



Tree Planting



Selecting and planting trees are not tasks shrouded in mystery and magic. However, both the novice and experienced tree planter should heed these prudent suggestions.

Nurseries sell trees in three forms: **bare root, balled-and-burlapped, containerized.** Bare root trees, as the name implies, lack soil or growing media on their roots. Therefore, it is imperative never to let the roots dry. The wise planter should soak the roots in water or cover them with wet peat moss and store them in a cool place until planting time.

Balled-and-Burlapped trees, on the other hand, retain their native soil. Although losing 90% or more of their root system during the digging process, these trees generally have a higher survival rate than transplanted bare root stock; yet, if the root ball is not kept intact during transplanting, survival is reduced considerably.

Containerized plants are currently very popular. However, containerized plants frequently suffer from poor root structure. While often unseen at planting time, kinked or encircling roots will cause future health problems for the transplant. During the transplanting process, these deformities must be gently straightened or cut!

As written and compiled by Jenna Terrez (CPS) and Mark Peterson (SAWS)

Selection Process

When choosing the right tree for your home, remember the following *Five S's*:

1. **Specific**—the purpose of your new tree, i.e. shade, privacy, color, etc. Always choose a species that corresponds to your landscape need.
2. **Site**—the matching of plant biological requirements to the physical conditions of the site. For example, plants preferring acidic soil must be planted in acidic soil. According to the *Trees for the San Antonio Region* guide, avoid planting trees that:
 - Will block traffic signs or street corners;
 - Are too close together;
 - Block transformer doors;
 - Are within three feet of clearance around the sides and back of a transformer; or



Arizona Cypress



Bur Oak



Chinkinpan Oak

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- Are too close to sidewalks or pavement.

3. **Space**—describes the need for adequate room above (both vertically and horizontally) and below ground for future growth.

Canopy trees are great trees to plant on the west side of your home to help shade your house from the afternoon sun; however, canopy trees ought not to be planted under utility lines. Instead they should be planted 20 feet away from the lines. Utility-friendly understory trees are can be planted five feet away from the lines and eight feet away from the poles.

Follow these guidelines for proper tree spacing:

Tree Size	Distance from Building
Small	10 feet
Medium	15 feet
Large	20 feet

- 4.
5. **Structure**—refers to an individual specimen’s physical attributes, such as a straight and well tapered trunk, well distributed branches along the entire trunk, branches smaller than the main trunk, 50% or more of the branches originate in the lower 2/3’s of the trunk, or significant wounds on the branches or trunk
6. **Standards**—the proper height and root ball proportions as defined in the American Standards for Nursery Stock. Of the standards mentioned within the manual, the most important one is the standard concerning root ball size. With the exception of very large diameter root balls, minimum root ball diameter should equal or exceed a ratio of 12” for each inch trunk caliper. Above all else, purchase a quality specimen and examine it carefully before you make the purchase.

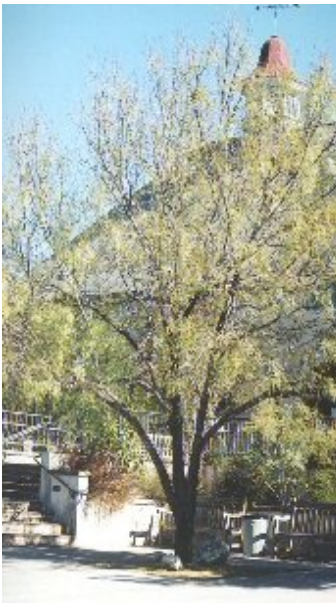
Planting Process

Always remember the old gardener’s adage: *Always plant a \$10.00 tree in a \$100.00 hole!*

Prudent planters no longer refer to the spot where the tree is to be planted as the “hole” but rather as the “planting area”. Current research indicates that the ideal habitat for a newly planted tree is a planting area that is three to five times the diameter of the root ball and has been loosened and mixed by shovel or rototiller. Feeder roots, some as fine as human hair, quickly exploit this moist, aerated soil, providing the tree with the water and minerals it requires to grow. A planting area constructed thusly bears a striking resemblance to the natural forest ecosystem. In



Live Oak



Mesquite

other words, the prudent planter attempts to mimic what the tree loves best.

The following steps attempt to recreate this ideal habitat:

1. Mark out a planting area two to five times the diameter of the root ball.
2. Using a shovel or rototiller, cultivate the soil to the depth of the tree's root ball. If the site proves unsuitable for this action, dig a hole at least twice the diameter of the root ball. The bigger the hole, the better!
3. Add and mix well a small (no more than 20% of total soil volume) amount of compost to the planting area.
4. Dig a shallow hole in the center of the prepared area only as deep as the root ball.
5. Place the root ball in the hole in such a manner as to ensure the root ball top is level with the surface of the surrounding soil. If the site has poor drainage or limited soil depth, then the root ball may be raised two or three inches above the surrounding soil.
6. Cut all wires and rope securing the burlap around the root ball and pull the burlap or wire at least half way down the root ball, preferably all the way.
7. For containerized trees, check to see if encircling roots are present. If so, gently separate and spread them into the planting hole. If they are too large to spread then cut them.
8. Backfill with the original soil using water instead of feet to settle the soil. Do not put any soil on top of the root ball!
9. Apply no more than eight ounces of a slow-release fertilizer (preferably organic) to the planting area.
10. Apply three to four inches of wood chip mulch over the entire planting area. If possible, place one inch of compost between the mulch and soil. Do not put mulch within three inches of the tree trunk.
11. Stake only if necessary. Support ties should be placed between 1/3 and 1/2 of the total tree height.
12. Prune only dead, diseased, broken, or rubbing branches.

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Pruning Your Tree

According to the *Trees for the San Antonio Region* guide, pruning is not recommended until after your tree has overcome transplant process and has a self-supporting root system. We prune to remove dangerous hazards for the tree's health, such as dead, diseased, or dying branches. This will also help prevent future hazards, such as narrow branch angles or rubbing branches. Follow these effective pruning



Osage-Orange



Pecan

tips:

- Consult with a certified arborist before pruning.
- Never prune any trees close to high voltage electric lines.
- Follow the *Ten Pruning Commandments*:
 1. Always have a reason to prune—if in doubt, then don't take it out.
 2. All pruning is done at a bud or branch regardless of whether you are shortening a branch, removing seeds, or reducing tree height.
 3. Prune to improve tree strength and safety. Reduce trunk and limb breakage by eliminating multiple trunks of equal size and narrow branch junctures that look like "V"s.
 4. Prune to improve tree health by removing the dead, diseased, and dying branches and any branch where light or wind cannot penetrate.
 5. Always maintain the upper two thirds of the tree in branches and foliage.
 6. Never remove more than 25% of the canopy during one pruning cycle.
 7. Never top a tree!
 8. Never leave a stub or remove the branch collar by a flush cut.
 9. Always paint tree wounds on oaks within 30 minutes. This is not necessary for any other tree species.
 10. Always disinfect pruning tools between trees to prevent the spread of disease.

Source: "Trees for the San Antonio Region" guide

Recommended Trees				
Canopy Trees				
Common Name	Scientific Name	Foliage	Mature Height, Mature Spread	Comments
Anaqua	Ehretia anacua	Semi-evergreen	Medium, 35 feet +	Prefers shade; moist soils; white flowers in spring; orange fruit in summer. Also known as Sycamore.
Black Cherry, Escarpment	Prunus serotina var. eximia	Deciduous	Medium, 35 feet +	Fast growing native tree; prefers moist, well drained soils; flowers in spring; red fruit in summer; fall color.
<u>Cypress, Arizona</u>	Cupressus arizonica	Evergreen	Medium, 15 feet +	Fast growing; full sun; conical form; tolerant of various soils; color; tolerant of drought.



Persimmon



Texas Mountain Laurel

Cypress, Montezuma	Taxodium mucronatum	Semi-evergreen	Large, 40 feet +	Fast growing; conical form and feathery foliage.
Elm, Cedar	Ulmus crassifolia	Deciduous	Large, 30 feet +	Moderate growing; bright green foliage in spring, yellow fall color; adaptable to a wide range of sites.
Maple, Uvalde Bigtooth	Acer grandidentatum	Deciduous	Medium, 30 feet +	Moderate growing; fall color; prefers well drained soils; protect from afternoon sun to reduce leaf scorch.
<u>Mesquite</u>	Prosopis glandulosa	Deciduous	Medium, 30 feet +	Very drought resistant; filters wind; allows turf underneath; lacy foliage; upright form; cream yellow flowers; splits into a long tan pod in late summer.
<u>Oak, Bur</u>	Quercus macrocarpa	Deciduous	Large, 45 feet +	Prefers deep and well-drained soil; produces golf ball sized acorns may be a pest concern.
<u>Oak, Chinkapin</u>	Quercus muehlenbergi	Deciduous	Medium, 45 feet +	Prefers well drained soils; often topped, with lance-shaped foliage; attractive light-colored bark; acorns are a food source; highly palatable.
<u>Oak, Live</u>	Quercus virginiana var. fusiformis	Semi-evergreen	Large, 45 feet +	Can be moderate growing; requires appropriate care; spreading form; Caution: Must always paint wounds to prevent Oak Wilt disease.
Oak, Mexican White Live	Quercus polymorpha	Semi-evergreen	Large, 35 feet +	Fast growing with appropriate care; moderate acorn producer. Feeds many pest problems.
Oak, Texas Red	Quercus buckleyi	Deciduous	Large, 35 feet +	Fast growing; "oak leaf" shape characteristic; fall color; good shade tree; requires minimal pruning.
<u>Osage-Orange</u>	Maclura pomifera	Deciduous	Medium, 35 feet +	Moderate fast growing; adapts to a wide range of sites; small green size fruit (female trees). Also known as Bois d'Arc.
<u>Pecan</u>	Carya illinoensis	Deciduous	Large, 45 feet +	State Tree; requires plenty of water and deep soil; prone to limb breakage and pest infestations.
Sycamore, Mexican	Platanus mexicana	Deciduous	Large, 45 feet +	Fast growing; resistant to insect damage; attractive foliage and minimal pruning.

Understory Trees

Common Name	Scientific Name	Foliage	Mature Height, Mature Spread	Comments
Anacacho Orchid Tree	Bauhinia congesta	Deciduous	Small, 10 feet	Does best in full sun; fragrant; flower clusters in spring.
Anacahuita/Wild Olive	Cordia boissieri	Evergreen	Small, 10 feet	Large white flowers most of year; pale yellow fruit; cold sensitive; will re-sprout quickly. Also known as Mexican Olive.

Buckeye, Mexican	<i>Ungnadia speciosa</i>	Deciduous	Small, 10 feet	Understory or full sun; pink flowers; yellow fall foliage
Condalia, Bluewood	<i>Condalia hookeri</i>	Evergreen	Small, 10 feet	Very drought tolerant; sun-shade; well-liked by wildlife
Crape/Crepe Myrtle	<i>Lagerstroemia indica</i>	Deciduous	Small, 5-20 feet	Non-native well adapted region; choice of flower color white to purple; some varieties grow to medium height
Desert Willow	<i>Chilopsis linearis</i>	Deciduous	Small, 15 feet	Fast growing; very drought tolerant; large white, pink or purple tubular shaped flowers; attract hummingbirds, butterflies, and bumblebees
Holly, Possumhaw	<i>Ilex decidua</i>	Deciduous	Small, 10 feet	Sun or shade; loses foliage in fall to expose red berries (female)
Holly, Yaupon	<i>Ilex vomitoria</i>	Evergreen	Small, 10 feet	Sun or shade; red berries (female only); evergreen foliage; preferred food & Shelter for birds
Goldenball Leadtree	<i>Leucaena retusa</i>	Deciduous	Small, 12 feet	Fast growing; feathery foliage; golden yellow (fuzzy balls) in spring.
Oak, Lacey	<i>Quercus laceyi</i>	Deciduous	Medium, 30 feet	Moderate growing, blue-gray and usually yellow fall color; a "Texas SuperStar" by the Texas Cooperative Extension Service
<u>Persimmon, Texas</u>	<i>Diospyrus mexicana</i>	Deciduous	Small, 12 feet	Slow growing; edible fruit matures a dark black in late summer; great wildlife food source but can be a problem.
Plum, Mexican	<i>Prunus mexicana</i>	Deciduous	Small, 25 feet	Prefers well-drained soils; full sunlight; showy white flowers in spring; tart and edible fruit; attracts wildlife.
Redbud, Mexican or Texas	<i>Cercis canadensis</i> var. <i>mexicana</i> or <i>texasensis</i>	Deciduous	Small, 12 feet	Pink-red blossoms in early spring; yellow fall foliage; glossy above leaves; more drought tolerant than Eastern species. Note: Do not use Eastern Species.
Sophora, Eve's Necklace	<i>Sophora affinis</i>	Deciduous	Small, 18 feet	Deciduous cousin to Texas mountain laurel; pink flower clusters (spring) form chains of black (necklace appearance) in late fall and fall.
<u>Sophora, Texas Mountain Laurel</u>	<i>Sophora secundiflora</i>	Evergreen	Small, 18 feet	Fragrant, purple clusters in spring. Very drought tolerant. Caution: Fruit is poisonous if chewed.
Viburnum, Rusty Blackhaw	<i>Viburnum rufidulum</i>	Deciduous	Small, 18 feet	Partial sun or shade; early bloomer with white flowers; berries turn black in fall; good fall color.
Vitex	<i>Vitex agnus-castus</i>	Deciduous	Small, 15 feet	Extremely drought tolerant; bluish-purple or white flowers in summer; leaves are aromatic when crushed. Also known as Lilac

Source: "Trees for the San Antonio Region" guide

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