
CACTUS and SUCCULENT SOCIETY of NEW MEXICO

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HOW TO INCORPORATE CACTUS INTO A GARDEN IN THE ALBUQUERQUE AREA

There are many different options for incorporating many different kinds of cactus into a garden. You may have an existing garden you want to add cactus to, or you may be starting with an open space to plant cactus and companion plants, or anything in between. Since gardening involves plant selection, design decisions and construction, try to keep all these in mind during this iterative process. Planting cactus into an existing landscape may involve considerations of existing plant roots, top dressing, water irrigation systems, landscape fabric and previous soil conditions etc. This is all very doable but I'm going to focus more on new bed preparation advice for the remainder of this article, all of which you can adapt to your particular situations.

Garden design is site specific and personal. It helps to take a good look at the area you are considering from all angles and at different times of the day. It's nice to start small with a few future options in mind so you don't need to make too many decisions about plants or design at the beginning. It will evolve as you see it in real life. This is supposed to be fun and rewarding even though it's also work. Think of combining plants of varying heights, shapes and architecture, and for a balance of variety and repetition. It's hard to plan for the mature size of plants, but it sure helps down the road. To help visualize your plans use random objects to simulate design elements and use lengths of rope that are easily adjusted in trying out ideas for garden shapes or layout. Allow for including paving stone paths through larger beds to allow access for viewing and maintenance without disturbing the plants nearby. It's important to find out where buried utilities or septic system are in your yard early in the design process as consideration for planting deeper rooted trees or shrubs. In our area 811 is the free "call before you dig" number.

There are many options for combining cactus with desert accent plants (Agave, Ocotillo, Coral Yucca, Bear Grass etc.), well behaved perennials, open shrubs and trees. Yes, most cactus appreciate a little open shade. If you are thinking about incorporating cactus in your garden you may already have some ideas of what plants you like. Besides availability the main deciding factor is whether or not the plants will be happy long term in your garden in the location you are thinking of planting them. As that can vary depending on exactly where you live, try to be realistic and gather what information you can from the many websites, books and lists available. It's important to consider the sun and water needs of plants near each other so that all of them stay healthy with less hassle. Be sure to find out and take notes on the sun and water needs of plants you are considering, along with nearby existing plants, to insure their compatibility.

A good starting point for plant selection is finding your Plant Hardiness Zone. Use this link {<https://planthardiness.ars.usda.gov/>} to enter your zip code and get your USDA Plant Hardiness Zone, the standard you'll see on most plant literature. Hint, much of the greater Albuquerque area is Zone 7, with the East Mountains being Zone 6. Elevation also affects the temperature by about 5°F for every 1,000 feet of elevation change, the difference between the Rio Grande and the Sandia foothills area. You may still rate as Zone 7, but the foothills area is cooler. Your microclimates may include areas of sun versus shade during the day at different times of the year, moisture levels by season, a south facing wall which retains heat all year which allows you to plant for a zone higher or a structure casting extensive shade in winter which suggests plants for a zone lower. It may sound complicated but really it is just about observing your prospective garden space and some aspects of it you may not have thought about before.

For tree, shrub and desert accent plant selection, start with southwest natives. Many of these plants will be labeled as "full sun" to "light shade" and "rainwater only" or "low water need". These are the conditions cactus will be happy around. Many trees and shrubs will need extra water to help them get established so there will be a little extra work at the beginning. Also consider how messy your choices are as anything that blooms will drop some debris. For example, Desert Willow, while native and long blooming, it is not a good shade tree for a cactus bed as the spines will collect the spent blooms and seed pods. If you live in a more natural area already substantially planted, like the East Mountains or Sandia foothills neighborhoods, you may have open areas that will work nicely for incorporating cactus. There are lots of factors involved in your decisions but a little consideration up front may save you from disappointment later and bring you more cactus blooms too, because the blooms are the best part. You can find a list of places to buy cactus on the CSSNM website but our plant sale in the spring is the best.

Soil prep is often considered the most important aspect of building a garden for long term plant health. Most of the Albuquerque area has great soil for cactus consisting of decomposed granite, but many yards also have heavily compacted, anaerobic soil from years of landscape fabric and UV damage. To ensure a good environment for any kind of plant roots the soil must be open to accept air and water, so it's good to first determine the soil condition you are working with. If you already have some gravel topdressing, don't have landscape fabric down and can get a pitchfork or shovel all the way into the ground in the area you want to plant, that's great. Now you need to do a drainage test by digging a fresh hole a foot deep and wide in the area you are planning to plant and fill the hole with water. It should drain overnight easily. The next day fill it with water again and if the water drains within an hour or so, your soil is well draining and you can just turn the bed over to loosen up the soil. If it hasn't drained after 2 hours you will need to add something to your soil to improve the drainage along with opening it up.

The easiest way to open up soil is using a pitchfork or shovel. But if the soil is compacted use a metal spike and small sledge to hammer a series of holes, then apply a deep watering in the holes. You will find that this deep watering, after it has drained, will have opened up the area further, so let the water do the work for you. Depending on your site you may need to repeat this process, so don't rush it. You should get to a point where you can turn over your soil to about a shovel blade depth. Testing the soil condition of existing garden areas is also important before adding cactus, though you may have additional considerations of water irrigation systems and existing plant roots.

Now comes the important part of improving the drainage, important for desert plants and cactus. One of the cheapest and most available additives is builder's sand/plaster sand, which has varied grain sizes, but there are several other options. The correct proportion for adding drainage material to native soil is about 50/50, give it your best guess here. Add the drainage material in stages by mixing it all together while turning it over. This also gives you the opportunity to create some topography in your garden if you want.

If you live in an area with clay soil then a raised bed is a better option. You will need to acquire enough suitable material to give you the 18" height usually suggested for a raised bed. Focus on mineral rich soil and aggregate, skipping anything with substantial organic matter, which is not good for cactus. An added benefit of a raised bed is it makes it easier to create topography. Be sure not to smother roots of any existing shrubs or trees by adding soil on top of existing roots.

OK, now you get to plant. If you are adding cactus to an existing planting you will need to be careful not to damage roots of nearby plants, so go slow. Aim for a cooler stretch of days in spring or fall. Barbeque tongs are your best friend for avoiding getting poked by cactus spines and glochids. Don't water newly planted cactus for several days to give any damaged roots time to heal. The old planting suggestion of 'plant high' applies, allowing for top dressing.

Once you've planted it's also important to top dress the area to protect what you've worked so hard on and avoid future UV damage. Again, there are many options, but a cheap and readily available option is pea gravel because it's not too dark, which would absorb heat, and the round shape is good for air and water penetration. Buildology and JPR Decorative Gravel are a couple of aggregate resources nearby. For existing cactus plantings just be sure the top dressing is not so large or deep that it swamps your cactus plants, which are probably small to begin with.

As a finishing touch many people use different sizes and kinds of rocks to mimic nature with the added benefit that rocks can be rearranged as plants grow, you add more plants or change your design. You may also have something personal or whimsical you want to add for interest, but here anything goes!

Maintaining your garden with cactus will involve some occasional cleanup and occasional watering as our weather gets hotter and rain unreliable. You may also find yourself collecting seed and propagating too. As for "critters" that may enjoy your cactus as much as you do, a cage of some sort is your best option until the cactus gets established. I feel your pain but there's only so much you can do about it.

Choose whatever of the above information applies to your situation for incorporating cactus in your garden and know that this may change over time. Consider gardening a fun, learning hobby that will grow and change with you over time. Enjoy the results of all your hard work, especially the blooms.

For a list of cactus and other succulent plants to consider for your garden, see CSSNM handouts, *Plants For Albuquerque Gardens*, *Hardy Sedums In Albuquerque*, and *Yuccas Around Albuquerque*. Also check out the picture gallery for examples of landscapes using cacti and other succulents.