FEQL Analytical Laboratory Emphasis (April 2008-2009)

Current area of extension-based research focuses on evaluating off-target volatilization and efficacy of fumigants important to PNW potato production and administration over a regional ambient air monitoring program for understanding implications of off-target pesticide movement on public health. Other areas of active research include: 1) chemically assessing concentrations of pesticide combinations in aquatic toxicity assessments, 2) the development of field air sampling methods and volatilization chamber system design for assessing semiochemicals useful in codling moth mating disruption, and 3) characterizing/isolating bioactive plant volatile emissions from insect herbivory that may prove useful in enhancing conservation biological control in cropping systems. A principle responsibility of my appointment is to administer over a state-mandated food and environmental regulatory science facility that conducts studies under federal 40CFR Part 160 Good Laboratory Practices (GLP) with Elizabeth Culbert who serves as the IR-4 Laboratory Research Director.

2008-2009 Analytical Lab Regulatory Science Report Outcomes


2008-2009 Magnitude of the Residue Food Safety Reports (At IR-4 HQ)


Ongoing IR-4 Crop Residue Programs

<table>
<thead>
<tr>
<th>IR Project Number</th>
<th>Substance/System</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>09938</td>
<td>Imidacloprid: in/on Oysters</td>
<td>?????</td>
</tr>
<tr>
<td>09783</td>
<td>Flonicamid: in/on Canola</td>
<td>In progress</td>
</tr>
<tr>
<td>09809</td>
<td>Oxamyl: in/on Blueberry</td>
<td>In progress</td>
</tr>
<tr>
<td>08137</td>
<td>Hexythiazox: in/on Tomato</td>
<td>Storage stability</td>
</tr>
</tbody>
</table>
Upcoming 2009-2010 Crop Residue Programs

<table>
<thead>
<tr>
<th>IR Project Number</th>
<th>Substance/System</th>
</tr>
</thead>
<tbody>
<tr>
<td>10230</td>
<td>Kasugamycin: Magnitude of the Residue on Cherry</td>
</tr>
<tr>
<td>09943</td>
<td>Flonicamid/Alfalfa, Clover</td>
</tr>
<tr>
<td>0109</td>
<td>Hexythiazox: Magnitude of the residue on Pepper</td>
</tr>
<tr>
<td>0209</td>
<td>Pendimethalin: Magnitude of Residue on Kiwi</td>
</tr>
</tbody>
</table>

2008-2009 Pesticide Related Outreach Clinics and Workshops

- Washington State Pesticide Incident Recording Tracking (PIRT) Panel and Pesticide Advisory Board (PAB) Sessions: Presented implications of recent fumigant emission data on fumigant movement at various meeting times throughout 2008
- W-1045 Agrochemical Impacts on Human and Environmental Health: Mechanisms and Mitigation, Hawaii June 2008
- International Crop Exposition (North Dakota). Discussed implications of recent fumigant air monitoring research in WA as it relates to northwest fumigant practices
- 9th Annual Pesticide Stewardship Conference (Albuquerque, NM): Moderated and presented off-target information for fumigants in WA
- Pesticide safety presentations given at eight pesticide applicator training sessions ran by WSU and WSDA
- FEQL's 2007 Residential and Near-field Fumigant Air Monitoring Project; WSCPR Crop Tour July 2008
- Provided talks on near-field and residential fumigant emissions to commodity groups and county extension town hall meetings through out eastern Washington State

On-going collaborative program involvement:
IR-4, DOH, NOAA, WSPC, WSCPR, EPA Region 10,WSU-ARC, WSU-TFREC, WSU-Prosser, WSU-Puyallup, OSU-Hermiston

2008-2009 funds received

- CSREES IR-4 Magnitude of the Residue Crop Evaluations
- WA DOH Biennium; Monitoring and Mitigating Fumigant Air Emissions at the Ag/Urban Interface;
- EPA R10; Farm Land Trust: Reducing Fumigant Air Emissions at the Ag/Urban Interface;
- WSPC: Fumigant Application Efficacy Trials in Light of Potential EPA Change;
- WSCPR: Application-based Fumigant Flux Evaluation in Light of Potential EPA Changes;
- Total: ca. $ 400K

2008-2009 funds received from outside grants/contracts

- WSU-TFREC IRI: Pheromone Mating Disruption: Investigations of flake emissions;
- NOAA: Pesticide Residue Analysis in Surface Waters;
- JSTARK PI, WSU ARC Internal Grant: Modeling the Impact of New Generation Insecticides used in Apple Production on Water Quality; $ 20K (to FEQL)
- Total: ca. $ 50K

Published/completed journal articles in 2008-2009