



REASONS TO PRUNE TREES AND SHRUBS IN HOME GARDENS

Home Garden Series

By
Tim Kohlhauff, Extension Coordinator, Urban Horticulture, WSU Extension Spokane County, **Therese Harris**, Writing & Editing Manager, WSU CAHNRS Communications, **Ray Maleike**, Professor Emeritus, Horticulture, WSU Puyallup Research and Extension Center, **Dr. Timothy Stuess**, Consultant, Affiliated Timber Investment Conversion Advisors, Inc

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FS182E

Reasons to Prune Trees and Shrubs in Home Gardens

(Adapted, with permission, from “Pruning Woody Landscape Plants” in *Master Gardener Manual*. WSU Extension Publication EC001.)

Why should trees and shrubs be pruned? Pruning is the intentional wounding of a plant, and yet it is also a tool that can help cultivate a healthy, beautiful tree or shrub. Thus, pruning should be performed only when necessary and always according to an established plan. Doing so will minimize the short-term harm and maximize the long-term benefit to the plant.

Trees and shrubs are typically pruned for six reasons:

- to maintain or improve the health of the plant
- to minimize injury or damage the plant may cause
- to assist the plant in creating a sturdy structure
- to increase the fruit production of the plant
- to create special visual effects
- to control size

No matter what the goal, there is a right way and a wrong way to go about pruning. To learn more about *how* to prune woody plants, including techniques and timing, refer to WSU Extension publication [Pruning Landscape Trees, EB1619](#). Additional information on tree care can be found at the WSU [Gardening in Washington website](#).

Health

Sometimes pruning is the best treatment for an unhealthy tree or shrub. Trees or shrubs with diagnosed diseases, such as [tip blight on arborvitae](#) or [fire blight](#) should be pruned to remove the infected branches, thus preventing its spread (Figure 1). Airborne diseases, such as [powdery mildew](#), can be reduced or even prevented by pruning to increase air circulation through the interior canopy of a plant. Pruning may also be the best course of action when there is a localized infestation of insects such as [scale](#). Any dead branches should be removed to prevent the spread of decay organisms into living tissue.

On newly transplanted trees and shrubs, pruning should be restricted to dead or broken branches. It was once common to reduce the canopy size of a plant at the time of transplanting, to balance the root system, but research has shown that this causes more harm than good. Trees and shrubs need energy to grow new roots after planting, as this is the key to successful establishment. Pruning at this time removes energy the plant has stored in branches, and redirects growth from roots to shoots to replace what was lost.



Figure 1. Trees with diagnosed diseases, such as the fire blight on this crabapple, should be pruned to remove the infected branches, thus preventing its spread. In this case, the branch is removed away from the point where symptoms are obvious (marked by the clothes pin); the actual cut is made at the next lateral branch (marked by the clippers).

Trees lose up to 90% of their roots when harvested from tree nurseries and for this reason, it is important that they grow new roots as soon as possible after planting.

Safety

There are situations in which a tree or shrub may cause an unsafe condition. This could be a broken limb in a tree with potential to fall. It could be a branch obstructing a clear line of sight in traffic, or a plant could be a potential fire hazard.

Proper pruning may remove or reduce the risk, but whether a plant is pruned or even removed, safety must be the top priority.

Remove hazardous limbs before they fail and cause damage or injury (Figure 2). When dead or broken branches are above a public area like a road, playground, or bus stop, prompt removal also becomes an issue of legal liability.



Figure 2. Remove hazardous limbs before they fail and cause damage.

Structures such as a house or fence can be damaged when branches grow up against them. Plants should be pruned *before* they come in contact with buildings.

Homeowners needing assistance to determine whether any part of a tree presents a hazard should contact a certified arborist with a tree risk assessment qualification (TRAQ).

Plants that grow over a street or sidewalk may interfere with a sightline or a path of travel. These trees and shrubs should be pruned to create visual and physical clearance. Most urban areas have minimum height clearance requirements to keep woody plants from interfering with traffic. These rules vary from city to city, or even within the same city. To determine the local regulations, consult the urban forestry program or planning department with jurisdiction in the area.

Safety Note: Never attempt to prune or remove any branch contacting a power line, or within ten feet of it. Any part of a tree within ten feet of a power line may be energized and pruning could cause severe injury or death (Figure 3). In addition, both federal and state laws regulate tree work near utility lines. Contact the local power company for assistance with these trees.



Figure 3. Any part of a tree within ten feet of a power line may be energized, and pruning could cause severe injury or death.

Wildfire

Wildfire is a safety concern throughout Washington, but plants can be pruned to minimize the risk to home and landscape. Branches should be pruned so they are 15–30 feet from roofs and chimneys. Tall trees should have lower branches pruned up to at least ten feet from the ground, and any understory vegetation should be thinned or removed to reduce the likelihood of a ground fire moving into the crown of mature trees (Figure 4).



Figure 4. In woodland landscapes, taller trees should have the lower branches pruned to be at least ten feet off the ground, and any understory vegetation should be thinned or removed to remove “ladder fuel.” (Photo courtesy of Doug Maguire, Oregon State University, Bugwood.org)

Structure

In addition to supporting tree health, we also want trees to develop proper structure through annual growth. When pruned correctly, plants will form a strong structure that is less likely to fail under stresses like high winds or heavy snows. Features of good structure include having a dominant central leader with proper spacing between lateral branches. This means that the tree should have one main trunk in the center of the plant, without branches competing to grow taller or larger in diameter. Side, or lateral, branches should be less than half the diameter of the trunk, and spaced far enough apart vertically that they will not grow too close and scrape against each other.

Sometimes the branch structure of a plant is not optimal, resulting in crossed limbs, competing leaders, or weak branch unions. Damage may occur where branches cross or rub, so prune to eliminate or, better yet, prevent this problem (Figure 5).

Branches that compete with the central leader can cause serious problems if they grow too large. The same is true of limbs growing too close together on the trunk. Research shows that cutting these problem branches back slows their growth and lessens the chance of failure.

Pruning to promote good structure should be initiated when plants are young. This way, tree defects can be removed when resulting pruning wounds are still small and future growth will be directed appropriately.



Figure 5. Damage may occur where branches cross or rub, so prune to eliminate or, better yet, prevent this problem.

Preventing these problems is much easier than trying to correct them later when cuts will be large and slow to seal (Figure 6).

Fruiting

Techniques for pruning fruit trees differ from ornamental trees. In this case, pruning directs the plant to maximize fruit production by limiting shoot growth and allowing light to penetrate throughout the canopy (Figure 7). Proper pruning allows enough vegetative growth to support plant health and produce fruit.



Figure 6. Preventing structural problems early in the life of a plant (left) is much easier than trying to correct problems later, when cuts will be large and slow to seal (right).



Figure 7. Pruning these trees directs the plant to maximize fruit production, by limiting shoot growth and allowing light to penetrate throughout the canopy. (Photo courtesy of Howard F. Schwartz, Colorado State University, Bugwood.org)

Unproductive branches that divert too much energy from flowering and fruiting or branches that shade others are removed.

The regularity of fruit tree pruning can be crucial to success. It should be done annually to minimize alternate year fruit production common in some species, like apples and pears. While some flower buds are removed during pruning, the remaining buds produce larger, higher quality fruit. More information on fruit tree pruning can be found in [Training and Pruning Your Home Orchard, PNW400](#).

Pruning for Special Visual Effect

Plants are sometimes pruned for special visual effects, rather than working with their natural shape. These styles call for regular and heavy pruning to maintain the plant in a specific shape. Cuts are made with less care for plant health and more concern for appearance.

Examples of this type of pruning include hedges, topiary, and espalier. Hedges are pruned to form a boundary or barrier, often at a property line. For more information about screens and hedges, consult [Selecting Plants for Hedges and Screens, EM089E](#). Topiary is a style of pruning sometimes described as plant sculpture where specimens are trimmed into unusual shapes. Depending on plant species and environment however, they may have to be trimmed two or more times per year. Espalier is a similar pruning style where trees or shrubs are shaped to grow flat against a wall or fence.

This type of pruning must begin when the tree or shrub is young, in order to direct future growth where it is wanted. Attempting to turn a mature plant into a hedge or topiary specimen by removing a large section of canopy usually fails to produce the desired appearance, and may even kill the plant.

Pruning for Size

Over time, plants may become too large for an area. Whether the problem is branches rubbing against a building or shading other plants, pruning can be an effective solution. It is important to remember that pruning not only removes a problem, but also directs future growth. This means that the remaining branches should be healthy, and oriented in a desirable direction.

“Renovation” pruning is performed on certain “canegrowing” shrubs when they have grown too large. Cane-growing shrubs are those that produce multiple stems directly from the ground, rather than a single tree-like trunk. Examples of cane-growing shrubs include Oregon grape, red-twig dogwood, lilac, and forsythia.

During renovation, up to 90% of the canopy is removed, usually in the early spring, prior to new growth. New stems grow from the roots during the growing season. This type of renovation pruning allows for immediate size reduction as well as better plant management in the future. Another form of renovation pruning is when just the older, less vigorous stems are removed to stimulate new growth.



Figure 8. If a plant must be severely pruned for size on a regular basis, then it may be too large for the location.

If an existing plant must be severely pruned for size on a regular basis, then it may be too large for the location (Figure 8). Heavy repeated pruning stresses a plant, and makes it more susceptible to pest damage. Trees and shrubs pruned in this way frequently detract from the appearance of the landscape and for these reasons, it may be appropriate to replace the plant. Only those plants that can grow to their mature height and width within the allowed space should be planted. This not only results in less pruning work, but healthier trees and shrubs that fit in well with the landscape.

Pruning is an important and effective tool in the landscape, but it must be done with a specific goal in mind. A plan should always be developed before beginning the work, and then performed using proper [pruning tools](#) and techniques. The result will be a healthier and more attractive landscape.

For Further Reading

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