

How to Plant Desert-Adapted Trees and Shrubs

THE PLANTING HOLE: Dig a generous hole that is 3-5 times the width of, but no deeper than, the root ball of the plant. For a one-gallon pot this would be a hole 18-30 inches wide. For a five gallon pot this would be a hole 30-65 inches wide.

CALICHE: If your shovel hits something that looks and feels like a piece of concrete, you have most likely encountered caliche. This is solidified calcium carbonate and is common in the Phoenix area. There is no treatment or adequate removal technique for caliche; one must work around it. Often an iron bar will break up enough caliche to create a planting hole, but it is important to evaluate the drainage of the hole if caliche is a factor on the site. If water cannot penetrate the caliche, neither can the roots.

DRAINAGE: To check the drainage of a hole, fill the hole with water. Ideally, the water will soak into the ground quickly. If several hours have passed and there is still standing water, bail out the water and attempt to punch through the caliche layer. Fill the hole again. If the hole does not drain completely in 8-10 hours, or overnight, relocate the hole, or consider a plant with a smaller root system.

BACKFILL: Native and truly desert-adapted trees and shrubs do not need organically amended backfill. By backfilling with the soil from the hole, roots are better encouraged to develop outside the range of the planting hole. In general, it is not necessary to fertilize newly transplanted plants; however, a slow-release fertilizer high in nitrogen and phosphorous can be added to the backfill.

PLANTING: Gently remove the plant from the pot and check the root ball. If the root ball is particularly tight or the roots are wound in a tight spiral, free the roots gently, avoiding breakage. If roots must be pruned, make a very clean cut and treat the cut with fungicide/bactericide and/or sulphur. For most woody plants, root pruning is not advisable unless absolutely unavoidable.

Position the plant in the hole so that the top of the root ball is even with the level of the existing soil grade. As the backfill is returned to the hole, press the soil firmly around the root ball. As the soil is watered, if the backfill settles, add more soil to bring it level with the surrounding soil grade.

WATERING: It is important to water a newly planted tree or shrub immediately after it is planted. You can create a basin outside the root ball area using excess soil in order to contain a large volume of water. Fill the basin, then let it completely percolate; repeat at least once. If there is no basin, lay a hose set at low volume by the plant's base and let it run for several hours. All newly planted plants, even native desert plants, need to be kept regularly watered until they are well established.

PRUNING: Some horticulturists suggest pruning the foliage of newly transplanted plants to compensate for root damage suffered during transplanting. Unless the foliage starts to wilt badly, this is usually not necessary. Some container grown plants, particularly fast growing trees, have long, whip-like branches that make the plant top heavy. After planting, and especially if the plant is leaning or has difficulty staying upright, prune these branches until they are upright. All other pruning is best done after a plant is well established, typically after a year or two in the ground.

STAKING: Most trees planted from a 5-gallon container do not need staking if properly planted. However, plants put in shortly before the intense monsoon winds benefit from staking because they do not have a sufficient root system to hold them upright.

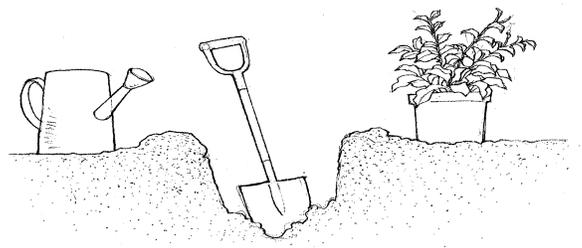
Make a collar around the plant about 12 to 36 inches from the ground with a material which will not cut the skin of the plant. For small plants, tree tape is ideal. Attach this collar to a stake which has been driven into the ground. Make an identical collar the same distance above the first one and attach it to a stake which is in the ground directly across from the first stake. There should be one stake on each side of the plant, oriented perpendicular to the dominant wind direction. Leave this support on the plant for at least three months and no more than six months by which time the plant should have a sufficient root system to stand on its own. The greatest cause of falling trees is a poorly established root system, most often from severely root-bound plantings and/or inadequate watering, so deep and regular watering is the best prevention for falling trees.

PREDATION: If you have problems with rabbits or ground squirrels, both voracious eaters of new plants, you may want to protect your plants with a cage made of chicken wire.

Need Help?

For more information about particular desert plants or problems, call the
Desert Botanical Garden's Plant Hotline,
480-481-8120,
Monday through Friday,
from 10:00 – 11:30 a.m.
or email your questions to planthotline@dbg.org

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