CSC Research and Regulatory Update

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California Strawberry Commission
Lygus Chemical Control Update

• Rimon (novaluron)
  – Apparently has a Canadian MRL
• Clutch (clothianidin)
  – Full registration expected in 2011 W/Canada MRL
• Sulfoxaflor (new chemistry), Dow
  – Strawberry registration likely in 2013
• CSC is evaluating other options
  – Training for using the degree day model
  – Farm level evaluation of insecticide resistance
Must wait 14 days before cutting tarp
Must use high barrier tarps (VIF, TIF)
Larger buffer zones
Applications prohibited within one-half mile of occupied schools, hospitals and nursing homes.
Buffer zones will be slightly smaller than originally calculated
New Federal Labels for Fumigants

• Some of the new label restrictions will start in 2011
  – Non-CUE uses will be dropped except for raspberry (2015)
  – Site management plans for all fumigants (2011)
• Changes to buffer zones and credit for high barrier tarps (2012)
New California Regulations

• New township cap for methyl bromide
  – 171,625 lbs/township per month
  – Reduction in maximum work hours during applications (about an hour)

• Chloropicrin reassessment to begin in 2011
Methyl Bromide CUE

• CA strawberry has been awarded:
  – **1.89 million** lbs for 2010
  – **1.65 million** lbs for 2011
  – **1.48 million** lbs for 2012

• Pre-2005 stockpiles of MB still available

• QPS (strawberry nursery) uses currently exempt but the EU is trying to eliminate them (shift to CUE)
US CUEs for Pre-plant Uses (2005-12)

- Strawberry CA: -55%
- Strawberry (Eastern US): -99%
- Peppers: -97%
- Tomatoes: -98%
US MB CUEs for Pre-Plant Uses

Pounds of Methyl Bromide

- Other Crops
- CA Strawberry

2005 2006 2007 2008 2009 2010 2011 2012

2005: 16,000,000
2006: 14,000,000
2007: 12,000,000
2008: 10,000,000
2009: 8,000,000
2010: 6,000,000
2011: 4,000,000
2012: 2,000,000

72%
Methyl Bromide Use on Strawberry

Millions of Pounds

- Santa Maria
- Oxnard
- Monterey/Santa Cruz
- CA Strawberry CUE

2005: 1.81
2006: 1.95
2007: 1.90
2008: 1.73
2009: 2.00
2010: 1.90
2011: 1.80
2012: 1.70
New Draft of Ag Order
(11/16/2010)

• Dischargers must not cause or contribute to exceedances of pesticide, toxicity, nutrient, sediment, turbidity, temperature and salt water quality standards.

• Dischargers may have to implement best management practices, treatment or control measures, or change farming practices to achieve compliance with this order.
<table>
<thead>
<tr>
<th>Tier 1 (Low risk)</th>
<th>Tier 2 (Moderate Risk)</th>
<th>Tier 3 (High Risk)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No chlorpyrifos or diazinon</td>
<td>Uses chlorpyrifos or diazinon</td>
<td>Uses chlorpyrifos or diazinon</td>
</tr>
<tr>
<td>&gt;1000 ft from listed waterbody</td>
<td>-or-</td>
<td>-and-</td>
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<tr>
<td>&lt;1000 ft</td>
<td>&lt;1000 ft</td>
<td>&gt;1000 ft</td>
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<tr>
<td>&lt;1000 total irrigated acres</td>
<td>-or-</td>
<td>-and-</td>
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<tr>
<td>&gt;1000 irr. acres</td>
<td>&gt;1000 irrigated acres</td>
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</tbody>
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New Ag Order (Tier 1, 2 & 3)

- Must sample all wells
- Must monitor receiving water quality to determine short and long term patterns in quality
- Must monitor individual discharges
- Must submit monitoring reports
- Must complete 15 hrs of water quality education
New Ag Order (Tier 2 & 3)

• Must conduct/submit photo monitoring of riparian, stream and wetland habitat every 3 years
• Must calculate and submit nitrate loading “risk factor” and report total nitrogen used, and those with a high risk in tier 3 must determine the typical nitrogen crop uptake for each crop and implement an approved management plan
• Tier 3-Must develop a water quality buffer plan to protect impaired waterbodies
Timelines for Ag Order

- 6 months
  - Start monitoring receiving water
- 12 months
  - Monitoring of wells
- 18 months
  - Complete 15 hrs of education
  - Implement farm plan
- 1-2 years
  - Submit groundwater report
- October 1, 2012 (Tier 2 & 3)
  - Photo monitoring, nitrate loading risk,
- October 1, 2014 (Tier 2 & 3)
  - Nitrogen use
- Tier 3 has too many requirements and deadlines to list here
Food Safety

• In 2007, we identified Food Safety as the Commissions top priority
• In 2008, we conducted an industry wide food safety assessment (SIFSA) We developed a food safety training program
• In 2009, we released the CSC Food Safety Flip Chart
• In 2009, we started our Food Safety Training program
Grower Participation in Training

83% of growers participated

17% yet to attend

378 of 455 growers participated
1. Attend ALL CSC Food Safety training workshops
   - Teaching Food Safety
   - Intro to Food Safety for Field Supervisors
   - Food Safety for Harvest for Processing
   - Additional Classes in Development

2. Pass Learning Assessment

3. Participate in ongoing continuing education

Certificate Issued