



The IR-4 Project

Pest management solutions for
specialty crops and specialty uses

ir4project.org

Today's Topics

- **Mission, History & Economic Impact (Slides No. 3 – 9)**
- **Our Team (Slides No. 10-16)**
- **Purposeful Partnerships & Funding (Slides No. 17 – 22)**
- **IR-4 Programs & Research Cycle (Slides No. 23 – 31)**
- **Major Events (Slides No. 32 – 36)**
- **IR-4 / Registrant Interactions (Slides No. 37 – 51)**
- **Protecting Data Confidentiality (Slides No. 52 – 53)**
- **Supporting IR-4 / Event Sponsorship (Slides No. 54 – 58)**
- **Connect with us (Slides No. 59-60)**



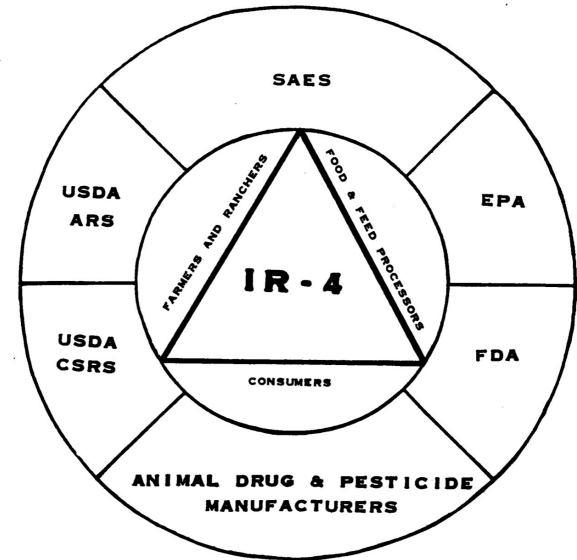
Mission, History & Economic Impact

IR-4's Mission

**Securing pest management solutions for specialty crops
and specialty uses in support of public well-being.**

IR-4's History

- IR-4 was established in **1963** through a partnership between the **USDA and land-grant universities** to address what's known as the '*minor use problem*'—where growers of specialty crops lack access to needed pest management tools because the markets are too small to justify private investment.
- For over 60 years, IR-4 has built **strong collaborations** across federal agencies, universities, and industry, which is reflected in its original logo.
- The program's name comes from its origins as **Interregional Research Project Number 4**, and its mission continues today: *to generate the data needed to support safe, effective pest management solutions for specialty crop producers.*



**A NATIONAL AGRICULTURAL PROGRAM
TO CLEAR PEST CONTROL AGENTS AND ANIMAL DRUGS
FOR MINOR USES**

What We Do

- Ensure that specialty crops and minor uses have legal access to **safe, effective crop protection** tools
 - Work with **growers and other stakeholders** to identify pest management needs and solutions
 - Conduct necessary crop safety, efficacy, and residue **research**
 - **Submit data** to the U.S. Environmental Protection Agency (EPA) and other entities for approval of new uses

Crops IR-4 Supports

- **Specialty crops**
 - Fruits, vegetables, nuts, herbs, spices, mushrooms, ornamental crops + more
 - USDA, Section 101 of the Specialty Crop Competitiveness Act of 2004
 - High-value, lower-acreage crops
- **Minor uses on major crops**
 - Ex: methoxyfenozone on rice



IR-4 is Technology Neutral



IR-4 helps organic and conventional farmers access safe, effective tools to manage pests.

IR-4 conducts research and registration work that responds to grower needs:

- Chemical pesticides
- Biopesticides
- Biotechnologies
- Other emerging technologies

IR-4's Economic Impacts

- IR-4's efforts and jobs contribute approximately **\$8.97 billion** to the annual gross domestic product.
- **Seven jobs** can be attributed to **every \$1,000 of public investment** in The IR-4 Project.
- IR-4 contributes to more than **123,000 U.S. jobs** throughout the agricultural production value chain.

**Figures according to a 2022 analysis conducted by Michigan State University's Center for Economic Analysis, based on 2021 numbers.*





Our Team

IR-4 serves growers across the country thanks to our offices at land-grant universities covering every region.

IR-4 Headquarters Office

**IR-4
Headquarters**

**North Carolina
State University**

***Management, QA,
program leads +
operations***

Teams located here:

Registration Team
Biology Team
Quality Assurance
Operations Team
IR-4 Management



NEW DIRECTOR ANNOUNCEMENT



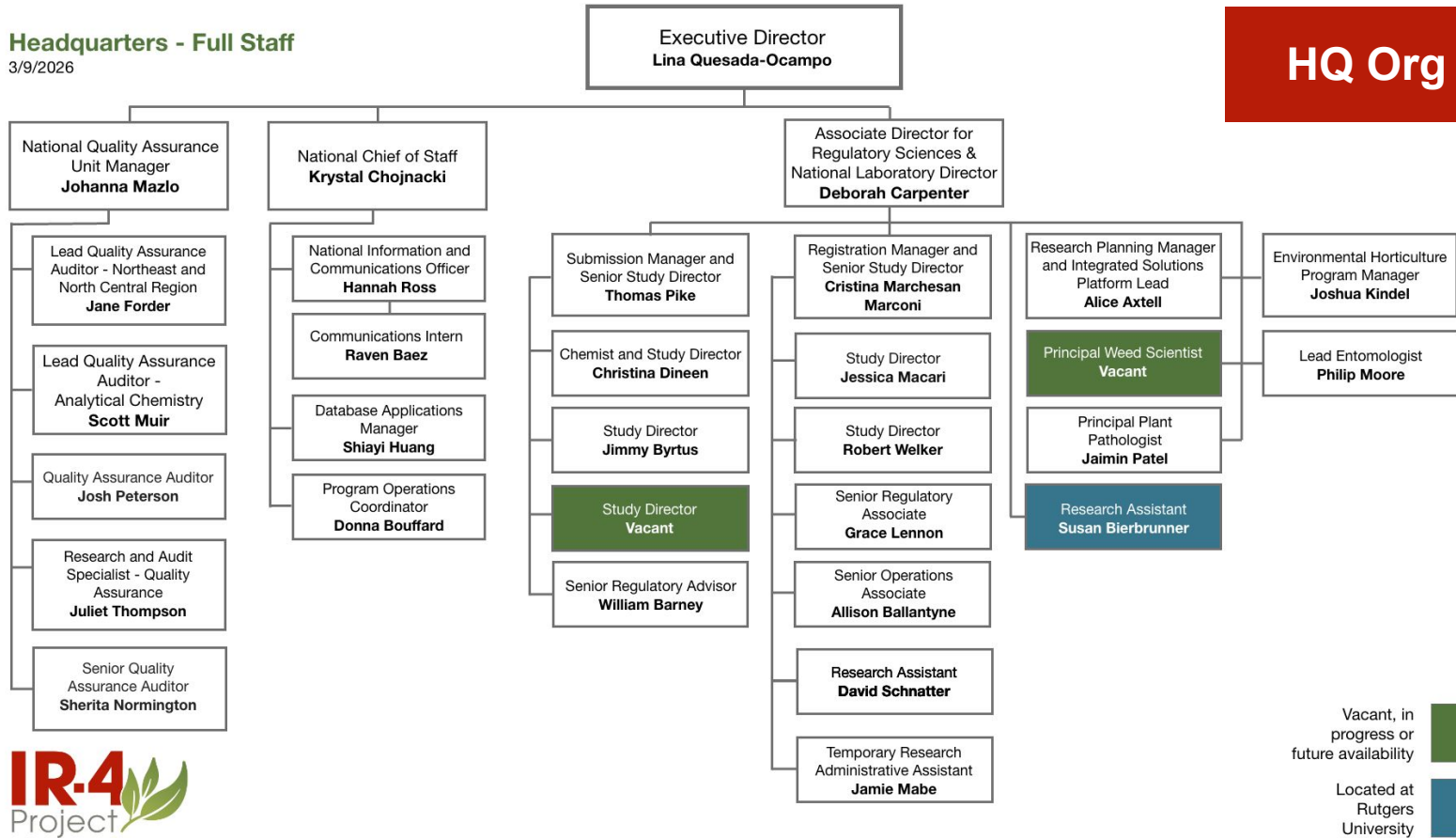
IR-4 recently welcomed a new Executive Director, Lina Quesada-Ocampo. Find the announcement on our website's news page.

ir4project.org/about-ir4/news

Headquarters - Full Staff

3/9/2026

HQ Org Chart



Vacant, in progress or future availability

Located at Rutgers University

HQ staff contact info is available on our website: ir4project.org/hq-staff/

IR-4 Regional Offices

SOUTHERN REGION

University of
Florida

Field + lab

WESTERN REGION

University of
California,
Davis

Field + lab

NORTHEAST REGION

University of
Maryland
Eastern Shore

Field

NORTH CENTRAL REGION

Michigan State
University

Field

USDA-ARS

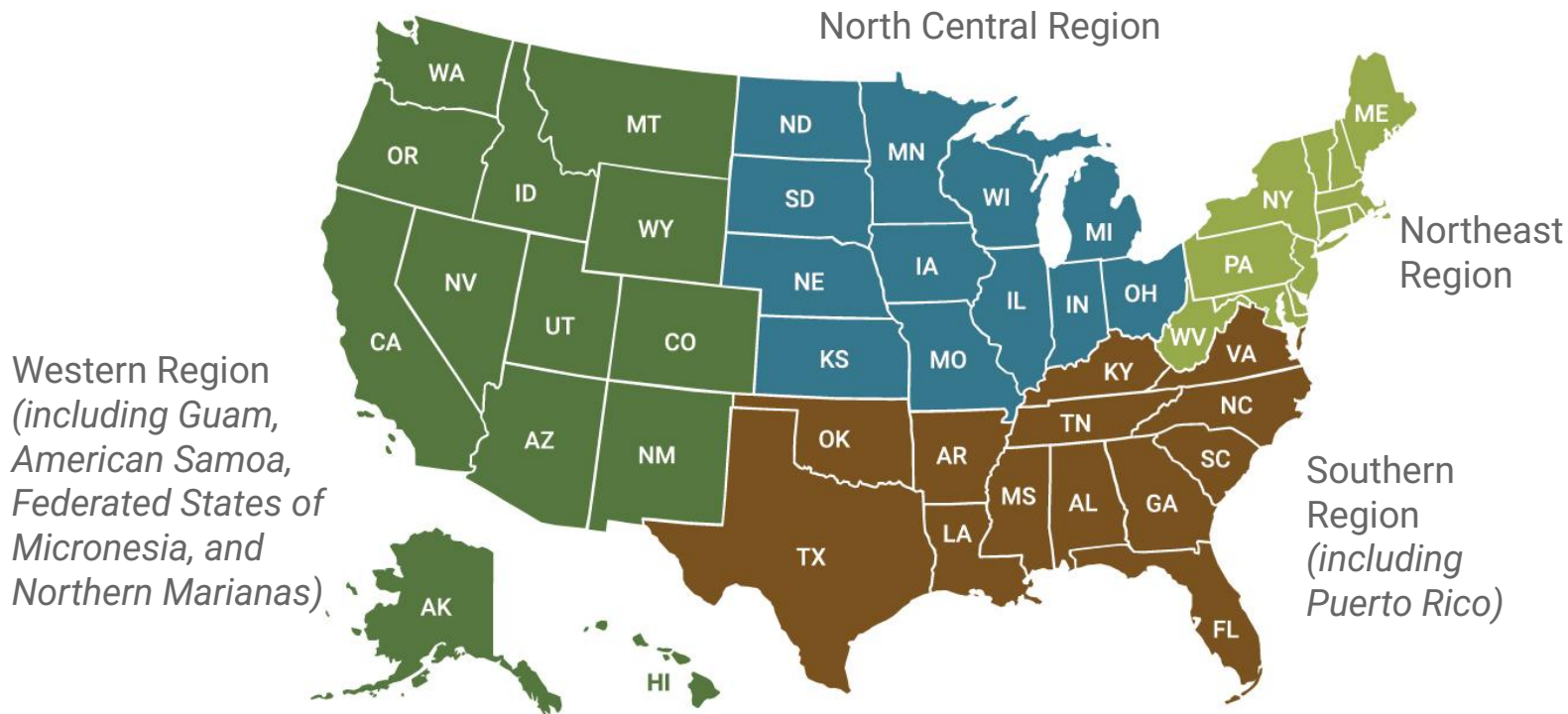
Charleston, SC
(Based at the
US Vegetable
Laboratory)

Field + lab

Regional Field Coordinators (RFCs) work with local growers and commodity groups to identify pest concerns and effective solutions. They facilitate regional priority setting and advocate for high priorities on a national level.

Regional Laboratory Coordinators oversee IR-4's analytical lab teams.

The IR-4 Project Regions



Regions also include USDA-ARS

Regional and Local Engagement

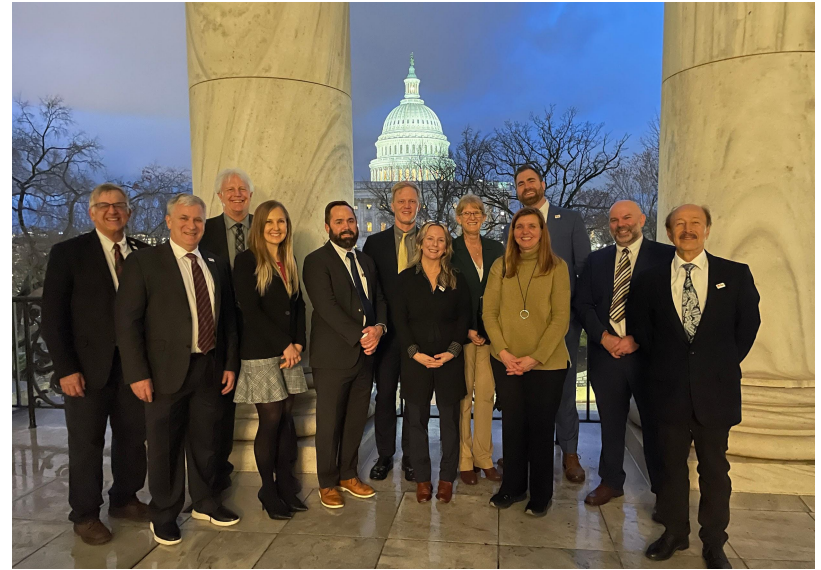
- **Regional Field Coordinators (RFCs) and State Liaison Representatives (SLRs)** work with local **growers** and **commodity groups** to identify pest concerns and potential solutions
- **RFCs** facilitate regional priority setting and advocate for high priorities on a national level
- **Field Research Directors (FRDs)** conduct and oversee trials locally at land-grant university research sites



Purposeful Partnerships & Funding

IR-4's work takes a village

Participants in the Process



Growers, researchers, agencies, committee members, commodity groups, land-grant universities, registrants, manufacturers and more

Project Management Committee

Board of Directors for IR-4

- **Meets a minimum of 3 times per year** to develop policies and procedures, set budgets, review status of ongoing programs, and ensure goals are met.
- **Members include:** IR-4 Executive Director, Regional Directors, Regional Administrative Advisors, and a representative from the Commodity Liaison Committee.



PMC members Matt Hengel, Liwei Gu and Simon Zebelo during the 2025 spring meeting in D.C.

Commodity Liaison Committee



- **Stakeholder committee** representing various specialty crop commodity groups
- Provides guidance to IR-4 on ways to **serve needs of growers**
- **Advocates for IR-4** to elected officials

Main Funding Support

- **U.S. Department of Agriculture (USDA)**
 - National Institute of Food and Agriculture (NIFA)
 - Agricultural Research Service (ARS)
- **agInnovation (NRSP-4)**
- **Crop protection industry and commodity groups**



Additional Support

- USDA – Foreign Agricultural Service (FAS)
- USDA – Animal and Plant Health Inspection Service (APHIS)
- CDFA – California Dept. of Food and Agriculture
- U.S. Environmental Protection Agency (waiver of submission fees)
- Minor Use Foundation and international partners (joint research projects)





IR-4's Programs & Research Cycle



Program Areas



Food Crops

- Residue Studies & Product Performance
- Biopesticide Regulatory Support
- International Activities

Environmental Horticulture

- Product Performance
- Invasive Species

RESIDUE & PRODUCT PERFORMANCE

Generates data required to support registration of a single product for the management of a specific pest on a specific crop.

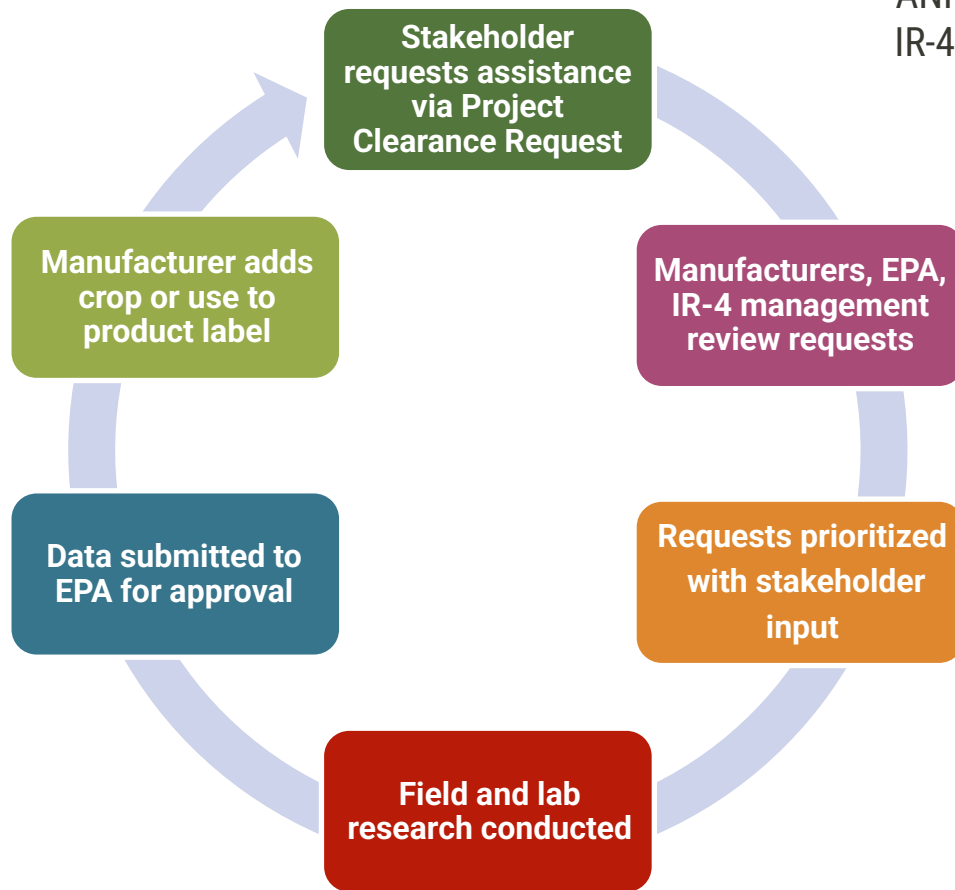
- **Product Performance:** Assesses the efficacy and crop safety of the pesticide
- **Residue:** Establishes residue tolerance for the crop

Data packages are then submitted to the EPA and receive a waiver from PRIA fees



FOOD CROP RESEARCH CYCLE

ANNUAL RESEARCH CYCLE IR-4 FOOD CROP PROGRAM



Biopesticide Regulatory Support

This platform provides **regulatory assistance** to public sector scientists and small businesses navigating EPA registration with **bio-based products**.

- IR-4 can help generate the necessary data package and receive a waiver from PRIA fees
- Support is provided only for new active ingredients
- To receive support, a Project Clearance Request (PCR) must be submitted by the public sector together with:
 - A letter explaining why the product is needed and why it is in the public interest for IR-4 to assist in the registration process
 - Efficacy data showing activity on the pest that needs to be controlled

International Activities

Global harmonization

- Help facilitate US grower access to international markets via harmonization maximum residue levels
- Harmonization of crop groups

Capacity building

- Cooperation with Minor Use Foundation

Joint residue studies

- Canadian Pest Management Centre/others

Policy enhancement

- Global Minor Use Summit



Environmental Horticulture Program

Facilitates regulatory approval of sustainable pest management products for ornamental crops. EH research helps green industry growers cultivate a diverse selection of healthy plants for landscapes, homes and gardens—a service to growers, the environment, the economy, and public well-being.

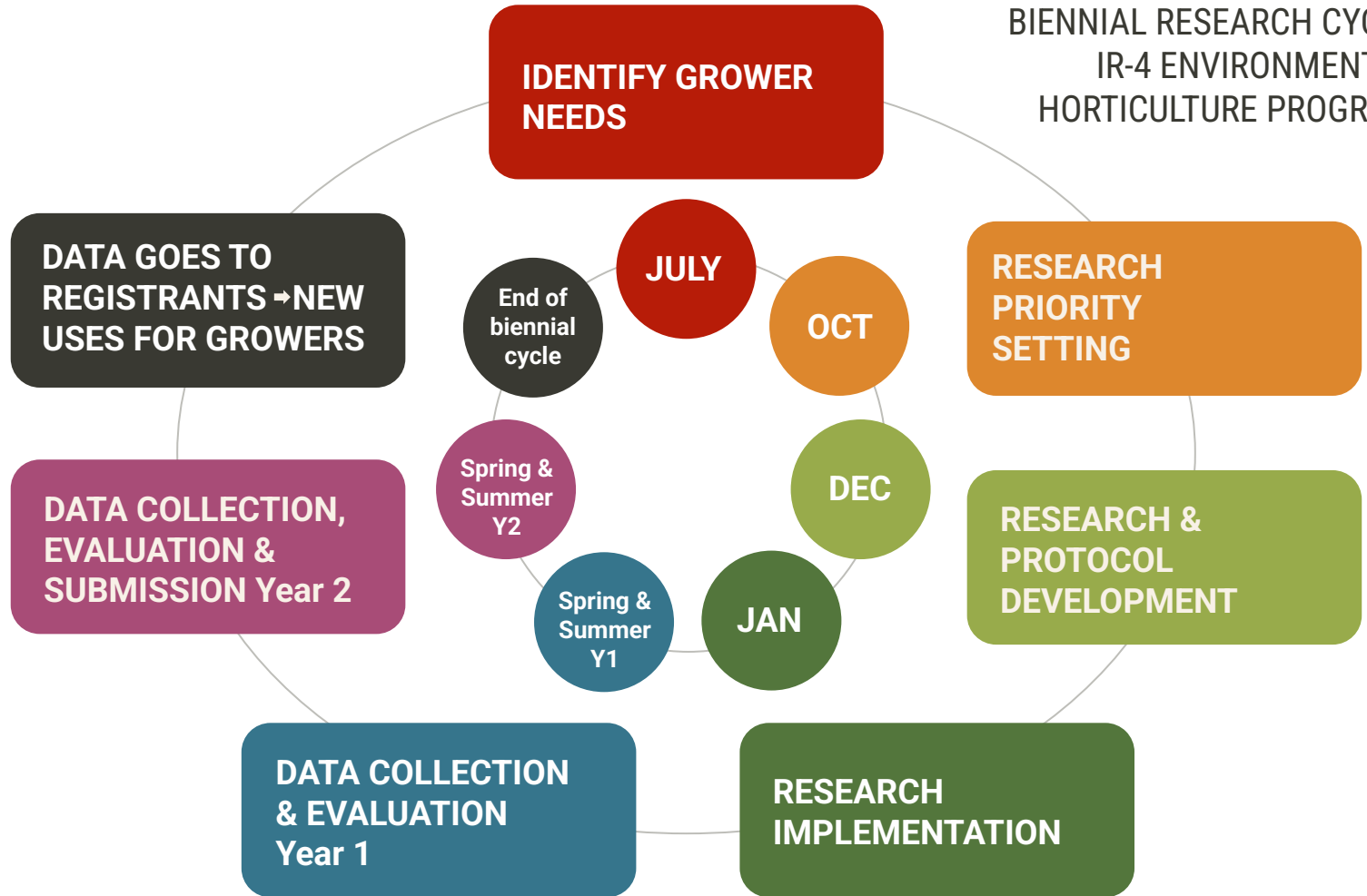
Crops include:

- Landscape & nursery plants
- Christmas trees
- Cut flowers
- Houseplants

2 key research areas:

- Registration support
- Invasive species





LEARN MORE

Visit the IR-4 HQ YouTube channel and view the videos “60 Years of IR-4” and “The IR-4 Project: Sixty Years and Beyond.”



IR-4 HQ

@ir-4hq587 · 59 subscribers · 18 videos

More about this channel ...more

Customize channel

Manage videos

Home

Videos

Shorts

Playlists

Posts



Latest

Popular

Oldest



THE IR-4 PROJECT
Pest Management Solutions for
Specialty Crops and Specialty Uses

4:39

60 Years of IR-4



The IR-4 Project: Sixty Years and Beyond





IR-4 Events

Join us & get involved



THE FOOD USE WORKSHOP

- Project Clearance Requests are submitted ahead of the workshop (by the July 1 deadline)
- Research priorities for residue and product performance research are selected by stakeholders during the workshop.
- Held each year in mid-September in varying locations
- **Industry attendance is encouraged** to establish connection with specialty crop stakeholders and address relevant questions.

Visit this year's event page:

ir4project.org/events/2026-food-use-workshop



Save the date
& join us in
Austin, TX

IR-4
Project 

**FOOD USE
WORKSHOP**
September 15 -17, 2026



THE ENVIRONMENTAL HORTICULTURE WORKSHOP

- Research priorities are selected by horticulture industry stakeholders during this workshop.
- Held on a **biennial basis** in early October in varying locations
- **Industry attendance is encouraged** to establish connection with our stakeholders and address relevant questions.

Visit the 2025 event page to learn more & view this cycle's priorities: ir4project.org/events/2025-eh-workshop/

A close-up photograph of a Colorado potato beetle on a green leaf. The beetle is positioned on the upper part of the leaf, facing left. It has a brown body with several distinct, dark, vertical stripes. The leaf is bright green and shows some signs of being eaten, with small holes visible. The background is a soft, out-of-focus green.

THE INDUSTRY TECHNOLOGY SESSION

- This annual event invites companies to introduce their novel pest control technologies, present updates on products already in IR-4 research, or share news about previously presented technologies or already known products.
- Usually held each year on the third Thursday of **February**.
- Presenters submit pre-recorded presentations and are encouraged to attend the event to answer questions.

Learn more & find presentations from this Feb.'s event:
ir4project.org/events/2026-industry-technology-session



IR-4 & Registrant Interactions

IDENTIFICATION OF NEEDS/ PRIORITIZATION

DATA GENERATION/ REPORT WRITING

PETITION PREPARATION/ SUBMISSION

POST-SUBMISSION

IDENTIFICATION OF NEEDS/ PRIORITIZATION

DATA GENERATION/ REPORT WRITING

PETITION PREPARATION/ SUBMISSION

POST-SUBMISSION

IDENTIFICATION OF NEEDS / PRIORITIZATION

- Stakeholders send IR-4 project clearance requests (PCRs) for crop/chemical combinations they would like to see registered
- Requests are reviewed internally at IR-4 to ensure that they are not redundant and can reasonably be pursued
- Requests are sent to the registrant to inquire for the company's support of the proposed use
- Requests are also sent to the EPA for review

Registrant's Role

- **A copy of the new PCR is sent to the registrant** for the review with a list of questions to address.
The registrant should:
 1. Determine whether or not they would support the registration of the proposed use pattern for the chemical /crop of interest
 2. If supportive, determine what kind of data IR-4 should generate: residue, efficacy, and/or crop safety
 3. Provide feedback on the proposed use pattern, target pests, proposed formulation, etc.
 4. Address the list of questions provided
- **New PCRs should be vetted on time for the Food Use Workshop**, although it is best to provide a response as soon as possible.
- **PCRs are further discussed** at the IR-4 / Registrant annual partnership meetings
- **Registrant representatives are encouraged to attend the Food Use Workshop** to address stakeholder questions on the floor as projects are prioritized for research.

IDENTIFICATION OF NEEDS/ PRIORITIZATION

DATA GENERATION/ REPORT WRITING

PETITION PREPARATION/ SUBMISSION

POST-SUBMISSION

DATA GENERATION/ REPORT WRITING (Residue & Product Performance Studies)

- IR-4 conducts **magnitude of residue and product performance** (efficacy & crop safety) studies via GLP trained professionals and university researchers, respectively.
 - A Study Director (for residue studies) and a Principal Biologist (for efficacy and plant safety studies) are assigned to each prioritized PCR. They are responsible for drafting the research protocol, coordinating trial execution, and serving as the primary points of contact for that study.
- Some studies are conducted jointly with the **Pest Management Center** (PMC) in Canada
 - IR-4/PMC utilize NAFTA trial guidelines for joint residue studies

Registrant's Role

- Registrant provides comments on the **draft protocols** for residue and/ or product performance studies prior to trial initiation such as:
 - Feedback on use pattern, formulation (especially if there are changes from the use pattern in the original PCR), testing methodology, etc.
 - Information regarding the reference method and storage stability data, if available
- Registrant is responsible for **providing test and/or reference substance** for the trials upon request:
 - Non-GLP product test substances are sufficient for product performance trials
 - GLP-characterized test substance is required for Magnitude of Residue studies and GLP-characterized reference substance is required for the laboratories, respectively
- Registrant **reviews the product performance data** in the relevant final report(s) and determines whether the data are satisfactory or if additional testing is required.

REQUESTING TEST SUBSTANCES VIA SMARTSHEET

- Test substance requests are managed through **Smartsheet**. Registrants do NOT need a license to access IR-4's Smartsheet sheets containing relevant information.
- By the end of December, IR-4 provides a tentative estimate of the **total volume of non-GLP and GLP-certified test substances needed** for each funded project. A notification is then sent to registrants via Smartsheet.
 - Please watch for the notification email with the subject line **"NC State University via Smartsheet."**
- **Specific test substance volume requirements for each research trial**, along with relevant shipping information, are provided to registrants via Smartsheet once the **protocol draft is finalized** and the trial is **ready to begin**.

IDENTIFICATION OF NEEDS/ PRIORITIZATION

DATA GENERATION/ REPORT WRITING

PETITION PREPARATION/ SUBMISSION

POST-SUBMISSION

PETITION PREPARATION/ SUBMISSION

- When **magnitude of residue studies** are complete, IR-4 prepares tolerance petition for submission, including additional documentation as needed
 - ChemSAC arguments, weight of the evidence argument, etc.
- **IR-4 reviews documents and requests revisions** from the registrant in order to address any errors that would delay processing at EPA
- Once the petition package review process is complete, **IR-4 submits it to the EPA**
 - IR-4 **coordinates timing of submissions with the registrant** in order to avoid delaying registrant actions at agency or to align simultaneous registrant/IR-4 submissions

Registrant's Role

Registrant provides the relevant documents that IR-4 needs for submission

- Letter of Authorization, Notice of Filing, 8570 forms, reduced risk package (if relevant)

Registrant provides corrected documents in response to IR-4 feedback

- Some IR-4 specific requirements in order to receive the waiver from PRIA fees
 - <https://www.epa.gov/pria-fees/guidance-ir-4-exemptions>
 - <https://www.epa.gov/pria-fees/factors-ir-4-public-interest-finding>

IDENTIFICATION OF NEEDS/ PRIORITIZATION

DATA GENERATION/ REPORT WRITING

PETITION PREPARATION/ SUBMISSION

POST-SUBMISSION

POST-SUBMISSION

- IR-4 **responds to EPA's requests** for additional information/corrections in relation to the submissions
 - Updated Section F, Notice of Filing, etc.
- IR-4 **monitors Federal Register** for posting of Notices of Filing and/or new tolerances in order to keep IR-4's public database up to date
- Once tolerances publish, IR-4 **works with registrant** to track when those uses are added to the product label(s). This step typically occurs during the IR-4 / registrant annual partnership meeting.

Registrant's Role

- Registrant **responds to requests** from EPA related to IR-4 submissions
 - XX-day letters, label revisions, etc.
- Registrant will **provide necessary documentation** to IR-4 in response to EPA inspections
 - Characterization reports for test and reference substance(s)
- Registrant **adds use(s) included in the IR-4 submission** to the commercial label(s)
 - Section 3, 21(c), and/or supplemental as appropriate



Protecting Confidential Data

Protecting Confidential Data

- Under federal law and state policy, data generated through IR-4–funded research cannot be owned by any external party.
- Confidentiality of study information cannot be maintained indefinitely; data become public upon submission of the data package to the EPA.
- IR-4 publishes research protocols for residue, crop safety, and product performance studies respectively.
 - While the results of magnitude of residue research trials and associated analytical summary reports are **not** posted in IR-4's publicly accessible database, crop safety and product performance data are made available for review.
- Use of code names for confidential information can be accommodated; however, results generated through the research cannot be treated as confidential, as work products are owned by NC State. While informal, time-limited non-disclosure may be discussed, such provisions cannot be contractually guaranteed.



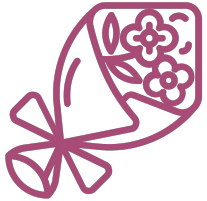
Supporting IR-4 / Event Sponsorship

Why Registrants Partner with IR-4

- **No U.S. Environmental Protection Agency (EPA) registration (PRIA) fees** for *IR-4-generated* or *PMC-generated* data submissions
- **Extended exclusive use protection:** +1 year per 3 specialty crops added to the label (up to 3 years).
- **Low-cost to registrants**, with IR-4 generating required data (performance, crop safety, and residue), while recognizing registrant contributions such as test substances, reference standards, and personnel time
- **Stakeholder-driven project selection** informed by IR-4's national research network and Workshop processes
- Regulatory insight and risk awareness through coordination with EPA, **limited to publicly available information and within agency information-sharing boundaries**
- **Collaborative partnership model** that balances registrant constraints with IR-4's mission to benefit growers

Why is the Role of Liaisons so Critical

- IR-4's success depends on the **active engagement and expertise of registrants and, especially, liaisons**, who serve as the critical bridge between their organizations and IR-4.
- Liaisons contribute **essential technical insight, regulatory perspective, materials (test and reference substances), and significant time and coordination effort** throughout the life of a project.



IR-4 **deeply values and sincerely appreciates** the commitment of liaisons, whose partnership is indispensable to advancing solutions and delivering meaningful benefits to specialty crop growers

Sponsorship Opportunities

Registrant support is essential to ensuring growers have the crop protection tools they need to succeed. Opportunities to partner with IR-4 include:




- Contributing to IR-4's research activities through **unrestricted gifts**.
- Becoming an **IR-4 event sponsor**. This support places your brand directly in front of public-sector researchers (USDA/land-grant), commodity groups, partner and competitor registrants, and EPA regulators.

Contact our team to start a conversation about sponsorship:

ir-4_project@ncsu.edu



2026 Event Sponsorship Levels

-  **Platinum > \$9,999**
-  **Gold > \$4,999**
-  **Silver > \$999**
-  **Bronze < \$999**





Connect with Us

Scan to sign up
for IR-4's
Newsletter*:



*or visit ir4project.org, scroll to the bottom, and select
"Sign Up for Announcements"

Thank You!

