Wisconsin IR-4 Center: Step One to a Vegetable Crop Label

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Integrated Pest Management

IR-4 Obtained Tolerances

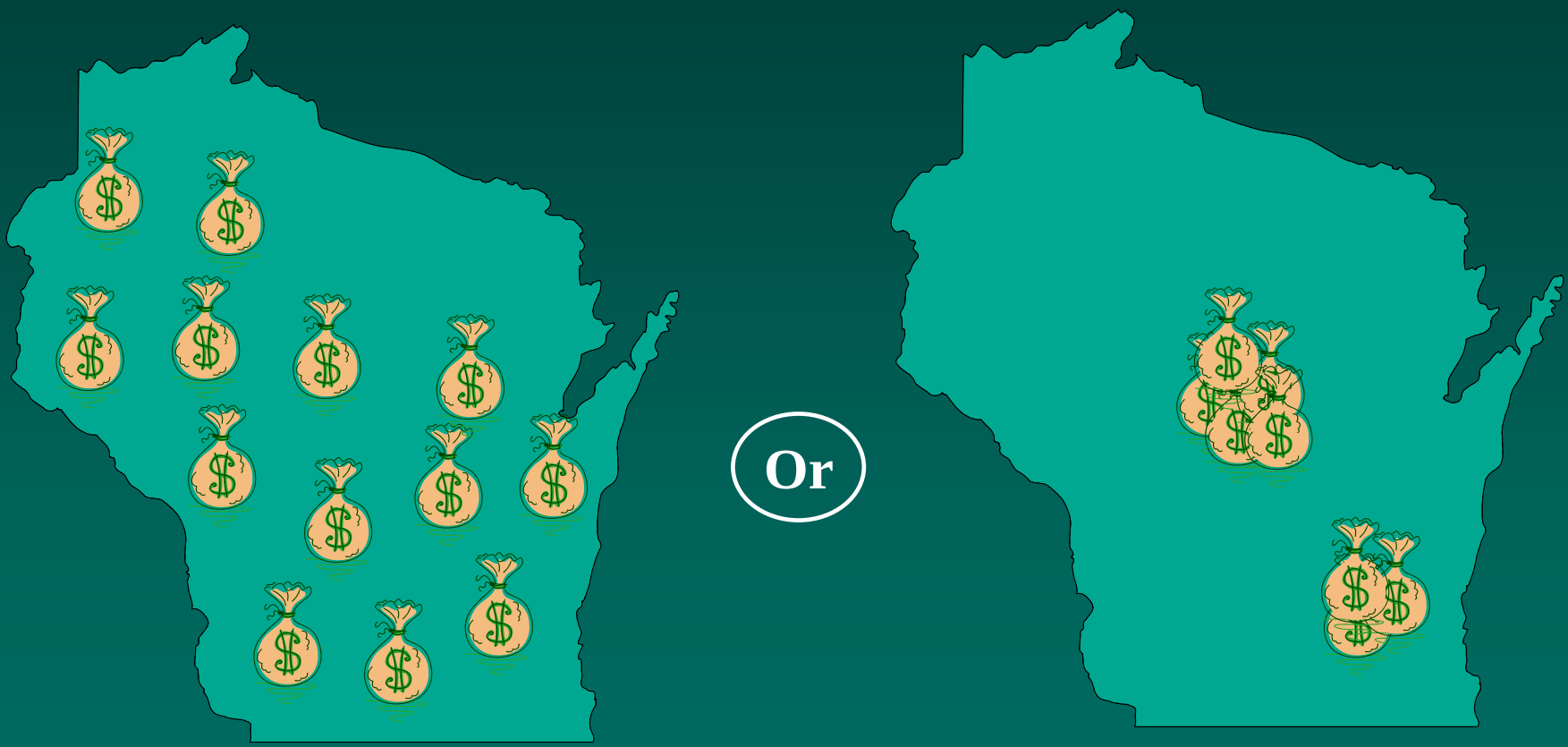
- Dimethenamid-P (Outlook®)
  - Potato, garden beet, onion, horseradish
- Sulfentrazone (Spartan®)
  - Mint
- Flumioxazin (Chateau®)
  - Onion, mint
- Halosulfuron-methyl (Sandea®)
  - Snap beans, dry beans


WFCA
USDA
NPM
IPM
NRCS
IR-4?
CDTC
IRS
IPM
CSREES
WPVGA

Providing Safe and Effective Pest Management Solutions for Specialty Crop Growers

- 1963 mission - “To obtain regulatory clearances for crop protection chemicals on specialty food crops when the incentives for the registrants precluded private sector investment.”

Pesticide Investment



Providing Safe and Effective Pest Management Solutions for Specialty Crop Growers

- 1963 mission - “To obtain regulatory clearances for crop protection chemicals on specialty food crops when the incentives for the registrants precluded private sector investment.”
- 1977 - added pest control products for: nursery, floral, forestry, Christmas trees, turf
- 1982 - biopesticides

The IR-4 Process

1. **<u>Identification of Needs</u>**
   - **Requests from minor crop growers, commodity groups, University scientists**
   - **Submission of a Project Clearance Request**

Project Clearance Request (PCR)

- Requester
- Pesticide
- Crop / Commodity
- Target Pest
- Why Needed

- Rate
- Application Parameters
- Use Directions
- Supporting Data
  - Phytotoxicity
  - Efficacy
  - Yield

The IR-4 Process

2. **Prioritization**
   - **>1000 active PCR's**
   - **National Food Use Workshop**

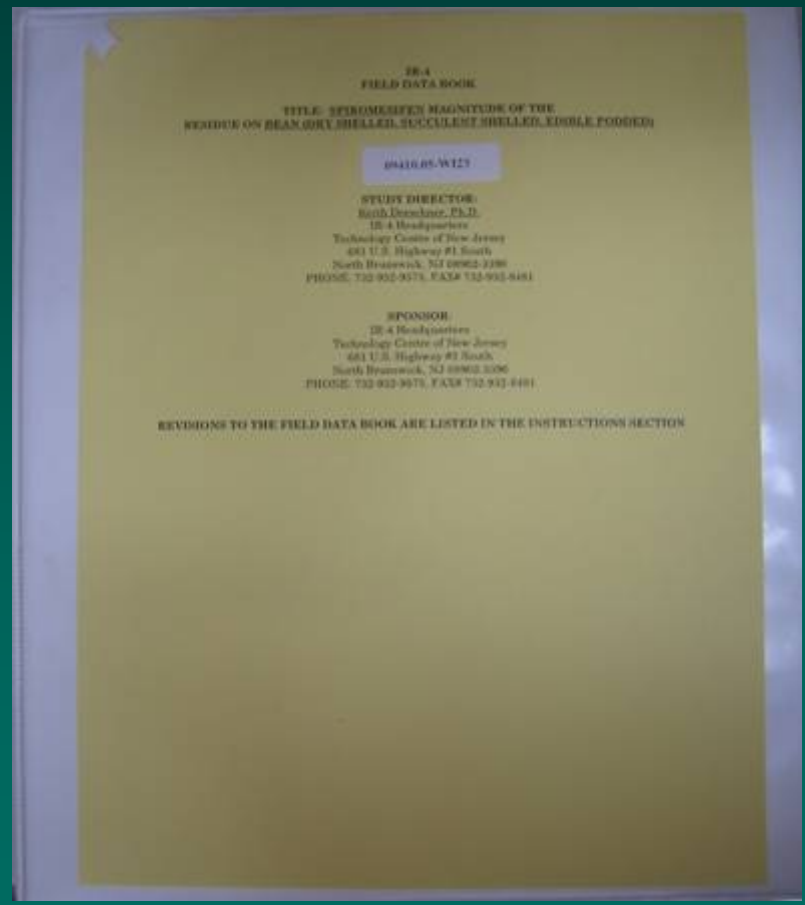
>1000 PCR's → **<50 Food use IR-4 Field Projects**

The IR-4 Process

3. **Final IR-4 Workplan**
   - **Based on $$$$$ available**
   - **Headquarters / Regional / ARS Staff**

The IR-4 Process

4. **Implementation**
   - **Protocol written, crops grown, pesticides applied, samples harvested for residue analysis.**
   - **Field & Lab studies must comply with EPA's Good Laboratory Practice (GLP) requirements.**


IR-4
FIELD DATA BOOK

TITLE: [illegible] MAGNITUDE OF THE RESIDUE ON BEAN (DRY SHELLED, SUCCULENT SHELLED, EDIBLE PODDED)

[illegible]

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REVISIONS TO THE FIELD DATA BOOK ARE LISTED IN THE INSTRUCTIONS SECTION

GLP Requirements

- Development of an approved SOP for each testing facility
- Documenting the training of individuals involved in the study
- Recording written records of all communications involving the field trial
- Receiving and storing the test substance in approved manner and monitoring the test substance storage environment

GLP Requirements

- Test site
  - Reference plot to permanent markers
  - Provide maps of plots and locations
  - Provide soil test data
  - Provide 3 yr crop, pesticide & fertilizer history of the field

GLP Requirements

- Application
  - Complete calibration or recheck of equipment (3 runs) prior to each application
  - Showing all calculations for determining spray mix amounts
  - Reporting environmental conditions
  - Post application calculations of actual amounts applied based on pass time

GLP Requirements

- Harvest Sampling
  - Descriptions of all harvest procedures and equipment
- Storage of sample prior to shipping
  - < 0^0F (continuous monitoring of freezer environment)
- Shipping of samples
  - Appropriate chain of custody of samples
- Meteorological Data

Wisconsin IR-4 Center 2005 Field Projects

Active Ingredient	pesticide class	commodity
(2,4-DB + Baythroid)		
2,4-DB + CYFLUTHRIN/LAMBDA	H	ALFALFA - MIX STANDS
AZOXYSTROBIN *(Quadris)*	F	POTATO
(Quadris + Tilt)		
AZOXYSTROBIN+PROPICONAZOLE	F	BEAN (SNAP)
BUPROFEZIN *(Applaud)*	I	TOMATO (FIELD & GH)
CLOTHIANIDIN *(Poncho)*	I	CRANBERRY
CLOTHIANIDIN *(Poncho)*	I	CRANBERRY
DIMETHENAMID-P *(Outlook)*	H	BEAN (SNAP)

Wisconsin IR-4 Center 2005 Field Projects (cont.)

Active Ingredient	pesticide class	commodity
ETOXAZOLE *(TetraSan)*	I	CUCUMBER
FENPYROXIMATE *(AkariTM)*	I	PEPPER (BELL & NON-BELL)
FLUMIOXAZIN *(Chateau)*	H	CUCUMBER
FLUTOLANIL *(Moncut)*	F	CABBAGE
HALOSULFURON *(Sandea)*	H	BEAN (DRY)
HALOSULFURON *(Sandea)*	H	BEAN (DRY)
INDOXACARB *(Avaunt)*	I	BEAN (SNAP)
OXYFLUORFEN *(Goal)*	H	TOMATO
PROPICONAZOLE *(Tilt)*	F	MINT
PROPICONAZOLE *(Tilt)*	F	MINT

Wisconsin IR-4 Center 2005 Field Projects (cont.)

Active Ingredient	pesticide class	commodity
PYRACLOSTROBIN *(Headline)*	F	CABBAGE
PYRIPROXYFEN	I	CELERY
SPIROMESIFEN *(Oberon)*	I	BEAN (DRY, SUCCULENT, EDIBLE)
SPIROMESIFEN *(Oberon)*	I	BEAN (DRY, SUCCULENT, EDIBLE)
SPIROMESIFEN *(Oberon)*	I	BEAN (DRY, SUCCULENT, EDIBLE)
SPIROMESIFEN *(Oberon)*	I	PEPPER (BELL & NON-BELL)
(Upbeet) TRIFLUSULFURON-METHYL	H	BEET (GARDEN)

The IR-4 Process

5. **Petition Preparation**
   - **Critical review of data**
   - **Summarized & prepared as an EPA petition based on field and laboratory results**

IR-4 Process

6. **EPA petition review & approval**
   - **Preliminary review for completeness of data**
   - **Health Effects Division**
     - **Comprehensive review of all data submitted**
     - **Data must show that proposed use will not expose consumers or environment to adverse effects**
     - **Tolerance = maximum safe limit of the agricultural chemical in or on the harvested crop that is considered safe and legally acceptable**

IR-4 Process

7. **Product Availability**
   - **EPA established tolerance allows the registrants to add the minor crop uses to existing labels**

IR-4 Process Timeline

1.	Identification of needs	24 months
2.	Prioritization	3 months
3.	Final Workplan	
4.	Implementation	30 months
5.	Petition Preparation	
6.	EPA Petition Review	12-24 months
7.	Product Availability	5-7 years

IR-4 Success Story

- Since 1963
  - 8,300 food use clearances
  - 10,600 ornamental clearances
  - 300 biopesticide clearances
- IR-4 clearances account for approx. 50% of all food use approvals granted by EPA