State of the Washington Blueberry Industry

Alan Schreiber, Executive Director
Washington Blueberry Commission
Eltopia, Washington

APR 19 2005
The Washington Blueberry Commission

- The WBC was formed in 1969, making it one of the oldest commodity commissions in the state.

- Commissioners are Bryan Sakuma (Burlington), Adam Enfield (Lynden), Brenton Roy (Prosser), Todd Van Mersbergen (Lynden), Rob Dhaliwal (Everson), Leif Olson (Prosser) and Rebecca Webber (WSDA, Richland).

- The Washington blueberry industry is in the midst of a dramatic period of growth and change.

- *I have been saying this for six years.*

- The Washington Blueberry Commission is trying to develop programming activities to change with it.
Production estimate for 2016 –

*This is a slide from a year ago.*

- Who knows. Foolish to predict next year’s yield.
- However,....
- Assuming minimal winter injury
- Assuming normal pollination
- Assuming no drought
- Assuming no excessive high temperatures.
- 112 to 115 million pounds,
Review of the 2016 season

- Yield per acre was down in Whatcom County in established fields.
- Many large Whatcom growers had farm level reductions in production in the 100,000s of pounds. Big Deal!
- Significant new production from young fields.
- Skagit yields were average in established fields with some new production from young fields.
- Eastern Washington the large Duke plantings have matured and yields are flat, but some increased production from new fields.
- Other areas of the state had average yields with small increases from young plantings.
- How much did the yield depression in Whatcom offset the production increases from young plantings around WA?
So how much did Washington produce this year?

- As of today, the Commission is not done calculating this.
- As of yesterday, Washington has collected assessments on 94.3 million pounds.
- Growers/handlers who have not yet paid assessments have either told me how much they have in 2016 or I am using last year’s production to estimate what has not yet come in.
- I project there are assessments on approximately 22.5 million pounds that have yet to come in.
- We easily have 2 million pounds of blueberries that we do not collect assessments on.
- Collectively, I project Washington produced between 118 to 120 million pounds in 2016. *At this time this is an estimate.*
## N. A. Highbush Blueberry Production

<table>
<thead>
<tr>
<th>Region</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>14</th>
<th>15</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michigan</td>
<td>88</td>
<td>91</td>
<td>110</td>
<td>100</td>
<td>107</td>
<td>71</td>
<td>87</td>
<td>115</td>
<td>97</td>
<td>72</td>
<td>100</td>
</tr>
<tr>
<td>B.C.</td>
<td>62</td>
<td>73</td>
<td>75</td>
<td>89</td>
<td>90</td>
<td>95</td>
<td>115</td>
<td>105</td>
<td>152</td>
<td>152</td>
<td>160</td>
</tr>
<tr>
<td>Oregon</td>
<td>34</td>
<td>44</td>
<td>44</td>
<td>47</td>
<td>50</td>
<td>65</td>
<td>75</td>
<td>80</td>
<td>86</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>Washington</td>
<td>18</td>
<td>28</td>
<td>29</td>
<td>38</td>
<td>39</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>96</td>
<td>104</td>
<td>118</td>
</tr>
<tr>
<td>Georgia</td>
<td>21</td>
<td>11</td>
<td>31</td>
<td>39</td>
<td>56</td>
<td>59</td>
<td>71</td>
<td>68</td>
<td>96</td>
<td>85</td>
<td>67</td>
</tr>
<tr>
<td>New Jersey</td>
<td>50</td>
<td>50</td>
<td>53</td>
<td>47</td>
<td>40</td>
<td>61</td>
<td>51</td>
<td>65</td>
<td>55</td>
<td>45</td>
<td>35.5</td>
</tr>
<tr>
<td>North Carolina</td>
<td>25</td>
<td>14</td>
<td>28</td>
<td>34</td>
<td>42</td>
<td>37</td>
<td>40</td>
<td>39</td>
<td>48</td>
<td>48</td>
<td>45</td>
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<tr>
<td>California</td>
<td>10</td>
<td>16</td>
<td>14</td>
<td>24</td>
<td>25</td>
<td>42</td>
<td>43</td>
<td>51</td>
<td>55</td>
<td>60</td>
<td>58.1</td>
</tr>
<tr>
<td>Florida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td>25</td>
<td>13.5</td>
</tr>
<tr>
<td>Mexico</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23</td>
<td>27</td>
<td>35</td>
</tr>
<tr>
<td>Other states</td>
<td>24</td>
<td>27</td>
<td>27</td>
<td>32</td>
<td>36</td>
<td>69</td>
<td>36</td>
<td>38</td>
<td>23</td>
<td>38</td>
<td>15.8</td>
</tr>
<tr>
<td>Total</td>
<td>334</td>
<td>356</td>
<td>413</td>
<td>450</td>
<td>488</td>
<td>559</td>
<td>589</td>
<td>640</td>
<td>674</td>
<td>723</td>
<td>748</td>
</tr>
</tbody>
</table>
Washington produces more processed blueberries than any other state, (B.C. processes more than WA).

<table>
<thead>
<tr>
<th>Year</th>
<th>Fresh</th>
<th>Processed</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>4.5</td>
<td>13.9</td>
<td>18.4</td>
</tr>
<tr>
<td>2007</td>
<td>5.5</td>
<td>22.8</td>
<td>28.3</td>
</tr>
<tr>
<td>2008</td>
<td>4.9</td>
<td>24.1</td>
<td>29.0</td>
</tr>
<tr>
<td>2009</td>
<td>10.0</td>
<td>28.0</td>
<td>38.0</td>
</tr>
<tr>
<td>2010</td>
<td>16.0</td>
<td>18.8</td>
<td>34.8</td>
</tr>
<tr>
<td>2011</td>
<td>16</td>
<td>44</td>
<td>60</td>
</tr>
<tr>
<td>2012</td>
<td>18</td>
<td>52</td>
<td>70</td>
</tr>
<tr>
<td>2013</td>
<td>20</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>2014</td>
<td>29</td>
<td>67</td>
<td>96</td>
</tr>
<tr>
<td>2015</td>
<td>26</td>
<td>78</td>
<td>104</td>
</tr>
<tr>
<td>2016</td>
<td>28</td>
<td>90</td>
<td>118</td>
</tr>
</tbody>
</table>

B.C. processes 110 million pounds or 69%.

Michigan processes 55 million pounds or 55%.

The Northwest produces 155 million pounds of process blueberries; North America produces 255 million pounds collectively.
Production estimate for 2017

- Who knows. Foolish to predict next year’s yield.
- However,….
- Assuming minimal winter injury
- Assuming normal pollination
- Assuming no drought
- Assuming no excessive high temperatures.
- 132 million pounds in 2017
- 12% increase based on a combination of improved production in established fields in Whatcom County and increased production in young fields in all growing regions.
- 145 million pounds in 2018 (10% increase).
The future of the Washington blueberry industry.

- Whatcom County is the leading producer of blueberries; the county has at least 7,000 acres of blueberries, a record number; a third of acres are 4 years old or younger.

- 25% of acreage in eastern Washington was not at full capacity by the end of 2016. Yields are 20,000 to 25,000 pounds per acre at maturity, even for organic fields.

- Washington is the leading producer of organic blueberries. This sector is still growing significantly.

- Conventional production is growing, with Snohomish and Skagit counties leading in new acres, followed by Whatcom, Franklin and Benton counties.

- Planting has moderated but at least 1,000 acres were planted in Washington in 2016.
Projected production in 2025, assuming all plantings planted as of 2016 are fully bearing.

<table>
<thead>
<tr>
<th>Location</th>
<th>Planted</th>
<th>Estimated Acres</th>
<th>Yield/acre</th>
<th>Production</th>
<th>Fresh (^2)</th>
<th>Processed (^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. Washington</td>
<td>5000</td>
<td>15000</td>
<td>75,000,000</td>
<td>22,500,000</td>
<td>52,500,000</td>
<td></td>
</tr>
<tr>
<td>Whatcom</td>
<td>7000</td>
<td>10000</td>
<td>70,000,000</td>
<td>14,000,000</td>
<td>56,000,000</td>
<td></td>
</tr>
<tr>
<td>Skagit</td>
<td>3000</td>
<td>10000</td>
<td>30,000,000</td>
<td>9,000,000</td>
<td>21,000,000</td>
<td></td>
</tr>
<tr>
<td>Lewis</td>
<td>350</td>
<td>10000</td>
<td>3,500,000</td>
<td>2,625,000</td>
<td>875,000</td>
<td></td>
</tr>
<tr>
<td>Snohomish</td>
<td>1500</td>
<td>10000</td>
<td>15,000,000</td>
<td>4,500,000</td>
<td>18,000,000</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1500</td>
<td>8000</td>
<td>12,000,000</td>
<td>4,800,000</td>
<td>7,200,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>18350</td>
<td><strong>12,000</strong></td>
<td><strong>205,500,000</strong></td>
<td><strong>57,425,000</strong></td>
<td><strong>155,575,000</strong></td>
<td></td>
</tr>
</tbody>
</table>

\(^1\)This assumes full production at maturity, which would be defined at 2025. These are projections and assume somewhat ideal conditions and that no fields are removed from production.

*Does not include production from post 2016 plantings.*
Assumes no plantings removed.

Assumes planting stops in 2016.
What is the WBC doing with your assessments?

- Our assessment is $8 per ton or .4 cents per pound, by the way, the lowest blueberry assessment in the U.S.

- The Washington blueberry industry is expanding and the Commission is expanding proportionally.

- We have created committees for Research, Promotions and Export and Food Safety and Labor.

- We have a small, in-state fresh promotion program.

- Research will continue to be the leading focus; about half of assessment dollars go to research.
WBC Budget By Category 2005 to 2016

- Promo/Export
- Research
- Administration
- Out Reach & Spec. Projects
- Food Safety / Workshops
- Total Budget
WBC administrative costs are budgeted at 19% and are increasing at less than half the rate of assessment growth. Actual expenditures are close to 16%.

<table>
<thead>
<tr>
<th>Administration</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplies, Postage, &amp; Copies</td>
<td>4,200</td>
</tr>
<tr>
<td>WSDA - nominations</td>
<td>1,000</td>
</tr>
<tr>
<td>Travel/Meetings</td>
<td>6,000</td>
</tr>
<tr>
<td>Administrative Service (ADG)</td>
<td>60,000</td>
</tr>
<tr>
<td>Financial Review</td>
<td>2,000</td>
</tr>
<tr>
<td>NABC Dues</td>
<td>1,000</td>
</tr>
<tr>
<td>Conference Calls</td>
<td>1,000</td>
</tr>
<tr>
<td>Attorney General</td>
<td>1,500</td>
</tr>
<tr>
<td>WSDA</td>
<td>750</td>
</tr>
<tr>
<td>OFM (Fidelity Bond)</td>
<td>50</td>
</tr>
<tr>
<td>OFM (self-ins prem)</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Total Administration</strong></td>
<td><strong>78,500</strong></td>
</tr>
</tbody>
</table>
Promotions

- Bear in mind that the U.S. Highbush Blueberry Council has THE money and is THE entity to handle national and international marketing, promotions and generic research. Their budget is over $6 million!

- The Commission's focus is on promoting fresh, in-season, in-state blueberries: may try to expand efforts supporting farmers markets and u-pick operations.

- We have a contract with a Seattle public relations company.

- We provide farmers market promotional materials and about 30% of all growers in the state used the program.

- If you have U-Pick or roadside stand, we can help you. Superblues.net
Research

- Roughly 46% of WBC funds support research.

- The impetus to start the WBC in 1969 was to fund research (mummy berry) and it has largely been a research funding commission ever since.

- The Research Committee sets priorities, ranks proposals and makes recommendations to the full Commission.

- 15 (out of 20) projects were funded in 2016 ($206,000), up from 4 in 2006 ($17,000).

- 2015 15 projects (out of 29) were funded for $185,000.

- Leighton Overson is the Chair of the Research Committee.
<table>
<thead>
<tr>
<th>Title</th>
<th>Researcher/Instit.</th>
<th>Request</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determining Blueberry Cold Hardiness in Washington</td>
<td>Hoheisel,Gwen/WSU</td>
<td>$24,400</td>
<td>3.9</td>
</tr>
<tr>
<td>Fungicide Decline Curves for Blueberry To Assist Growers in Meeting MRLs</td>
<td>Schreiber, Alan/ADG</td>
<td>$17,000</td>
<td>4.2</td>
</tr>
<tr>
<td>Blueberry Tissue Nutrient Standards for Washington Production</td>
<td>Davenport,Joan/WSU</td>
<td>$28,423</td>
<td>4.6</td>
</tr>
<tr>
<td>Developing Organic Controls for SWD in Blueberries – Year 5</td>
<td>Schreiber, Alan/ADG</td>
<td>$14,600</td>
<td>6.8</td>
</tr>
<tr>
<td>Testing of Several Herbicides for Weed Control and Crop Safety in Newly-Planted Blueberry</td>
<td>Miller,Tim/WSU</td>
<td>$8,352</td>
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</tr>
<tr>
<td>Harmonization of MRLs – Dealing with Impossible to Meet MRLs</td>
<td>Schreiber, Alan/ADG</td>
<td>$5,000</td>
<td>6.9</td>
</tr>
<tr>
<td>New Products and Resistance Management Strategies for Mummyberry and Botrytis in Conventional Blueberries.</td>
<td>Schreiber, Alan/ADG</td>
<td>$13,750</td>
<td>8.9</td>
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<tr>
<td>Biology and control of Blueberry Mummy Berry and Fungicide Sensitivity</td>
<td>Peever, Tobin/WSU</td>
<td>$21,484</td>
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<tr>
<td>Evaluating the Role of Boron in Enhancing Fruit Set of Highbush Blueberry</td>
<td>DeVetter,Lisa/WSU</td>
<td>$9,937</td>
<td>9.1</td>
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<tr>
<td>Washington Blueberry Variety Trials</td>
<td>Schreiber, Alan/ADG</td>
<td>$10,000</td>
<td>10.3</td>
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<tr>
<td>Control of Mummy Berry in Organic Blueberries – Year Three</td>
<td>Schreiber, Alan/ADG</td>
<td>$10,750</td>
<td>10.8</td>
</tr>
<tr>
<td>Assessing Blueberry Virus Risks in Washington: Blueberry Scorch, Shock, Fruit Drop and Tomato Ringspot, and Surveys of Washington Blueberry Fields for Aphids</td>
<td>Walters,Thomas/Waltermans Ag</td>
<td>$10,540</td>
<td>12.1</td>
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<tr>
<td>Improvement of Pollination through Pollinator Supplementation in Washington Highbush Blueberry</td>
<td>DeVetter,Lisa/WSU</td>
<td>$10,925</td>
<td>14.6</td>
</tr>
<tr>
<td>Potential for Exirel® as a drench for control of larval root weevils in highbush blueberry</td>
<td>Gerdeman,Bev/WSU</td>
<td>$6,623</td>
<td>14.7</td>
</tr>
<tr>
<td>Developing commercial blueberry cultivars adapted to the Pacific Northwest with an emphasis on tolerance of Blueberry shock virus (BlShV)</td>
<td>Finn,Chad/OSU</td>
<td>$15,108</td>
<td>13.6</td>
</tr>
<tr>
<td>Development of Microbial Sanitizing System for Blueberry</td>
<td>Zhu, Meijun/WSU</td>
<td></td>
<td>13.8</td>
</tr>
<tr>
<td>Machine harvesting for specialized processed and fresh markets</td>
<td>Strik, Bernadine/OSU</td>
<td></td>
<td>12.3</td>
</tr>
<tr>
<td>Planning Grant for the Effective Coordination of Blueberry Cultivar and Advanced Selection Trials in Washington State</td>
<td>DeVetter,Lisa/WSU</td>
<td></td>
<td>14.7</td>
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<td>Development of Biologically-based RNA-1 Insecticide to Control Spotted Wing Drosophila</td>
<td>Choi,Man-Yeon/USDA</td>
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<td>15.7</td>
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<tr>
<td>Targeted applications of “foliar” calcium fertilizers to fruit for increased quality – testing a dosage response</td>
<td>Strik, Bernadine/OSU</td>
<td></td>
<td>16.7</td>
</tr>
</tbody>
</table>
Exporting Blueberries

- Washington, the U.S., Canada, North America, South America, the Western Hemisphere is facing an over supply of blueberries.

- Part of dealing with Washington’s supply has to be exports, particularly to the Asian Pacific Rim.

- Few blueberry growing regions are better situated to take advantage of this than is Washington.

- Oregon has fresh access to South Korea.

- B.C., Oregon and California have aggressive export market development programs.

- I feel that the Commission needs to increase its efforts in this area.
Exports - this is an area where significant progress is occurring.

- Washington has to develop export markets.
- Washington has teamed up with California on a joint project to get into South Korea, China and Australia early.
- We hope to ship to South Korea in 3 years or so (same thing I said last year) and Australia not longer after.
- We recently initiated a program that hopefully will result in sales of processed blueberries in China and South Korea.
- I would like to initiate a program that would jump start sales to India.
- Exports is WBC’s biggest area of increased effort.
- Our focus is just on processed blueberries.
Export Market Development is a Major Area of Focus

- The WBC is co-funding an international trade development firm to assist with market access to South Korea, China, India, Philippines, Australia, New Zealand, and South Africa.
- Considering trade mission to Viet Nam.
- Considering trade mission to Philippines.
- Looking for other trade development ideas.
- Bryant Christie Inc, will speak tomorrow on Washington berry market development opportunities as one of our keynote presentations.
- Will have an export market development session after this talk. We are seeking feedback and ideas.
The WRRC and the WBC hosted a set of workshops on food safety in 2014 and 2015. In 2014 included the US Department of Labor.

- Prosser, Whatcom, Skagit and SW Washington locations.
- Targeted at growers and key employees.
- Want to include food safety, Department of Labor and Washington L and I.
- We want to do food safety and labor outreach but we have mixed messages and feelings about what to do.
- We need feedback on what the industry wants....
One major concern.

- We do not have the capacity to fresh pack or process the crop that we produced in 2016.

- I estimate that at least 40% of our crop is packed or processed outside of the state; British Columbia and Oregon are primary destinations, but at more than 2 million pounds each goes to California and Idaho.

- Our industry is leaving a lot of income on the table by shipping it out of the state.

- The Washington industry would be greatly strengthened by increasing post harvest handling capacity.

- Two examples – we need freezing capacity in eastern Washington, we need fresh pack capacity in NW WA.
Our industry is rapidly evolving.

Want to go over some positive developments and point out some areas where there are issues.
Some concerns that I have

- My number one concern is how do we manage an industry that is rapidly moving to producing 200 million pounds of fruit.
- Fungicide resistance.
- Spotted wing drosophila.
- Is supply going to outstrip demand.
- Concerned about food safety. I do not feel like we are prepared, not sure what to do. Wish we had a kill step.
- Worried about labor—we do not have enough.
- Wish we were making more progress on mechanized harvesting: when can we machine pick 4th pick Duke for fresh.
Concerns that I have.

- The Washington blueberry industry has not ascended to its appropriate position at the national level.
- We need to have more North American Blueberry Council members. We are the largest producers and have the fewest members on the NABC.
- Washington needs more representatives on the U.S. Highbush Council.
- I do not feel like the WBC is making enough progress opening export markets. Long hard slog to open foreign markets.
- The PNW Small Fruit Research Center does not provide the Washington blueberry industry support commensurate to our needs.
Imports are not helping us, particularly on the processed side.

- Latin America etc. ramping up exports to Asia.
- The number 1 export destination for Latin America blueberries is the U.S.
- Imports are up a lot.
- Watch out for Peru.
- I presided over the demise of the Washington asparagus industry as it was decimated by Peruvian imports.
- Peru can produce 52 weeks a year. Low cost of production. High yields. We are teaching them every thing the need to know.
Peru – this is from FreshPlaza yesterday

Huge increase in blueberry volumes from Peru

Volumes of blueberries from Talsa have substantially increased this season. The Peruvian producer has exported over 300 containers this season so far via seafreight, last year it was only 195.

Rob Cullum from Pacific Produce, said this was mainly due to new plantings coming into commercial volumes. "There has been a 40% increase so far and this just by sea. The company also airfreighted more than normal this season due to Poland dropping out of the market early. Over 400,000 boxes went by air which was a massive increase on the previous year's, as much of this volume would normally have been shipped by sea."
In 2016, there were growers who ended up with no place to take their fruit.

- This happened for a variety of reasons.
- With increased supply it has become a buyers market.
- Buyers are taking the cheapest, closest, easiest, avoiding small growers, not certified for food safety fruit.
- Growers have to be third party certified for food safety, probably not just GAP certified.
- Have to make it easy for them to take your fruit.
- Growers need to get more involved in marketing their fruit. You should know now who is taking your fruit next year.
- If you do not know by now, consider yourself in trouble.
Move to the positive aspects of our industry

The price is not as good as it was but there is definitely more room for prices to go down.
Outreach efforts

- Washington Small Fruit Conference and Lynden Ag Show
- Record attendance every year.
- Very proud of this event.
- It just gets better every year.
- My biggest concern is that we are going to outgrow this facility in 2 to 3 years.
- Diane O’Neil and Henry Bierlink doing a great job.
Annual workshops for growers

- Starting annual workshops with WSU in eastern Washington (Gwen Hoheisel), Skagit County (Don McMorrin) and Whatcom County (Chris Benedict).
- Pruning
- Irrigation
- Pest Management
- Whatever is needed.
Washington Blueberry School

- WSU’s Lisa DeVetter is running it. Shamelessly patterned after Oregon Blueberry School
- Every other year.
- One day of intensive training.
- Covers a wide array of topics.
- We will train 100 people.
- Targeting employees coming into the industry or moving up in their business.
- We need to train the people that are going to raise the second 100 million pounds of blueberries produced by Washington.
WBC works well with the WRRC

- No two commissions work more closely together that blueberries and raspberries.
- I feel fortunate to have Henry to work with.
- We work closely and well together.
Our research program is a strong suit

- Dr. DeVetter has started a strong horticultural program that will build into a significant force.
- Dr. Peever has rapidly created a very strong pathology program.
- Drs. Gwen Hoheisel, Chris Benedict, Tim Miller, Tom Walters and others are building a strong, strong research base.
- Research takes time, not all projects end up with useful results.
- The research projects address 15 of our highest priorities.
- We do not have all of the funds or researchers to tackle everything.
- Small Fruit Center’s Virginia Stockwell needs to get involved.
Generally, I think the Washington blueberry industry is very well situated

- Latest plantings in the nation, so we have the best varieties, best technologies, best post harvest handling facilities.
- Some of the highest yields in the world.
- The most organic production in the world.
- Overall, very good growers.
- Excellent export position, and generally aggressive exporters.
- We have the widest temporal range of harvest from early June to October in the world. (Watch out for Peru.)
- Some deep pockets funding our operations.
- Everybody wants to grow in Washington.

- Everybody wants Washington blueberries.
The Future (of the WBC)

- The WBC assessment is $8 per ton—we do not plan to change our state assessment.
- WBC funds will increase as production increase.
- The majority of our funds will probably continue to go heavily into research and export market development.
- Increasing transfer of information to growers.
- We are seeking more involvement, more feedback and more participation by industry members (growers and others).
- We have a good board that gives me a lot of room to work, but keeps me on a leash.
- Wisely using grower assessments.
The End