

IR-4 PROJECT: VISION 2020



BACKGROUND

Since 1963, the IR-4 Project has been the primary resource for facilitating registrations of conventional chemical pesticides and biopesticides for specialty crops and other minor uses (specialty uses) in the United States. Using its unique ability to partner with government, industry and growers, IR-4 develops required data to support the registration of pest management products. IR-4's commitment and service to the producers of fruits, vegetables, herbs, ornamentals and specialty uses is unsurpassed; the Project's research efforts have yielded over 45,000 use registrations in the past 50 plus years.

The IR-4 Project is committed to remain relevant to its stakeholders. Through advisory boards, workshops and strategic planning, new programs and initiatives have been added to assist specialty crop growers with their pest management needs.

IR-4's evolution includes:

- Focusing research efforts on reduced risk pesticide registrations that are critically important to modern Integrated Pest Management Systems;
- Emphasizing the development of efficacy data to manage difficult to control pests in ornamental crop production; and

- Supporting all segments of specialty crop/specialty use agriculture including facilitating pest management products that can be used for organic growers as well as cutting edge biotechnology products.

More recently, IR-4 expanded its mission to:

- Assist in exports of U.S. grown specialty crops by aiding in the harmonization of domestic tolerances with global Maximum Residue Levels (MRLs) and with standards of global trading partners;
- Conduct research to mitigate invasive pest species which cause economic and environmental hardships; and
- Support registration of new products to manage arthropod pests, such as mosquitoes, ticks, sand flea, which can vector diseases of human.



VISION 2020

REFRESH THE VISION

In order to capture stakeholder comments and advice as to the future pest management needs for specialty crops/specialty uses, IR-4 conducted an online strategic planning survey in late 2013. Over 550 individuals responded. Their comments, ideas and suggestions influenced the development of the IR-4 Project Vision 2020.

The IR-4 Strategic Planning Survey asked participants a series of questions including, "Do you believe the need for existing services provided by the IR-4 Project will increase, decrease or stay the same over the next five years?" Over 65% of the replies associated with the Food Program indicated that the need will increase. Seventy-two percent of those responding to the

Biopesticide section felt the need for the program will increase and 56% felt the need for the Ornamental program will increase.

Survey participants were also asked to identify the transformational forces that are driving the increased need for IR-4.

Responses included:

- New pest pressure,
- Pest resistance to pesticides,
- Increased need for product performance data,
- Residue studies becoming more complex,
- Internationalization of IR-4 data development, and
- Emerging science and regulatory issues.



IR-4 VISION

The IR-4 Project aspires to remain a responsive and efficient organization that supports the farmer/growers, food processors and consumers of specialty crops/specialty uses by facilitating U.S. regulatory approval and international acceptance of chemical and biologically-based pest management technologies.

This allows producers and food processors to provide a consistent supply of nutritious foods, essential to good health, as well as aid in the production of ornamental horticulture crops that enhance the environment. IR-4 activities also assist in agriculture profitability.

The IR-4 Project effectively and efficiently assists with obtaining regulatory approvals for small market uses of pest management technology, such as specialty uses of pesticide products on major crops (corn, soybean, cotton, grains). Other specialty uses include the management of invasive species, approval of biotechnology for specialty crops and use of pest management technology to manage arthropod pests that pose a public health risk.

The IR-4 Project concentrates its efforts in the cooperative registration process of pest management technology that respects human health and the environment.

MISSION STATEMENT

The mission of the IR-4 Project is to facilitate regulatory approval of sustainable pest management technology for specialty crops and specialty uses to promote public wellbeing.

PROJECT VALUES & CULTURE

- **Exceptional Service to Customers/Stakeholders**
- **Inclusiveness**
- **Effective collaboration**
- **Transparency, Accountability and Stewardship**
- **Highly Competent Staff**

PLANT HEALTH OBJECTIVES

FOOD PROGRAM

- Facilitate the domestic registration of conventional chemical pesticides to manage pests on specialty food crops as well as specialty uses on major food crops.
- Where appropriate, assist in the establishment of international Maximum Residue Levels (MRLs) of pesticides in specialty food crops to remove pesticide residues as a barrier of trade.



PLANT HEALTH OBJECTIVES

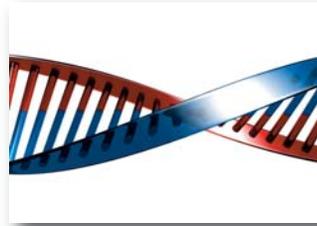
ORNAMENTAL HORTICULTURE PROGRAM

Develop data to support appropriate use of pest management technology (conventional chemistry, microbials, plant extracts) and cultural practices for managing pests on ornamental horticulture plants.



BIOPESTICIDE & ORGANIC SUPPORT

Develop product performance (value) data and provide regulatory guidance to support new registrations of biopesticides for the management of pests in conventional and organic agriculture.



HUMAN/ANIMAL VECTOR MANAGEMENT OBJECTIVE

PUBLIC HEALTH

PESTICIDES PROGRAM

Provide assistance in the development and registration of biopesticides, conventional chemical pesticides and other pest management technology for use in controlling arthropod pests that transmit disease to humans and minor animal species.



TURNING IDEAS INTO ACTIONS

IMPROVE EFFICIENCIES

IR-4 will seek an independent examination of its organizational structure to determine where efforts can be consolidated or enhanced.

ENHANCE “GRASS ROOTS” PRIORITY SETTING AND OUTREACH

IR-4 State Liaison Representatives will be empowered to conduct state based workshops or collaborate in multi-state workshops to identify pest management voids and raise awareness of IR-4.

ENHANCE IR-4’S

HUMAN/ ANIMAL VECTOR PROGRAM

There is an acute need for information on pest management product/technology used to manage arthropod pests that vector disease. IR-4 will modify and expand our publically available Public Health Pesticide database to answer the data voids and make it more useful to stakeholders.

FUTURE DEVELOPMENT

For IR-4 to continue to support specialty crop agriculture and other specialty minor uses in meeting pest management needs, an increased investment in funding for IR-4 is absolutely necessary. Its funding must be increased to \$23.7 million. It is IR-4’s goal to double the unrestricted grants and gifts to \$2.5 million annually by 2020.

GOALS/BENCHMARKS*

Priority Setting/Outreach

- At least 25 IR-4 State Liaison Representatives will host or participate in local priority setting workshops, with information feeding into IR-4's national workshops.
- Reach out to Integrated Pest Management and Organic agriculture communities to assist them in getting regulatory approval for technology necessary for successful pest management systems.
- Increase awareness of IR-4 to stakeholders and key influencers by expanding outreach and sharing of information via conventional print and electronic means as well as via social media.

Research – IR-4 will conduct/cooperate on:

Food Crops

- Approximately 100 Magnitude of the Residue studies annually to answer grower critical pest management needs in modern integrated pest management systems.
- 50 to 60 field trials designed to collect efficacy and/or crop safety data annually.
- 30 studies with international research programs that lead to harmonized MRLs.

Ornamental Horticulture

- At least six to eight research projects to screen options for the management of critical pests and to determine whether solutions impact plant quality.
- At least 200 field trials to determine potential phytotoxicity risk of pesticides on specific ornamental crops.

Biopesticides

- 20-25 studies with biopesticides alone, or in combination with conventional chemical pesticides to determine feasible solutions to manage critical pests and provide sustainable pesticide resistance management opportunities.
- Two to three support projects where IR-4 will provide knowledge and understanding of the regulatory process to facilitate the approval of biopesticide and biotechnology.
- One project to assist certified organic growers by facilitating approval of products that can be used in organic systems.

Regulatory Submissions – Submit to US EPA and/or industry:

- Approximately 100 final reports from Magnitude of the Residue studies.
- Six data packages proposing establishment or expansion of uses for ornamental crops.
- Three to four regulatory packages proposing new or expanded uses of biopesticides.

Internal Processes

- Lessen the burden of IR-4 on the costs incurred by land grant universities in hosting IR-4 research units.
- Replace outdated analytical equipment at the IR-4 Analytical Laboratories.
- Replace key personnel lost through retirements and resignations.

**** For IR-4 to achieve these goals there must be an increased public/private investment in funding. It is estimated that total funding must be increased to \$23.7 million.***

FINANCIAL RESOURCES NEEDED TO ACHIEVE BENCHMARKS (x \$1,000)

Purpose	USDA-NIFA	USDA-ARS	NRSP-4	Development	Total
Existing Plant Health Program Funding	\$11,916	\$3,600	\$481	\$1,250	\$16,766
Additional Funding Needed for Plant Health Programs					
Restore Program Capacity	\$900	\$1,000		\$1,250	\$3,150
Expanded Efficacy/Crop Safety Testing	\$1,500	\$400		----	\$1,900
Enhanced State-Based priority setting	\$100	----		----	\$100
Funds for Indirect Costs	\$1,442	----		----	\$1,442
Existing Human /Animal Vector Management Funding		\$252			\$252
Additional Funding Needed for Human/Animal Vector Management					
Enhanced Data Management Capabilities		\$125			\$125
TOTAL (Existing and New)	\$15,858	\$5,377	\$481	\$2,500	\$23,735



IR-4 SPONSORED RESEARCH

Individual farmers, commodity associations and/or other organizations also provide funding to have their priority project added to IR-4's research program. These programs include:

- Grower-Funded Research,
- Invasive Species Management,
- International (Global) Capacity Building,
- Import Tolerances,
- Pollinator Protection, and
- Other Studies as Needed.



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