Increased GDD, Reduced PAR

SWMREC Growing Degree Days
Total Accumulation from Bloom until Harvest

SWMREC Daily Light Integral
Accumulation From Plastic On to Plastic Off
The tunnels generally reduced wind gusts during fruiting by 5 to 10 mph.
Spring Temperature Management

2006-07: open ends & sides, slight protection from mild frosts
2008: closed ends & sides, daily heat effects, nightly heat loss
2009: closed ends & sides, supplemental heat retention?
High Density Sweet Cherry Tree Training

Early tree establishment; balanced, more horizontal growth

April 2008

June 2008
Impact of Season-Long Covers on Growth

Trees are up to 24% taller; leaf size is about 20% larger

Trunk girth was 18% smaller in 2006, then increased by ~35%

Lateral shoot length was clearly greater under tunnels

Projected Year 4 Fruiting Area
## Effect of Reflective Orchard Floor Fabric (Installed in 2007) on Tree Growth

<table>
<thead>
<tr>
<th>Cultivar / Rootstock</th>
<th>Increase in TCSA (cm²)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tunnel</td>
<td>No Tunnel</td>
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</tr>
<tr>
<td></td>
<td>Extenday</td>
<td>No Extenday</td>
<td>Extenday</td>
</tr>
<tr>
<td>Early Robin / Gi12</td>
<td>33.3</td>
<td>20.0</td>
<td>16.8</td>
</tr>
<tr>
<td>NY 119 / Gi 5</td>
<td>17.2</td>
<td>13.4</td>
<td>18.4</td>
</tr>
<tr>
<td>Rainier / Gi 5</td>
<td>19.7</td>
<td>19.7</td>
<td>15.0</td>
</tr>
<tr>
<td>Skeena / Gi 5</td>
<td>25.2</td>
<td>18.2</td>
<td>18.0</td>
</tr>
<tr>
<td>Ave</td>
<td>23.9</td>
<td>17.8</td>
<td>17.1</td>
</tr>
</tbody>
</table>

+34%
High Tunnels: Effects on Cropping and Fruit Quality