

Training Young Trees for Future Health and Beauty

Nip it in the Bud - why pruning young trees matters

"...the training of young trees can best ensure structurally strong mature trees that will be safer and require less corrective pruning to fulfill their functions in the landscape."

Harris, Clark & Matheny, *Arboriculture*, 4th ed., page 335.

How trees grow

Length is gained with new shoot growth emerging from buds. Girth is gained with new layers of cells in each year's growth ring.

Apical dominance is the suppression of side branches by the active growth of the top-most bud.

Pruning can change the positions of apical dominance in a tree, and thereby alter where new growth is concentrated. Good structural pruning takes advantage of apical dominance to promote strong form and good growth.

Time of year and pruning response

Dormant season and *early spring* pruning promotes vigorous growth. This is a good time of year to prune to establish the central leader and main branch structure.

Summer pruning has a dwarfing affect on new growth. This is a good time of year to shorten temporary branches and to reduce competing leaders. Remove suckers from root stock and water sprouts from branches in summer to suppress repeat sprouts. Overall, keep summer pruning very light.

Plan to accomplish training of young trees by doing some light pruning at different times in the growing season. Inspect young trees yearly for follow up work over the first several years after planting.

Branch attachment

Branch attachment will be strongest when lateral branches are less than 1/2 the diameter of the main trunk.

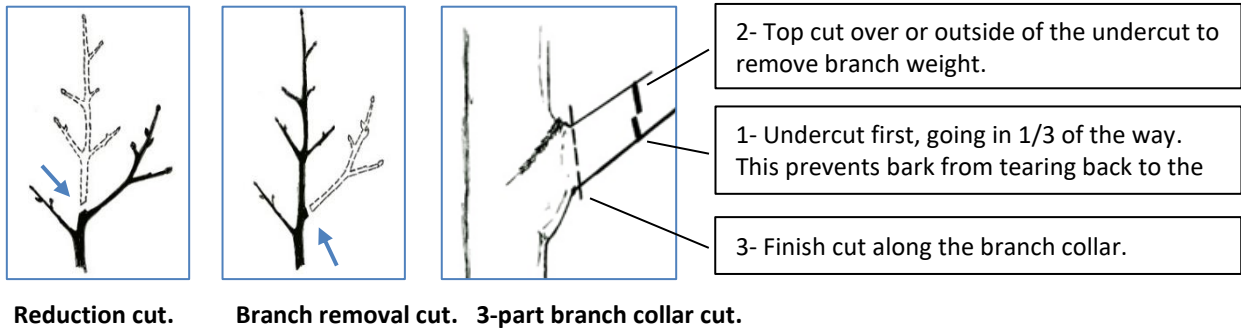
Co-dominant leaders with included bark have a very weak attachment. This is a common location of limb failure in storm events. Corrective pruning to prevent co-dominant leaders will help avoid serious failures in future years.

Making good pruning cuts

Use selective pruning cuts placed at natural points of branch attachment.

Good clean cuts will promote good wound closure. Don't use wound dressings.

Use hand pruners for branches up to ½-inch diameter. Use hand saws for branches larger than ½-inch diameter.



A 5-step approach to structural pruning of young trees

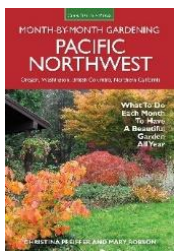
Ideally, begin pruning trees for structure about one year after planting. Follow these steps over the first several years of establishment.

1. Fix what's broken. Look for the 4-D's - Dead, Damaged, Diseased, and Dysfunctional (rubbing branches, severely crowded branches, double-leaders).
2. Make sure there is one central leader. Removing competing leaders could be the single most important thing you do for a young tree. If the stems are over an inch in diameter, suppress the competing leader with a reduction cut placed to remove about 3/4 or 2/3 of the branch length. This can be helpful to avoid making a large cut directly on the main trunk.
3. Determine where the lowest branches should be on the mature canopy. Branches below this point will be gradually removed as the tree becomes taller. Maintain a canopy height so that the branched area is around 2/3 the total height of the tree.
4. Thin out any crowded branches along the main trunk. Completely remove any tightly spaced branches so that the main lateral limbs are well spaced vertically and around the main trunk.
5. Select temporary branches. Some or all of the branches below the lowest permanent branch should be kept to help support growth in trunk diameter. Shorten temporary branches by more than half their original length. Remove temporary branches before the time they reach 1/3 the diameter of the main trunk.

For more information:

Watch the video: [Training Young Trees: Structural Pruning for Home Gardeners](#), University of California Extension

International Society of Arboriculture: [Trees are Good.org](#) - Tree Owner Information: [Pruning Young Trees](#)



Pacific Northwest Month-by-Month Gardening by Christina Pfeiffer with Mary Robson. Cool Springs Press

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