IR-4 Project
International Activities Update

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Executive Director and Associate Director, IR-4 Project
Outline

- Brief IR-4 Overview
- Repurposing Existing Data to support MRLs
- IR-4’s International Residue Studies
- Capacity Building
- Global Minor Use Workshop
- Global Minor Use Summit-3
- Global Fund
IR-4 Project

A US government funded research program

Facilitating the regulatory approval of sustainable pest management technology for specialty crops and specialty uses to promote public well-being
Objectives

- **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
  - Invasive species

- **Public Health Pesticides**
IR-4 Data

- Conduct 70 residue studies per year on 40 or chemistries (about 500 field trials)
- Submit approximately 80 study reports to EPA each year
- EPA reviews and established Tolerances (MRLs) on 20 or more chemicals per year.
- Through crop group extrapolations etc the data supports and average of more than 700 new uses each year.
Deliverables w/ Food Crops
Crop Grouping

- NAFTA revision 2002, Codex Update followed
  - Last Crop group submission went to EPA in 2016
  - All Fruit types are done (NAFTA/Codex)
  - All Vegetable Types are nearly done, most codified in NAFTA and Codex to complete in 2017
  - Nuts and seeds – nearly complete (tree nuts and oil seeds codified in NAFTA)
  - Grasses – Cereal grains nearly complete in Codex, forage etc pending submission.
  - Herbs and spices – being reviewed (NAFTA/Codex).
EU Minor Uses
Coordination Facility

Jeroen Meeussen
Coordinator
International Residue Studies
IR-4’s efforts are making a difference

- Global Zoning Study w/ Tomato
  - 4 ai’s/28 locations
  - key part of EPA’s global exchangeability proposal
- Blueberry – GLP residue study in various regions
  - Managed by IR4
  - Harmonized MRL established & use is registered
Repurposing IR-4 Data
International Use of IR-4 Data

- **Codex/JMPR**
  - Work with commodity groups and EPA to add uses (chemicals) to JMPR work plan
  - Review JMPR work plan and dovetail IR-4 data with chemicals scheduled for review
  - Work with EPA and Registrants to submit data to JMPR
  - Nominate Chemicals for JMPR review
  - Consider working with other countries to nominate chemicals or add commodities to JMPR workplan

- **2016 Results**
  - IR-4 data impacted 70 MRLs
  - Directly responsible for 23 CXLs
International Use of IR-4 Data

Additional examples include:

– Hop exports to the EU
– Citrus and Berry growers to Asia markets
– Cranberries to the EU
Data Development Next Steps

New TASC grant request

Enhanced Data Sets to Satisfy International Data Requirements for Establishment of Appropriate Maximum Residue Level’s (MRL’s) to support US exports.
Capacity Building
International Residue Studies – Capacity Building or Research >60 Countries, >>100 Scientists.
Global Minor Use Workshop
Global Minor Use Workshop

- **Sponsors**
  - IR-4 (USDA), Australia, Canada, the EU and others
- First step in global research approaches to solve minor use needs.
- Created a global database
- ID common critical pest management voids
- Plan Cooperative research or data sharing.
- Nearly 200 attendees from 30 countries.
<table>
<thead>
<tr>
<th>Cropping System</th>
<th>Pest/Crop rank 1 - A (highest votes)</th>
<th>Pest/Crop rank 2 - B (votes)</th>
<th>Pest rank 3 – B (votes)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Protected CANADA</strong></td>
<td><strong>Aphids on lettuce</strong></td>
<td>Thrips on fruiting vegetables, other than cucurbits</td>
<td>Whiteflies, fruiting veg, other than cucurbits</td>
</tr>
<tr>
<td></td>
<td>Possible Solutions: Flonicamid Pymetrozine Cyantraniliprole Sulfoxaflor NA 11630</td>
<td>Possible solutions: Cyantraniliprole Novaluran Cyclaniliprole</td>
<td>Possible solutions: Flupyradifurone Cyantraniliprole Novaluran NA 11630</td>
</tr>
<tr>
<td><strong>Temperate EUROPEAN UNION</strong></td>
<td><strong>Downy mildew on leafy vegetables</strong> (eg Lettuce, Spinach, greens).</td>
<td>Aphids on legumes crops</td>
<td>Weeds on leafy vegetables (eg Lettuce, Spinach, greens).</td>
</tr>
<tr>
<td></td>
<td>Possible solutions: Zoxamide Ametoctradin + Dimethomorph Acibenzolar Fluopicolide + Propamocarb Cyazofamid Oxathiapiprolin FAMOXADONE + CYMOXANIL</td>
<td>Possible solutions: Flonicamid Pymetrozine Cyantraniliprole Sulfoxaflor Dinotefuran Spirotetramat Flupyradifurone NA 11630</td>
<td>Possible solutions: s-metolachlor</td>
</tr>
<tr>
<td><strong>Tropical UNITED STATES</strong></td>
<td><strong>Fruit flies on inedible peel, tropical crops</strong></td>
<td>Anthracnose on inedible peel, tropical crops</td>
<td>Psyllids on Citrus crops</td>
</tr>
<tr>
<td></td>
<td>Possible solutions: Spinosad Cyantraniliprole Kaolin NA 11630</td>
<td>Possible solutions: Isofenamide Trifloxystrobin + Fluopyram Pyraclostrobin + Metiram Mandistrobin Azoxystrobin + Difenoconazol Cyproconazole + Fludioxonil Penthiopyrad</td>
<td>Possible solutions: Diflubenzuron Flonicamid Sulfoxaflor Buprofezin NA 11630</td>
</tr>
</tbody>
</table>
Global Vision
Global network of capable minor use programs working together to solve the MUP

- Help establish and mentor these minor use programs
- Partner with other data development groups
- Address the many unresolved needs.

Our Vision
Research goes forward, following year or longer

Global Process

International Organizations, Grower, researchers, Farm advisors
Identify top research priorities
Use consensus decision making process
Industry and Regulatory attend and must provide “buy in” for selected projects

Research starts as soon as priorities are determined
Use Global Research Hubs

*priorities collected from survey and now listed in global database
Dan Kunkel: IUPAC Award for Advances in Harmonized Approaches to Crop Protection Chemistry
THANK YOU!