

A Guide to Successful Pruning

Stop Topping Trees

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What is “topping”?

Topping occurs when the vertical stem (**leader**) and upper primary limbs (**scaffold branches**) on mature trees are cut back to stubs at uniform height. Topping is also referred to as heading, stubbing, or dehorning.

How does topping damage trees?

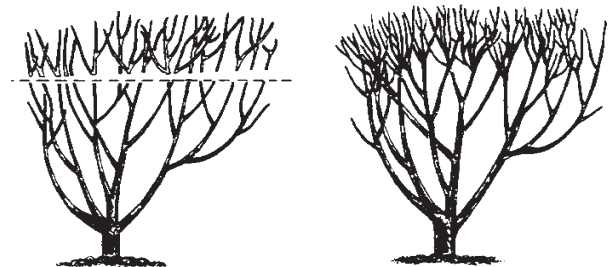
- 1) **Topping reduces food-making capacity.** Trees require a large leaf surface area to provide food for maintenance and growth. Topping cuts off a major portion of the tree’s food-making potential and depletes the tree’s stored reserves.
- 2) **Topping stimulates undesirable “water sprout” growth.** While removing most of the buds that would form a normal branch system, topping often stimulates the regrowth of dense, unattractive, upright branches (water sprouts) just below the pruning cut. Water sprout regrowth is vigorous. A topped tree will rapidly return to its original height, but will lack its original form.



Water sprouts

Large wounds

- 4) **Topping creates a hazard.** Weakened stubs are more prone to wind and storm breakage because they generally begin to die back or decay.
- 5) **Topping injures bark.** Increased sun exposure on trunk and branches can lead to severe bark damage.
- 6) **Topping disfigures trees.** Ugly branch stubs, conspicuous pruning cuts, and a broom-like branch growth replace natural beauty and form. Topping reduces the real estate value of trees by 20 - 100 percent. A correctly trimmed tree increases in value at each pruning.



Before Tree Topping

After

Why are trees topped?

Some homeowners and unprofessional tree pruners practice topping whenever trees reach an undesirable height. They mistakenly believe that topping will reduce the storm hazard of falling branches, when in fact, topping has the opposite effect. People also top trees when they interfere with utility wires, buildings, solar collectors, or sunny garden areas.

- 3) Topping leaves large wounds. The branch wounds left from topping are slow to close, therefore more vulnerable to insect attacks and fungal decay. An invasion by either pest can spread into the trunk, killing the tree.

Selection of trees that only reach desired maximum heights eliminates severe pruning later. If you must prune a tree heavily every five to seven years, the tree is too large for the site. Replace it with a smaller species.

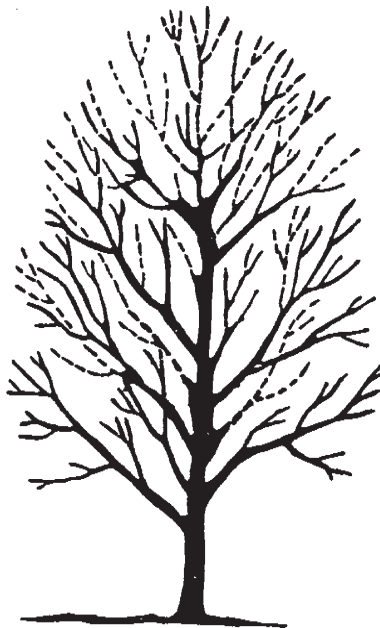
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The National Arborist Association considers topping an unacceptable practice and advises against it. Unfortunately, even some legitimate tree service companies indiscriminately top trees. Before selecting a tree service, find out which companies advocate topping and avoid patronizing them.

What are the alternatives?

In order to avoid topping, newly planted trees should be properly pruned to develop a good branch structure as they grow. When a mature tree's height must be reduced, an alternative to topping is "drop-crotching".

Drop-crotching is a type of thinning cut that reduces a tree's size while preserving its natural shape. To drop-crotch, select and cut higher branches back to laterals at least one-third the diameter of the limbs being removed. Cut outside the branch collar at a 45 to 60 degree angle to the branch bark ridge. Leave the branch collar intact to help prevent decay from entering the trunk. This type of thinning cut will stimulate growth throughout the tree and discourage water sprout development.



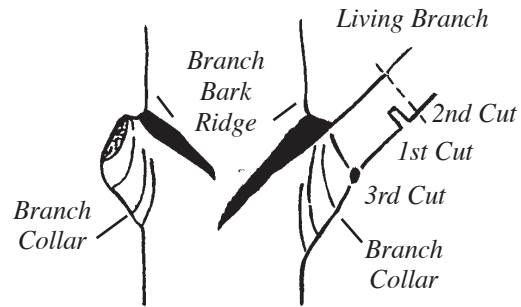
Drop-crotching

Lateral limbs are pruned where they join large diameter side branches.

The center leader is cut back to a large diameter secondary branch so that a modified leader remains.

This does not change the direction of growth. It encourages stimulation of the apical growth point.

Whenever removing limbs greater than 1 inch in diameter, use the three-cut method to avoid tearing bark. First, about 12 inches from the trunk, cut halfway through the limb from the underside. Second, about 1 inch past the first cut, cut through the limb from the top side. The limb's weight will cause it to break between the two cuts. Make the third cut outside the branch collar, as described earlier. Use a handsaw to provide greater control.



Branch bark ridge and branch collar

Don't coat pruning cuts with tree paint or wound dressing, except for control of certain disease-carrying insects. These materials won't prevent decay or promote wound closure.

Can topping be corrected?

A professional arborist can improve the condition of a tree, even after it's been severely topped and shows heavy water sprout regrowth. As the water sprouts begin to gain caliper, they can be selectively "thinned out" using properly placed branch collar cuts. New growth can be directed outward to expand and round out the crown. This process will need repeating for a few years. The scars, both physical and visual, will never completely disappear.

A wiser alternative to topping is careful selection and training of your young trees. Avoid topping altogether. Allow your trees to realize their full potential for health and beauty in the landscape.