

GardenNotes #615

Structural Training of Young Shade Trees Pruning Flow Chart

Has the root system established since planting (as evidence by current growth)?

No →

Yes ↓

Non-established trees

- No pruning required at this point (heavy pruning slows root regeneration).
- Minimal pruning needed to correct:
 - Broken branches
 - Maintain single trunk.

Established trees

1. Maximum amount of foliage/live wood to remove.

- Actively growing tree without stress and growth limiting factors (such as dry site or restricted rooting zone) – up to 25% of foliage per season
- Reduced growth with growing limiting factors and/or stress – up to 10-15% of foliage per season
- Minimal growth – do not remove live wood/foliage

2. Natural growth habit?

- Decurrent tree** (develop multiple scaffold branches)
- Excurrent tree** (single trunk to top)

continue on back →



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- o Colorado Master Gardener *GardenNotes* are available on-line at www.cmg.colostate.edu.
- o Colorado Master Gardener training is made possible, in part, by a grant from the **Colorado Garden Show, Inc.**
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Extension

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<p style="text-align: center;"><u>Excurrent Tree</u> Single trunk to top</p> 	<p style="text-align: center;"><u>Decurrent Tree</u> Multiple scaffold branches</p> 
<p>1. Broken, damaged and competing branches</p> <ul style="list-style-type: none"> <input type="checkbox"/> Broken branches <input type="checkbox"/> Competing branches 	<p>1. Broken, damaged and competing branches</p> <ul style="list-style-type: none"> <input type="checkbox"/> Broken branches <input type="checkbox"/> Competing branches
<p>2. Maintain single trunk to top</p> <ul style="list-style-type: none"> <input type="checkbox"/> Co-dominant trunks or competing trunks <input type="checkbox"/> Secondary branches becoming trunk-like 	<p>2. Maintain single dominant trunk to at least 2/3s of the tree's mature height</p> <ul style="list-style-type: none"> <input type="checkbox"/> Co-dominant trunks or competing trunks <input type="checkbox"/> Secondary branches becoming trunk-like
<p>3. Select lowest permanent branch</p> <ul style="list-style-type: none"> <input type="checkbox"/> Lowest permanent branch previously selected <input type="checkbox"/> Select lowest permanent branch <input type="checkbox"/> Tree needs to grow more before selection 	<p>3. Select lowest scaffold branch</p> <ul style="list-style-type: none"> <input type="checkbox"/> Lowest scaffold branch previously selected <input type="checkbox"/> Select lowest scaffold branch <input type="checkbox"/> Tree needs to grow more before selection
<p>4. Branches less than 1/2 the diameter of adjacent trunk (less than 1/3 preferred).</p> <ul style="list-style-type: none"> <input type="checkbox"/> Prune back side branch to slow growth 	<p>4. Select other scaffold branches as tree grows in height.</p> <p>Factors to consider:</p> <ul style="list-style-type: none"> ✓ Minimum branch spacing (6" per 10 feet of mature tree height) ✓ Wide branch union (crotch) angles ✓ Avoid multiple branches originating at one site <ul style="list-style-type: none"> <input type="checkbox"/> Select 2nd scaffold branches <input type="checkbox"/> Select 3rd scaffold branches <input type="checkbox"/> Select 4th scaffold branches <input type="checkbox"/> Select 5th scaffold branches <input type="checkbox"/> Select other scaffold branches <input type="checkbox"/> Tree needs to grow more in height
<p>5. Manage temporary branches, removing them over time (before they reach a 2-inch diameter).</p> <ul style="list-style-type: none"> <input type="checkbox"/> Remove temporary branches <input type="checkbox"/> Thin or reduce temporary branches to slow growth 	<p>5. Manage temporary branches, removing them over time (before they reach a 2-inch diameter).</p> <ul style="list-style-type: none"> <input type="checkbox"/> Remove temporary branches <input type="checkbox"/> Thin or reduce temporary branches to slow growth