

Planting and Training Trees

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Benefits

Trees reduce storm water runoff, save energy, and remove air pollution. Carefully located trees reduce noise pollution, screen unpleasant views, frame good views, and increase privacy.

Diversity

“Don’t put all of your eggs in one basket.” Plant more than one or two kinds of trees. This reduces risks of landscape-wide problems with insects, diseases, and stress-related death. Most County Extension Agents have useful lists of suitable trees for your region of Texas. Good lists include small, medium, and large-size trees with notes on positive and negative aspects of each species. There is no “perfect” tree.

Quality

“Get your moneys worth.” Buy strong vigorous plants with thick (large caliper) “trashy” trunks. Avoid root-bound plants with large roots in a circle in the bottom of the pot. Also, avoid plants with rotted roots in the bottom of the container. Avoid thin trunk (small caliper) spindly (willowy) trees with no small branches on the trunk.

A young tree in a small (1- or 5-“gallon”) is usually a better buy than an older tree in a large pot (10-, 20-“gallon” or larger) or with a very large root ball. After 5 years, more of the small-pot trees will still be alive, and most will be larger, more attractive, and healthier than those started as larger trees.

Pot-grown trees usually survive better and grow faster than bare-root or ball-and-burlap trees.

Move trees by lifting the pot or root-ball, not by pulling on the trunk. Do not haul young trees for any distance in an open truck. The wind dries them rapidly and may kill the trees. Use a covered vehicle to haul plants, or cover plants with a tarp or blanket and drive slowly. Water trees as needed upon arrival at the landscape site and frequently during the planting process.

Location

Know your soil and choose kinds of trees that will do well in your soil. Know how much space you have and buy trees with an appropriate mature tree-size. Determine mature size estimates and allow appropriate space. Large and medium size trees need full sun.

Design

Make plans before you start a new landscape. Do you need to screen unwanted views, frame wanted views, and shade buildings and living areas? First, plant trees that will become large shade trees. Later, you can plant smaller trees, shrubs, perennials, groundcover, and annual flowering plants.

<https://agrillifebookstore.org/>

E-447, Xeriscape...Landscape Water Conservation, Douglas F. Welsh, William C. Welch, Richard L. Duble, revised April 2007; methods of designing a water-efficient landscape, or xeriscape; topics covered include planning, soil preparation, plant selection, maintenance, watering, irrigation systems, mulching and mowing.

Planting time

The best time of year to plant trees is December, January, and February. Young tree tops are not actively growing in winter and can better survive the shock of transplanting. The cooler weather gives tree roots time to grow into the surrounding soil before hot weather arrives. Bare-root and ball-and-burlap trees are best planted in December, January, and February. Pot-grown trees planted at other times of the year may survive if mulched and watered carefully and frequently, but many of them will die from transplant shock. Expect lower survival, more stress symptoms, and decreased growth if you use larger pot-sizes and/or plant in warm months.

The first stress symptom is brown leaf margins. More severe stress results in branch dieback or tree death.

Planting hole

Dig a hole only as deep as the root-ball, but twice as wide. Do not add organic matter to the hole or to soil that will go back in the planting hole.

See also: <http://aggie->

Horticulture.tamu.edu/extension/newsletters/hortupdate/oct01/art2oct.html

Planting fertilizer

Put a little fertilizer in the bottom outside of the hole. Use one slow-release tablet for each 1-gallon-size tree or two to three for larger pot sizes. You can substitute 1 tablespoon of 21-0-0 lawn fertilizer for each 1-gallon-size tree. Do not put fertilizer in direct contact with tree roots.

Planting depth

The top of the planted root ball should be LEVEL WITH THE SOIL in the landscape. Test the hole depth by setting the pot, tree and all, in the hole. Or, estimate root mass height with a tape measure or yard stick. If you accidentally dig too deep, backfill to correct plus a little extra loose soil in anticipation of settling. Carefully remove the tree from the pot by holding the pot upside-down or turning on its side. Gently tap the edge of the pot and let the weight of the roots remove the tree. It helps to have at least two people with large specimens. Handle the exposed root ball carefully to keep roots and potting mix from breaking apart. Prune any broken, injured, or choked (pot-bound) roots.

Point the dominant limb slightly into the prevailing southeast wind. Gently pack the soil you removed from the hole around and over the root ball at a little above grade. Irrigation will help move the extra soil into air spaces around the root ball.

Planting berm

Use left-over soil to build a 3 to 4 ft. diameter circular berm, about 4-6 in. high, around the new tree. If you are planting on a slope, make the berm higher on the down-hill side. This low berm will erode after about 1 year. Apply mulch 2-6 in. deep inside and over this low berm. Do not heap mulch against the trunk. Wood chips, grass clippings, leaves, pine needles, bark, and even gravel or crushed stone can be used. The low berm will help hold the mulch in place and hold some irrigation water for the critical first 18 months. Mulch helps control weeds, conserve water, lowers soil temperature, and it looks good.

<https://agrillifebookstore.org/>

L-5447, Pine Straw as a Ground Cover Mulch by Eric Taylor and Jay Tate, January 2004; excellent mulch for gardens and landscapes, breaks down more slowly than other natural mulches.

Staking

Staking is usually not necessary. Floppy, spindly trees should be pruned back to reduce top weight. This will encourage low branches and force the tree to grow a sturdy thick trunk. If you stake a new tree, use two or three stakes around the tree and be sure to cushion or pad the string or wire with short pieces of garden hose or plastic tubing before securing. Remove the stakes after one season.

Irrigation

Water the newly planted tree *immediately* by slowly filling the shallow basin inside the low berm. This settles moist soil around the tree roots and thoroughly wets the root ball. Keep the root ball and surrounding soil moist FOR THE NEXT 18 MONTHS. Avoid irrigation only at the trunk. When there is no rain, water the tree lightly and frequently for the first week, then once every 3 or 4 days for another 2 weeks, then once a

week. Soggy is not good, so do not over water. Irrigation frequency depends on planting date, temperature, wind speed, exposure to wind and sun, rainfall, mulch depth, competition from turf and weeds, etc. A good rule is to poke your finger into the soil to see if it is cool and moist. Remember, the next 18 MONTHS of frequent irrigation are critical for survival during no-rain periods. You can irrigate less frequently afterwards.

Weed control

Bermuda grass is one of the most competitive weeds in landscapes. Mulch slows it down, but 3-5 ft. runners will invade the mulch and moist soil underneath. A grass-selective herbicide is very useful for grass control and does not harm trees or broadleaf plants. Glyphosate (Roundup, other brands) can be used to control grasses, sedges and broadleaf plants, but drift onto tree leaves or the smooth bark of young trees can damage or kill the tree (use some barrier when spraying).

Mechanical damage from string-trimmers, mowers, and hoes are common tree killers. The only living cells in tree trunks are located just under the bark, so bark damage can kill trees. Train your workers, spouse, children, etc. to never approach a tree with a trimmer or mower. Mulch helps keep trimmers and mowers away, but it may be worthwhile to loosely wrap and secure a sturdy material to the base of young trees for a fool-proof protection. Be sure to remove any guard materials as the tree trunk enlarges.

Pruning

After planting, examine the new tree and remove any injured or dead branches. There are differences of opinion on taking off some branches (at branch junctions) at planting because this reduces the plant's potential initial leaf area for manufacturing food. My personal preference is to remove some top wood if you use bare-root, ball-and-burlap, or pot-bound trees in pots. Always remove damaged or broken branches.

If you plant a pot-grown tree in March or later, even with no root injuries, I suggest you remove some of the branches. An excess of leaves may need more water than the limited root system can supply during the coming hot summer months.

If you plant tall spindly trees in late winter, use sharp clippers to remove one-third to one-half of the height with a cut just above a dormant bud or small branch.

Leave all small low branches for a "trashy trunk" for the first 3-5 years. Small low branches on a young tree are the best way to build a large caliper trunk while the root system is getting established.

In the following years, prune trees when they are dormant (late winter) if at all possible. It may be necessary to prune an occasional branch at other times due to wind or other damage.

In the early years, phase out the “trashy trunk” strategy and phase in the “one inch rule.” During late dormancy, first remove all dead, injured, and poorly positioned limbs. Next, remove limbs 1 in. diameter or larger that are low on the tree, or that have a narrow branch angle.

Established trees should be pruned late in dormancy every 1 or 2 years to remove dead wood, injured wood, and any branches that touch and rub. You may need to remove some branches that are 2-4 in. or larger in diameter. Remove small shaded limbs inside the canopy to expose the unique branching pattern of each tree.

On larger limbs, make three cuts to remove most of the weight and avoid peeling bark from the remaining limbs or trunk. When removing unwanted limbs, do not leave a branch stub. However, do not cut flush with the remaining limb. The ideal cut is at an angle just outside the “branch ridge” or “collar” at the base of a branch. There is a good discussion of this and other aspects of pruning and training young trees on the Internet at: <http://extension-horticulture.tamu.edu/extension/pruning/pruning.html>

After several years, you may realize that trees are too close together. Remove low quality or low priority trees to relieve crowding.

Never “dead-head” or “top” a mature tree by cutting off all large branches. The natural branching pattern is destroyed, new wood may never close large wounds, heart rot begins, and tree life is shortened. The dense growth that results is very prone to insect invasion and wind damage.