Kurt Schwartau

IR-4 Food Use Workshop 2009

Insecticides
Sipcam-Oxon Today

- SipcamAdvan is a wholly owned subsidiary of Sipcam-Oxon.
-Privately owned, Italian multinational founded in 1946

- Business focuses on:
  - Synthesis/formulation of crop protection products
  - Production of chemical intermediates
  - Custom synthesis, Contract manufacturing.

- Development and registration
- The parent company has unique global partnerships notably with Chinese suppliers and Japanese R & D companies
- The parent brings formulation expertise, multi-sourced manufacturing and third party products.

Growing well together
SipcamAdvan Products

- Crop Protection standard products
- Proprietary formulations and pre-mixtures
- Bio-rationals - a new generation
- New Products to US market
Trebon Insecticide Registration Status

- Mitsui Chemical is the technical registrant
- 1st Etofenprox EPA Food Crop Registration in 2008
- 3G formula against RWW
- Additional foliar food crop registration submissions are planned for conventional, ULV and aerial application
**Physical and Chemical Properties of Trebon**

- **Common name**: Etofenprox
- **Trade name**: Trebon
- **Chemical name**: 2-(4-ethoxyphenyl)-2-methylpropyl 3-phenoxybenzyl ether
- **Chemical structure**:
  ![Chemical structure diagram](image)
- **Appearance**: Crystalline solid
- **Melting point**: 36.4~38.0°C
Characteristics of Etofenprox

**Chemistry**
1. Non-ester & pyrethroid-like insecticide

   ![](image)

**Efficacy**
1. Quick killing action
2. Reasonably persistence
3. Broad spectrum

**Safety**
1. Extremely low toxicity
2. No irritation on eyes nor skin

**Environment**
1. Low fish toxicity
2. Low impact on beneficial insects
3. No harmful metabolites
## Compared to pyrethroids

<table>
<thead>
<tr>
<th>Compound</th>
<th>Acute oral rat tox (LD50 mg/kg)</th>
<th>Fish tox (LC50 ppb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etofenprox</td>
<td>&gt; 42,880</td>
<td>5,000 (carp)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>103 (rainbow trout)*</td>
</tr>
<tr>
<td>Fenvalerate</td>
<td>451</td>
<td>0.42 (bluegill)</td>
</tr>
<tr>
<td>Cypermethrin</td>
<td>250</td>
<td>0.69 (rainbow trout)</td>
</tr>
<tr>
<td>Deltamethrin</td>
<td>128.5</td>
<td>0.91 (rainbow trout)*</td>
</tr>
</tbody>
</table>

Source: Farm Chemicals Handbook

* MCI data
**Efficacy** (Comparison between **Trebon**® and **Pyrethroids**)

<table>
<thead>
<tr>
<th></th>
<th><strong>Trebon</strong></th>
<th><strong>Pyrethroids</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Insect Control Spectrum</td>
<td>Wide, in particular Psyllid, Thrip, Leafhopper, Plant bugs &amp; Diptera</td>
<td>Wide, in particular Lepidoptera</td>
</tr>
<tr>
<td>Mode of Action</td>
<td>Sodium channel blocker</td>
<td>Sodium channel blocker</td>
</tr>
<tr>
<td>Cross resistance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R/S (Py.-R)</td>
<td>Low to Medium</td>
<td>High</td>
</tr>
<tr>
<td>Effect Natural enemies</td>
<td>Moderate</td>
<td>High</td>
</tr>
</tbody>
</table>
Thank You!

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