

# PRUNING — WHY, WHEN AND HOW<sup>1</sup>

by David L. Hensley

Pruning is an integral part of the maintenance of any landscape site. Correct pruning helps maintain vigorous plants and can aid the supply of additional energy for development of flowers, fruit and limbs.

Pruning is most generally conducted to control the size of plants and to bring overgrown plants back into bounds. Extreme or radical pruning to control size can be eliminated by correct plant selection. Choose plants that "fit" the landscape purpose. Don't try to make a large growing plant fill the need by extensive annual pruning.

Pruning aids the survival chances of newly planted trees and shrubs by compensating for reduced root systems. The tops of bare-root plants should be pruned back 1/3 to 1/2. Balled-and-burlapped and container-grown material require less severe thinning but still may require some reduction of the leaf surface.

Pruning aids in maintaining the health and appearance of the plant. Minor insect and disease infestations can often be controlled by removing the affected portions. Damaged and dead wood should also be removed.

Future flower and fruit development can often be stimulated by correct pruning. Removal of shrivelled and faded flowers and fruit allows more available carbohydrates for development of next season's buds.

Personal and property damage can be reduced or avoided by removal of low hanging and dangerous limbs. Other maintenance procedures, such as mowing or spraying can also be speeded or aided by removing low limbs.

## When

Timing is one of the most important factors in correct pruning and is usually based on the flowering and fruiting habit of the plant. Trees and shrubs that bloom before the end of June produce flower buds on the previous season's growth. Plants, such as *Magnolia* sp. and *Forsythia* sp.,

should be pruned immediately after flowering. Plants that flower after the end of June, such as *Buddleia* sp. (Butterfly-bush) and *Hibiscus syriacus* (shrub althea), form flower buds on the current season's growth. These species should be pruned in the winter or early spring.

Plants valued for their fruit should be pruned in the winter or early spring after the fruit drops. A maintenance schedule which divides plants into pruning groups based on flowering or fruiting will aid the operation and reduce confusion.

Evergreens, both broadleaved and narrow-leaved, can be pruned any time the wood is not frozen. Pruning of most conifers every two or three years is essential for size control, since new growth seldom arises from older wood. The shoots of coniferous evergreens, such as *Pinus* sp. (pine) can be pinched back in the spring to thicken these plants. Pinch the candle back about half way when the new needles are about 1/4 inch long.

Most shade trees should be trained while young. Establish alternate branching and remove weak branch angles or crotches to prevent problems in later years. Shade trees are generally pruned in late winter or early spring. Some trees, such as *Ulmus* sp. (elm), *Betula* sp. (birch), *Cornus* sp. (dogwood), *Acer* sp. (maple) and *Cladastrus lutea* (yellowwood) are known as "bleeders." These plants may be best pruned in summer or fall. The sap dripping from spring wounds will not harm the plant, but may be objectionable to clients.

Late summer pruning should be avoided. New growth may be encouraged and will not be sufficiently hardened to prevent winter damage.

## How

*Deciduous Shrubs.* Deciduous plants should be pruned using a thinning technique which preserves the natural shape. Prune out weakened, diseased and damaged portions first. Cut

<sup>1</sup>Presented at the annual meeting Kentucky Chapter, ISA at Louisville, Kentucky in January 1979.

other branches back at varying lengths.

Always cut to an out-facing bud. This will cause the new branch to grow outward rather than into the center of the plant. Make the cut 1/4 inch above the bud. Pick off or cut off at a 45° angle the inward facing bud on plants with opposite buds to prevent a fork.

**Evergreen Shrubs.** Needle-type evergreen shrubs may be pruned using the same type thinning technique. Cut as close to the main branch as possible. Avoid severe pruning into older brown or dead areas, as these branches will not regenerate new growth. Long shoots of early growth should be tipped back to retain the desired shape.

**Broadleaf evergreens** are also pruned with a thinning technique. Holly trees should be pruned lightly every year or heavily every three years.

**Shade Trees.** The best time to alter shade trees, if needed, is when they are young. Establish alternate branching after the tree has been established for 2 or 3 years.

Choose well spaced branches; close branches on the same side of the tree will compete with neither developing into a desirable branch. Remove branches with narrow crotches as these are more likely to break under wind or snow loads. Prune so branches are emerging on a three dimensional perspective, don't prune so the tree has a "flat" appearance.

Pruning when the tree is without leaves allows you to better see the form and branching. It is usually more effective to start at the top and prune your way down. Do not remove the central leader in such trees as *Platanus* sp. (plane tree), *Quercus* (oak), *Nyssa sylvatica* (black gum) and *Liquidambar styraciflua* (sweet gum).

Large trees may need to be thinned to prevent property and personal injury. Do not dehorn trees. This practice not only ruins the form but weakens the plant. In addition to large wounds for disease and insect entrance, the resulting flush of "feathery growth" is weak and susceptible to

storm damage.

A three cut method is recommended for larger limbs. The first cut is made eight to ten inches from the crotch or branch angle and on the underside of the limb. It should be 1/3 to 1/2 way through the limb. The second cut is made one to three inches further out from the first cut. This cut is made from the top and through the limb. As the limb falls, any bark rip, or break is stopped at the first cut. This prevents wounding and damage to other limbs or the trunk. Make the final cut through the branch collar. Support the stub to prevent bark wounds.

The wounded area should be smoothed with a knife to promote healing. At present there exists a controversy as to whether or not to apply wound dressing to the area. Shortle and Shigo (1978) recommend covering the wound with black plastic. Other references recommend a tree wound dressing, but without evidence to indicate efficacy. The procedure you follow is between you and your clientele. Many homeowners, however, may feel the job is incomplete unless they see wound dressing.

Damage to root systems of large shade trees may occur from construction, and other disturbances. If severe root damage occurs, some thinning to the crown may be necessary to compensate. When thinning large branches, remove them at a crotch, do not leave stubs. The more severe the disturbance of the root system, the greater the need for thinning the crown.

#### Literature Cited

Shortle, W.C. and A.L. Shigo. 1978. *Effect of plastic wrap on wound closure and internal compartmentalization of discolored and decayed wood in red maple.* Plant Disease Reporter 62(11):999-1002.

*Extension Specialist in Horticulture  
University of Kentucky  
Robinson Research Station  
Quicksand, Kentucky*