IR-4 FOOD USE WORKSHOP
September 9 - 11, 2025

Integrated Solutions Updates

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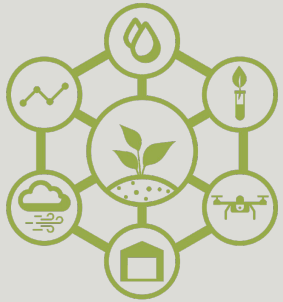

INTEGRATED SOLUTIONS (IS)

Established in 2017, **the Integrated Solutions platform explores potential new pest management strategies for organic and conventional specialty crop growers through a systems-based approach**—combining traditional tools with emerging technologies. This research helps growers manage increasingly complex pest challenges **in alignment with the principles of Integrated Pest Management**.

Goals & Objectives:

1. Fill complex gaps in pest management programs
2. Find solutions to address pest resistance
3. Reduce pesticide residues in produce

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ELIGIBLE PRODUCTS & TECHNOLOGIES

Tool Types*	Examples	Purpose/Function
Primary Tools	• Conventional pesticides • Biopesticides • FIFRA-exempt (25b) products • Plant growth regulators • Biotechnologies • Emerging technologies • Application devices	These are the core components being evaluated in IS studies.
Complementary Tools	• Adjuvants • Biostimulants • Biocontrols • Resistant cultivars • Mechanical tools • Cultural practices	Tools or practices that enhance the efficacy of or reduce reliance on primary tools. Must contribute to improved pest management.

**Not an exhaustive list of eligible technologies.*
Contact the IR-4 team with questions.

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IS PLATFORM DELIVERABLES

- **Generate data to support a new product or a new use registration.** Registration may be pursued directly by the company or a third party in collaboration with IR-4 (through either the *Residue & Product Performance* platform or the *Biopesticide Regulatory Support* platform).

- **Provide public access to research findings and publishing research outcomes** to help inform the specialty crop community of promising tools and integrated strategies for managing difficult pest challenges. Additionally, the IS database features research protocols and final reports that outline study outcomes.

- **Engage and inform** stakeholders through outreach to raise awareness, encourage collaboration, and invite involvement in IS research efforts.

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IS Reboot Initiative

A Progress Report from the IS Listening Session at the 2024 FUW

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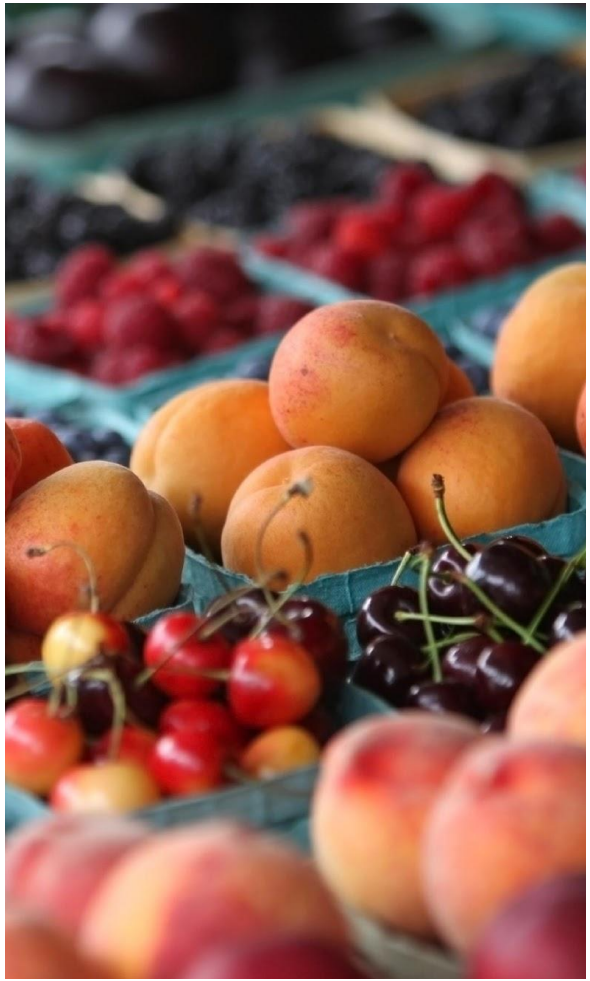


Capping Annual Priorities to Boost Project Resources

A **reduced number of new priorities** will be funded per year so that more resources can be allocated for each project.

Maximum of **11** new IS priorities per year

- Up to **9** NIFA-funded FUW priorities
- Up to **2** sponsored projects

Allocating Balanced Funding for National & Regional Priorities

A **proportional funding model** has been implemented to support both national and regional priorities, enhancing fairness & transparency in resource allocation, where:

- **60% of IS (NIFA) funds** will support **national** priorities
- **40% of IS (NIFA) funds** will support **regional** priorities

NATIONAL PRIORITY	A project nominated by **more than one** region.
REGIONAL PRIORITY	A project nominated by **ONLY one** region.

Building Scientifically Robust Protocols: Key Approaches

Research trials can be deferred to enable IR-4 Biology Leads to design more scientifically robust and impactful protocols. This additional time will be used to:

- **Engage early with industry partners** by attending spring partnership company meetings to identify promising new products and technologies for potential evaluation
- **Leverage specialized expertise** through the formation of targeted working groups with key subject matter experts to refine trial designs and address critical knowledge gaps
- **Sustain collaborative momentum** by continuing in-depth discussions at the FUW if needed.

The IS Database Tracks Study Goals & Achievements

For each funded project the IS database displays:

- PCR details
- Study goals
- Researchers & affiliations
- Protocols & reports
- Accomplishments

Visit **ir4project.org** under the tab **"Stakeholder Resources"**

IS#	Priority	Commodity (Crop Group)	Pest	Project Status	Discipline	Use Site
IS00458	A	CORN (FIELD & SWEET) (15-22CD = CORN (FIELD & SWEET) SUBGROUPS)	Earworm, Corn (Helicoverpa zea (Heliothis zea))	Research Ongoing	Entomology	Field Only

Problem Code:	Resis
Requesting State(s):	Bessin,Ricardo (KY) ; Tonnessen,Brad (CO) ; Oneill,Patrick (CO) ; Groves,Russell (WI) ; Hutchison,Bill (MN) ; Cato,Aaron (AR)
Potential Products:	Optimol; Magnet
PCR Reason for Need:	Corn earworm are becoming devastatingly difficult to control in sweet and field corn, especially as resistance to Bt and to numerous insecticides has become commonplace [CO: 8/23 AA].
PCR Details:	There is a need to diversify treatments for sweet corn earworm as we figure out systematic solutions for the ongoing issue [CO: 8/23 AA].
Study Goals:	The study evaluated the performance of Magnet, an attractant bait designed for use in tank mixes with insecticides to enhance overall control of corn earworm infestations. Manufactured by AgBiTech LLC, the product is registered in several countries but not yet in the United States. This study aims to generate performance data to support a potential U.S. registration [8/25 AA]
Comments	Registrant supports screening of Magnet [HQ: 8/23 AA].
Study Accomplishments:	In response to the positive research outcomes deriving from this study, a request for assistance was received by the IR-4 Biopesticide Regulatory Support Platform to help AgBiTech LLC pursue the registration of this bait in the U.S. The request is currently been vetted at HQ [8/25 AA].

Trial Number	Trial Year	Trial State	Institution	Coordinator	Researcher	Protocol	Report	Data To MG	Performance Results and Comments
IS00458-24-DE01	2024	DE	Carvel Research and Education Center	Alice Axtell	David Owens	IS00458-24	Yes	08/2025	This unreplicated study involved three commercial 'Glacial' sweet corn fields established in blocks of 16 rows. Four applications were made every 2-3 days of Magnet attractant bait (Alpha-pinene + anisyl alcohol + butyl salicylate + cineole + D-limonene + phenylacetaldehyde) in a tank mix with either Lannate/ methomyl (125.4 fl oz Magnet + 2.6 fl oz Lannate/ gal tank mix) or Radiant/ spinetoram (127 fl oz Magnet + 1.0 fl oz Radiant/ gal tank mix), applied to a single outer row, on every other block at silking. Treatments were applied via backpack sprayer with a single nozzle calibrated to deliver 5.3 fl oz/100 row feet of Magnet attractant bait + toxicant. Plots were established both with and without the grower's standard corn earworm (CEW) control program and compared against an untreated control (no treatment) as well as the grower's standard program alone, which included: 1) Nudrin /methomyl and Sultrus/ beta-cyfluthrin (24 fl oz + 2.8 fl oz/ gal tank mix) 2) Elevest/ chlorantraniliprole + bifenthrin (9 fl oz/ gal) 3) Intrepid Edge/ methoxyfenozide + spinetoram and Sultrus/ beta-cyfluthrin (6.4 fl oz + 2.8 fl oz/ gal tank mix) 4) Besiege/ chlorantraniliprole + lambda cyhalothrin (10 fl oz/ gal) Pheromone traps were used to monitor corn earworm (CEW) adults and corn ears were collected to count eggs and larvae. Pest pressure was very high during the study, especially in the plots receiving the grower's control program. While only 1% and 43% of clean ears were observed in the negative control and in the Magnet only plots respectively, more than 93% of clean ears were observed for the treatments that included the grower's control program with and without Magnet + toxicant. Magnet may have had a greater effect when applied to a larger field and earlier in the season, when moth migration is less, or when conventional spray programs are not as aggressive in terms of frequency of application. No phytotoxicity was recorded.

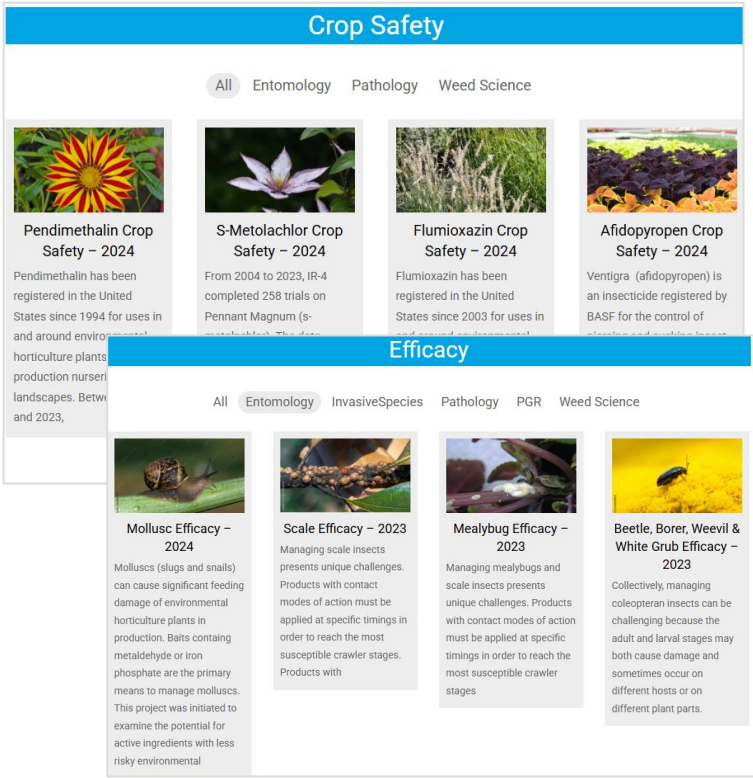
Expanding Awareness of IS and Research Outcomes

In progress:

- Updating the IS webpage
- Developing outreach materials
- Presenting at conferences and events

Planned:

- Posting research summaries on website
- Communicating impact through success stories on our newsletter and through other channels.



Thank you!

Your feedback and contributions are always welcome.

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