**Blueberry growth stages**

**Flower bud development**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tight bud</td>
<td>Bud swelling of buds; scales separated. Can tolerate 10 to 15°F (-12 to -9°C).</td>
</tr>
<tr>
<td>Bud swell</td>
<td>Visible swelling of buds; scales separated. Can tolerate 10 to 15°F (-12 to -9°C).</td>
</tr>
<tr>
<td>Bud break</td>
<td>Bud scales separated, tips of flowers visible. Can tolerate 15 to 20°F (-9 to -6°C).</td>
</tr>
<tr>
<td>Tight cluster</td>
<td>Individual flowers distinguishable. Can tolerate 20 to 25°F (-6 to -4°C).</td>
</tr>
<tr>
<td>Early green tip</td>
<td>1/16 to 3/16 inch (1 to 5 mm) of green leaf tissue visible; leaves still rolled up.</td>
</tr>
<tr>
<td>Late green tip</td>
<td>1/4 to 1/2 inch (6 to 13 mm) of green leaf tissue visible; leaves starting to unfold.</td>
</tr>
<tr>
<td>Shoot expansion</td>
<td>Shoots expanding and leaves enlarging.</td>
</tr>
</tbody>
</table>

**Leaf bud development**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No visible swelling; bud scales completely closed.</td>
<td>Visible swelling of buds; scales separated. Can tolerate 10 to 15°F (-12 to -9°C).</td>
</tr>
<tr>
<td>Bud scales separated, tips of flowers visible. Can tolerate 15 to 20°F (-9 to -6°C).</td>
<td>Bud scales separated, tips of flowers visible. Can tolerate 15 to 20°F (-9 to -6°C).</td>
</tr>
<tr>
<td>Individual flowers distinguishable. Can tolerate 20 to 25°F (-6 to -4°C).</td>
<td>1/16 to 3/16 inch (1 to 5 mm) of green leaf tissue visible; leaves still rolled up.</td>
</tr>
<tr>
<td>1/4 to 1/2 inch (6 to 13 mm) of green leaf tissue visible; leaves starting to unfold.</td>
<td>Shoots expanding and leaves enlarging.</td>
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**Blueberry growth stages**

**Flower development**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early pink bud</td>
<td>Partly expanded flowers are readily visible and have separated; corolla tubes (petals) short and closed. Can tolerate 23 to 25°F (-5 to -4°C).</td>
</tr>
<tr>
<td>Late pink bud</td>
<td>Individual flowers fully developed and separated; corollas expanded but still closed. Can tolerate 24 to 27°F (-4 to -3°C).</td>
</tr>
<tr>
<td>Early bloom</td>
<td>Some corollas completely expanded and open; many flowers still closed. Can tolerate 25 to 28°F (-4 to -2°C).</td>
</tr>
<tr>
<td>Full bloom</td>
<td>Most flowers on the bush have opened and can tolerate 28°F (-2°C).</td>
</tr>
<tr>
<td>Petal fall</td>
<td>Corollas are falling off, revealing small green fruit; this is the stage most vulnerable to frost damage, which can occur at 32°F (0°C).</td>
</tr>
</tbody>
</table>

**Blueberry growth stages**

**Fruit development and postharvest**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green fruit</td>
<td>Berries are expanding; fruit may vary from small to large pea-size in the same cluster.</td>
</tr>
<tr>
<td>Fruit coloring</td>
<td>Berries are changing from green to pink to blue.</td>
</tr>
<tr>
<td>~25% blue</td>
<td>First crop of berries is ripe and ready for harvest.</td>
</tr>
<tr>
<td>~75% blue</td>
<td>Berries are picked several times as they ripen. There may be 2 to 5 pickings. Berries may be hand- or machine harvested.</td>
</tr>
<tr>
<td>Bud set for following year</td>
<td>After harvest, the blueberry plant stores reserves and sets buds for next year’s growth until leaf fall.</td>
</tr>
</tbody>
</table>