

## Pruning\*

Pruning can be dangerous work. Follow these safety precautions to be sure you are around to enjoy your tree.



**Electricity flows through branches.**

Never prune trees or branches that are within 10 feet of utility lines; instead contact your local utility company.



**Ladders and trees do not mix.**

If pruning cannot be done with both feet on the ground, hire an arborist (p. 28).



**Chainsaws cut limbs.**

If power equipment is required, hire an arborist (p. 28).

The main reasons for pruning trees are safety, health, and esthetics. Pruning can encourage trees to develop a strong structure and reduce the likelihood of damage during severe weather.

Pruning for safety involves removing branches that could fall and cause injury or property damage, trimming branches that interfere with lines of sight on streets or driveways, and removing branches that grow into utility lines.

Pruning for health involves removing diseased or insect-infested wood, thinning the crown to increase airflow and reduce some pest problems, and removing crossing and rubbing branches.

Pruning for esthetics involves enhancing the natural form and character of trees or stimulating flower production.

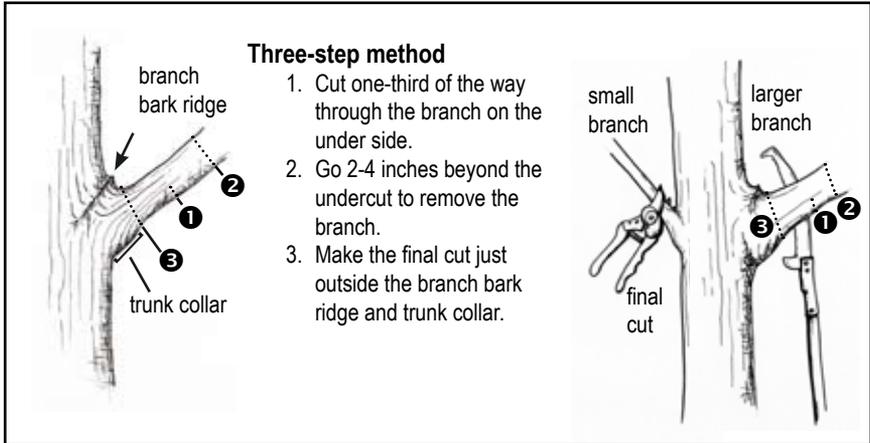
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\*Except where noted, this section has been adapted in part, from: Bedker, P.; O'Brien, J.; Mielke, M. 1995. How to prune trees. [Newtown Square], PA: USDA Forest Service Northeastern Area. 30 p.

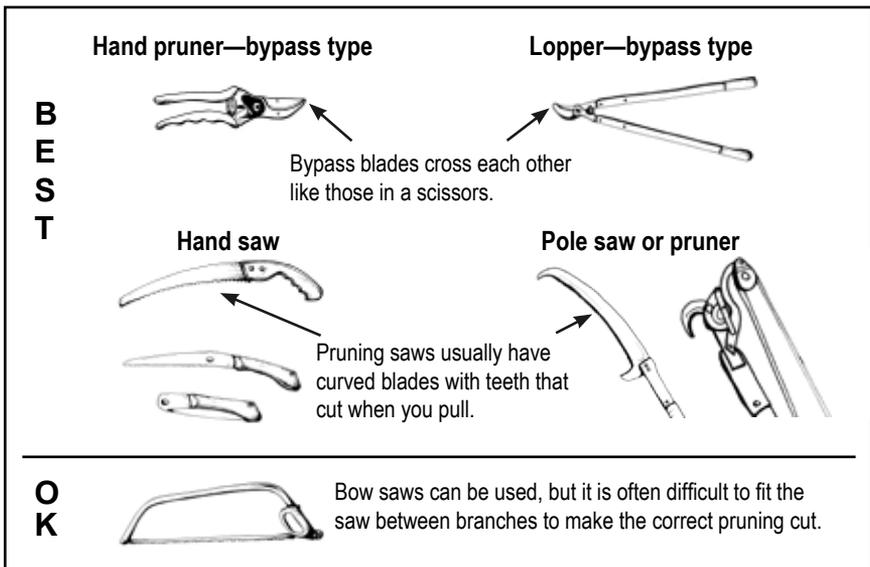
## Where to Cut

Support the branch with one hand while you make the cut to prevent the bark from ripping. If the branch is too large to support, use the three-step method (see details below).

For the final cut, look for the branch bark ridge and trunk collar. Begin the cut just outside of the branch bark ridge, and angle down away from the trunk. Stay close to the trunk collar without cutting into it (see images below).



## Pruning Tools



## How Often

Beginning 2 years after planting, prune lightly every year or every other year. After 10 years, frequency of pruning depends on the type of tree and amount of shade the canopy receives.

**⚠️ Do not remove more than 25 percent of the tree's live branches (and therefore leaves) at any one time.**

Tree Type	First 10 years	10+ Years After Planting
<b>Fruit trees</b>	Once every 1-2 years	Once every 1-3 years
<b>Deciduous shade trees</b>	Once every 1-2 years	Once every 4-7 years*
<b>Evergreen trees</b>	Only as needed**	Only as needed**

\* Pruning lightly and more frequently is better than pruning heavily and less often.

\*\* Evergreen trees usually need pruning only if they are diseased or their branches need to be raised up from the ground. In either case, prune off the entire branch (p. 19).

Removal of the following can be done every year:

- Broken, dead, or rubbing branches
- Branches sprouting from the base of the trunk.

## Time of Year

Winter is best time of year to prune because branches are easy to see, diseases cannot be spread, and there is minimal stress to the tree. But for most trees, pruning can be done at any time. Exceptions are trees that are prone to fire blight or oak wilt.

Trees susceptible to fire blight include mountain ash, apple, crabapple, hawthorn, pear, flowering quince, and pyracantha. Trees susceptible to oak wilt include most oaks. To minimize disease infection of these types of trees, follow the pruning guidelines on the next page.

**FIRE BLIGHT**

**Range:** All counties in the United States

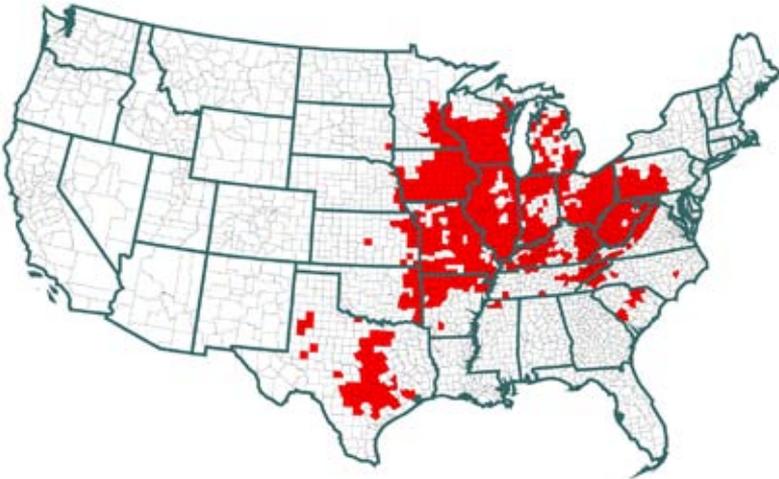
**Types of trees:** mountain-ash, apple, crabapple, hawthorn, pear, flowering quince, pyracantha

**Pruning guidelines:** Avoid pruning from the time that spring flowers emerge until leaves drop. If pruning must be done on these tree types during disease-transmission times, sanitize pruning tools before each branch is pruned. Use rubbing alcohol, or household bleach diluted 1 to 9 with water. Tools should be immersed in the solution, preferably for 1-2 minutes. Bleach is corrosive to metal, so tools should be thoroughly cleaned with soap and water after each use.

**OAK WILT**

**Range:** See map below

**Types of trees:** oaks



**Pruning guidelines:** Avoid pruning from early spring through early summer (April, May, and June in the Lakes States). Check with your plant diagnostic clinic (see page 31 for phone numbers) to get exact dates for your area. If pruning must be done on oaks during disease-transmission times, immediately apply wound paint after the cut is made.



**Wound dressings are not necessary in any other case.** In fact, they may be harmful.

## Pruning Young Trees\*

Pruning a young tree saves money. Removing small branches is fairly easy compared with waiting until limbs are large, when pruning can be costly and a bigger risk to the tree. Correctly pruning a tree when it's young will help it develop a strong, well-balanced crown. Prune to have the following:

### A. Branches that are well-attached to the trunk

Branches with a branch bark ridge (bark pushed out at the point where the branch attaches to the trunk) are less likely to break off in wind or heavy ice or snow. Branches that are less than half the diameter of the trunk are also less likely to break off in storms.

### B. One central leader

Most trees will be strongest if they have one central leader (instead of multiple). Unless your tree is an arborvitae or fruit tree, choose one leader to keep, and prune off the competitors.

### C. Good spacing between branches

Vertical space between branches should eventually be 12 inches for fruit or small-statured trees and 18 inches for medium- and large-stature deciduous trees. Try to space branches equally around the tree.

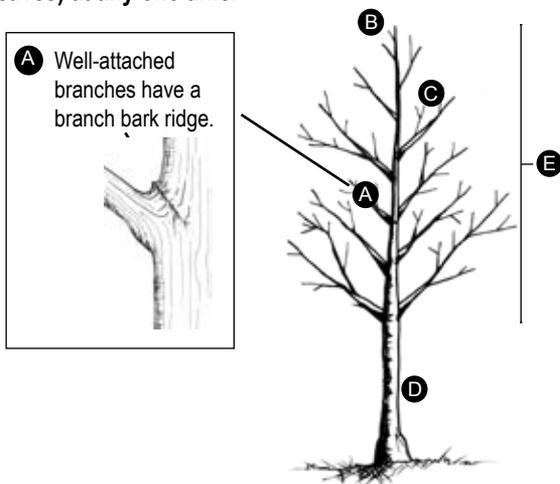
### D. Enough clearance between the ground and first branch

As a tree grows taller, branches remain at the same height. Branches located low on the trunk may get in the way of sidewalk paths or lawn mowing as the tree gets bigger. Over time, gradually remove low branches.

### E. Good crown height

The crown of a deciduous tree should be at least 60 percent of the total tree height.

 Do not remove more than 25 percent of the tree's live branches (and therefore leaves) at any one time.



\*Gilman, E. 2002. An illustrated guide to pruning, 2d ed. Albany, NY: Delmar Publishers. 330 p.

**Topping\*:** (Also called stubbing, heading, tipping, hat-racking, dehorning, or roundover)

 **Topping is not pruning.**

Topping is the indiscriminate removal of branch ends. Topping injures and ultimately results in early failure or death of a tree.

 **TIP:** If the end of the branch must be removed, cut it back to a side branch that is at least one-third (preferably one-half) the diameter of the branch being cut.



Topped tree

**Myth:** Topping will make the tree easier to maintain.

**Truth:** Topped trees can regain their original height quickly, often in 2 years. A topped tree will require more attention than a properly pruned tree because of the fast growing, loosely attached shoots that form.

**Myth:** Topping invigorates a tree.

**Truth:** Topping immediately injures a tree and starts it on a downward spiral. Topping wounds expose the tree to decay and invasion from insects and disease. While a tree may survive topping, its life span will be significantly reduced.

**Myth:** Topped trees will add value to your property.

**Truth:** Topped trees lack natural beauty and may actually reduce your property values. Also, a topped tree can become hazardous and cause property damage, making it a liability.



Topped tree with regrowth

**EXPERTS AGREE**  
**DON'T**  
**TOP YOUR**  
**TREE**

\*Adapted, with permission, from the "Experts Agree: Don't Top Your Tree" campaign which was developed by the Missouri Community Forestry Council and Forest ReLeaf of Missouri, with financial assistance currently provided by the Missouri Department of Conservation.