



TRAINING YOUNG TREES FOR STRUCTURE AND FORM — Part 2

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When to Prune

Both deciduous and broad-leaved evergreen trees should be trained primarily in the winter months when the trees are dormant. Dormancy is a time of minimal physiological activity, and pruning will have the least impact on subsequent growth and development. Dormancy periods change with location and species, however. For instance, in much of California the dormancy period is December to February for most species. In Maine, many species will be dormant from November to March. At the earliest, wait until the leaves have fallen before pruning deciduous trees. At the latest, prune well before buds swell and new leaves begin to develop in the spring for both deciduous and broad-leaved evergreen trees.

Pruning during the growing season may be needed to remove diseased or insect-infested wood (for example, shoots killed by fireblight), to direct growth, to remove growth that obstructs signs or windows, or to control watersprouts or suckers. Such pruning should be kept to a minimum so as not to unnecessarily reduce tree growth and development. In some cases, pruning during the growing season should be avoided entirely for pest management reasons (for example, to avoid attracting bark beetles). For trees with a tendency to develop suckers, it is important to remove the suckers frequently during the growing season, particularly those within 6 inches (15 centimeters) of the ground.

It is generally recommended that newly planted trees not be pruned or pruned very lightly the first year. This recommendation is more important for bare-root or balled-and-burlapped trees than for container stock. It is recommended that steps one

and two be applied in all cases. For container stock, steps three and four can be applied if tree size is sufficiently large. For all stock types, temporary branches along the trunk should be selected and cut back (step five).

editor's note: The five steps for training young trees are discussed in Part 1 of this article. See volume 25, no. 6 of this newsletter.

What About Next Year and Subsequent Years?

You probably won't be able to develop the tree's permanent framework (central leader and scaffold branches) in the first year. In fact, you may not even be able to select the lowest permanent branch or scaffolds. Pruning in subsequent years is necessary in almost all cases. Plan to go through all steps each year until good structure and form are achieved.

Conifers

The five steps can be applied to conifers but with some modifications. Steps one and two are important. Damaged branches and competing leaders need to be removed. Step three is important, depending on tree location. If clearance is needed for vehicles, equipment, or people, then step three should be applied. Step four is not as important for conifers as for hardwood species. In many cases, step four can be bypassed entirely. Look for and remove branches with weak attachments, however. Step five will be necessary if a lowest permanent branch is established.

Field Practice

It is important to practice the five steps before applying them. Review each step with a co-worker before making cuts. Tie

a string or ribbon around the leader, the lowest permanent branch, and scaffolds. Discuss reasons for your selections and step back to evaluate potential impacts on tree form and size. After you are confident of your selections, make your cuts. Again, step back from time to time to assess changes in canopy size and form. Remember that species and conditions vary considerably, and you will always need to use good judgment. Understand the reasons for the five steps and make reasonable adjustments in the field.

References

- American National Standards Institute. 2001. *ANSI A300: Tree Care Operations—Tree, Shrub and Other Woody Plant Maintenance—Standard Practices, Part 1: Pruning*. ANSI, New York, NY.
- Costello, L.R. 2000. *Training Young Trees for Structure and Form* (videocassette and booklet). University of California Cooperative Extension, Davis, CA.
- Gilman, E. 2002. *An Illustrated Guide to Pruning*. Delmar, Albany, NY.
- Gilman, E.F., and S.J. Lilly. 2002. *Best Management Practices: Tree Pruning*. International Society of Arboriculture, Champaign, IL.
- Harris, R.W., J.R. Clark, and N.P. Matheny. 2003. *Arboriculture: Integrated Management of Trees, Shrubs, and Vines*, 3rd ed. Prentice Hall, Englewood Cliffs, NJ.

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