

# Why Topping Severely Damages Trees

## Topping Trees

Topping is perhaps the most harmful tree pruning practice known. Yet despite more than 25 years of literature and seminars explaining its harmful effects, topping remains a common practice.

## What is Topping?

Topping is the indiscriminate cutting back of tree branches to stubs or lateral branches that are not large enough to assume the terminal role. Other names for topping include "heading", "tipping", "hat-racking", and "rounding over". The most common reason given for topping is to reduce the size of the tree. Often homeowners feel that their trees have become too large for their property. People fear that tall trees may pose a hazard. Topping, however, is not a viable method of height reduction, and certainly does not reduce the hazard. In fact, topping will make a tree more hazardous in the long term.

## Topping Stresses Trees

Topping often removes 50–100% of the leaf-bearing crown of a tree. Since the leaves are the "food factories" of a tree, this can temporarily "starve" a tree. The severity of the pruning triggers a sort of survival mechanism. The tree activates latent buds, forcing the rapid growth of multiple shoots below each cut. The tree needs to put out a new crop of leaves as soon as possible. If a tree does not have the stored energy reserves to do this, it will be seriously weakened and may die. A stressed tree is more vulnerable to insect and disease infestations. Large, open pruning wounds expose the sapwood and heartwood to attack. The tree may lack sufficient energy to chemically "defend" the wounds against invasion. Some insects are actually attracted to stressed trees by chemical signals.

## Topping Causes Decay

The preferred location to make a pruning cut is just beyond the branch collar at the branch point of attachment. The tree is biologically equipped to close such a wound provided the wound is not too large. Cuts made along a limb, between lateral branches, create stubs with wounds that the tree may not be able to close. The exposed wood tissues begin to decay. Normally a tree will "wall off" or compartmentalize the decaying tissues. But few trees can defend the multiple severe wounds caused by topping. The decay organisms are given a great path to move down through the branches.

## Topping Can Lead to Sunburn

Branches within a tree's crown produce thousands of leaves to absorb sunlight. When the leaves are removed, the remaining branches and trunk are suddenly exposed to high levels of light and heat. The result may be sunburn of the tissues beneath the bark. This can lead to cankers, bark splitting and death of some branches.

## Topping Creates Hazards

The survival mechanism that causes a tree to produce multiple shoots below each topping cut comes at a great expense to the tree. These shoots develop from buds near the surface of the old branches, unlike normal branches that develop in a "socket" of overlapping wood tissues; these new shoots are only anchored in the outermost layers of the parent branches. The new shoots grow very quickly, as much as 20 feet in one year, in some species. Unfortunately, the shoots are very prone to breaking, especially during windy conditions. The irony is that while the goal was to reduce the tree's height to make it safer, it has been made more hazardous than before.

## Topping is Expensive

The cost of topping a tree is not limited to what the perpetrator is paid. If the tree survives, it will require pruning again within a few years. It will either need to be reduced again, or storm damage will have to be cleaned up. If the tree dies it will have to be removed. Topping is a high maintenance pruning practice. There are some hidden costs to topping. One is the reduction in property value. Healthy, well maintained trees can add 10–20% to the value of a property. Disfigured, topped trees are considered an impending expense. Another potential cost of topped trees is the potential liability. Topped trees are prone to breaking and can be hazardous. Since topping is considered to be an unacceptable pruning practice, any damage caused by branch failure of a topped tree may lead to a finding of negligence in a court of law.

## Alternatives to Topping

There are recommended techniques as alternatives to topping. If practical, branches should be removed back to their point of origin. If a branch must be shortened, it should be cut back to a lateral branch that is large enough to assume the terminal role. A rule of thumb for this is to cut back to lateral that is at least 1/3rd the diameter of the limb being removed. This should be done in an arc across the crown of the tree to avoid flat topping. Avoid using the services of any tree company that advertises and/or promotes topping as a service. Cabling Trees, in my professional opinion is a safer and less costly method to solve weight problems and excessive movement in winter storms.

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