

## RESOURCES

The Cooperative Extension has several leaflets that describe in greater detail many of the cultural practices in this brochure:

- |                                |                                      |
|--------------------------------|--------------------------------------|
| #2583 Planting Landscape Trees | #22181 Treating Tree Wounds          |
| #2574 Pruning Landscape Trees  | #2958 Fertilizing Woody Plants       |
| #2576 Staking Landscape Trees  | Sacramento Area Landscape Trees List |

Other references include: **All About Pruning** — Ortho Books; **All About Trees** — Ortho Books; **Pruning** — How-To Guide for Gardeners — HP Books; **Sunset New Western Garden Book**; **Sacramento: City of Trees** — George C. Dobbins

People to contact for more information on trees include:

A professional arborist (in the phone book under TREES)

Tree Services — City of Sacramento — 449-5304

County Tree Coordinator — 440-6291

Cooperative Extension Urban Horticulture Advisor — 366-2013

A California Certified Nurseryman (at nurseries and garden centers)

University of California Master Gardeners — 366-2013

## SACRAMENTO TREE FOUNDATION

The Sacramento Tree Foundation is a private non-profit organization dedicated to the planting and preservation of trees in the city and county of Sacramento. It was incorporated by the State of California on Arbor Day, March 7, 1982. The foundation's goals are to plant trees along public streets, at schools and in parks and to promote education programs about trees. For more information, call 924-TREE.

## U.C. COOPERATIVE EXTENSION

Cooperative Extension provides Sacramento County residents with problem-solving information about agriculture, backyard gardening, community and natural resource development, family and consumer education, horticulture, and youth development. For information about any of Cooperative Extension's educational programs, visit the extension office at 4145 Branch Center Road, Sacramento, or phone (916) 366-2013.

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Written by Pamela S. Bone

U.C. Cooperative Extension Urban Horticultural Advisor

Designed and illustrated by Carol Regner Bohmbach

U.C. Master Gardener

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A BRIEF GUIDE TO THE PLANTING AND MAINTENANCE OF TREES

Produced jointly by

The University of California Cooperative Extension, Sacramento County

and

The Sacramento Tree Foundation

## SELECTION

What do you want from a tree? — Color in the fall, flowers, fruit, a particular shape, one that is tolerant of water or drought? Trees come in all shapes, sizes and habits. Some have shallow roots; others, deep. Some have serious pest problems. Look at the site carefully. Is there room for the tree's top and roots? Will the tree interfere with phone lines, sewers or buildings? Choose the right tree for the right place. It will save you problems in the long run. Select healthy trees with no wounds on the trunk or branches. Avoid trees that are root bound. Choosing a good tree is the first step to a successful tree planting.



## PLANTING

Proper planting techniques may mean the difference between a healthy, vigorous tree and one that performs poorly or dies. By observing the following recommendations, you will be giving your tree the best possible start in life.

**Plant the tree high.** Dig the hole one or two inches less than the soil level in the container or the depth of the root ball. In other words, plant the tree one to two inches higher than the surrounding soil. Don't worry about a few roots showing on the surface. If you have to dig deep to get through a hardpan or restricted layer, refill the hole with the original, loosened soil and let it settle for a week or so before re-digging a hole for the tree. Be sure not to plant the tree too deep. This may lead to crown rot and eventual death of the tree.

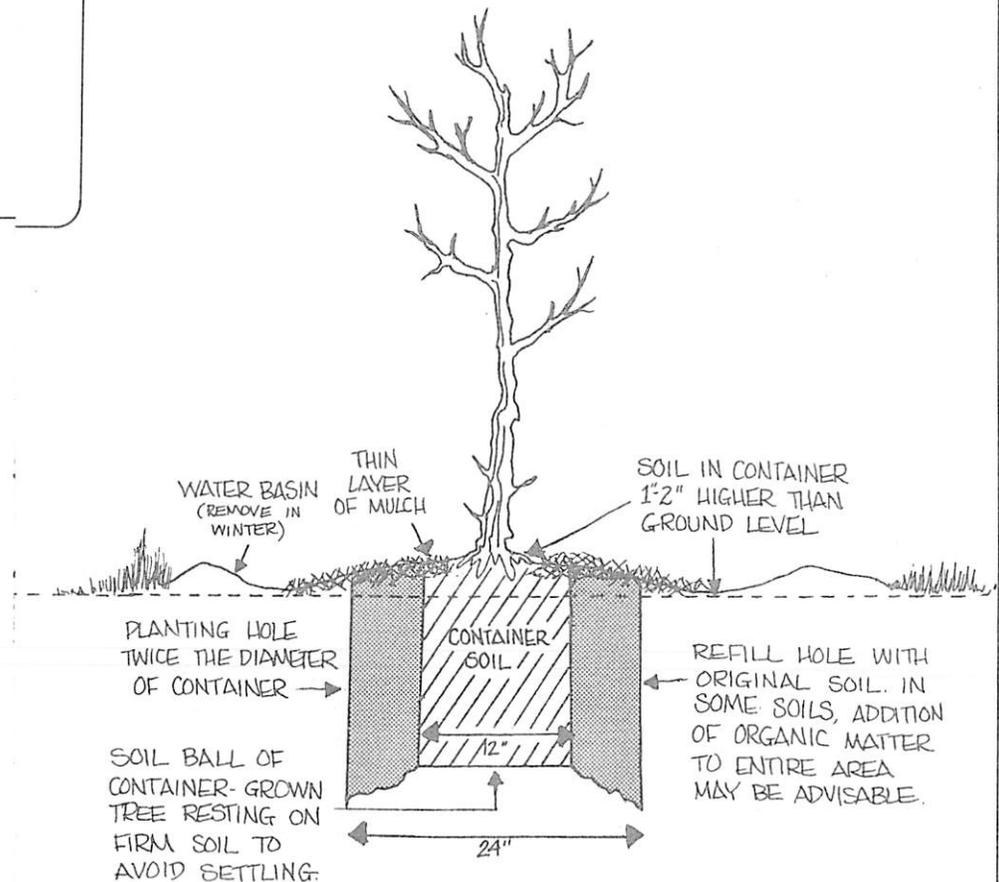
**Dig the hole** two times wider than the container or root ball. For bareroot trees, make the hole wide enough to accommodate the roots without bending them.

**Roughen the sides** of the hole to make it easier for the roots to penetrate. Check for twisted, circling or kinked roots. Cut and remove roots that wrap around or are broken or discolored.

**Refill the hole** with the original soil. If a tree is to mature in the landscape, it will have to grow in the existing soil of the planting site. Soil amendments like peat moss, compost, rice hulls or fir bark are not necessary in most situations. Adding amendments to the entire area may be helpful in extremely poor soils. To exclude air pockets, firm the soil around the roots as you fill the hole. Keep the trunk area free of soil.

**Trees need oxygen** — don't plant them in wet, soggy soils.

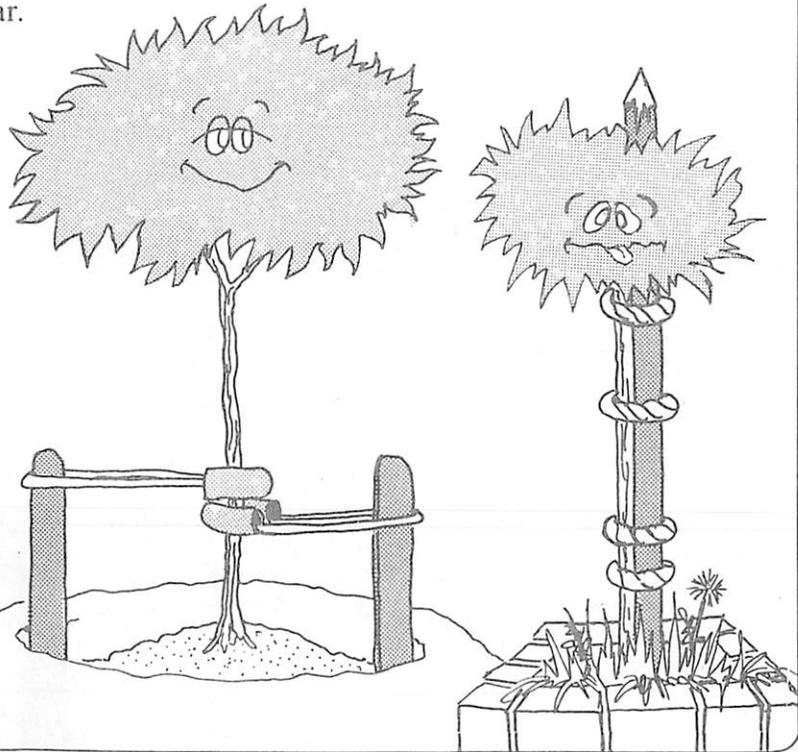
**Water the tree** thoroughly after planting to settle the soil around the roots.



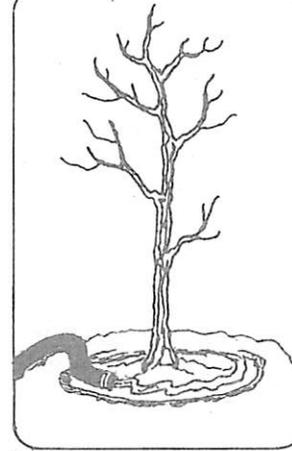
## STAKING

Not all trees require staking. In fact, improper staking may seriously weaken, deform or injure a tree. A tree left unstaked, with its top allowed to move in the wind, will develop a better root system, have greater trunk taper and thickness, and will have less wind resistance than a rigidly staked tree. In some cases, a young spindly tree may require staking for a short time to hold it upright until it develops a stronger trunk. *Always remove the nursery stake.* A tree tied to only one stake is subject to trunk and branch wounds, produces a smaller root system and blows over more readily when the stake is finally removed. If you need to stake a tree, do it correctly.

When staking, use two stakes, one on either side of the root ball. Pound the stakes in deep enough so the stakes can't move in the wind. Make the stakes as short as possible. To find the right height, move your hand up the tree trunk until the tree just remains upright — this is where to place the ties. Use two broad ties, of flexible material. Cut the stakes two to three inches above the ties. Leaving the stakes too tall will cause injuries to the tree when the wind rubs it against the stakes. *Remove the stakes as soon as the tree will stand on its own.* Most trees will not need to be staked longer than one year.



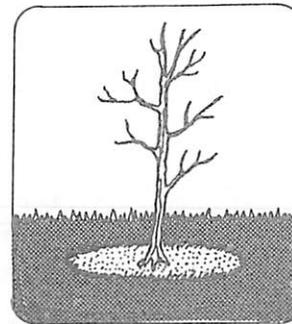
## WATERING



Newly planted trees require regular watering. Construct a basin around the tree, slightly larger than the root ball. Fill the basin once or twice a week during hot weather, less often if it is cool or it rains. After six weeks or so, roots will have grown into the soil surrounding the planting hole, and the tree will require less frequent watering.

Since soils and environmental conditions vary, periodically check the soil to see that it is not too wet or too dry and that you are watering deeply enough. Be sure to water the entire root area and slightly beyond. Roots won't grow in dry soil. However, don't over-water; roots can rot in soil that is too wet. Remove the basin in the winter so the tree doesn't stand in water.

To conserve water and control weeds, apply a four- to six-inch deep organic mulch around the tree. Don't use plastic mulches. They may hold in too much moisture and inhibit oxygen exchange, leading to root and trunk rot. Sometimes plastic mulches may not allow enough water to reach the roots, stressing the tree for moisture. To avoid crown rot, keep the mulch away from the trunk.



## LAWN COMPETITION

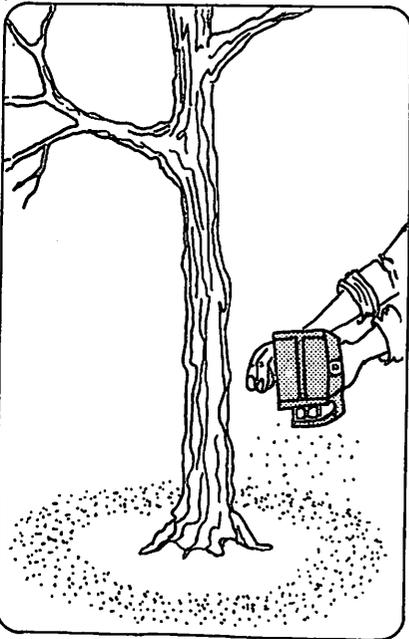
When planting trees in lawn, keep the grass 15" from the trunk for the first three years. Competition from turfgrass stunts tree growth, and even additional fertilizer and water will not overcome this effect. A bare area around the trunk also helps prevent injury to the tree from a mower or string trimmer. Trunk wounds to a young tree can have a severe dwarfing effect.

## FERTILIZING

Nitrogen (N) is the element most lacking in Sacramento soils and is usually the only nutrient to which landscape trees respond. Phosphorus (P) and potassium (K) are seldom needed for landscape trees in our area. Nitrogen moves readily in the soil; therefore surface application of this nutrient is very effective. Making holes in the ground to apply nitrogen is not necessary. However, the aeration the holes provide may be of benefit to the tree.

For newly planted trees, apply 1/10 of a pound of actual nitrogen. This is about 3/4 of a cup of ammonium sulfate (21% N). Apply the fertilizer to a 3' x 3' area around the tree, keeping it 6" from the trunk. Water it in thoroughly. Apply the fertilizer at planting time and again six weeks later. If a complete fertilizer (one with N, P and K) is used, choose one high in nitrogen and follow package directions.

For the tree to benefit from the P and K in a fertilizer, the fertilizer should be placed where the roots are, as these nutrients do not move readily through the soil. To do this, a complete fertilizer can be used in the planting hole. Be sure it is a slow release type and follow directions carefully.



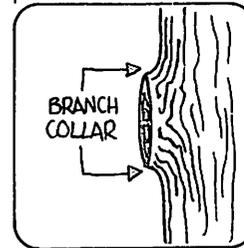
After the first two years, increase the amount of fertilizer applied. If you use ammonium sulfate, apply 1½ cups per 100 square feet of area beneath the branches. Make the first application in late winter — before spring growth starts — and again in six weeks.

Mature trees usually do not require fertilizing as long as their leaf color and size is good. If needed, broadcast and water in a high nitrogen fertilizer according to rates given on the package.

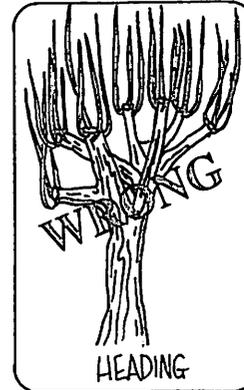
## PRUNING

Correct pruning will help a tree develop proper structure, control its size, direct growth and maintain tree health. Improperly done, pruning can seriously affect the health, safety and beauty of a tree. Here are some tips to help guide you:

1. Most pruning that cannot be done from the ground or a short ladder should be done by a competent arborist. (Don't just hire any person with a chain saw; ask for references and credentials.)
2. Train trees when they are young. It's often difficult to correct poor structure once the tree is mature.

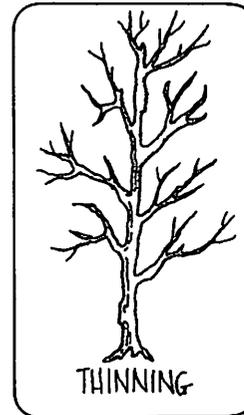


3. Do not stub tree branches. This is called heading. Instead use a thinning cut: remove the entire branch or cut back to another branch that can assume the new lead. Heading a tree causes several vigorous upright shoots to grow. They are weakly attached and crowded, and the natural shape of the tree is destroyed. Thinning retains a tree's shape. Do not head or "top" a tree to lower its height. Instead, prune by thinning.



4. Never cut out the top of trees with a central leader, like birch, liquidambar, alder, tulip tree and most pines. This ruins their shape and opens them up to invasion by borers and disease.

5. Do not make cuts flush to the trunk or branch. It has been shown that the small ridge or collar at the base of every branch protects the tree from disease and insects. Cut just beyond this collar, leaving it intact, but don't leave a long stub. It is not necessary to use a wound dressing on the pruning cuts.



6. Remove any dead, diseased or criss-crossing branches. Remove competing limbs. Avoid one branch growing directly over another. Space branches evenly around the tree at least eight inches apart. Select branches with wide attachments. Narrow crotches are weak and can split out. Keep side branches from outgrowing the leader.