



Providing Safe and Effective Pest Management Solutions for Specialty Crop Growers



Minor/Specialty Crop Pest Management Inter-Regional Research Project No. 4 (IR-4)

Cooperative State Research, Education, and Extension Service

Since 1963, the IR-4 Project has cooperated with researchers, producers, the agrichemical industry and federal agencies to secure regulatory clearances that allow companies to achieve registrations for pest management products on specialty crops. Specialty crops are high value/low acreage crops that make up about 46% of U.S. agricultural crop production and \$43 billion in sales. They include vegetables, fruits, nuts, herbs, spices, floral, nursery, landscape, turf, and Christmas trees. Without IR-4 support, most of these specialty crops would not have pest management tools because it would not be economically feasible for companies to invest in the registration costs. IR-4 uses an extensive stakeholder driven process to prioritize research. The success of this program has been due to a three-pronged approach:

1. Partnering with specialty crop stakeholders, land grant universities and USDA-ARS to identify most critical pest management voids and developing data to answer the need.
2. Partnering with agricultural chemical and biopesticide companies to allow access to the best pest management technology.
3. Partnering with the Environmental Protection Agency (EPA) and other regulatory agencies to facilitate specialty crop registrations.

Some of the recent accomplishments of the IR-4 Project include:

- Record 1014 Food Use clearances in 2004
- Over 3900 of the project's total 8300 clearances granted since 1998
- Increase research support for Ornamental Horticulture Program
- Biopesticide Demonstration Program jointly funded with the EPA
- Methyl Bromide Alternatives Program (identified potential solutions)
- Crop Grouping Project (to streamline registrations)
- Section 18 (Emergency Registrations) Economic Loss Avoidance of over \$10.1 billion from 1998 to 2004.
- Regulatory Partnerships with EPA, California Department of Pesticide Regulation (CPDR), and Canada's Pest Management Regulatory Agency (PMRA)
- Improved communications efforts

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Examples of Projects Supported by IR-4



Focus on Reduced Risk Products

- Targeted food residue programs using the newest and safest chemistries.
- Petitions occupying 50% of the EPA's work plan for label expansion since 2002.

Biopesticide Registration Efforts of AF36

- Assisted registration of AF36 by the Arizona Cotton Research and Protection Council.
- When AF36 is applied in cotton fields it displaces the toxin producing *Aspergillus flavus* in the soil, thereby reducing the presence of the mycotoxin in cotton seed and the environment.



IR-4 Supports the Ultra Minor Crops

- Supports Section 18 Emergency Exemptions.
- Over 90% of the products currently used by U.S. hop growers are the direct result of IR-4 registration efforts.
- Label clearance for fenhexamid, a reduced risk product used to control *Botrytis*, a devastating disease on ginseng. The ginseng industry in Wisconsin is relying on the products in the IR-4 pipeline coming through.



Crop Grouping

- Classify crops that are botanically or taxonomically related or culturally similar.
- Tolerances can be established on crop groups based on residue data from representative crops within each crop group.
- In 2003, the IR-4/EPA Crop Grouping Working Group was established to bring these proposals to federal regulation.
- Results in more efficient utilization of resources and facilitates significant global harmonization if adopted by international authorities.



Finding Solutions for Tough Problems

- IR-4's 2004 Food Use Workshop targeted the toughest pest management issues.
- Identified thrips management in onions, *Phytophthora capsici* in cucurbits and peppers, and herbicide safety testing in leafy vegetables.
- Established product performance testing pilot programs at multiple locations throughout the United States leading to the identification of several potential onion thrips solutions (one prioritized at the 2005 Food Use Workshop).



Emerging Pest Issues

- Recently discovered Q-Biotype whitefly is immune to most types of insect management tools. IR-4 was a key participant in efforts to develop innovative strategies to ensure that growers of specialty crops are prepared to control this pest.
- Initiated an Aquatic Herbicide Program to address serious weeds that are clogging irrigation ditches and ponds restricting water flow and specialty crop production.

