Pear Production in Western States: Status, Challenges and Trends

Mid-Atlantic Fruit and Vegetable Convention

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Many Thanks To:

- Linda Bailey, Pear Bureau Northwest
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- Tim Smith, WA State University
- David Sugar, OR State University
North American Pear Production 2012

United States 96%

Canada and Mexico 4%

West Coast 99.5%

New York, Michigan, Pennsylvania

Oregon 29%
California 25%
Washington 46%

Other: 0.05%

Source: USDA, Economic Research Service
### U.S. Pear Production

**1980 – 2007:** 13.3 tons/acre
- 27% fewer acres
- 3% fewer tons

**2007 - 2012:** 15.8 tons/acre
- 7% fewer acres
- 2% fewer tons

*Source: USDA, Economic Research Service*
## AVERAGE 2010-2012

### BEARING ACREAGE & TONS PER ACRE

<table>
<thead>
<tr>
<th>State</th>
<th>Bearing Acreage</th>
<th>Tons per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington</td>
<td>22,000</td>
<td>19.0</td>
</tr>
<tr>
<td>Oregon</td>
<td>16,200</td>
<td>13.7</td>
</tr>
<tr>
<td>California</td>
<td>14,000</td>
<td>16.4</td>
</tr>
<tr>
<td>New York</td>
<td>1,200</td>
<td>6.5</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>800</td>
<td>2.4</td>
</tr>
<tr>
<td>Michigan</td>
<td>730</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Source: USDA, Economic Research Service
Crop Utilization

1,000 Tons

Fresh: 9%

Processed: 32%

Source: USDA, Economic Research Service
People are eating fewer pears!

Source: USDA, Economic Research Service
The Industry Revolves Around Bartlett and Anjou (4 year average, 2009-2012)

<table>
<thead>
<tr>
<th>Bartlett (Williams)</th>
<th>Anjou and Others</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acres:</strong> ~ 24,000</td>
<td><strong>Acres:</strong> ~ 28,000</td>
</tr>
<tr>
<td><strong>Production:</strong> 418,500 tons (47%)</td>
<td><strong>Production:</strong> 484,000 tons (53%)</td>
</tr>
<tr>
<td><strong>Utilization:</strong></td>
<td><strong>Utilization:</strong></td>
</tr>
<tr>
<td>- 28% fresh</td>
<td>- 72% fresh</td>
</tr>
<tr>
<td>- 81% processed</td>
<td>- 19% processed</td>
</tr>
</tbody>
</table>

Source: USDA, Economic Research Service
Total U.S. West Coast Bartlett Production 1998-2012

19% decrease 1998 - 2012
Bartlett Utilization

40% decrease in processed from 1998 to 2012

7% increase in fresh from 1998 to 2012

Source: National Agricultural Statistics Service, USDA
## Canned Pear Trends
(x 1000 Tons)

<table>
<thead>
<tr>
<th>Canned Pear Data</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting Inventory</td>
<td>282</td>
<td>321</td>
<td>300</td>
</tr>
<tr>
<td>Total Supply</td>
<td>313</td>
<td>347</td>
<td>329</td>
</tr>
<tr>
<td>Year End Inventory</td>
<td>2.4</td>
<td>2.5</td>
<td>2.6</td>
</tr>
<tr>
<td>Exports</td>
<td>6.9</td>
<td>9.4</td>
<td>9.1</td>
</tr>
<tr>
<td>US Domestic Sales</td>
<td>303</td>
<td>338</td>
<td>320</td>
</tr>
<tr>
<td>Imports</td>
<td>31.6</td>
<td>26.3</td>
<td>27.5</td>
</tr>
</tbody>
</table>

U.S. Fresh Availability by Variety - 2013

Source: Chris Zanobini, California Pear Advisory Board

- Anjou: 46%
- Bartlett: 29%
- Bosc: 16%
- Red Pears: 4%
- Other Varieties: 1%
- Seckel: 0.4%
- Comice: 1%
Anjou Pear Production

(24% increase from 2004-2013)

Source: Final Crop Reports, Winter Pear Control Committee
U.S. Imports 2004-2012

Imported Pear Utilization

(Percent of Domestic Market)

Source: USDA, Economic Research Service
Consumption of Imported Pears (2010-2012)

- Canned: 22% decrease
- Fresh: 2.5% increase

Source: USDA, Economic Research Service
“Cheap imported pears from China* and Thailand are taking an increasing bite out of the market for canned pears in the United States.”

*25.4 Thousand tons from China– 2012
We need fresh AND processed!
U.S. Pear Exports

1,000 Tons

Source: USDA, Economic Research Service
## Change in Top Export Markets

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Canada</strong></td>
<td>5%</td>
<td>10%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td><strong>Mexico</strong></td>
<td>55%</td>
<td>34%</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Russia</strong></td>
<td>45%</td>
<td>966%</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Taiwan</strong></td>
<td>65%</td>
<td>32%</td>
<td>~</td>
</tr>
<tr>
<td><strong>Venezuela</strong></td>
<td>59%</td>
<td>~</td>
<td>~</td>
</tr>
<tr>
<td><strong>Others</strong></td>
<td>28%</td>
<td>34%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source: USDA, Economic Research Service
U.S. **Imports** vs. **Exports**

1,000 Tons

- **Exports**: 16% increase
- **Imports**: 7% decrease

Source: USDA, Economic Research Service
Canned Pear Exports 2009-2012

- 8,400 Tons
- ~ 0.9% of total production
- Canada and Mexico largest markets

Canada 59.6%
Mexico 24.1%
United Arab Emirates 12.3%
Guatemala 2.7%
Honduras 1.9%
Other 4.7%

Source: U.S. International Trade Commission
Organic Acreage

Source: Elizabeth Kirby, David Granatstein, WSU-CSANR, WSDA
Organic Variety Trend (Washington)

Source: * 2001-2005 data estimated from graph done by Elizabeth Kirby, David Granatstein, WSU-CSANR, WSDA
Pear slug and damage to a tree
Keys to Future Profitability

- Efficient Cost-Effective Production
  Orchard design and mechanization to reduce dependence on seasonal manual labor!
We need to go from ladders to machines

Cutting fire blight on ladders

New wine grapes
Mechanical and Robotic Harvesting

Stavros Vougioukas, UC Davis, Dept. of Bio & Ag Engineering
2005 N140 Rootstock Project (California)

California, New York, Oregon, Washington, Nova Scotia, Chihuahua
2013 NC-140 Systems Trial

California (Elkins)

New York (Robinson)

Oregon (Einhorn) (PI)
2013 NC-140 Orchard Systems

4 training systems
3 spacings (3’, 4.5’, 6’)
3 rootstocks
Stefano Musacchi, Todd Einhorn, Ted DeJong

Bi-axis knip: spread and unspread
2-leader and bi-axis knip
Tall spindle (note blind wood at base of laterals) and unheaded bi-axis
Light management to optimize canopy and spacing: using in pears as well as walnuts, almonds
We still have to farm existing orchards!
Reflective fabric to increase fruiting
Keys to Future Profitability

Ability to maintain successful IPM programs
Fire blight management

-Delayed dormant copper
-Biological controls
-Actigard to stop running
-FUNDED BY OREI
Keys to Future Profitability

- Innovative, high quality products
  - Post-harvest quality
Keys to Future Profitability

- Innovative, high quality products
- Cultivar breeding and evaluation
Fire blight-resistant cultivars (USDA-ARS, Bell)
Which are resistant?
New Cultivar Release: ‘Gem’

- Precocious and productive
- Fire blight resistance
- Non-russeting
- Crisp/juicy texture at harvest
- Requires hand thinning to achieve good size
Keys to Future Profitability

- Innovative, high quality products

Value-added products
Keys to Future Profitability

- Innovative, high quality products
- Value-added products
Keys to Future Profitability

- Effective Marketing
  - Domestic, exports
  - Inter-generational
  - Multi-cultural
  - Market to everyone!
Thank You!