Recent Trends in Organic Tree Fruit Production

Washington State 2011

December, 2011
Rev. 11/28/11

Elizabeth Kirby & David Granatstein, WSU-CSANR
in cooperation with
Washington State Department of Agriculture Organic Program
Organic food sales in the US have been growing significantly. In 2010, organic food sales accounted for 4% of all food sales. Organic fruits and vegetables in 2010 constituted 39.7% of organic sales, which is approximately 12% of all produce sales with a growth rate of 11.8%.

Source: OTA, Nutrition Business Journal
# Organic Tree Fruit Acres
## Washington State

<table>
<thead>
<tr>
<th></th>
<th>--- Certified acres ---</th>
<th>% Change</th>
<th>--- Transition acres ---</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>15,735</td>
<td>14,790</td>
<td>14,296</td>
</tr>
<tr>
<td>Pear</td>
<td>1,964</td>
<td>2,033</td>
<td>1,917</td>
</tr>
<tr>
<td>Cherry</td>
<td>2,437</td>
<td>2,147</td>
<td>1,826</td>
</tr>
<tr>
<td>Apricot</td>
<td>265</td>
<td>299</td>
<td>296</td>
</tr>
<tr>
<td>Peach &amp; Nectarine</td>
<td>1,238</td>
<td>1,251</td>
<td>1,146</td>
</tr>
<tr>
<td>Plum &amp; Prune</td>
<td>130</td>
<td>125</td>
<td>92</td>
</tr>
<tr>
<td>Mixed stone</td>
<td>30</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>21,799</td>
<td>20,639</td>
<td>19,590</td>
</tr>
</tbody>
</table>

Tree fruit has a 20% share of all organic acreage in Washington State

Combined certifiers data; 2011 Preliminary data; Photo: ARS Gallery
### Estimated US Organic Apple Production (acres)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WA</td>
<td>1,707</td>
<td>4,228</td>
<td>6,540</td>
<td>7,003</td>
<td>6,721</td>
<td>8,018</td>
<td>12,936</td>
<td>15,735</td>
<td>14,296</td>
</tr>
<tr>
<td>CA</td>
<td>1,883</td>
<td>4,423</td>
<td>4,853</td>
<td>4,045</td>
<td>3,402</td>
<td>3,900</td>
<td>3,393</td>
<td>3,450</td>
<td></td>
</tr>
<tr>
<td>AZ</td>
<td>3,178</td>
<td>1,795</td>
<td>1,715</td>
<td>835</td>
<td>865</td>
<td>816</td>
<td>816</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO</td>
<td>1,270</td>
<td>431</td>
<td>635</td>
<td>235</td>
<td>202</td>
<td>209</td>
<td>164</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>9</td>
<td>350</td>
<td>350</td>
<td>265</td>
<td>123</td>
<td>106</td>
<td>136</td>
<td>201</td>
<td></td>
</tr>
<tr>
<td>Other West</td>
<td>59</td>
<td>281</td>
<td>677</td>
<td>171</td>
<td>83</td>
<td>147</td>
<td>139</td>
<td></td>
<td></td>
</tr>
<tr>
<td>West total</td>
<td>8,106</td>
<td>11,508</td>
<td>14,770</td>
<td>12,554</td>
<td>11,396</td>
<td>13,196</td>
<td>17,584</td>
<td>&gt;20,000</td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>522</td>
<td>419</td>
<td>567</td>
<td>650</td>
<td>708</td>
<td>612</td>
<td>655</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NY &amp; NE</td>
<td>201</td>
<td>83</td>
<td>52</td>
<td>5</td>
<td>392</td>
<td>212</td>
<td>193</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S &amp; SE</td>
<td>17</td>
<td>28</td>
<td>15</td>
<td>1</td>
<td>8</td>
<td>47</td>
<td>33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US Total</td>
<td>8,846</td>
<td>12,038</td>
<td>15,404</td>
<td>13,210</td>
<td>12,504</td>
<td>14,067</td>
<td>18,465</td>
<td>&gt;21,000</td>
<td></td>
</tr>
</tbody>
</table>

>95 % in arid west

Combined data sets from WSU-CSANR and USDA-ERS; 2011 is preliminary data; Other West states include ID, MT, NM, NV, UT
Estimated U.S. Organic Apple Trend

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, ID and CA
Organic Apple Area
Washington State

14,296 ac = 8.5% of WA apple bearing acreage
(based on 2011 WA-NASS estimate of 167,489 acres)

Combined certifiers data; 2011 Preliminary data
Organic Apple Variety
Acres Washington 2011

Certified Organic  Transition

Fuji
Gala
Red Delicious
Granny Smith
Honeycrisp
Golden Types
Cripps Pink
Braeburn
Cameo
Other & NS

Acres

2011 preliminary certifier data; NS includes apples not reported by variety
Organic Varieties
Washington State Acres Trend

GALA

FUJI

REDS

Certifier data; 2011 preliminary; Photo by B. Barritt
Organic Apple Variety Trends
Washington State – Major Varieties

Combined certifier data; 2011 preliminary data; 2013 based on 2011 C+T

FUJI
GALA
4% or less growth projected

Fuji  Gala  Granny  Red Del  Golden Types
Organic Specialty Apple Trends

Washington State

Potential 30% increase of Honeycrisp

Projected

Combined certifier data; 2011 preliminary data; 2013 based on 2011 C + T
Annual prices are typically reported for a proportion of total boxes shipped rather than total volume of boxes shipped. Data Source: WA Grower’s Clearing House: Season end organic FOB Average History; priced boxes all grades, sizes, storage.
Organic Share of Apple Shipments
Washington State

<table>
<thead>
<tr>
<th>Year/Year</th>
<th>Organic % of all apples shipped</th>
</tr>
</thead>
<tbody>
<tr>
<td>00/01</td>
<td>1.8</td>
</tr>
<tr>
<td>01/02</td>
<td>2.2</td>
</tr>
<tr>
<td>02/03</td>
<td>2.0</td>
</tr>
<tr>
<td>03/04</td>
<td>2.1</td>
</tr>
<tr>
<td>04/05</td>
<td>2.5</td>
</tr>
<tr>
<td>05/06</td>
<td>2.9</td>
</tr>
<tr>
<td>06/07</td>
<td>3.6</td>
</tr>
<tr>
<td>07/08</td>
<td>3.8</td>
</tr>
<tr>
<td>08/09</td>
<td>5.4</td>
</tr>
<tr>
<td>09/10</td>
<td>6.1</td>
</tr>
<tr>
<td>10/11</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Data Sources: WA Growers Clearing House and Wenatchee Valley Traffic Association
Total Shipped Organic Volume by year and variety, Washington State

Season end 2003/04 to 2010/11

Boxes *1000

0 500 1000 1500 2000 2500

Gala Fuji Red Delicious Granny Smith Golden Delicious

03/04 04/05 05/06 06/07 07/08 08/09 09/10 10/11

Nearly 2 million boxes of organic ‘Gala’ sold for 2010 crop

Data Sources: WA Growers Clearing House & Wenatchee Valley Traffic Association. Photo: ARS Gallery
Price Trends
Washington Apples

Data Source: Washington Growers Clearing House; FOB average, all storage, grades, sizes
Price Trends
Washington Apples

Red Delicious

Golden Delicious

Price Trends
Washington Apples

Granny Smith

Cripps Pink

Data Source: WA Growers Clearing House:
FOB average, all storage, grades, sizes.
Average Monthly Prices for WA apples 2010/11

Data Source: WA Growers Clearing House: FOB average, all storage, grades, sizes.
Ave. Monthly Organic Prices & Storage Volume: WA 2010/11

Data Source: WA Growers Clearing House & WVTA: FOB average, all storage, grades, sizes.
Data Source: WA Growers Clearing House: FOB average, all storage, grades, sizes.
### Recent Price Fluctuation
**Washington State Apples**

<table>
<thead>
<tr>
<th></th>
<th>Conventional</th>
<th>Organic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>08/09 ↓</td>
<td>09/10 ↑</td>
</tr>
<tr>
<td>Gala</td>
<td>(1.19)</td>
<td>0.62</td>
</tr>
<tr>
<td>Fuji</td>
<td>(6.06)</td>
<td>4.08</td>
</tr>
<tr>
<td>Reds</td>
<td>(4.86)</td>
<td>1.96</td>
</tr>
<tr>
<td>Goldens</td>
<td>(7.12)</td>
<td>4.06</td>
</tr>
<tr>
<td>Cripps Pink</td>
<td>(6.99)</td>
<td>2.30</td>
</tr>
<tr>
<td>All apples average</td>
<td>(4.47)</td>
<td>2.39</td>
</tr>
</tbody>
</table>

* Standard Equivalent Box.  WAGCHA data; FOB average, all storage, grades, sizes

Prices shown are changes per box from the previous year.

“Organic growers are offering newer apple varieties, such as the spicy-sweet Pinova, to attract shoppers' attention in store bins.” Judith Blake / The Seattle Times 2004 /Photo: Betty Udesen /
Recent Organic Apple Prices
Washington State

SEB = Standard Equivalent Box. Data Source: WA Growers Clearing House; FOB average, all storage, grades, sizes.
Organic Premiums
Washington Apples

$/Box

Percent

Data Source: WA Growers Clearing House
Photo: B. Barritt
## Modeled Prices of WA Organic Apples with increasing sales volume

<table>
<thead>
<tr>
<th>Organic Shipments as % of All WA Apple Shipments</th>
<th>6%</th>
<th>8%</th>
<th>10%</th>
<th>12%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Box Price, All Apples</td>
<td>-  -  -  -  Organic Price ($/box FOB) -  -  -  -  -</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$20.00</td>
<td>$26.77</td>
<td>$24.45</td>
<td>$22.13</td>
<td>$19.82</td>
</tr>
<tr>
<td>$17.00</td>
<td>$22.75</td>
<td>$20.78</td>
<td>$18.81</td>
<td>$16.85</td>
</tr>
<tr>
<td>$14.00</td>
<td>$18.74</td>
<td>$17.11</td>
<td>$15.49</td>
<td>$13.87</td>
</tr>
</tbody>
</table>

Source: D. O’Rourke, 2008

### 2010/11 Season; Actual Organic Share of Sales Volume = 6.3%

<table>
<thead>
<tr>
<th>Avg. Box Price (FOB)</th>
<th>All Apples</th>
<th>Organic Apples</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$19.79</td>
<td>$23.55</td>
</tr>
</tbody>
</table>

Refer to slide 12 for trend of actual organic apple share of all WA apple sales volume.
Data: Washington Growers Clearing House
Geographic Distribution of Organic Tree Fruit
Washington State 2010

- **Grant**: Large area covered by apples.
- **Douglas**: Smaller area with a mix of apples, pears, and cherries.
- **Yakima**: Moderate area with a mix of apples and pears.
- **Okanogan**: Smaller area with a mix of apples, pears, cherries, and other stone fruits.
- **Franklin**: Smaller area with a mix of apples and pears.
- **Walla Walla**: Smaller area with a mix of apples, pears, cherries, and other stone fruits.
- **Chelan**: Small area with a mix of apples, pears, cherries, and other stone fruits.
- **Adams**: Small area with a mix of apples, pears, cherries, and other stone fruits.
- **Benton**: Small area with a mix of apples, pears, cherries, and other stone fruits.
- **Other**: Smaller area with a mix of apples, pears, cherries, and other stone fruits.

Certifier data; Photo by C. Donovan
Washington State

Pear and Stone Fruit Trend

Certified acres

<table>
<thead>
<tr>
<th>Year</th>
<th>Pear</th>
<th>Cherry</th>
<th>Other Stone Fruit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>2005</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>2006</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>2007</td>
<td>500</td>
<td>500</td>
<td>500</td>
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<tr>
<td>2008</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>2009</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>2010</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>2011</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
</tbody>
</table>

Transition acres

<table>
<thead>
<tr>
<th>Year</th>
<th>Pear</th>
<th>Cherry</th>
<th>Other Stone Fruit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>2005</td>
<td>500</td>
<td>500</td>
<td>500</td>
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<td>2006</td>
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<td>2007</td>
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<td>2008</td>
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<td>2009</td>
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</tr>
<tr>
<td>2010</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>2011</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
</tbody>
</table>

Combined certifiers data; 2011 Preliminary data
Organic Pear Acreage
Washington State

2011 = 8.5% of total WA pear acreage
(based on 2011 WA-NASS estimate of 22,008 pear acres)

Combined certifiers data; 2011 Preliminary data
Organic Pear Acres by Variety
Washington 2011

- Bartlett: 33%
- D'Anjou: 32%
- Bosc: 14%
- Red Types: 11%
- Other & NS: 8%
- Asian: 2%

2011 preliminary data; NS = not specified
Organic Pear Variety Trend
Washington State

Combined certifiers data; 2011 preliminary data;
Photo by Agyle
Organic Pear Sales
Volume and Price Trends

SEB = Standard Equivalent Box. Data Source: WA Growers Clearing House & WVTA. Annual organic prices are typically reported for only a proportion of total shipped volume.
Price Trends
Washington Pears

Bartlett

D’Anjou

Organic

Conventional

SEB = Standard Equivalent Box
Data Source: WA Growers Clearing House; FOB averages
Price Trends
Washington Pears

Red Bartlett

Red D’Anjou

SEB = Standard Equivalent Box.
Data: WA Growers Clearing House; FOB avg, all storage, grades, sizes.
Organic Premiums
Washington Pears

$/SEB

Bosc
Bartlett
D‘Anjou

Percent

Source: WA Growers Clearing House. SEB = Standard Equivalent Box
Photo: Hedrich 1921 Pears of New York
Recent Organic Pear Prices
Washington State

Data Source: WA Growers Clearing House

$/SEB

Bartlett | Red Bartlett | D'Anjou | Red Anjou | Bosc

0-10 | 11-15 | 16-20 | 21-25 | 26-30 | 31-35 | 36-40 | 41-45

10-11 | to 11/15/10 | to 11/15/11 | 11/1-11/15/11

SEB = Standard Equivalent Box  Data Source: WA Growers Clearing House; FOB avg, all storage, organic grades, sizes.
Organic Apple and Pear Exports
Washington State

Boxes Exported

07/08 08/09 09/10 10/11

Apple  Pear

Data source: Wenatchee Valley Traffic Association
Washington Organic Apple
Top Export Destinations

Data source: Wenatchee Valley Traffic Association
WA Organic Apple Exports by Variety

Data source: Wenatchee Valley Traffic Association
WA Organic Pear Exports by Variety

![Graph showing WA Organic Pear Exports by Variety](image)

Data source: Wenatchee Valley Traffic Association
Organic Cherry Acreage
Washington State

2011 = 4.8% of total WA cherry area
(based on 2010 WA-NASS estimate of 38,115 acres)

Combined certifiers data; 2011 preliminary data
Organic Cherry Variety Acres
Washington State 2011

30% of cherries not reported by variety in 2011 compared to 57% in 2008

Variety NS 29%
Bing 17%
Chelan 11%
Other Dark Sweet 11%
Sweetheart 5%
Other Sweet 2%
Skeena 7%
Rainier 8%
Tart 10%
Other Sweet 2%

2011 WSDA data; NS = not specified
Cherry Price Trends
Washington State

SEB = Standard Equivalent Box.  WAGCHA data. Conventional prices are from season FOB histories; may include organic 2008-2010. Organic prices are from season FOB histories All grades and sizes.
Where are prices going?

78¢ = $31.20/box; C = $21.73, O = $30.23

Grocery ad, Wenatchee, WA; October 2011
‘Gala’ apple prices, $/box FOB, WA

Price trend is flat. Input costs are up 70% since 1995.

USDA Index of farm production costs (1992=100)

Different estimates of cost of production

- $23.46 O
- $20.76 C
- $15.70 C (WGCH)
‘Gala’ Apple

3% annual cost increase

Selling price

Cost of production

$/box (FOB)

Organic

Conventional

Cost includes farm and warehouse

USDA cost index

WGCH data, USDA data
ANNOUNCING

International Organic Fruit Research Symposium

“From Research to Practice”

June 18-21, 2012  --  Leavenworth, WA

• Organized by Washington State University

• Sponsored by International Society for Horticultural Science

http://www.tfrec.wsu.edu/pages/organicfruit2012/