

Pruning Trees

Christopher Reeves, Forestry

Trees benefit from pruning when they have tight branch angles or they are damaged, diseased, or in the way. Trees in landscapes often differ from forest-grown trees in the amount of light that each branch receives. Tree branches in landscapes are frequently not shaded by other trees and become large and long-lived. Shading in woodlands reduces light to lower branches resulting in natural pruning. This results in main stems that are clear of branches for many feet resulting in a higher valued timber product. This factsheet addresses if, when, and how to prune trees primarily in woodland settings.

To Prune or Not to Prune

In natural hardwood forests common throughout Kentucky, pruning to improve the timber value of woodland trees is generally not warranted. However,



Widespread pruning in natural stands is not recommended because of the high economic costs.

woodland owners may want to remove a branch that sticks out into their favorite hiking or ATV trail. The financial gains of pruning natural hardwood stands, purely for timber production, do not offset the tremendous amount of work and money required to repeatedly prune woodland trees to produce high valued logs.

Pruning may be advisable in plantations made up of rows of planted hardwoods or softwoods. Plantations are generally managed to grow trees as rapidly as possible. Corrective pruning limbs to help tree form when they are very young and side pruning main stems as they grow

can add value to plantation trees. Unlike natural forests this type of pruning helps in plantations because they contain fewer trees than naturally regenerating forests. As a result they do not produce as many rapidly growing straight trees, nor generate enough shade to naturally shed branches compared to natural forests. Contact a forester to determine if pruning is an appropriate practice for your plantation.

Pruning is generally more applicable for landscape trees. Pruning these trees is undertaken to improve safety, health, and aesthetics. Removing disease or insect infested branches can prolong the life and safety of trees. Landowners interested in pruning their landscape trees for shade, flowers, or fruits should consult the references for more applicable information.

What and When to Prune

While most species can be pruned throughout the year, the best time to prune trees is when they are dormant in the winter before the bark loosens up a month before leaf out. Branches are easier to see, lighter without the foliage, and the potential for spreading diseases, and the chance for peeling bark from the tree is less. As trees grow taller, branches remain at the same height so consider pruning limbs that are in the way. Any branch that will ultimately need to be removed should be pruned when it is as small as possible. The smaller the branch, the easier it is for the tree to close over the wound.

Pruning of newly planted trees is not recommended to compensate for roots lost in transplanting. Corrective pruning to remove defective branches may be beneficial. Starting two years after planting, light corrective pruning, especially to



Topping or rounding-over of trees should not occur. The resulting tree is less healthy and environmental benefits are reduced.

Joseph O'Brien, USDA Forest Service, Bugwood.org



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maintain one main leader, can take place every year or every other year. Do not remove more than 25% of the tree's live branches in any year. Definitely do not "top" or round-over a tree! Topping is the process of removing branch ends and can cause the early failure of the resulting branches and death of the tree. Even if the tree survives, the results are unnatural looking and reduce the environmental benefits of the tree!

How to Prune

Safety is always paramount when pruning. Do not prune branches that are too large to handle or are within 10 feet of residential utility lines or have the potential to come within this distance as they are being removed. Branches do not need to contact utility lines to conduct electricity. It is not recommended that anybody, even professional arborists prune from a ladder. Chainsaws should never be used in trees unless you are trained in this practice. Before starting any pruning always be sure that you are going to be able to control the branch throughout the removal process. If safety is an issue, landowners should contact an International Society of Arboriculture Certified Arborist® or other trained individual.



Chainsaws should only be used by trained professionals and never used from ladders.

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The remaining cut should not be flush with the main stem but still limit leaving a stub.

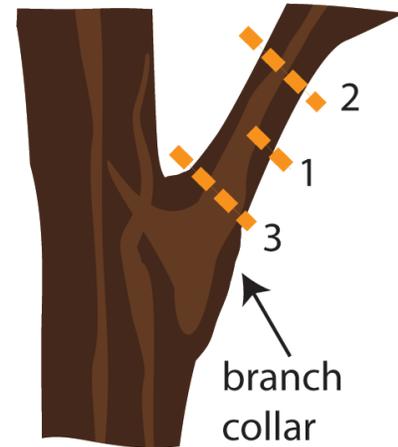
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Pruning small branches (< 1.5" in diameter) can be completed with small hand pruners or loppers. Cut the branch off at the branch collar and not flush with the trunk. Cutting the branch flush with the trunk will damage the collar; this will lengthen the time for the wound to close-over, increases the amount of internal decay (rotten wood), and increases the likelihood of insects attacking the tree. Leaving a stub increases the potential for somebody running into it and will not close over.

Wound dressings or painting are not recommended and may be potentially harmful because they trap moisture.

Pruning large (> 1.5") branches requires a hand saw or a pole saw that are designed specifically for pruning. Common bow saws can be used but they are difficult to maneuver between branches because of their bulkier size compared to hand saws. A three step method should be followed when removing larger branches to ensure the cut is flush to the branch collar and no bark is stripped off:

1. Undercut the bottom of the branch about one-third of the way through 12" out from the trunk.
2. Make a second cut from the top of the branch about 3" farther out from the undercut until the branch falls away.
3. Cut back the resulting stub to the branch collar.



By practicing good pruning techniques and focusing on safety, pruning can improve the health and aesthetic value of trees!

For More Information

International Society of Arboriculture:
<http://treesaregood.org>

University of Kentucky
Department of Forestry: <http://ukforestry.org>

References

- Care of Woody Plants. University of Kentucky Department of Horticulture Cooperative Extension Service. Kentucky Master Gardener Manual Chapter 12. HO-101. 20 p.
- Pruning Landscape Trees. University of Kentucky Department of Horticulture Cooperative Extension Service. HO-45. 10 p.
- Tree Owner's Manual for the Northeastern and Midwestern United States. USDA Forest Service. Northeastern Area State and Private Forestry. NA-FR-04-7. 39.