



IR-4 Program: How it Works and What is in the Pipeline for Brambles

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- 1. THE PURPOSE**
- 2. THE PROCESS**
- 3. THE PRODUCTIVITY**
- 4. IR4 impact for BRAMBLES**



THE PURPOSE



IR-4 Program

- Interregional **R**esearch Program No. **4**
- Established in 1963
- Cooperative project between the federal government, university researchers, extension personnel and the agrichemical industry



Funding for IR-4

- USDA Cooperative State Research, Education and Extension Service (CSREES)
- USDA Agricultural Research Service (ARS)
- Agrichemical companies
- Grower organizations



Goal of IR-4

To provide pest management solutions to growers of fruits, vegetables, and other minor/specialty crops for the benefit of consumers, growers and food processors.

“FILL THE TOOLBOX”



What are Minor Crops?

- 300,000 acres or less
- Most fruits, vegetables, herbs, nuts, spices, nursery and landscape plants are considered minor crops.
- Approx. 10,000 acres of blackberries and 20,000 acres of raspberries grown in US*

*Source: 2002 USDA Census of Agriculture



Minor Crops \neq Minor Value

- Minor crops make up >50% of total crop value in 26 states. 100% of Hawaii's crop value and 98% of Florida's.*
- Minor crops account for over \$40 billion in sales annually.
- Approx. 40% of total crop sales in the U.S.

* Source: 1997 Census of Agriculture, United States summary AC97-A51



Minor/Specialty Crop Value

1997 Census of Agriculture

<u>State</u>	<u>Value</u>
California	\$14,400,000,000
Florida	\$ 4,700,000,000
Georgia	\$ 1,100,000,000
Idaho	\$ 945,500,000
Michigan	\$ 1,100,000,000
Oregon	\$ 1,400,000,000
Texas	\$ 1,100,000,000
Washington	\$ 2,300,000,000
Others	\$12,654,500,000
Total	\$ 39,700,000,000



Factors Limiting Pesticide Registration in Minor Crops

- High cost associated with registering a pesticide (**Estimated \$50 million***)
- Low return on cost of registration
- High value crops may mean greater liability
- FIFRA reregistration requirements
- Food Quality Protection Act

*Crop Life America website, www.croplifeamerica.org



THE PROCESS



IR-4 Project Requests

Who submits Project Clearance Requests (PCR's)

- Producers
- Commodity organizations
- Extension personnel
- Agricultural scientists

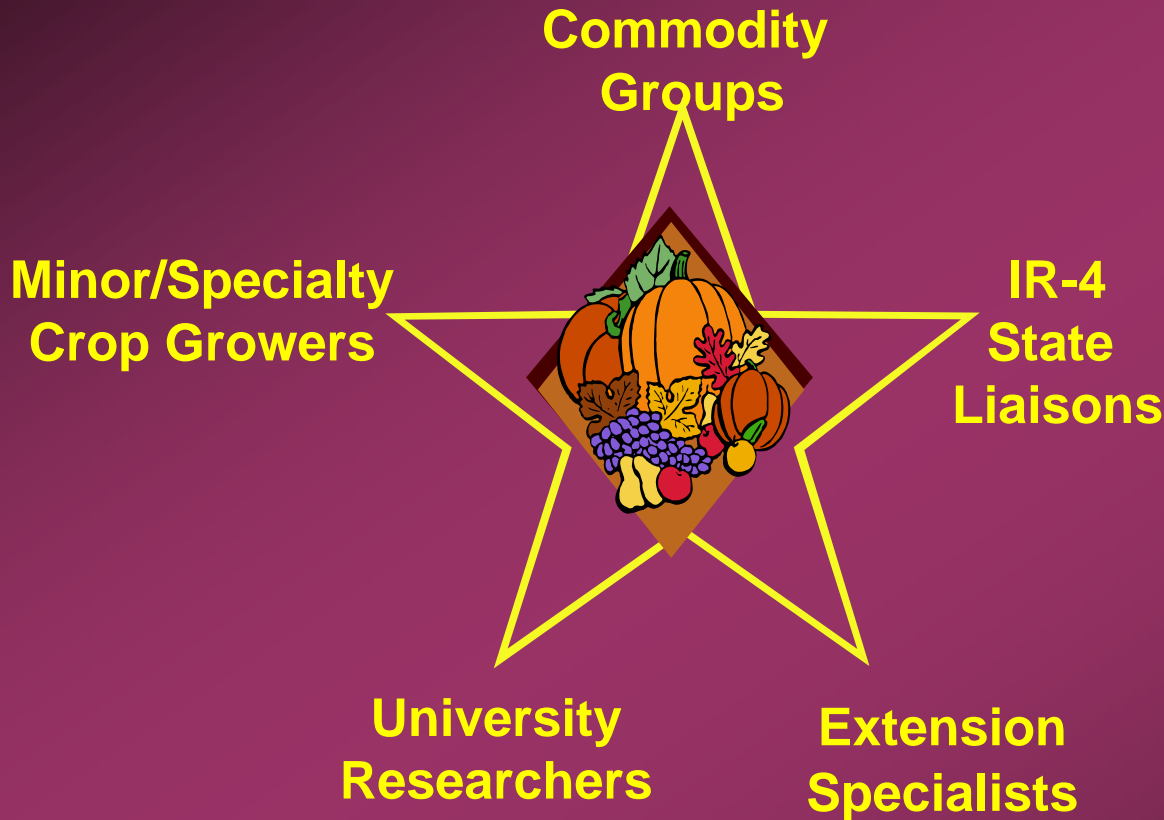
A screenshot of a web browser displaying the IR-4 Project website. The browser title is 'Interregional Research Project #4 - Microsoft Internet Explorer'. The address bar shows 'http://ir4.rutgers.edu/Docs/FOODRequestForm.htm'. The page features the IR-4 Project logo, a search bar, and a navigation menu. The main content area is titled 'IR-4 Minor Use Project Clearance Request Form' and includes a form for submitting requests. The form fields are: Name, Affiliation, Address (two lines), City, State, Zip, and Phone. A note indicates that blue fields are required. The page also includes a sidebar with links to Home, About IR-4/ Staff Directory, News, Events, Training, Advisories, and Special Programs (Food Crops, Ornamentals, Biopesticides). Logos for CSREES, OAS, and Rutgers are visible at the bottom.

Submit a Request: <http://ir4.rutgers.edu/Docs/FOODRequestForm.htm>



Beginning a Project

Submission of a Project Clearance Request Form (PCR)



Active Project



Discuss project with Registrant

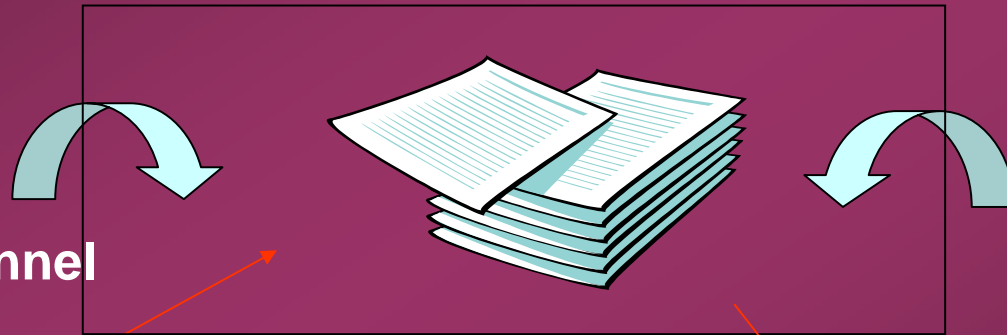
Pest Control Problem & Possible Solution
Project Clearance Request (PCR)

Research Planning

Annual Food Use Workshop

Where active projects are prioritized

- Growers
- Commodity groups
- University Research and Extension Personnel



- EPA
- Crop Protection Industry
- USDA-ARS and CSREES

Regional Field Coordinators/
Headquarters Coordination

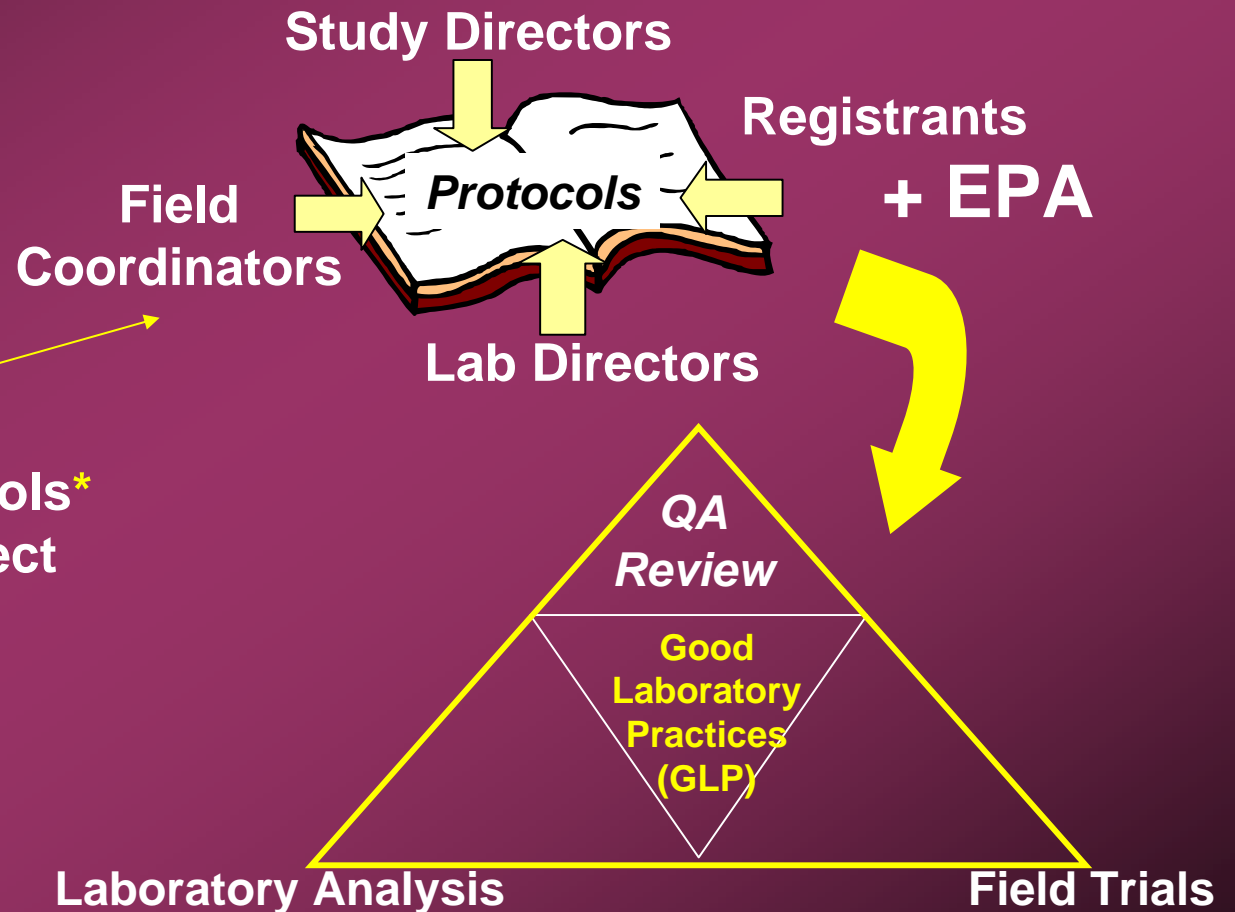


National Research Planning



Where research projects are
designated for the coming year

Developing Data for Projects

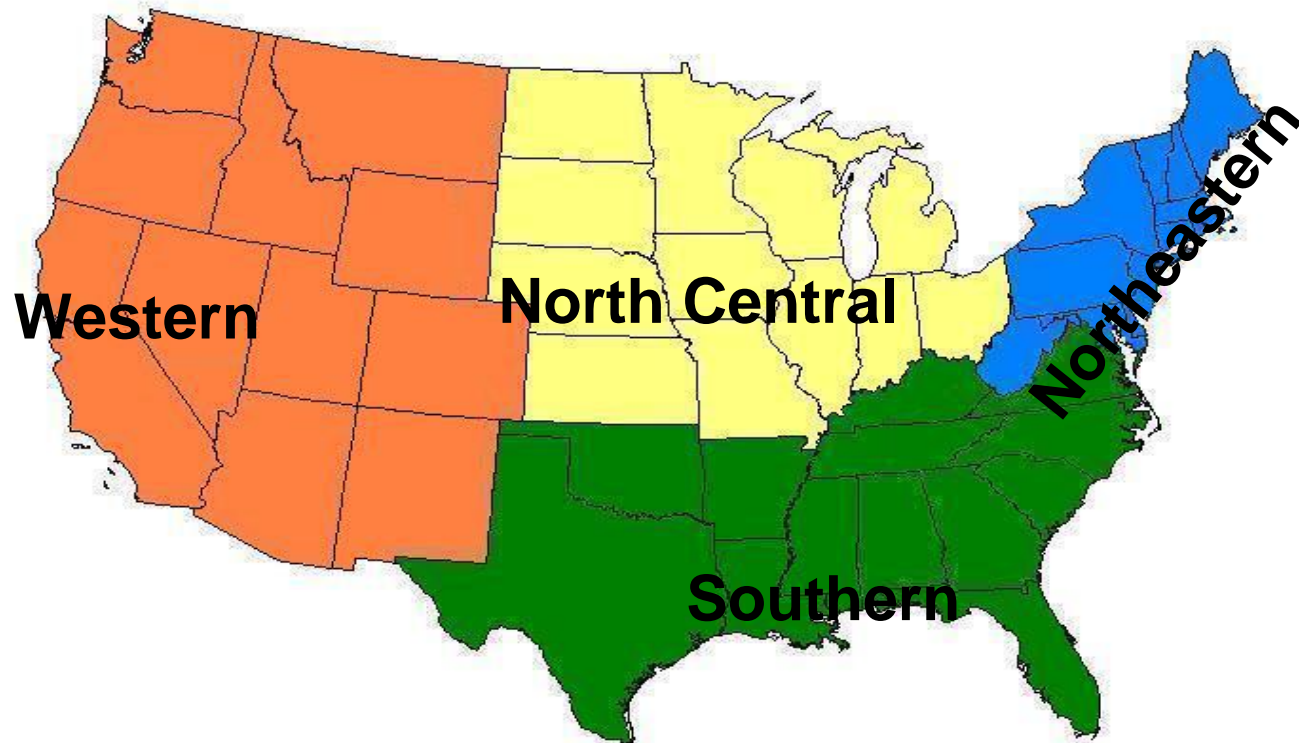


Laboratory and Field Protocols* are developed for each project

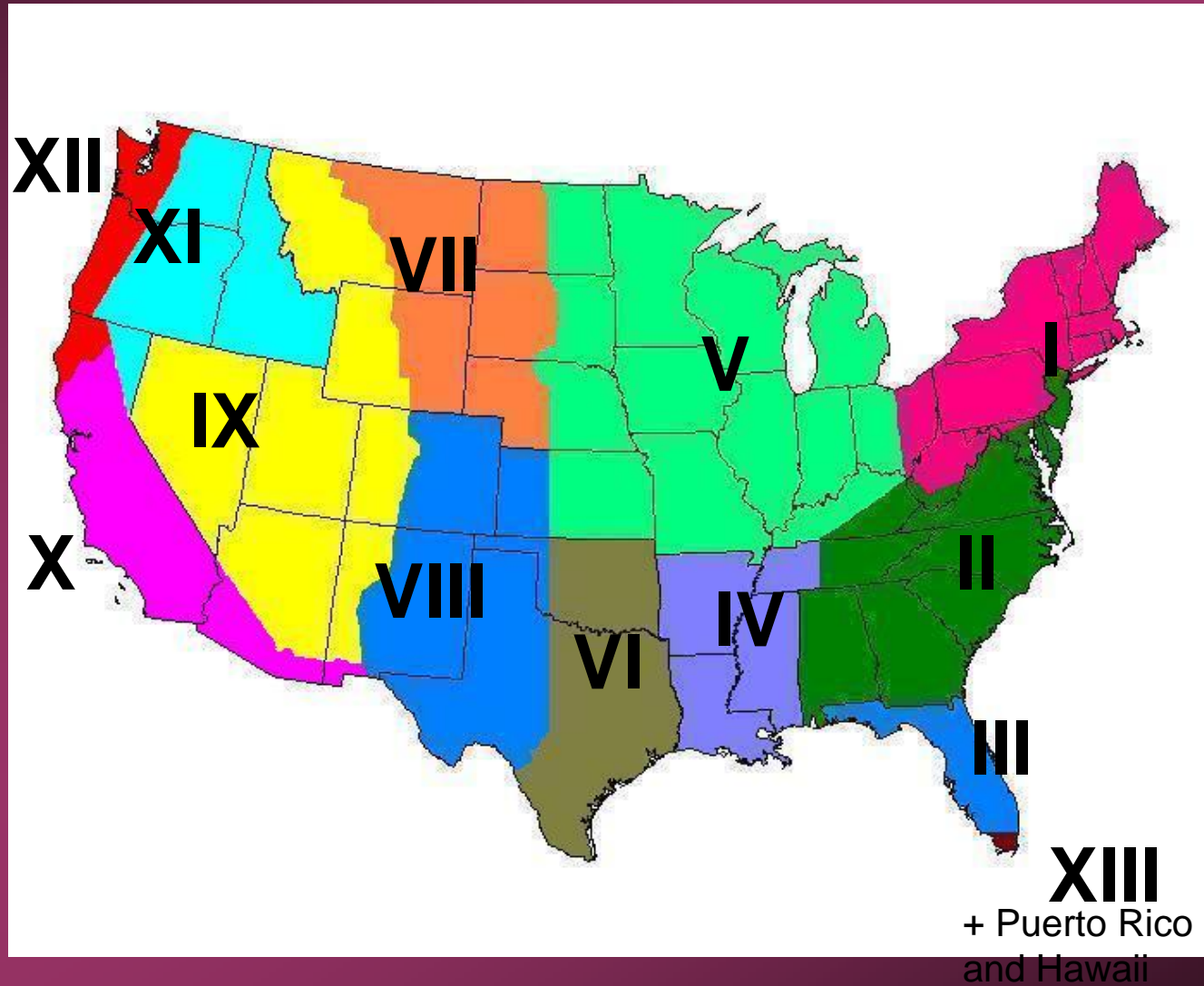


***30-month timeline begins with approved protocol**

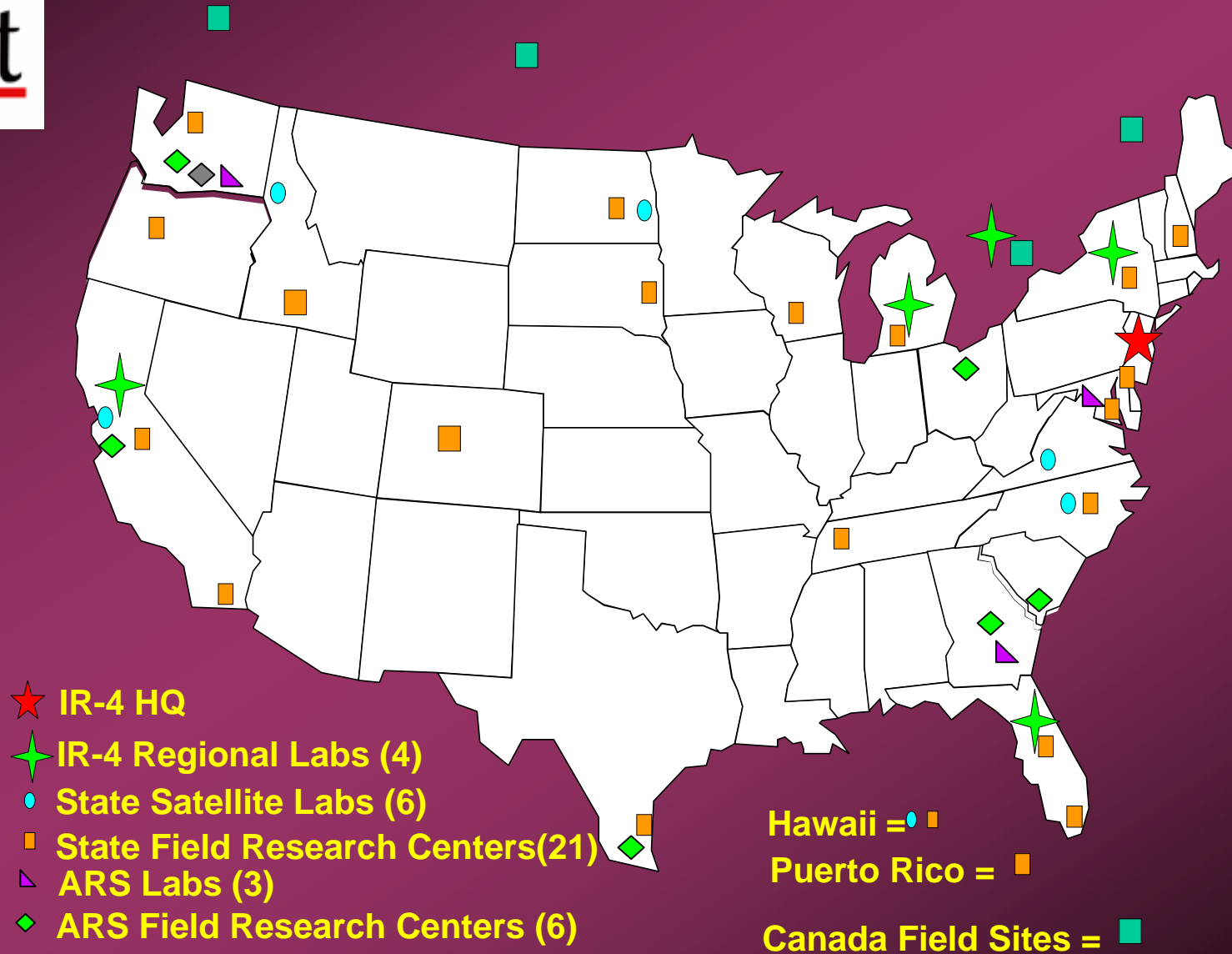
IR-4 Regions



EPA Regions



IR-4 Research Facilities



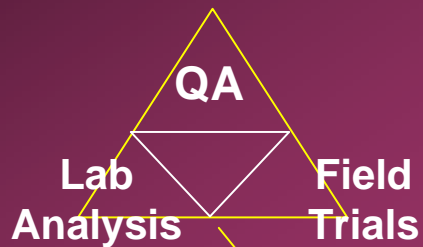


IR-4 Yearly Workload

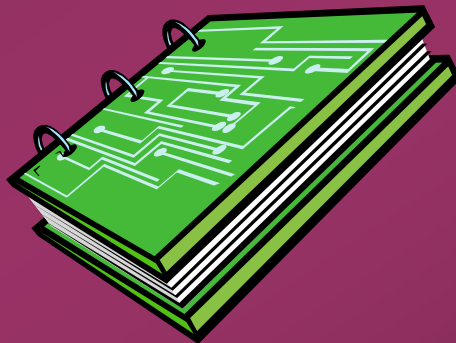
IR-4 will conduct approximately 100 residue studies involving 600-700 field trials annually.

2005 = 94 studies; 681 field trials

Preparation of EPA Petition



Lab and Field Data

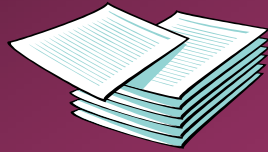


- Study Directors Review
- Quality Assurance Review
- Registrant Review

Study Directors
Prepare Petition to
Submit to EPA



Product Registration



The petition is sent to EPA

where it is reviewed.



If everything is in order, a tolerance is granted (MRL)
and a registration follows.



A new tool is now in the toolbox!!



THE PRODUCTIVITY



IR-4 Scorecard

- 7,300+ food crop tolerances since 1963
- 10,600+ ornamental tolerances since 1977
- Over 300 biopesticide tolerances since 1982

- Since 2001, over 50% of tolerances established by EPA have come from IR-4 petitions



Impact of IR4 through Section 18 Tolerances (1998-2002)

<u>State</u>	<u>Economic Loss Avoidance</u>
California	\$1,646,500,000 (56)
Florida	\$ 150,500,000 (20)
Georgia	\$ 151,300,000 (12)
Idaho	\$ 257,600,000 (61)
Michigan	\$ 226,700,000 (25)
Oregon	\$ 331,300,000 (66)
Texas	\$ 92,400,000 (13)
Washington	\$1,209,100,000 (74)
Others	\$1,655,600,000 (376)
Total	\$5,721,000,000 (703)



IR-4: Impact for Brambles



Registrations and Established Tolerances for Brambles through IR-4

- Aim (carfentrazone) herbicide June 04. Previously in WA and OR only
- Benlate (benomyl) fungicide (gone??)
- Casaron (dichlobenil) herbicide
- Solicam (norflurazon) herbicide
- Direx (diuron) herbicide reregistration Aug 01
- Sinbar (terbacil) registration Mar 80 and rereg. June 98

- Lorsban (chlorpyrifos) insecticide TOLERANCE ESTABLISHED for 28 day PHI Aug 91, not currently labeled.



IR-4: Pipeline for Brambles



Bramble Projects in Progress

- Pristine (boscalid + pyraclostrobin) fungicide.
- Diazinon insecticide: reregistration; petition under review at EPA since Feb 01**
- Admire (imidacloprid) insecticide: soil application (CA only), submitted to EPA Dec 02
- Actara (thiamethoxam) insecticide: all data received at IR4 HQ Aug 03

**Raspberry Crown Borer listed as a target pest.



Researchable Projects*

- Provado (imidacloprid): foliar application
- Kenamite (acequinocyl) miticide
- Capture (bifenthrin) insecticide**
- Lorsban (chlorpyrifos) insecticide**
- E2Y45 (experimental) insecticide**
- TetraSan (etoxazole) miticide
- Tanos (famoxadone + cymoxanil) fungicide
- Danitol (fenpropathrin) insecticide
- Akari (fenpyroximate) miticide
- F 1785 (flonicamid) insecticide
- Avaunt (indoxacarb) insecticide
- Mesa (milbemectin) miticide
- Rimon (novaluron) insecticide
- Sanmite (pyridaben) miticide
- Spin-Tor (spinosad) insecticide

*Projects have mfg. approval, but lack prioritization and/or efficacy data.

**Raspberry Crown Borer listed as a target pest.



Turning 'Researchable' projects into 'In-Progress' projects

- **Prioritization**
 - Food Use Workshop
- **Efficacy data**
 - Monetary support for researchers to do the work
 - Researchers-Include an extra treatment or two in your plot work
 - Forward data to IR-4:

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Crownsville, MD 21032
Phone: 410-923-4880
Fax: 410-923-4880
E-mail: evvea@comcast.net



Making IR-4 Work for You

- **Make Your Needs Known**
 - Can't solve a problem unless it is identified. Submit PCR's. Contact state IR-4 liaisons, specialists, etc.
 - PCR = <http://ir4.rutgers.edu/Docs/FOODRequestForm.htm>
- **Be Visible**
 - Have representation at IR-4 Food Use Workshop. This is where projects receive A,B,C rankings.
 - 2005 F.U.W. = Sept. 13-15, Marriott, San Diego, CA. See IR-4 website <http://ir4.rutgers.edu/>