

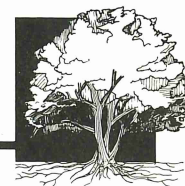
Tree Removal

Sometimes, despite your greatest efforts at rejuvenation, a tree dies and must be removed. *Symptoms of a thoroughly dead tree (one which has been overcome by disease or insects) include a lack of foliage in the spring and falling limbs throughout the year.* Such trees will not recover, are hazardous and could cause considerable damage to surrounding structures if not removed promptly.

Tree removal should be handled by a reputable professional. Exercise caution in choosing a person to do the job, and be sure to select someone with the necessary equipment, proven ability, and the financial responsibility to

cover any damage that might occur. Because the removal of trees is a dangerous and difficult task, you can expect to pay rates ranging from less than \$100 for the removal of small trees and shrubs to a cost of several hundred dollars for removal of a large tree. Before any work is done, negotiate a written contract specifying how the tree is to be removed, where the wood is to be taken, and who is liable in case of damage. A written agreement, which protects the tree worker's rights as well as yours, can prevent a great deal of misunderstanding and ensure that the work is done to your satisfaction. These suggestions also apply when having your trees professionally pruned.

Mature Tree Care



Think of preventive health care for trees as an investment in natural beauty that pays big dividends.

When one considers that the value of a healthy tree increases as it ages, and that some tree species, such as oak and walnut, can live as long as 200 to 300 years, then providing regular care for your trees is like putting money in the bank. Remember also that curing a problem once it develops is much more difficult, time-consuming and costly than preventing one. Therefore, it is worthwhile to give your trees regular maintenance to ensure that they are able to offer enjoyment and value for generations. *An effective tree maintenance program should include four major practices: inspection, mulching, fertilizing, and pruning.*

Tree Inspection

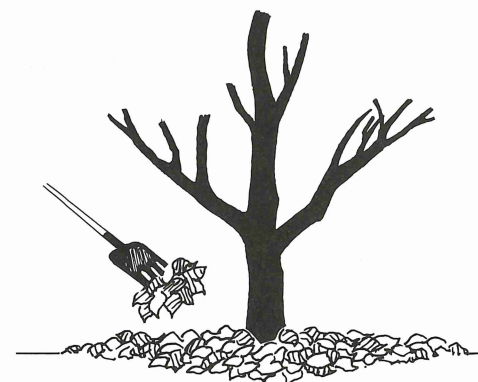
Tree inspection is an evaluative tool to call attention to any change in the tree's health before the problem becomes too serious. *By providing regular inspections of mature trees (at least once a year), you can prevent or reduce the severity of future disease, insect and environmental problems.* During the inspection, be sure to examine four characteristics of tree vigor: new leaves or buds, leaf size, twig growth, and crown dieback.

A reduction in the extension of shoots (new growing parts, such as buds or new leaves) or in the size of leaves is a fairly reliable cue that the tree's health has recently changed. To evaluate this, compare the growth of shoots over the past three years. Determine if there is a reduction in

the tree's typical growth pattern.

Further signs of poor tree health are stem decay and crown dieback (gradual death of the upper part of the tree). These symptoms often indicate problems that began several years before. Loose bark or deformed growths, such as stem conks, are common signs of stem decay.

Any abnormalities found during this inspection should be noted and watched closely. If you are uncertain as to what should be done, report your findings to your local arborist, a tree care professional for advice on treatment.



Mulching

Mulching can cut down on stress by providing trees with a stable root environment that is cooler and contains more moisture than the surrounding soil. Mulch can also prevent mechanical damage by keeping machines such as lawnmowers away from the tree's base. Further, mulch acts to reduce competition from surrounding weeds and turf.

To be most effective in all of these functions, mulch should be placed two to four inches deep and extend as far as possible from the base of the



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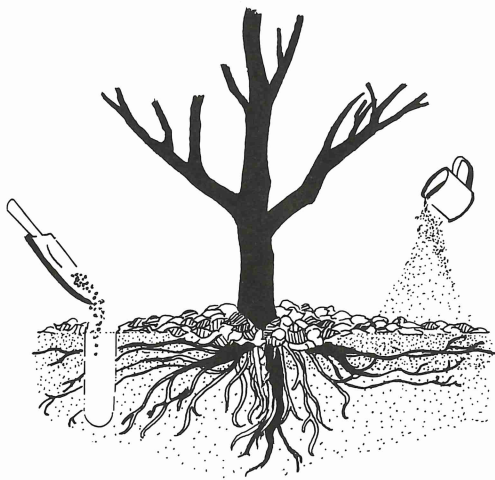


tree (at least two feet for young trees). When possible, mulch should extend two to three times the branch spread of the tree.

An adequate mulch layer is two to four inches of loosely packed organic material such as shredded leaves, pine straw, peat moss or composted wood chips. Plastic should not be used because it interferes with the exchange of gases between soil and air and inhibits root growth. The thickness of the mulch layer is important; mulches five or six inches thick may inhibit gas exchange.

Fertilization

Fertilization is another important aspect of tree health care. Fertilizer is best applied in the fall or early spring, although it is not harmful to apply fertilizer at any time during the year. In addition to providing minor nutrients, fertilizers increase the amount of three major nutrients in the soil: nitrogen, phosphorous, and potassium.



Nitrogen (N) is possibly the most critical of these nutrients. It is the element most responsible for maintaining the green color in leaves and for normal twig growth. Because nitrogen is rapidly depleted from the soil, it must be replenished regularly to ensure plant health.

Phosphorous (P) assists in the maturation of tissues and stimulates root growth. It is particularly important in flower, fruit, and seed production. Fortunately, phosphorous in the soil is not depleted as rapidly as nitrogen, yet its sparsity may limit the number of plants that can thrive in a particular area.

Potassium (K) – also known as potash) assists in the manufacture of sugar and starches, helps tissues mature properly, and heightens the color of flowers. Plants without enough potassium may become either too succulent or too brittle.

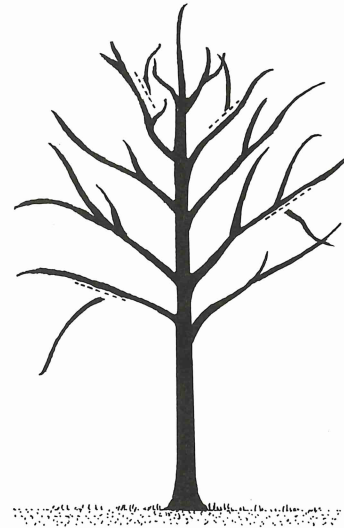
Various fertilizer mixtures contain different amounts of these and other nutrients. Soil conditions, especially pH and organic matter content, vary greatly from region to region, thus the proper selection and use of fertilizer is a complex process. When applying fertilizer remember that nitrogen can be applied directly on the soil surface, whereas phosphorous and potassium, like other insoluble nutrients, should be applied via holes in the soil. Consult your garden center staff or a tree care professional for advice on application and the best blend for each of your trees.

Pruning

Pruning or trimming should be done regularly to control its shape and keep branches from harming surrounding structures or people. For most trees, the best time to prune is winter to early spring. Trees pruned at this time of year close their wounds more quickly. Exceptions to this are trees that have problems with disease in the spring. Oaks and honeylocusts are examples of trees which are susceptible to disease if pruned during rainy spring weather.

Pruning should always be performed sparingly: overpruning is extremely harmful because without enough leaves, a tree cannot gather and process enough sunlight to survive.

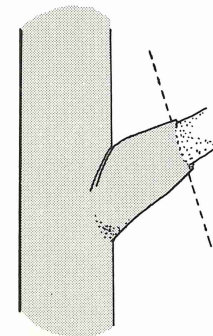
In some cases, however, pruning is absolutely necessary because damaged limbs pose a threat to other healthy parts of the tree or surrounding structures.



Pruning also directs the growth pattern of a tree. Branches typically grow in the direction that the buds are pointing, and the outermost bud on a branch has the most influence on the direction of future growth. Therefore, you can control the orientation of a branch by carefully selecting the pruning cut's location. Cut so that the outermost bud on the branch is pointing in the direction that you want the branch to grow.

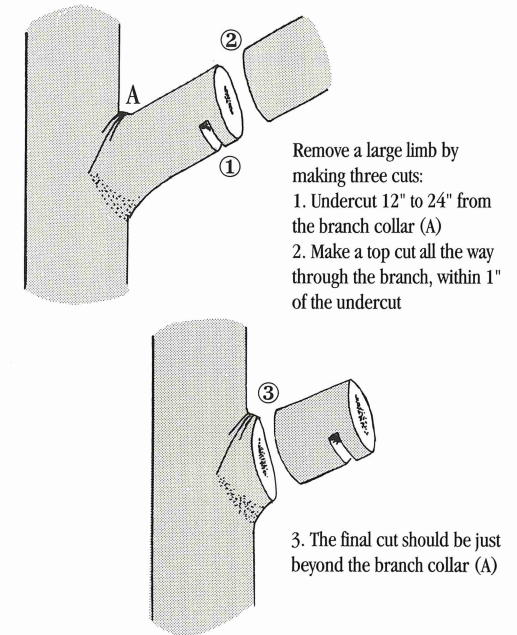
Pruning a Dead Branch

A dead branch stub that has a collar of live wood should be cut just at the outer edge of the collar (swollen area where one branch meets another).



Once you begin a cut, always finish it. Prune limbs and branches so that you preserve the branch's collar. This often appears as a collar (ridge) of rough bark on the trunk that formed in the "Y" of a growing branch. The final pruning cut should also be angled so that it begins in the crotch and extends down and outward at an opposite angle as the branch collar. This will not result in a cut flush with the trunk; rather, the base of the cut will extend out from the trunk. The purpose of cut ① is to ensure that when cut ② is completed, the bark does not "tear" down the remaining branch. Cut ③ finishes the job.

Pruning a Live Branch



A healthy tree will seal on its own, so wound dressings, which may actually interfere with this process, are not necessary. To aid in the recovery of cuts, water and fertilize your trees well. If you are not confident in the particular pruning needs of your tree, contact your local tree care professional.