working Group for ISAC.

### **USDA and NIFA Invasive Species Coordinating Committees.**

#### **USDA Invasive Species Coordinating Committee.**

- This committee helps coordinate invasive species efforts among federal agencies within the Department of Agriculture. **Federal agency members of this committee include:** The Animal Plant Health Inspection Service - Plant Protection and Quarantine (**APHIS-PPQ**), the Agricultural Research Service (**ARS**), the Cooperative State Research, Education, and Extension Service (**NIFA; NIFA representative: Robert Nowierski**), the Economic Research Service (**ERS**), the Forest Service (**FS**), and the National Resource Conservation Service (**NRCS**).
- The USDA Senior Invasive Species Coordinator/Liaison to the National Invasive Species Council is **Hilda Diaz-Soltero**.

#### **NIFA Invasive Species Working Group.**

- This Invasive Species Working Group is helping NIFA become better engaged and responsive to invasive species issues and activities. Members include: **Robert Nowierski** - NPL Bio-Based Pest Management (Chair); **Michael Bowers** - NPL Ecology; **Herb Bolton** - NPL Army Environmental Programs.

### **Regional IPM Centers**

- Regional IPM Centers are located in each of four regions in the U.S.: **North Central, Northeastern, Southern and Western.**

- The IPM Centers promote the development and implementation of IPM by facilitating collaboration across states, disciplines, and purposes. They serve as focal points for regional pest management information networks, collaborative team building, and broad-based stakeholder participation. The end result is increased coordination of IPM research, education and extension efforts and enhanced responsiveness to critical pest management challenges. **Herb Bolton** is the Director of the Regional IPM Centers Program.

### **National Plant and Animal Diagnostic Laboratory Networks**

- The safety of our plant and animal production systems is contingent upon our ability to rapidly identify foreign pathogens and other pests, whether introduced intentionally through bio-terrorism or unintentionally.
- To this end, NIFA has established two national networks of existing diagnostic laboratories to rapidly and accurately detect and report pathogens of national interest and provide timely information and training to state university diagnostic labs.
- **Kitty Cardwell**, NPL for Plant Pathology, and **Bill Hoffman**, NPL for Homeland Security, have been instrumental in organizing these efforts.
- **The National Plant Diagnostic Network** is led by **five regional labs** (Cornell, Florida, Michigan State, Kansas State, and California at Davis) and **one support lab** (Texas Tech).
- **The National Animal Health Laboratory Network** is led by **five core labs** (Georgia, Texas A&M, California at Davis, Wisconsin, and Colorado State), seven satellite labs (Cornell, Rollins Laboratory in North Carolina, Louisiana State, Florida Diagnostic Laboratory, Arizona, Washington State, and Iowa State), and **one support lab** (Oklahoma State). These facilities will help to link growers, field consultants and other university diagnostic labs to coordinate regional detection and provide inter-regional communication in the event of an outbreak.

### **Pest Information Platform for Extension and Education (PIPE)**

- PIPE is a system for managing pest and disease information flow via the Web.
- Provides real-time useful information to US crop producers, and a “one stop shopping” center for timely, unbiased, national, and local pest information
- Fosters good farming practices by encouraging growers to:
  - Avoid unnecessary or ill-timed chemical applications
  - Use the proper control tactics with the proper timing to manage crop loss risk
  - Document practices for crop insurance purposes
- **Kitty Cardwell**, NPL for Plant Pathology, **Bill Hoffman**, NPL for Homeland Security, and **Marty Draper**, NPL for Plant Pathology, have been instrumental in developing the PIPE System.

### **IPM<sup>3</sup> Training Consortium**

- **Integrated Pest Management (IPM)** provides a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks (US Code Sec. 136r-1).

- **NIFA is actively involved in the IPM<sup>3</sup> Training Consortium, which provides Integrated Pest Management Training to federal workers and beyond involved in pest management issues and activities.** Increased IPM education and training will help federal agency personnel better address elements of the National Invasive Species Management Plan. **Robert Nowierski - Co-Chairs the Consortium.**
- Increasing the quality and consistency of IPM training and implementation among federal agencies will help ensure that the most economically feasible and sustainable programs are developed for the management of pests on federal lands in the future.
- Visit the IPM<sup>3</sup> website at [www.umn.edu/ipm3](http://www.umn.edu/ipm3)

## **Funding**

### **Pest Management Programs**

- <http://NIFA.usda.gov/NIFA/pestmanagementprograms/>

Regional Integrated Pest Management Program (**RIPM**)

IR-4 Minor Crop Pest Management (**IR-4**)

Pest Management Alternatives Program (**PMAP**)

Integrated Pest Management Centers (**Centers**)

Extension IPM Program (**EIPM**)

Methyl Bromide Transitions Program (**MBT**)

Critical and Emerging New Pests and Diseases

Agriculture and Food Research Initiative (**AFRI**)

Specialty Crop Research Initiative (**SCRI**)

Agriculture and Food Research Initiative (**AFRI**)

Foundation Program

- Plant-Associated Insects and Nematodes

- Controlling Weedy and Invasive Plants

Food Security Program

- Management of Arthropod- and Nematode-vectored Plant Pathogens

- Enhanced Implementation of Integrated Pest Management (IPM) for Vectored Pathogens

Organic Agriculture Research and Extension Initiative (**OREI**)

### **Formula Funds**

<http://NIFA.usda.gov/NIFA/formulafunds>

Agricultural Experiment Stations (**Hatch Funding**)

Cooperative Extension (**Smith-Lever Funding**)

Cooperative Forestry (**McIntire-Stennis Funds**) (Forestry Funding)

## Partnerships

- **Federal Coordinating Committees are helping federal agencies better plan and coordinate invasive species efforts.**

**FICMNEW** - Federal Interagency Committee on the Management of Noxious and Exotic Weeds. NIFA representatives: **Robert Nowierski.**

**ITAP** - Management of Invasive Terrestrial Animals and Pathogens. NIFA representatives: **Robert Nowierski and Herb Bolton.**

**NASA/USDA Focus Area Working Group on Invasive Species.** NIFA representative: **Michael Bowers.**

**ANSTF** - Aquatic Nuisance Species Task Force. NIFA representative: **Gary Jensen.**

**FIPMCC.** Federal IPM Coordinating Committee. NIFA representatives: **Mike Fitzner** - NPL Integrated Pest Management, **Robert Nowierski,** and **Herb Bolton.**

**TAG** - Technical Advisory Group for the Biological Control of Weeds. NIFA representative: **Robert Nowierski.** **Tom Bewick,** NPL for Horticulture, represents the Weed Science Society of America on the Committee.

**WGRPAW** - Ad Hoc Working Group for Registration of Pesticides for Aquatic Weeds. **Chair: Jim Parochetti** (now retired).

**BOA** - APHIS-PPQ Permitting Board of Advisors. The BOA is currently working on improving the regulatory process and commercial carrier issues regarding the importation and shipment of living organisms, including biocontrol agents. NIFA representative: **Robert Nowierski.**

**Advisory Body for the ARS Overseas Biological Control Laboratories.** NIFA representative: **Robert Nowierski.**

## Contact Information:

**Dr. Robert M. Nowierski, National Program Leader for Bio-Based Pest Management, USDA-NIFA, Washington, DC; ph. 202-401-4900; [rnowierski@nifa.usda.gov](mailto:rnowierski@nifa.usda.gov).**

**Dr. Michael Bowers, National Program Leader for Ecology, USDA-NIFA, Washington, DC; ph. 202-401-4510; [mbowers@nifa.usda.gov](mailto:mbowers@nifa.usda.gov).**

**Dr. Herb Bolton, National Program Leader, Army Environmental Programs, USDA-NIFA, Washington, DC; ph. 202-401-4201; [hbolton@nifa.usda.gov](mailto:hbolton@nifa.usda.gov).**