CSC Regulatory and Research Update

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California Strawberry Commission
US MB CUEs for Pre-Plant Uses

- **Pounds of Methyl Bromide**
- **2009**: Other Crops (6,000,000) + CA Strawberry (2,000,000)
- **2010**: Other Crops (5,000,000) + CA Strawberry (1,500,000)
- **2011**: Other Crops (3,000,000) + CA Strawberry (1,000,000)
- **2012**: Other Crops (1,000,000) + CA Strawberry (1,000,000)
- **2013**: Other Crops (800,000) + CA Strawberry (600,000)
Methyl Bromide Use on Strawberry

*based on Cal DPR Pesticide use reports
Methyl Bromide Use on Strawberry

*based on Cal DPR Pesticide use reports
Other Fumigants - California

- Midas court case meets in January 2012
- Chloropicrin re-assessment to come out in 2012
  - May have significant changes to current restrictions
## Various Film Structures

### Fumigant Barrier

<table>
<thead>
<tr>
<th></th>
<th>STD</th>
<th>STD</th>
<th>3-layer VIF</th>
<th>5-layer VIF</th>
<th>5-layer TIF</th>
<th>7-layer TIF</th>
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<tbody>
<tr>
<td><strong>FUMIGANT</strong></td>
<td></td>
<td></td>
<td>GOOD</td>
<td>HIGH</td>
<td>HIGH</td>
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<tr>
<td><strong>PHYSICAL PROPERTIES</strong></td>
<td></td>
<td></td>
<td>GOOD</td>
<td>HIGH</td>
<td>POOR</td>
<td>HIGH</td>
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**Mono-Layer Blend**
- LLDPE, MDPE, & REPRO

**Mono-Layer Blend**
- LLDPE & MDPE

**PE & Tie**

**PE**

**TIE**

**Nylon**

**EVOH**

**TIE**

**PE**

**PE**

**PE**

**PE**

**POOR**

**MEDIUM**

**HIGH**

**POOR**

**MEDIUM**

**POOR**

**HIGH**
Chloropicrin Peak Flux Rates for Tarped Shallow Broadcast Applications

Drip application with workable buffer zones

GAP-compliant + polyethylene tarp.

GAP-compliant + TIF
TIF use in CA strawberry

- Was some use in all of the main production regions
  - Primarily with broadcast applications of Telone C60
  - Some limited “trial” use with straight chloropicrin
- Cost of TIF is about 80% more than PE
- Preliminary results
2011 Lygus Monitoring Program: IPM for Industry
Lygus Management Project

Phase I -

✓ Train growers to scout for Lygus (Jan/Feb)

✓ Site-specific weather stations -> growers implement the degree day model

Phase II –

✓ Conduct resistance testing to aid growers in spray decisions (July/Aug)
Results: Degree Day predictions were later than actual population peaks

- Possible causes: late set date, poor weather data
Results: Resistance Testing

- Dibrom/Actara tank Mix had 100 percent mortality at all but 1 site
- Results were variable and context specific
- Spray patterns were predictable from resistance data
Summary

Practice:
• Growers allocated largely to PCAs to sample
• Weekly systematic monitoring is rare; visual scouting is common
• OP and pyrethroid use is widespread; new chemistry insect growth regulators not as much, timing wasn’t always optimal

Degree day Model:
• Predictions are difficult to fine-tune; systematic sampling necessary

Resistance Testing
• Resistance variable by site and practice
Thank You