

# Growing Cactus from Seed

Leo A. Martin

Some people are intimidated at the thought of growing cactus from those little, tiny seeds. Although it is somewhat slower than growing cabbage or sunflowers, it is not much more difficult.

Because they are small for quite some time, a hundred seedlings of one species can easily be kept in a six-ounce Styrofoam cup for a year or two before they are crowded enough to need transplanting. Almost everybody has space for a six-ounce cup on a home windowsill or near the light in their cubicle at work.

Cactus seedlings need the same things needed by all other seedlings: light, water, soil, and warmth, in the proper quantities, and a place to grow. Each of these needs is easy to meet.

First, I'll tell you how I do it. Then I'll explain each of the factors. Some excellent growers do this very differently. However, this is how I do it.

Start with six-ounce Styrofoam cups. You can use bigger cups but you don't need to. Write names on the cups with a ballpoint pen. Don't poke holes in the cups. Fill cups about 3/4 with sharp builders' sand. This is sold at home improvement stores in 50 pound bags. Never, ever, use potting soil in any proportion or any added organic matter like peat moss or coco fiber, because this junk carries eggs of fungus gnats, which eat seedlings.

Fill the cup with tap water. Be sure there is water standing above the surface of the sand. Use tap water, not filtered or distilled water. The chlorine in the tap water will inhibit algae growth long enough for the cacti to get started. Sprinkle the seeds on the water surface. A hundred seeds or more would be fine in a typical six-ounce cup. They love being crowded. If you have less seeds, that works just fine. Let the cup sit on the kitchen counter or under some fluorescent lights until the water has mostly evaporated and the soil is glistening wet.

Cover with plastic wrap, and secure with a rubber band. Place in a bright spot with temperatures in the 70s or higher. Don't put them in the sun. This will cook the seeds. Under fluorescent light is a good place. Set them so the top of the sand is about nine inches from the tubes and keep the light on for 12 hours per day.

Check every few days. They should begin sprouting within a week or so. Don't ever let the soil dry out. Use a spray bottle to rewet. It is better to use distilled or reverse osmosis water for subsequent waterings to prevent salt buildup. Replace the plastic cover. Remove the plastic when the seedlings have several sets of spines. This will be several weeks to months.

Once you have removed the plastic, begin watering with quarter-strength liquid fertilizer at every watering. Dissolve the fertilizer in distilled, purified or reverse-osmosis water to minimize salt buildup.

Do not transplant out until the seedlings are so crowded you no longer can see the soil. This would normally be at least two years. You can have a collection of a thousand cacti on your kitchen windowsill!

If cottony fungus or thick moss appears near the beginning, take off the cover for a day or so until it dries out. If you start with tap water, this will not be an issue until the seedlings are big enough to stand a day or so without the cover.

After two years or so, during warm weather, when the cacti are easily big enough to handle (two inches or so for columnar types) and the pot is so crowded it looks like a single jumbo scoop of green ice cream, transplant to individual pots. At all costs, resist the impulse to transplant before the seedlings are quite large.

#### LIGHT

Newborn baby humans can't handle a day at the beach in a swimsuit very well. Neither can cactus seedlings. They need bright light but not direct sunlight. Eight to twelve inches from a fluorescent lighting fixture works well for most. Light from a north window also works well, if you keep the afternoon sun from shining onto the seedlings. The top shelf in most well-lit cubicles will also work. Not enough light leads to skinny, light green, weak seedlings. Too much light leads to red but living seedlings and slow growth. Far too much light leads to white, dead seedlings. Different species have different requirements. Most opuntia can take almost full sun from the start.

#### WATER

This is where most people make mistakes. Adult cacti are succulents. Baby cacti are not. An excess of water is needed to wake up the sleeping seeds and wash away chemicals in the seed that inhibit sprouting. Once sprouted, cactus seedlings must stay moist for the first one to two years of their lives. Especially during the first few months of life, drying the pot out completely, even for an hour or so, will usually be fatal. Some people get around this issue by looking at their plants every day, and watering almost daily. The rest of us use sprouting pots without drainage holes, and stretch plastic wrap over the tops to hold in moisture. Even, light moisture is what we want; a swamp will lead to algae and moss overgrowing the cacti.

#### SOIL

Use plain builder's sand. Don't use anything containing any kind of peat, potting soil, sawdust or coco fiber. Fungus gnat larvae in potting soil are the second leading cause of failure. They eat tiny seedlings. Don't use potting soil. Yes, you can sterilize it by cooking in the microwave or in the oven, and you can use insect poison, but why go to all this trouble? Besides, the gnats will find their way from the other plants you have in that nasty stuff. If you insist on using potting soil don't come complaining to me.

## WARMTH

This shouldn't be a problem here at any time of the year. Inside in the winter, and outside in the shade in the summer, are just fine for cacti to sprout.

## A PLACE TO GROW

The most common cause of loss is drying out. So, don't use a container with drainage holes. In addition, cover with plastic. If you avoid nasty organic matter in your soil, you won't have to worry much about fungus or insects. Small containers work just as well as larger ones, and the seedlings stay in the first pot for two years or so; therefore, I settled on six-ounce Styrofoam cups. You can fit more into your growing space.

## TOO MUCH IS NEVER ENOUGH

If you want to go into mass indoor production, warehouse stores sell a 4-foot long x 6-foot high x 18 inches deep shelf rack with 6 shelves for about \$80. Put it together with five evenly-spaced shelves. Two or three 4-foot fluorescent shop light fixtures (\$8), holding 2 tubes each (\$1 per tube), can be attached under the shelves. (Six if you put cups on the floor under the first shelf.) Space the shelves so the bottoms of the light tubes are about nine inches above the tops of your cups. The cheapest plain white tubes work as well as expensive grow lights for seedlings. About 50 cups fit under each of the 6 shelves. Let's see... 6 shelves x 50 cups per shelf x 100 seedlings per cup equals 30,000 seedlings.

It really is that easy. Now go and grow some plants.