



# The IR-4 Program

History, Infrastructure, Establishment of priorities,  
Coordination with the EPA and the Crop Protection  
Industry

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**IR-4 Project Headquarters**

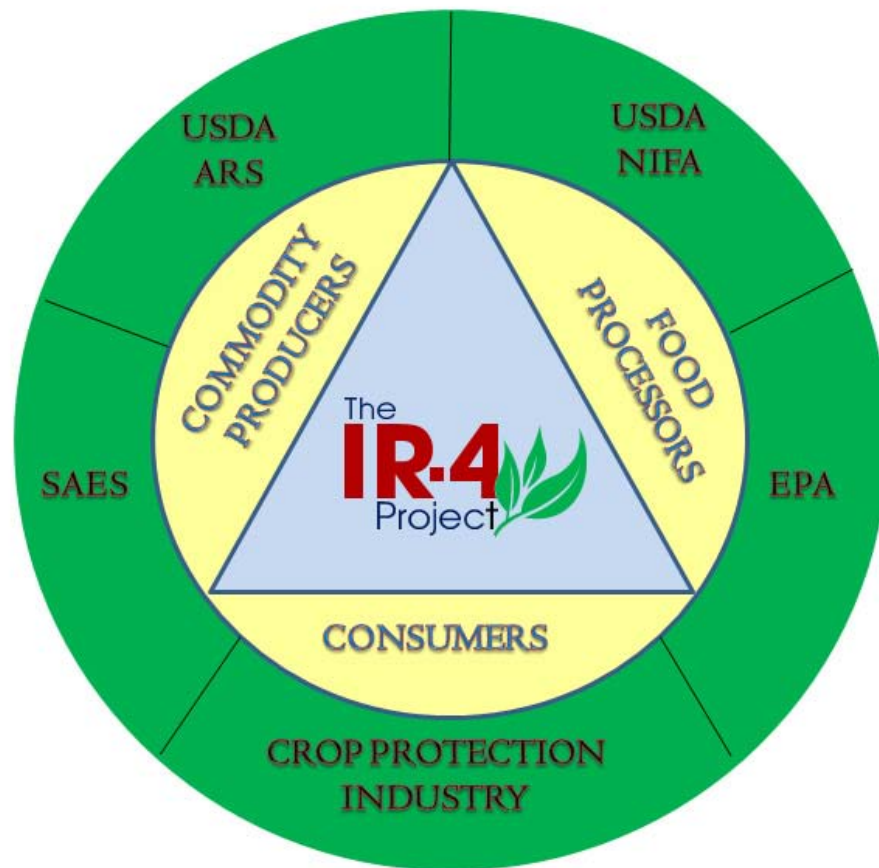


## IR-4 Project

***Since 1963 IR-4 has been a US government funded research program to facilitate registration of sustainable pest management technology for specialty crops and minor uses***



# The IR-4 Program



**50 Years of providing growers with crop protection solutions.**

## Specialty Crops Include:

**Most:**  
**Vegetables**  
**Fruits**  
**Nuts**  
**Herbs**  
**Spices**



## Current Objectives - Programs

- **Food Program w/ Reduced Risk Products**
  - Residue trials, some efficacy & crop safety
  - Crop Grouping
  - International Harmonization, MRL's and Registrations
- **Biopesticide and Organic Support Program**
  - Regulatory support and efficacy
- **Ornamental Horticulture Program**
  - Efficacy and crop safety
- **Public Health Pesticides**

# Who Are Our Stakeholders?

1. Specialty Crop & Minor Use Growers
2. Food Processors/Food Chain buyers
3. Consumers
4. Crop Protection Consultants/Research Providers
5. Funding Agency
6. Regulatory Agency

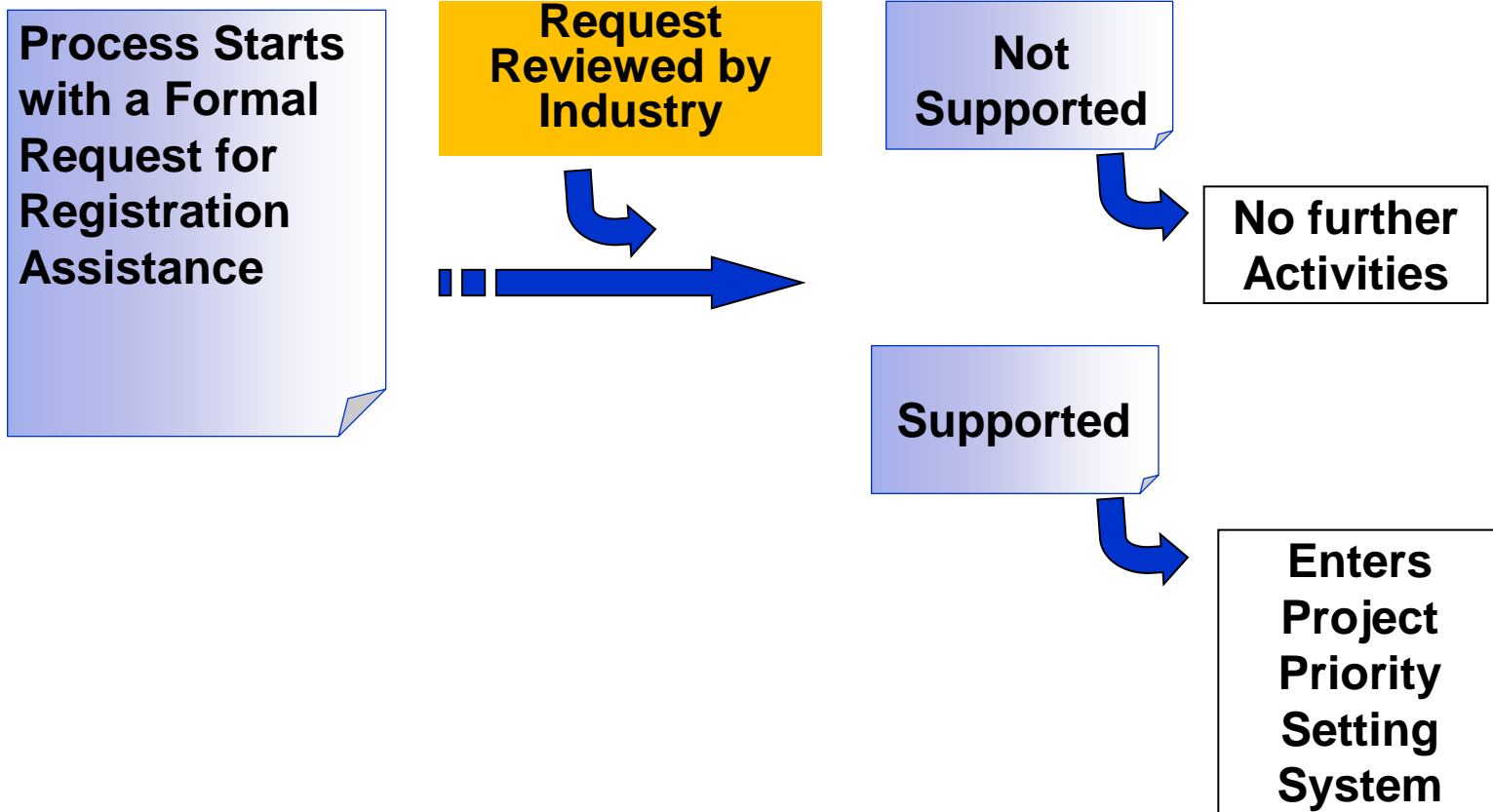
# Stakeholder Involvement

**Grower  
experiences  
pest problem**

**Identify Pest  
Management  
Solution**

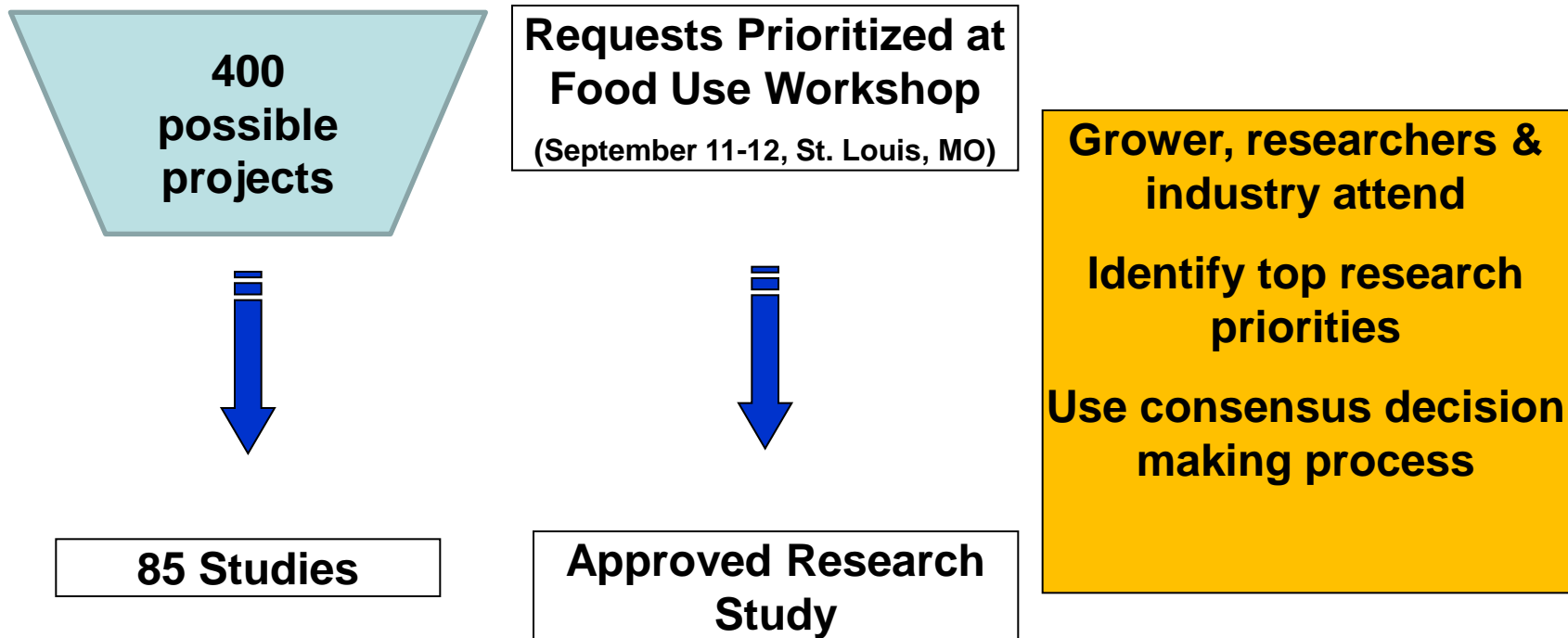


# Stakeholder Involvement





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# Stakeholder Involvement

**Approved Research  
Study**



**Protocol drafted and  
reviewed by industry  
and EPA (if needed).**

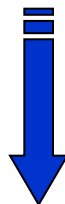
**Industry provides  
correct info on GAP, and  
GLP test & reference  
substances**

**Research Initiated**



# Stakeholder Involvement

**Data Development**

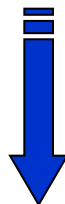


**Industry reviews data,  
provides supporting  
submission documents**

**Submission Report**

# Stakeholder Involvement

**Submission Report**

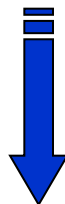


**Regulatory authority  
conducts risk  
assessment**

**MRL**

# Stakeholder Involvement

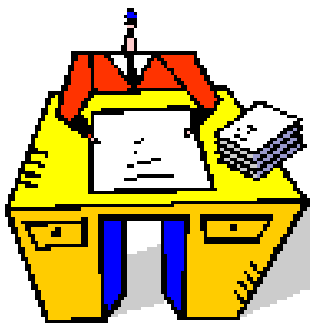
**MRL**



**Industry updates  
registration and markets  
product**

**Growers have new  
PPP**

## 30 Month Timeline



Project Initiation

0-month



Analytic Phase

10<sup>th</sup> month



Field Phase

2<sup>nd</sup> month

Quality  
Assurance  
Review  
**GLP**



Petition Prep

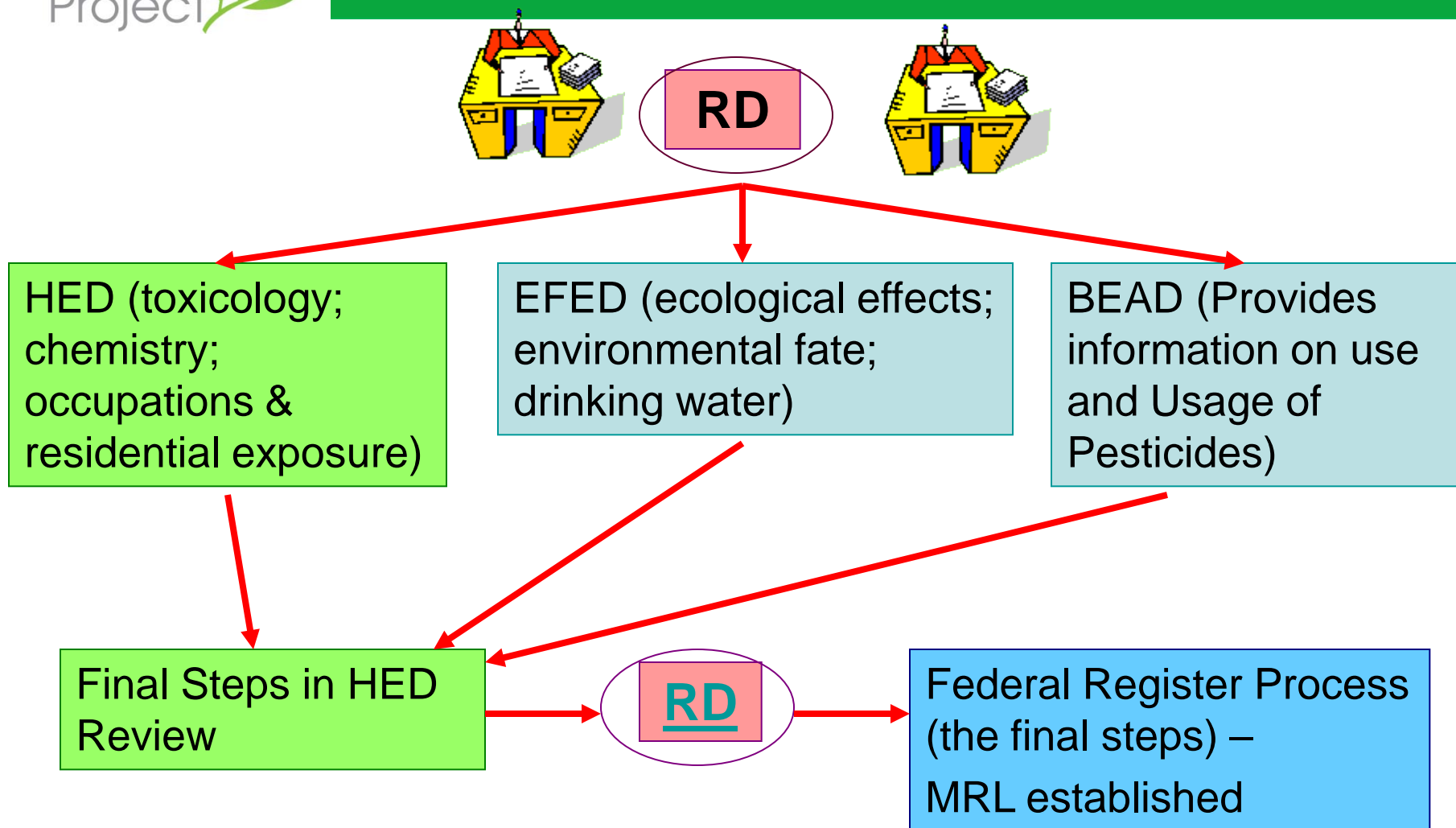
22<sup>nd</sup> month



Submission to EPA

30<sup>th</sup> month

## EPA Timeline 15 Months



- **Located at Rutgers University in New Jersey**
- **Responsible to manage and coordinate the day to day activities of the program**
- **Staffed with 30 full and part time Scientists, Coordinators & Administrative Personnel**



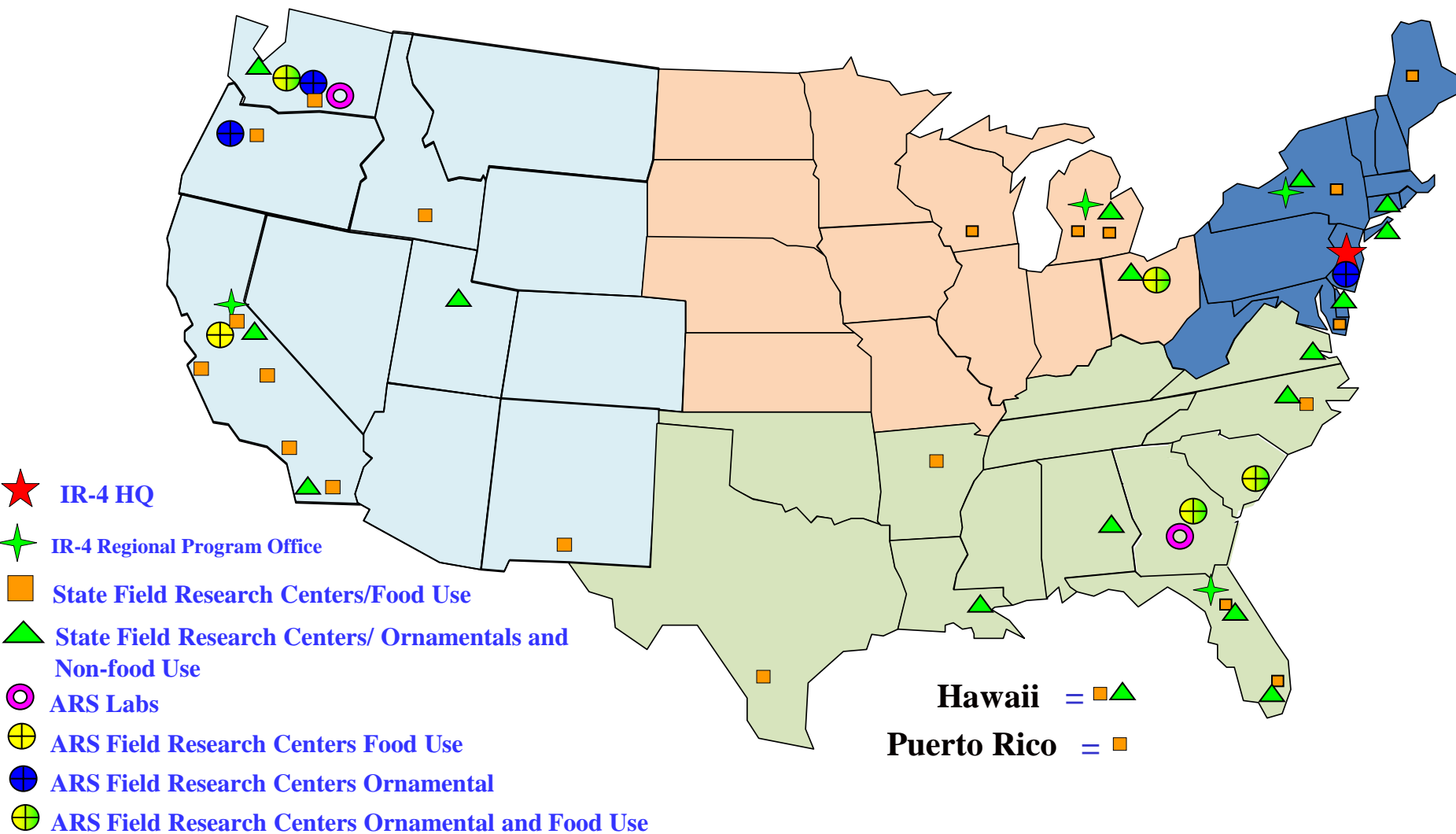
## IR- 4 Regional Offices

- **Northeast Region - Cornell University,  
Geneva, New York**
- **Southern Region - University of Florida,  
Gainesville, Florida**
- **North Central Region - Michigan State  
University, East Lansing, Michigan**
- **Western Region - University of  
California – Davis, California**
- ***USDA – ARS – Companion program***

# Board of Directors

- Representation from the Headquarters and each of the regions (including USDA) and Commodity Liaison Committee.
- Provides guidance and direction
  - Allocation of funds to each of the programs
  - Budgets for HQ and regional office
  - Five year strategic plan etc.

## IR-4 Project Infrastructure - Pesticide Residue work 85 studies/550 field trials



# IR-4 Funding

## Direct Contributions >\$18 million

• USDA-NIFA	\$11,913,000
• USDA-ARS	\$ 3,920,000
• USDA-ARS/DoD	\$ 250,000
• USDA-FAS	\$ 500,000
• USDA-APHIS	\$ 900,000
• State Ag. Exp. Stations	\$ 481,182
• Donations from Industry	\$ 1,420,000

## Indirect Contributions

Valued at \$18 million but diminishing







Food  
Crops

Ornamentals

Biopesticides &  
Organic Support

Public  
Health

International  
Activities

Directory

Outreach  
Materials



**Facilitating Registration of Sustainable Pest Management  
Technology for Speciality Crops and Minor Uses**

Track Your Projects

>> Food Crops Database

>> Ornamentals Database

Submit a Request

>> Food Crops

>> Ornamentals

## About IR-4

>> "History of IR-4 Minor Use  
Pesticide Registration 1963-2000 "

## IR-4 News

>> AGROW World Crop Protection News

## IR-4 Project Headquarters

Rutgers, The State University of NJ  
500 College Road East, Suite 201 W  
Princeton, NJ 08540  
Phone 732.932.9575

### Canada “Win-Win” Model

#### Objective:

- Address grower pest control needs with safe effective products in a manner that does not affect trade markets
- Conduct Joint Residue Studies and provide simultaneous submissions to both regulatory agencies (EPA and PMRA)
- Submissions reviewed and registrations approved in both countries at approximately the same time with harmonized tolerances/MRLs



# Partnerships



	Responsibilities	Roles	Benefits
NA Growers	Identify needs	Choose priorities	Target limited resources efficiency and obtain new tools
PMRA, EPA, SENASICA-SAGARPA, COFEPRIS-SSA	Federal Regulator – submission review, enforcement and monitoring.	Review regulatory proposals and make decisions taking in account harmonization.	Fulfills federal mandate - Greater efficiencies.
Researchers, Universities and Crop specialists	Conduct research on grower-selected MU solutions to specific pest problems.	Conducting of field trials, compilation of data supporting new MU submissions.	Contributes to science and innovation strategy.
Provinces and States	Also conducts field trials. Provinces prepare as well submissions on behalf of growers.	Advocate Provincial/States grower needs.	Obtain new Crop Protection tools for their growers.
Registrants	R&D on new crop protection tools and technologies.	Agree to label expansion and new use submissions.	Market new uses of products.
IR-4 Project and PMC and MU WG in Mexico	Facilitates registration of sustainable pest management technology for specialty crops and minor uses.	Develop necessary data to facilitate registration of crop protection tools for specialty crop growers and work jointly to facilitate North American registrations.	US and Canadian growers get national registration and access to Canadian and US markets as MRL is set and equal.

## Harmonization NAFTA Level

- Regulatory environment
  - Address key science policy issues and achieve common regulatory procedures
- Crop Grouping
  - Expansion, development and harmonization of Crop Groups
- Data generation / data exchange
  - Acceptance of data and extrapolation
- Joint Reviews / Work shares
  - achieved by regulators (regular way to do business)
- MRL Harmonization
  - to facilitate trade
- NAFTA Labels
  - to facilitate a North American market for pest control products
- RCC will further promote this work





- RCC will further promote Harmonization of IR-4/PMC work
  - Data Generation
  - Reports
  - Joint reviews
  - Possible Joint workshops with Stakeholders

## International Activities

- Data - Many reports submitted to JMPR/Reg. Authorities
- Leadership-NAFTA, OECD, and Codex CCPR
- Capacity Building w/FAS in Africa, Asia, Central and S. America
- Crop Group Harmonization/Internationalization NAFTA/Codex
- Global Residue Study
- Global Minor Use Summit 2

## Biopesticide and Organic Support Program

- **5% of the Project's efforts and resources**
- **Registration support and grants program for efficacy data**
- **Focus work with integration of biopesticides into conventional systems**
- **Support for organic markets**
- **Plant incorporated protectants**
- **Successes include:**
  - **BT (all crops), Afla-Guard, ENTRUST**





## HoneySweet Plum- Transgenic resistance Plum Pox Virus



**Ralph Scorza –USDA-ARS Kearneysville**

# IR-4 Ornamental Program

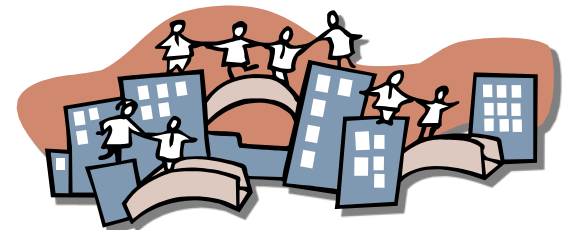
- **Established 1974**
- **10% of the Project's efforts and resources**
- **Predominantly crop safety testing and efficacy**



## Public Health Pesticides

- Expand registrations for existing PHP
- Facilitate registrations for new technology and novel pesticides
- Register products outside US to protect deployed US military personnel

# Partnerships Make Things Happen





## Environmental Protection Agency (EPA)



- **EPA/IR-4 Technical Working Group:** Initiated in 1999, meets two times a year and provides educational summer tours
- **Explores initiatives to facilitate minor crop tolerances;**
  - crop group update
  - extrapolation proposals
  - specific chemical or crop proposals etc.
- **PRIA implementation, Priority projects (Section 18s).**
- **EPA reviews annual IR-4 residue program**
- **Final report formats and electronic petition submission**
- **IR-4 part of US delegation to NAFTA, OECD, Codex**





## Canada



### **Health Canada's Pest Management Regulatory Agency (PMRA) and Agriculture and Agri-Food Canada's Pest Management Centre**

- Partnership with IR-4 began in 1996
- First IR-4 work share petition with EPA was completed in 2002
- In 2003, the Canadian government made a major funding commitment to minor crop growers through PMRA and AAFC
- 20% of projects are cooperative projects — since 2003
- Over 60 joint reviews and over 100 joint registrations for minor uses.
- MRLs are established at the same time in US and Canada

## Crop Protection Industry

- IR-4 maintains at least yearly visits to update cooperative projects and discuss new technology strategies.
- Provide support for IR-4 GLP studies
  - Protocol review, Test and reference substance
- Partnerships with biopesticide and chemical companies are crucial
- Despite reorganizations etc. companies continue to work with IR-4 to develop minor crop uses for their products
- PRIA has presented New Petition Submission Challenges
  - Provide submissions documents and risk assessment



# Brasil

- Dovetail with data development
  - 2013 Research Plan
- Share data
- Promote activities at Codex
  - Crop groups
  - Data requirements/Guidelines
    - To allow greater data sharing etc

## **IR-4 Deliverables**

- **Since its inception, IR-4 has facilitated the registration of over 25,000 crop uses.**
  - **14,000 food uses and 11,000 ornamental uses**
- **Return on investment**
  - **Michigan State University Center for Economic Analysis (Dec. 2011) reported that for a combined total budget of \$18 million**
    - **IR-4 Project efforts contribute over \$7.2 BILLION to annual US Gross Domestic Product.**
    - **IR-4 Project efforts support 104,650 JOBS throughout the United States.**



## Challenges

### Fiscal Challenges:

- Importance of maintaining adequate budgets in order to have capacity and resources to conduct residue and efficacy trials



# Commodity Liaison Committee

**Dr. Michael Aerts**, Florida Fruit and Vegetable Association

**Mr. Mark Arney**, Nat'l Watermelon Promotion Board

**Mr. Kirk Baumann**, Ginseng Board of Wisconsin

**Dr. Lori Berger**, California Specialty Crops Council

**Dr. Michael Bledsoe**, Village Farms, L.P.

**Dr. A. Richard Bonanno**, Bonanno Farm Trust - **Chair**

**Mr. Bruce Buurma**, Buurma Farms Inc.

**Dr. Thomas G. Davenport**, National Grape Cooperative

**Dr. Brian R. Flood**, Del Monte USA

**Mrs. Ann E. George**, Washington Hop Commission

**Mr. Hank Giclas**, Western Growers Association

**Mr. John Keeling**, National Potato Council

**Mr. Phil Korson**, Cherry Marketing Institute

**Mr. Rocky Lundy**, Mint Industry Research Council

**Mr. Reed Olszack**, Tropical Fruit Growers of S. Florida Inc.

**Ms. Laura Philips**, American Mushroom Institute

**Mr. Ray Prewett**, Texas Vegetable Association

**Mr. Ray Ratto**, Ratto Brothers

**Ms. Lin Schmale**, Society of American Florists

**Mr. Todd Scholz**, USA Dry Pea & Lentil Council

**Dr. Alan Schreiber**, Agriculture Development Group, Inc.

**Dr. Marc Tefteau**, American Nursery and Landscape Assoc.

**Mr. Dave Trink**, MBG Marketing

# Thank You!

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