Welcome!

Cherry Day 2016
MCAREC Sweet Cherry Research Symposium
KYM GREEN BUSH (KGB)

The Kym Green Bush (KGB) is the only system covered in this manual that creates a fully pedestrian orchard—one that can be harvested without ladders or platforms. Tree formation is easy and requires minimal labor; mature pruning is simple and follows a repeatable plan. Although most varieties grow and produce well with a KGB system, it is not recommended for non-spur type varieties such as ‘Regina’ and ‘Attika’, which produce a significant proportion of fruit at the base of 1-year-old shoots. This wood is eliminated in the KGB system.

The establishment years of the KGB system are similar to the Spanish Bush (SB); however, once the structure is formed, the two systems diverge significantly. In the SB tree, all upright leaders are permanent and fruit is produced on small laterals that are renewed regularly. This contrasts with the KGB tree, where all vertical leaders eventually are renewed and the only permanent wood is the lower framework of the tree. The KGB utilizes vigorous or semi-vigorous rootstocks, and the number of vertical leaders established should be proportional to tree vigor.
New Cherry Varieties of Interest to PNW Growers

Lynn E. Long
Oregon State University
Cultivar Trial

- Established 1996
- Evaluated 100+
- Cultivars & selections
- Potential candidates for PNW industry

- Thanks to Mike Omeg and Omeg Family Orchards
New Cultivar Attributes

- Greatest Interest
  - Early or very late
    - 10-12 days before Bing
    - After Sweetheart
  - Good shipping potential
    - China
    - Japan
    - Korea
  - Large (28 mm+)
  - Firm
  - Rain crack resistant
  - Flavorful
Relative Harvest Timing for Red and Blush Cultivars

<table>
<thead>
<tr>
<th>Chelan</th>
<th>Royal Hazel</th>
<th>Santina</th>
<th>Black Pearl</th>
<th>Suite Note</th>
<th>Burgundy Pearl</th>
<th>Samba</th>
<th>Bing</th>
<th>Royal Hazel</th>
<th>Skeena</th>
<th>Royal Helen</th>
<th>Royal Edie</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>14</td>
<td>13</td>
<td>12</td>
<td>11</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
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</tbody>
</table>
Pitting Tool
Pitting Potential

Radiance Pearl | Black Pearl | Suite Note | Bing | Burgandy Pearl | Skeena | Royal Hazel | Royal Edie | Santina | Ebony Pearl | Royal Helen

0.24 | 0.22 | 0.22 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.31
Cracking Potential

50 fruit from each cultivar were placed in distilled water bath at room temperature for 2 hours per I. Hanrahan protocol (http://www.goodfruit.com/cherry-cracking-test/).
Royal Hazel

- Zaiger Genetics
- 500 Chilling hours
- First bloom 7 days before Bing
- Fruit set - 2013-2015 Heavy
- Excellent, strong sweet/acid flavor
- Shaped like Skeena
- Royal Lynn or Royal Lee as pollinizers

<table>
<thead>
<tr>
<th>Harvest timing days +/- Bing</th>
<th>Size (mm)</th>
<th>Firm. (g/mm)</th>
<th>PFRF (g)</th>
<th>SS ° Brix</th>
</tr>
</thead>
<tbody>
<tr>
<td>-10 days</td>
<td>30.24</td>
<td>335</td>
<td>1294</td>
<td>18.6</td>
</tr>
<tr>
<td>64%</td>
<td>9 row +</td>
<td></td>
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</tbody>
</table>
Santina

- Very large
- Early
- Flavor is fair to good
- Tart/sweet but weak
- Very popular in Chile
- Some WA growers disillusioned
- Nose end crack accentuated by rain
- Moderate-Light producer on Mazzard
- Being planted as alternative to Tieton
- Self-fertile + 2 days

<table>
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<th>PFRF (g)</th>
<th>SS ° Brix</th>
</tr>
</thead>
<tbody>
<tr>
<td>-7 days +/- Bing</td>
<td>30.6</td>
<td>320</td>
<td>1125</td>
<td>16.8</td>
</tr>
</tbody>
</table>
Black Pearl

- Cornell University
- Earliest ripening of “Pearl” series
- 1st releases developed for west coast cherry industry (export)
- > flavor Santina or Tieton
- Medium strong taste
- Sweet with nice acid balance
- Very firm to crunchy
- Some rain crack resistance
- Heavy producer
- Blooms mid-early S₄S₁₃ – Chelan, Samba

<table>
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<tr>
<th>Harvest timing days +/-Bing</th>
<th>Size (mm)</th>
<th>Firm. (g/mm)</th>
<th>PFRF (g)</th>
<th>Epi/mes Color CTIFL</th>
<th>SS Brix</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 7 days</td>
<td>30.67</td>
<td>365</td>
<td>1110</td>
<td>6.5/6</td>
<td>18.4</td>
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<tr>
<td>70%</td>
<td>9 row</td>
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</tbody>
</table>
Suite Note

- 2012 release by PICO (SVC) Summerland, BC
- 5 days before Bing
- Large
- Excellent, strong sweet/acid flavor
- Stores well
- Growing for >10 years
- Moderate to heavy production
- Blooms late +8 days
- Self-sterile (Benton)

<table>
<thead>
<tr>
<th>Harvest timing days +/-Bing</th>
<th>Size (mm)</th>
<th>Firm. (g/mm)</th>
<th>PFRF (g)</th>
<th>Epi/mes Color CTIFL</th>
<th>SS Brix</th>
</tr>
</thead>
<tbody>
<tr>
<td>-5 days</td>
<td>30.6</td>
<td>310</td>
<td>1015</td>
<td>5/4</td>
<td>18.2</td>
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<tr>
<td></td>
<td>(67 % 9 row)</td>
<td></td>
<td></td>
<td>Overset 300’s</td>
<td></td>
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</table>
Burgundy Pearl

- Cornell University
- Ripens just before Bing
- Said to be “resistant to bacterial canker”
- Crunchy firm
- Mild sweet/acid flavor
- Lacks tang
- Moderate-heavy producer
- $S_3S_4$ allele – Chelan, Samba

<table>
<thead>
<tr>
<th>Harvest timing days +/- Bing</th>
<th>Size (mm)</th>
<th>Firm. (g/mm)</th>
<th>PFRF (g)</th>
<th>Rain crack resist.</th>
<th>Epi/mes Color CTIFL</th>
<th>SS Brix</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4.5 days</td>
<td>31.2</td>
<td>359</td>
<td>909</td>
<td>Moderate</td>
<td>5.5/5</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>82%</td>
<td>9 row</td>
<td></td>
<td></td>
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</tbody>
</table>
Samba

- Summerland Canada
- Ripens just before Bing
- Best on productive rootstock
- Strong flavor but somewhat acidic
- Moderate rain crack resistance
- Pedicel retention problems in Europe
- $S_1 S_3$ - Black Pearl, Burgundy Pearl

<table>
<thead>
<tr>
<th>Harvest timing days +/- Bing</th>
<th>Size (mm)</th>
<th>Firm. (g/mm)</th>
<th>PFRF (g)</th>
<th>Rain crack resist.</th>
<th>Epi/mes Color</th>
<th>CTIFL</th>
<th>SS</th>
<th>° Brix</th>
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</thead>
<tbody>
<tr>
<td>-3 to -5 days</td>
<td>28.7</td>
<td>296</td>
<td>775</td>
<td>Moderate</td>
<td>5/4.5</td>
<td>17</td>
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<tr>
<td></td>
<td>27%</td>
<td>9 row</td>
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</tr>
</tbody>
</table>

Photo by Jef Vercammen
Ebony Pearl

- Cornell University
- Ripens with Bing
- Very large
- Said to have “good resistance to canker”
- Excellent, strong flavor
- Mostly sweet but nice tang
- Skin and flesh both dark
- $S_1S_4$ allele – Bing, Black Pearl, Burgundy Pearl possible pollinizers

<table>
<thead>
<tr>
<th>Harvest timing</th>
<th>Bloom timing</th>
<th>Size (mm)</th>
<th>Firm. (g/mm)</th>
<th>PFRF (g)</th>
<th>Rain crack suscept</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ 1.5 days</td>
<td>+1 Bing</td>
<td>32.0</td>
<td>293</td>
<td>1120</td>
<td>Mod.</td>
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<tr>
<td>+/-Bing</td>
<td>+/-Bing</td>
<td>94%</td>
<td>9 row</td>
<td></td>
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</tbody>
</table>
Royal Helen

- Zaiger Genetics
- Very large
- Very firm
- Regina timing
- Good flavor medium strong with meaty texture
- Mild sweet/acid balance
- Some rain cracking resist.
- Pollinate with Royal Edie

<table>
<thead>
<tr>
<th>Harvest timing</th>
<th>Bloom timing</th>
<th>Size (mm)</th>
<th>Firm. (g/mm)</th>
<th>PFRF (g)</th>
<th>Rain crack suscept</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ 13 days Bing</td>
<td>+2 Bing</td>
<td>32.4</td>
<td>370</td>
<td>1274</td>
<td>Mod.</td>
</tr>
<tr>
<td>+2 Bing</td>
<td></td>
<td>8.5 row</td>
<td>(36% 8 row +)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Royal Edie

- Zaiger Genetics
- Very large
- Very firm
- Regina timing
- Somewhat mild flavor
- Very meaty
- Crunchy
- Pollinate with Royal Helen

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<thead>
<tr>
<th>Harvest timing days +/-Bing</th>
<th>Bloom timing +/- Bing</th>
<th>Size (mm)</th>
<th>Firm. (g/mm)</th>
<th>PFRF (g)</th>
<th>Rain crack suscept</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ 13 days</td>
<td>+2</td>
<td>31.5</td>
<td>371</td>
<td>1316</td>
<td>2013 – 84%</td>
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<tr>
<td></td>
<td></td>
<td>8.5 row</td>
<td>(80% 9 row +)</td>
<td></td>
<td>Av. 2 yr. 15%</td>
</tr>
</tbody>
</table>
Radiance Pearl

- Cornell University
- Early Rainier type
- Heavy producer
- Spreading tree habit
- Moderate to good rain crack resistance
- Blooms +3 $S_1 S_{13}$ – Ebony Pearl, Rainier

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<thead>
<tr>
<th>Harvest timing days +/- Rainier</th>
<th>Bloom timing +/- Bing</th>
<th>Size (mm)</th>
<th>Firm. (g/mm)</th>
<th>PFRF (g)</th>
<th>Rain crack susceptible</th>
<th>SS</th>
<th>Brix</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4.5</td>
<td>-3</td>
<td>32.0</td>
<td>408</td>
<td>967</td>
<td>Medium</td>
<td>88%</td>
<td>20.8</td>
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</tbody>
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New Options for the PNW