

Proper Tree Pruning and Care

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Pruning Trees - Why Prune?

What to think about....

- Safety
 - Removal of dead branches
 - Remove storm damage
- Aesthetics
 - Enhance form
 - Stimulate flowering
- Health
 - Remove crowded or rubbing limbs
 - Remove diseased or insect infested wood
 - Develop strong structure
 - Increase airflow and reduce pest problems



When to Prune



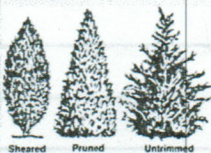
-Routine Pruning

- Removal of weak, diseased, or dead limbs
- Performed any time during the year

- Heavy Pruning

- Removal of large amount of foliage
- Avoid just after spring flush

When to Prune Conifers



- During the dormant season
 - Will minimize sap and resin flow from cut branches
 - Will maximize wound closure during the growing season

When to Prune Deciduous?



- Avoid pruning in late winter/early spring due to sap flow
- Avoid pruning from spring through summer due to insect/disease problems
- Avoid pruning after July –flower bud sets
- Fall –normally the best time!
- Follow recommended guidelines

When to Prune Hardwoods

▪ Without showy flowers

➢ Prune in the dormant season

- Reduces the risk of spreading diseases (ex. Dutch elm disease)
- Reduce sap flow from the wound
- Easy to visualize tree structure
- Maximize wound closure during the growing season

When to Prune Hardwoods

- With showy flowers

- Prune in the dormant season for the same reasons as trees without showing flowers
- To preserve current year's flower crop
- **Early spring flowering trees** (redbud, dogwood) - immediately after flowering
- **Summer flowering trees** (Sweet-bay magnolia, sourwood) – during the dormant season

How much to prune?

- **Depends on**
 - tree size, species, age
 - Pruning objectives
- **Things to remember**
 - Trees recover faster from several smaller wounds than from one large wound
 - Maintain an even distribution of foliage through out the crown
 - Mature trees require little routine pruning

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

Rule-of-thumb

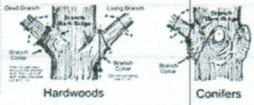
- Never remove more than 1/4 of a tree's leaf bearing canopy
- For large mature trees
 - Should be limited to removal of dead or potentially hazard limbs
 - Remove no more than 10-15% of live foliage



Pruning Cuts

Proper Pruning Principles

- Live branches
- Look for branch collar and branch bark ridge
- Cut just outside branch bark ridge angling away from the tree



Hardwoods Conifers

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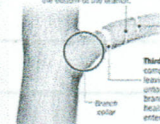
Pruning Cuts

Dead branches

- Look for branch collar and branch bark ridge
- Cut just outside the ring of wound wood tissue

Pruning large tree limbs

The three-cut branch removal method prevents damaging the tree further and encourages its natural healing processes:



First cut: Saw halfway through the bottom of the branch.

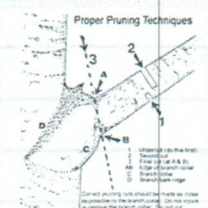
Second cut: Saw halfway through the top of the branch. Without these two cuts, the weight of the branch might tear and damage the branch collar.

Third and final cut: Saw completely through the branch, leaving the branch collar untouched. Chemicals in the branch collar encourage rapid healing and prevent rot from entering the heart of the tree.

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Pruning Cut

Large Branches – use Three step Method



Proper Pruning Techniques

1. Undercut (A & B)
2. Top cut (C & D)
3. Final cut (E & F)

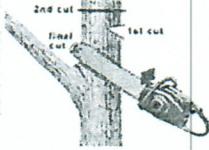
Cut 1: Partially cut up into branch 1/3 to 1/2 of the way through

Cut 2: Saw down through branch

Cut 3: Saw through branch just outside the branch collar

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Pruning Cuts



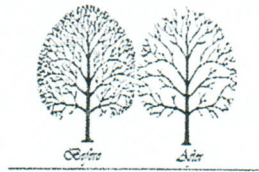
Drop Crotch Cuts

-Used to reduced size of tree or to remove damaged stem

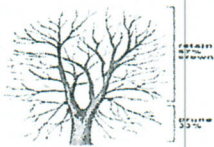
-Final cut is just inside the branch bark ridge, cutting through the stem parallel to the branch bark ridge

Pruning Approaches

- **Crown thinning**
- -primarily for hardwoods
- -Used to increase light and airflow penetration
- -intent is to maintain form and structure
- -remove no more than $\frac{1}{4}$ of the living crown at one time in a given year



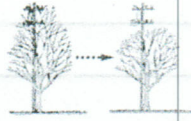
Pruning Approaches



Crown raising

- Used to provide clearance
- After pruning the ratio of live crown to tree height should be at least two thirds. e.g. a 12 ft. tree should have live branches on at least the upper 8 ft.

Pruning approaches



■ Crown reduction

- used for trees that have grown to large for its space
- preferred to topping because:
 - Increases the time before pruning is needed again
 - Minimizes stress
 - Cuts should be made at lateral branches that are at least 1/3 the diameter of the stem being cut

CROWN REDUCTION


Why topping hurts

■ Stresses the tree

- removal of large portion of leaf bearing crown can result in starving a tree
- more vulnerable to insect and disease

■ Causes decay

- create a wound(stub) that can not heal and will be exposed to decay
- creates pathways for decay organisms to move into lower limbs and trunk



Why topping hurts

■ Leads to sunburn


- results in cankers, bark splitting, and death of some branches

■ Creates hazards

- survival mechanism is to create multiple shoots
- shoots form from buds that are near the surface
- shoots are prone to breaking

■ Makes an unattractive tree!

- destroys the natural shape that can't be regained



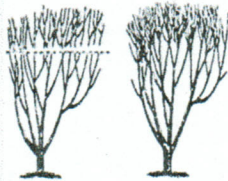
Why topping hurts

- Is expensive!
 - requires pruning every few years
 - if the tree does not survive it will have to be removed
 - reduces property value
 - increases potential for liability



When do you need an arborist

- Leaves don't look right
- Signs of insects or disease
- Dead or dying limbs
- Pruning is needed
 - For removing hazards
 - Near power lines, utilities
 - Where working is off the ground
- Plant health care



Selecting an Arborist

- Look in phone book or contact International Society of Arboriculture (<http://www.isa-arbor.com/>)
- Ask for certification credentials
- Ask for insurances, including proof of liability and workman compensation
- Ask for local references
- Have more than one arborist look at the job
- Get the work to be done and cost in writing
