

## **DON'T OVER-PRUNE THAT TREE!**

**“I WANT MOST OF THE FOLIAGE REMOVED FROM MY TREE SO MY GRASS WILL GROW BETTER.” “ I WANT THE LOW LIMBS DRASTICALLY RAISED TO GET MORE SUNLIGHT.”** If these are thoughts you've had, please read on.

One of the worst things you can do to your tree is to over-prune it. It is also one of the most common ailments of our area trees. Why is it so common? It stems from a lack of understanding about how a tree functions or a lack of current information about tree health.

Myths and old wife's tales often guide tree pruning. You've heard *“Remove one-third of the top growth when transplanting to offset root loss,” Prune heavily to offset construction injury or soil compaction,” “Because that's how we've always done it,”* or my favorite, *“Prune heavily to help the turf grow.”* None of these statements is correct with regard to tree health. Except in very rare circumstances, there is no valid reason to over-prune a tree. The National Arborist Association's standards for tree care specify that no more than 20-30% of the foliage should be removed in any year. Over-pruning has detrimental effects on tree health, structural integrity, and aesthetic value.

1. Any cut made on a tree is a wound that must be healed. The fewer cuts made, the better. Smaller cuts throughout the tree's life are better than large cuts that should have been made many years ago when the tree was small. One large, poorly made cut or too many cuts in the wrong places can ruin a tree for life.
2. The foliage is what actually produces food for the plant. Fertilizer is not tree food. It is absorbed through the roots and contributes elements that a tree's foliage needs to produce food through photosynthesis. Removing a large amount of the foliage significantly reduces the tree's ability to produce food. This creates an unhealthy and unbalanced condition in most instances. It actually stunts the growth of the tree in many cases. Food storage is reduced in any year the tree is over-pruned and the loss is compounded if over-pruning is done year after year.
3. Any significant reduction in crown thickness will generally cause profuse interior sprouting and allow excessive sunlight penetration through the remaining canopy and onto the bark. If too much foliage is removed, it creates an imbalance in the roots to foliage ratio, so the tree reacts by using stored food to re-grow its foliage. In proper pruning, the tree reacts by producing mostly tip growth. If improperly pruned, the tree reacts by

producing mostly interior growth with very little tip growth. This is especially true with trees that have sunlight-sensitive bark such as Red Oak.

If a Red Oak's bark is normally in a shaded area and it is suddenly exposed to full sun, the bark and cambium layer directly under the bark can burn along the length that is exposed to full sun (sunscald). This in turn creates other unhealthy conditions that affect health and longevity. Exposure to full sun can cause interior sprouting in an attempt to protect the bark! Sometimes it saves the bark and cambium from sunscald if the sprouts can grow quickly enough to shade the limb and if they are not constantly removed.

4. Since over-pruning creates excessive sprouting, constant pruning is required to maintain the aesthetic qualities of the tree. Constant pruning means a higher maintenance budget. Good pruning practices reduce the need for constant attention and reduce expenditures for tree maintenance.
5. Over pruning increases the chances of wind damage. Trees with high canopies encounter higher wind stresses, especially when raised beyond what would be considered a balanced height. If a tree is located close to a street, alley or walkway, the limbs must be maintained at an appropriate height. In these instances, there is no alternative. However, by over-raising low limbs unnecessarily (higher than 1/3 of the total height), an increased stress load is created on the trunk and roots. As long as both are strong, this may not be a problem, but if either the trunk or roots contain decayed, damaged, or weak areas, these problems could result in failure.

In the same manner, individual limbs are subject to higher stresses if too much of its foliage and lateral growth have been removed. Trees that contain long limbs with foliage only on the tips will be more likely to break than limbs that contain many smaller, outward growing limbs and an even amount of foliage. The even amount of outward growth and foliage help distribute the stress load from high winds along the entire length of the limb instead of concentrating it at the tip.

In summary, over-pruning causes:

- excessive wounds that must be healed
- reduced food storage
- increased interior sprouting
- decreased tip growth
- increased end weight on limbs
- increased chances of sunscald/sun injury
- increased maintenance expense
- increased chances of wind or ice damage
- **AN UGLY TREE!!!!**

As trees get larger, the chore of growing turf under them often grows as well. From a pure health standpoint, the tree would prefer to have no competition from turf, shrubs, or flowers. Trees would prefer organic material slowly breaking down on the soil surface around them, with no competition, which would not generally be considered an attractive landscape picture. The health of your tree should not be sacrificed, however, for the sake of a green lawn. Remember that city trees must overcome a great number of negative forces. Over-pruning shouldn't be one of them!

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