Organic Tree Fruit: Growing, Growing, Gone?

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TOPICS

- Fruit consumption trends
- Fruit production trends
- Economics
Consumer Demand

Growth of US Organic Food Sales

Organic Food Sales (Bil $)

2008 - 3.5% of all food sales

1%

Fruits & vegetables = 37% of sales

Source: OTA, Nutrition Business Journal
## Market Share of Organic Food and Fruit, 2007

<table>
<thead>
<tr>
<th></th>
<th>Organic share of food market (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All food</td>
</tr>
<tr>
<td>Austria</td>
<td>5.4</td>
</tr>
<tr>
<td>Germany</td>
<td>2.7</td>
</tr>
<tr>
<td>Switzerland</td>
<td>4.6</td>
</tr>
</tbody>
</table>

*Source: FiBL Survey based on data from Bio Austria, AC Nielsen/ZMP/BOELW and Bio Suisse.*

Leading organic fruit: apple, orange, banana, mango
Consumers Willing to Pay 30% More for Organic

# 1
- Fresh fruit: 59%
- Fresh vegetables: 55%
- Meat/poultry: 54%
- Baby food: 53%
- Milk: 49%
- Eggs: 46%
- Soymilk: 41%
- Breads: 40%
- Coffee: 38%
- Cold cereal: 37%
- Juice: 37%
- Other dairy: 34%
- Canned fruit/veg: 32%
- Yogurt: 32%
- Fresh prepared: 30%
- Frozen foods: 27%

Source: Hartman, 2008
U.S. Consumption of Fresh Fruit

(U.S.A.D.A.-ERS, 2008)
## Top 10 Fresh Fruits Consumed in the U.S.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Fruit</th>
<th>2005</th>
<th>1995</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Banana</td>
<td>20.7</td>
<td>23.0</td>
<td>22.3</td>
</tr>
<tr>
<td>2</td>
<td>Melon</td>
<td>19.3</td>
<td>20.1</td>
<td>20.8</td>
</tr>
<tr>
<td>3</td>
<td>Apple</td>
<td>14.9</td>
<td>15.4</td>
<td>15.8</td>
</tr>
<tr>
<td>4</td>
<td>Orange</td>
<td>9.1</td>
<td>9.7</td>
<td>11.2</td>
</tr>
<tr>
<td>5</td>
<td>Grape</td>
<td>6.5</td>
<td>5.8</td>
<td>6.0</td>
</tr>
<tr>
<td>6</td>
<td>Strawberry ↑</td>
<td>4.4</td>
<td>3.2</td>
<td>2.6</td>
</tr>
<tr>
<td>7</td>
<td>Pineapple ↑</td>
<td>3.8</td>
<td>1.5</td>
<td>1.3</td>
</tr>
<tr>
<td>8</td>
<td>Peach/nectarine ↓</td>
<td>3.8</td>
<td>4.3</td>
<td>4.9</td>
</tr>
<tr>
<td>9</td>
<td>Avocado ↑</td>
<td>2.6</td>
<td>1.3</td>
<td>1.4</td>
</tr>
<tr>
<td>10</td>
<td>Pear ↓</td>
<td>2.3</td>
<td>2.7</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Tree Fruit and Nut Production
Global Organic Fruit Area by Specific Crop, 2007

28% of ha are NS
## Organic Tree Fruit and Nuts
### Western U.S. 2008

<table>
<thead>
<tr>
<th>State</th>
<th>Apple</th>
<th>Pear</th>
<th>Sweet Cherry</th>
<th>Walnut</th>
<th>Almond</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>20,009</td>
<td>2,145</td>
<td>2,061</td>
<td>4,321</td>
<td>4,937</td>
</tr>
<tr>
<td>WA</td>
<td>13,055</td>
<td>1,319</td>
<td>1,497</td>
<td>7</td>
<td>--</td>
</tr>
<tr>
<td>CA</td>
<td>3,192</td>
<td>212</td>
<td>380</td>
<td>4,279</td>
<td>4,934</td>
</tr>
<tr>
<td>OR</td>
<td>136</td>
<td>344</td>
<td>276</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>AZ</td>
<td>1,023</td>
<td>--</td>
<td>0</td>
<td>0</td>
<td>--</td>
</tr>
<tr>
<td>CO</td>
<td>426</td>
<td>--</td>
<td>27</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>MT</td>
<td>20</td>
<td>--</td>
<td>34</td>
<td>--</td>
<td>0</td>
</tr>
<tr>
<td>NM</td>
<td>66</td>
<td>4</td>
<td>13</td>
<td>0</td>
<td>--</td>
</tr>
<tr>
<td>NV</td>
<td>55</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UT</td>
<td>48</td>
<td>--</td>
<td>--</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Data: USDA-ERS, USDA NASS; 2008
Estimated U.S. Organic Apple Trend

Organic = 4.6% of US apple acres
West = >95% of area

Based on combined data from WSDA, ERS, CDFA AZ Apple Growers Assoc., QAI and OTCO; * same data for 2008 and 2009, except WA and CA
Organic Apple Area
Washington State

15,735ac = 10% of WA apple bearing acreage
(based on 2008 WA-NASS estimate of 153,000 acres)
California Organic Tree Fruit Acres
California Dept of Food and Agriculture

Organic grapes 23,000 ac
California Organic Stone Fruit Acres
California Dept of Food and Agriculture

Based on raw CDFA data
Organic Pear Acreage
Washington State

2009 = 8% of total WA pear acreage
(based on 2008 WA-NASS estimate of 24,000 acres)

Combined certifiers data; 2009 WSDA only
Organic Cherry Acreage
Washington State

U.S. organic tart cherries
264 ac

2009 = 7% of total WA cherry area
(based on 2008 WA-NASS estimate of 34,300 acres)
Organic Tree Nuts

<table>
<thead>
<tr>
<th>Nut</th>
<th>CA acres</th>
<th>% of all acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walnut</td>
<td>4279</td>
<td>1.8</td>
</tr>
<tr>
<td>Almond</td>
<td>4934</td>
<td>0.6</td>
</tr>
</tbody>
</table>

CA has 99% of organic walnut and almond acres in US

Hazelnut/filbert (US) 154 ac

OR/WA had 9 of 32 farms
Apple Price Trends

Gala

$/box FOB

organic

Conv

$0

$10

$20

$30

$40


Fuji

$/box FOB

organic

Conv

$0

$10

$20

$30

$40

WAGCHA data; FOB average, all storage, grades, sizes, domestic & export
Pear Price Trends

Bartlett

D’Anjou

WAGCHA data; FOB avg, all storage, grades, sizes, dom & exp
Jan. 2010 Grower Survey

How would you compare the cost of production for organic tree fruit to similar conventional production?

1. 20% or more lower in organic
2. 10% lower in organic
3. Similar
4. 10% higher in organic
5. 20% or more higher in organic
Jan. 2010 Grower Survey

Was organic fruit production profitable for you for the 2008 crop?

1. Yes
2. No
Year-to-Date WA
Organic Apple Sales

WSDA compliance data
Question 1a.

What is the most serious problem you face in organic tree fruit production?

1. New varieties / rootstock
2. Insect management
3. Disease control
4. Tree nutrition
5. Weed control
6. Crop load management
7. Fruit quality
8. Economics
9. Post harvest issues
Question 13a.

Choose your **highest** priority for organic tree fruit research.

1. Crop load management
2. Post harvest issues
3. Disease control
4. Economics
5. Weed control
6. New varieties / rootstock
7. Organic systems site
8. Tree nutrition
9. Insect management
10. Fruit quality

![Priority Bar Chart]

- **Crop load management**: 49%
- **Post harvest issues**: 16%
- **Disease control**: 8%
- **Economics**: 8%
- **Weed control**: 8%
- **New varieties / rootstock**: 1%
- **Organic systems site**: 1%
- **Tree nutrition**: 1%
- **Insect management**: 1%
- **Fruit quality**: 5%
Rank the **3 most** difficult insect pests to control in organic apple production (with the worst first).

1. Rosy apple aphid
2. Stink bug
3. Mites
4. Woolly apple aphid
5. Codling moth
6. Thrips
7. Lygus bug
8. Leaf roller
9. San Jose Scale
10. Green aphid
Future Outlook

• Organic trees, fruits, and nuts:
  - Market will still grow
  - There is a ceiling
  - Price premiums likely to decline

• Research to help lower costs, risks; increase yield and quality
  - Insect pests a priority

• Organic system constraints offer unique research opportunities
  - E.g. GF-120 for cherry fruit fly

• Western states a premier region for organic fruits, nuts; need support to remain competitive, to deal with new pests