

## HOW TO TRANSPLANT A CACTUS

Moving a cactus need not be a daunting task. By following these easy--to-follow steps you can successfully move a cactus in the landscape. Attempt to transplant the cactus to an area that is similar to the original site in regard to light exposure, freeze potential, excessive heat, soil type

and texture, irrigation method and schedule, orientation, and other abiotic factors. Cacti should not be moved during the winter or when nighttime temperatures are below 60°F (16°C) because rooting will be delayed or inhibited by the cold soil temperatures and the plant may die.



Figure 1.

If the plant has been lying on the ground, check for sunburning (yellowing) on the exposed side or insect and rodent damage.

### Step 1:

Select a healthy cactus. Choose a plump specimen that is free of blemishes, obvious disease, bruises and abrasions (Fig. 1). If the plant has been lying on the ground, check for sunburning (yellowing) on the exposed side or insect and rodent damage.



Figure 2.

### Step 2:

Mark one side of the plant so that you can orient the plant in the direction as it was in its original location (Fig. 2). This will prevent or minimize sunburn damage to the plant.



Figure 3.

### Step 3:

Carefully dig out the roots about 6 inches around plant. Try to get as many roots as possible. The roots of cacti are fragile, fleshy and close to the soil surface (Fig. 3).

### Step 4:

Once the plant is loose, carefully work a shovel under the plant and lift it out using a gentle prying motion.



Figure 4.

Use the hose to lift the plant out of the ground (Fig. 4).

### Step 5:

If the plant is large or heavy, the next step may require two people. Take a garden hose and wrap it around the plant. Place the hose slightly below the midpoint of the side of the plant.



Figure 5.

Use the hose to lift the plant out of the ground (Fig. 4).

### Step 6:

Place the plant on its side. Trim off any damaged parts of the roots, the plant will grow new roots when replanted (Fig. 5). Damaged roots will typically decompose and are

an entry point for root rotting pathogens. Do not remove any healthy undamaged roots.

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### Step 7:

Air dry the roots in the shade or under shade cloth for two or more days. This will allow the cut roots to scab over and prevent pathogens from entering the fleshy, moist cut roots.



Figure 6.

### Step 8:

Move larger barrel cactus using a hand truck with adequate padding, (such as foam rubber, blankets, etc.), taking care not to damage the spines and ribs (Fig. 6).

### Step 9:

Determine the new location for the plant. Dig a shallow wide hole to accommodate the cactus. If planting in sandy soils, condition the soil with organic compost (about 25% by volume) to aid in moisture and nutrient retention. Add pumice (volcanic rock) and organic compost to clay soil to help it drain more quickly. Perlite can be substituted for pumice. In all instances the soil must drain quickly to diminish transplant aftercare problems.



Figure 7.



Figure 8.

### Step 10:

Place the cactus in the planting hole. Align the plant to the direction that it was originally. See Step 2 above. Use the garden hose to manipulate the cactus to its proper depth and orientation (Fig. 7). Backfill and tamp the soil in around the roots using the shovel handle or a blunt stick (Fig. 8). This will assure that the backfill soil comes in contact with the plant's roots and will eliminate air pockets and uneven settling.



Figure 9.

### Step 11:

Water thoroughly to settle the soil (Fig. 9). Irrigate two times a week during this establishment period if transplanting was done when nighttime temperatures are above 60°F (16°C). When the

nighttime temperature drops below 60°F (16°C) do not water except if there is a period of two to four weeks without rain. Most cacti will survive without supplemental winter irrigation.



Figure 10.

### Step 12:

Cover with shade cloth or cheese cloth for several weeks or until growth resumes (Fig. 10). When transplanting in the late fall or early spring shade cloth may not be necessary.



Figure 11.

### Moving Larger Cactus

Moving large cactus is best left to professional cacti movers. The weight of large saguaro and large barrel cacti is too heavy for amateurs to attempt moving. Don't underestimate the weight of a large cactus... a clump like that in (Fig. 11) can weigh more than 200 lbs. (90 kg)! An 18 inch cactus may weigh 75 - 80 lbs. (32 - 36 kg); a 30 - inch wide plant may weigh



Figure 12.

200 - 250 lbs.(113 kg). When moving larger plants two hoses and two people may be needed to safely move the cactus (Fig. 12).



Figure 13.

## Moving Saguaro Cactus

Small saguaro cactus up to three feet tall can be moved relatively easily. Larger saguaros should be moved by professional movers. Follow the same protocol as for barrel cactus that is outlined above. Saguaro roots are quite different from other cacti in that they have a prominent tap root that must be cut in order to transplant the cactus (Fig 13).

Carefully start digging about one foot away from the saguaro's trunk. Dig down until you encounter several lateral roots. Try to leave as many roots as possible. Now cut across the bottom of the hole and sever the tap root. Carefully lift the cactus out of the ground and trim any damaged parts of roots with clean sharp pruning shears. Air dry the roots for two to four days in the shade to allow scabbing over of the cuts which will exclude most soil pathogens, then re-orient the plant in its new location. Transplanting saguaro is best done when nighttime temperatures are 60°F (16°C) or above. The warm soil will encourage re-rooting and establishment. When the nighttime temperatures are below 60°F (16°C), do not transplant as this may result in too cool a soil temperature for the plants to initiate new roots resulting in either delayed establishment or death of the plant.

Backfill the hole with the same soil as removed from the planting hole removing any large rocks or caliche. Do not plant the newly moved saguaro any deeper than it was in its original location. Gently tamp the soil with a shovel handle and thoroughly irrigate to settle the soil. Water the plants weekly during the warmer months and once a month in winter.

## Related University of Arizona Cooperative Extension Bulletins:

Cactus, Agave, Yucca and Ocotillo. 2001. Bulletin Az1225, University of Arizona, College of Agriculture and Life Sciences, Tucson, Arizona, 85721.

Control of Bacterial Necrosis of Saguaro. 1988. Bulletin # 8837, University of Arizona, College of Agriculture and Life Sciences, Tucson Arizona, 85721.

Problems and Pests of Agaves, Aloes, Cacti and Yuccas. 2005. (In press). University of Arizona, College of Agriculture and Life Sciences, Tucson, Arizona, 85721.

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## Visit this website for more information on plant diseases

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**Whenever moving cactus from one property to another, always check with your local Department of Agriculture office for current rules and necessary permits. For Arizona: consult <http://www.azda.gov/ESD/bluseal.pdf>.**

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