United States
QPS Use of Methyl Bromide

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Animal and Plant Health Inspection Service (APHIS)
Plant Protection and Quarantine (PPQ)
Outline

• Plant Protection and Quarantine Mission
• 2012 PPQ QPS Usage
• QPS Usage Trends
• International Perspective
• PPQ Research on Alternatives
Plant Protection and Quarantine
Mission and Authority

Plant Protection Act of 2000

- Protect the “agriculture, environment, and economy of the United States”

- Regulate the movement of any commodity capable of harboring invasive plant pests and noxious weeds

- Facilitate import, export, and interstate commerce of agricultural products and other commodities that pose a risk of harboring these plant pests and weeds
Quarantine and Preshipment (QPS) Methyl Bromide Use in the U.S.

- Total QPS Methyl Bromide Usage
  - Preshipment uses
    - Not PPQ!
  - Quarantine uses
    - Interstate movement
      - Not PPQ!
    - Entry Requirement
      - Offshore Treatments for US import
      - POE Treatments for US import or US Export
    - Emergency Action
      - POE Treatments for US import
      - In-field Eradication Programs
### PPQ 2012 Methyl Bromide Use On Commodities

<table>
<thead>
<tr>
<th>Category</th>
<th>Pounds</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>All PPQ-monitored Fumigations</td>
<td>544,535</td>
<td>100%</td>
</tr>
<tr>
<td>Import Fumigations</td>
<td>461,410</td>
<td>85%</td>
</tr>
<tr>
<td>Export Fumigations</td>
<td>82,041</td>
<td>15%</td>
</tr>
<tr>
<td>‘Other’ Fumigations</td>
<td>1,082</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>
2012
Usage on Imports to US by Reason for Fumigation

- Condition of Entry: 90%
- Quarantine Pest: 10%
- Other: <1%
Fruits & Vegetables 91%

Cut Flowers & Greenery 2%

Propagative Plant Material <1%

Other 7%

2012 Usage on Imports to US by Commodity Type

Grape - 61%
Asparagus - 15%
2012
PPQ-monitored Export Fumigations

PPQ does not monitor US export fumigations except for...

• Logs

• Majority are destined for Europe and China

• 82,041 pounds in 2012
2012
In-Field Eradication Fumigations

PPQ conducts in-field eradication of invasive species

- Cyst nematodes
- ~208,000 pounds in 2012
- Switched from 98% methyl bromide to 80% with no decrease in efficacy
Annual Totals for All PPQ-monitored Fumigations (import, export, & in-field)

Pounds Methyl Bromide

2005 2006 2007 2008 2009 2010 2011 2012

Total
Import/Export
In-Field
2012 US QPS Methyl Bromide Use

<table>
<thead>
<tr>
<th>Source</th>
<th>Pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>All sources</td>
<td>2,579,408</td>
</tr>
<tr>
<td>PPQ commodity</td>
<td>544,535</td>
</tr>
<tr>
<td>PPQ in-field</td>
<td>~208,000</td>
</tr>
<tr>
<td>Remaining</td>
<td>1,826,873</td>
</tr>
</tbody>
</table>

- ‘All sources’ is not truly use, but a surrogate
- ‘Remaining’ consists of non-PPQ export, preshipment, and interstate treatments
The Future of QPS Methyl Bromide

- The Montreal Protocol exempts methyl bromide from global phase-out when used for QPS purposes
- Other countries are questioning this exemption
- QPS discussions were limited this year
- Multiple parties and the Methyl Bromide Technical Options Committee will likely ask probing questions on QPS next year
- PPQ committed to maintaining the QPS exemption, while researching and implementing feasible alternatives
PPQ Methyl Bromide Alternatives Work

- Bilateral discussions with trading partners
- Alternatives research priorities
- Pest-specific research
- Tool-specific research
- Increased efficiencies when methyl bromide must be used
Questions?
2012
Usage on Imports to US by Commodity

Asparagus 15%
Grape 61%
2012
Usage on Imports to US By Country of Origin

- Chile: 66%
- Peru: 15%
- Remaining Countries: 5%
- Other countries: Colombia (2%), Guatemala (1%), Ecuador (1%), Italy (2%), Costa Rica (4%)
Montreal Protocol Update

Regional consumption of MB for QPS uses in 2011

- Asia: 54%
- Western Europe & others: 32%
- Latin America & Caribbean: 10%
- Eastern Europe: 0%
- Africa: 4%
# Annual Totals for Import & In-Field Fumigations

<table>
<thead>
<tr>
<th>Year</th>
<th>Pounds-Import</th>
<th>Pounds-In-Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>461,410</td>
<td>~208,000</td>
</tr>
<tr>
<td>2011</td>
<td>528,178</td>
<td>~272,000</td>
</tr>
<tr>
<td>2010</td>
<td>556,476</td>
<td>~444,000</td>
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<tr>
<td>2009</td>
<td>553,604</td>
<td>~438,000</td>
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<tr>
<td>2008</td>
<td>548,824</td>
<td>~431,000</td>
</tr>
<tr>
<td>2007</td>
<td>515,256</td>
<td>~363,000</td>
</tr>
<tr>
<td>2006</td>
<td>540,287</td>
<td>-</td>
</tr>
<tr>
<td>2005</td>
<td>470,653</td>
<td>-</td>
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