

## Annual National IR-4 Funding (2012)

### Direct Support

|   |               |
|---|---------------|
| USDA-NIFA (Improved Pest Management*)     | \$ 11,916,000 |
| USDA-ARS                                  | \$ 3,900,000  |
| USDA-FAS (TASC Grant)                     | \$ 250,000    |
| USDA-APHIS (Invasive Species)             | \$ 922,000    |
| Hatch Grant (Multi State Research)        | \$ 481,182    |
| Dept. of Defense/USDA-ARS (Public Health) | \$ 250,000    |
| Industry Grants                           | \$ 1,420,000  |

Over \$19 million direct

### In-Kind Support

|                                       |                |
|---------------------------------------|----------------|
| Land Grant Universities and/or        |                |
| State Agriculture Experiment Stations | ~\$ 10,000,000 |
| Crop Protection Industry              | ~\$ 3,000,000  |
| Regulatory Authorities (EPA, CA-DPR)  | ~\$ 4,200,000  |
| Agriculture and Ag-Food Canada        | ~\$ 800,000    |

Indirect contributions at least \$18 million

\*IR-4 is one of several programs within Improved Pest Management

To learn more about IR-4 visit [ir4.rutgers.edu](http://ir4.rutgers.edu).

or Contact

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United States Department of Agriculture  
National Institute of Food and Agriculture



## A Proven Program with Proven Results

Since it has been established, IR-4 research has supported more than 24,000 food and ornamental horticulture use registrations. Also, according to the Center for Economic Analysis at Michigan State University, "the IR-4 Project is anticipated to support research and industry sales sufficient to support 104,650 U.S. jobs and bumps annual gross domestic product by more than \$7.2 billion."

IR-4 research activities are predominantly funded through annual Congressional Appropriations (\$11.916 million USDA-NIFA, \$4 million USDA-ARS).

Conducting this research is becoming more and more costly due to inflation and the complexity of analyzing new reduced and lower risk chemistries. It is also becoming more challenging and costly for IR-4 to meet EPA data requirements. For IR-4 to maintain its current level of high productivity, funding needs to increase. There is no other program or organization doing this work. If IR-4 doesn't do it, no one else will.

Specialty crop growers believe that without adequate funding to support IR-4's research on safe, effective pest management solutions, our domestic harvests are in jeopardy... which means more imports and higher prices at the grocery store.

## Please Help IR-4 Continue to Assist Specialty Crop Growers by:

- letting IR-4 know your pest management needs
- participating in IR-4 sponsored research
- supporting adequate funding at all levels (industry, university, and government)



# The Specialty Crops Program



Major funding provided by Special Research Grants and Hatch Act Funds from USDA-NIFA, in cooperation with the State Agricultural Experiment Stations, and USDA-ARS. State Agricultural Experiment Stations provide in-kind support valued at over \$10 million annually.

# About IR-4

## Mission

The mission of the IR-4 Project is to facilitate registration of sustainable pest management technology for specialty crops and minor uses.

Since 1963, the IR-4 Project has been the primary resource in the United States for facilitating registration of conventional pesticides and biopesticides on specialty food crops (fruits, vegetables, nuts, herbs, spices) and non-food ornamental horticulture crops (greenhouse, nursery, landscape plants, and Christmas trees). IR-4 serves as an intermediary between the agri-chemical industry and specialty crop growers. Due to the inherently small specialty crop market and cost prohibitive regulatory requirements, companies shy away from investing in the development of products for low acreage specialty crops.

The USDA recognized this gap between grower needs and industry market goals, and established IR-4 to bridge this specific gap and provide US growers with necessary pest management products. IR-4 accomplishes this by developing research data to support US Environmental Protection Agency (EPA) registrations. IR-4 also assists stakeholders by cooperating in registration of pest management tools for:

- minor uses on major crops
- invasive species
- medically important arthropods
- organic crop production

Additionally, IR-4 assists U.S. specialty crop growers to compete in international trade, by aiding in the harmonization of pesticide use and country-specific Maximum Residue Levels (MRLs) that often differ between the US and its global trading partners. IR-4 remains active in global harmonization efforts of NAFTA, the Codex Committee of Pesticide Residues (CCPR) and Organisation for Economic Co-operation and Development.

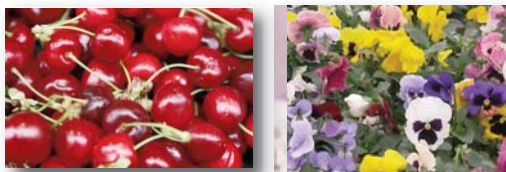
## Who benefits from IR-4 activities?

Growers benefit by having effective pest management tools that enable them to produce high quality food and ornamental horticulture crops. This in turn benefits the general public who have ample food and ornamental

horticulture crops available at reasonable prices. Specialty food crops provide essential nutrition for a balanced diet, while ornamental horticulture crops enrich the environment and improve the quality of life. The general public also benefits from IR-4's initiative of providing regulatory support for the development of pest control agents on arthropod pests that transmit diseases and threaten human health.

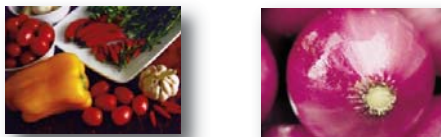
## Working in Cooperation

IR-4 is a highly effective collaborative effort among the State Agricultural Experiment Stations, USDA-National Institute of Food and Agriculture (NIFA), USDA-Agricultural Research Service (ARS), USDA-Foreign Agricultural Service (FAS), EPA, commodity growers, and the crop protection industry



## IR-4 Contributions

About 80% of IR-4 research projects are conducted on reduced-risk chemistries and biologically based products that fit well into Integrated Pest Management (IPM) systems. IR-4 research has contributed to thousands of new uses for food and ornamental crops.



## How IR-4 Helps Growers

When a pest is discovered or new pesticide use is needed for growers, extension agents and researchers are encouraged to submit a project request to IR-4.

## Once Needs are Identified

- Industry is consulted for project support
- Projects are prioritized
- Research is conducted

## IR-4 Generates Data for...

### Food Use

- Residue data from research trials are compiled and submitted to the EPA for review and establishment of pesticide tolerances
- The manufacturer adds the use to the label

### Ornamental Horticulture

- Efficacy and crop safety data are compiled into research summaries which are sent to manufacturers
- Manufacturers review summaries and incorporate into technical literature and product labels

## Outcome:

Healthier crops are produced and crop protection issues are resolved.

## For Biopesticides and Organic Support

Biopesticides are a "green focus" of pest management for food and ornamental horticulture crops. These naturally sourced technologies utilize microorganisms (fungi and [Bt] bacteria), plant extracts, and pheromones. Through the Biopesticide and Organic Support program, successful solutions have been developed for insect pests, diseases, birds and frogs, and the program has played a major role in the expansion of Bt uses. The IR-4 Biopesticide and Organic Support program has supported on-site projects on honeybees, woody ornamentals, forestry, cotton, fruits and vegetables. Recently, the IR-4 Biopesticide program was expanded to include the development of new tools for organic growers.

## IR-4 Public Health Pesticides Program (PHP)

The IR-4 PHP program is a partnership of USDA-ARS, the US Department of Defense and IR-4. It was created to facilitate development and registration of toxicants, repellents and attractants to manage public health pests such as mosquitoes, ticks, sand flies and to protect military personnel from arthropod borne diseases.

