

Cacti and Succulents

- Succulent plants including cacti are specialized to enable them to survive prolonged drought and most have developed distinctive features to help reduce water loss and to withstand their hostile habitats.
- Succulents are able to store moisture in fleshy tissue in their stems, roots, or leaves. Is a huge group that includes aloe, haworthia, sedum, sempervivum, and cacti.
- Cacti are the only succulents that have **areoles**, which are modified pad-like buds from which spines, hair, leaves, shoots and flowers grow. Areoles are not always easily visible.
- “All cacti are succulents, but not all succulents are cacti”.

Cacti and succulent plants need:

Light:

- Most need full sun, but too much sun may scorch the plant.

Temperature:

- Most need 61° or above (70° to 90°). Some succulents and cactus can tolerate temperatures as low as 32° but most should be treated as house plants.

Growing media:

- Commercial potting mixes are available but you can make a mix:
 - Indoor plant mix: 2 parts commercial soilless potting mix with 1 part ¼” washed grit
 - In outdoor containers or raised beds: 3 parts peat or wood bark with 1 part ¼” washed grit
- Do not use sand since it impedes drainage.
- Top dress with pea size pebbles or small gravel.

Water:

- When plants are actively growing is when they need water. During their dormant period (winter) little or no water is needed. You can water sparingly to keep the roots from drying out.
- The best time to water is in the morning or late in the day so the plants can absorb the water. The ideal way to water is from the bottom. Do not allow to stand in the water and be sure the pots drain.
- Plants that are in large pots or in raised beds can be watered with a over head spray (nozzle with a gentle water flow).

Nutrients:

- Nitrogen for vigorous top growth
- Potassium to encourage flowers and fruit
- Phosphorus for root growth.
- There are commercial cactus fertilizers, or you can use a Tomato fertilizer at ½ strength. A suggested feeding program for desert species would be twice a month, and for a Jungle species once a week.
- It is important that you feed your cactus or succulents only during the growing period.

Repotting:

- Generally it is recommended to repot every 2 to 3 years to refresh the compacted soil and correct the mineral imbalance from the potting mix, water chemicals and fertilizer.
To upgrade to a bigger pot it is recommended to go ½” to 1 “ bigger in diameter.
- To repot the plant:
 - First trim excessively long old or damaged roots and trim old shriveled leaves if any.
 - Add some soil to the new pot, then hold plant in pot, added more soil.
 - Use a dibble or chopstick to poke the soil between the roots and around them. Continue to add more soil until the plant is secure in the pot.
 - Spiny plants can be held with gloves or wrap a collar (using newspaper) around the plant to hold it.
 - Be sure the soil level is the same as it was in the old pot. Usually a good ½ “ from edge of pot to the soil line.

- Top dress with pea size pebbles or small gravel.

Propagation from seed:

- Fill a clean plastic pot with a good quality seed starting mix or cactus potting soil
- Thoroughly drench the soil with water, allow to drain
- Thinly cover the top of the seed mix with small washed grit
- Scatter the seed evenly over the surface. If working with tiny seed, do not cover; if working with larger seed, cover to their thickness.
 - o Place under glass or cover with plastic wrap, secure with a rubber band.
- Place in a warm place 70° to 81° out of the direct sunlight. Lift glass or open plastic periodically to allow fresh air in.
- Once seed has germinated remove the cover and place in brighter light, keep the growing media moist but not wet.
- Allow seedlings to grow bigger without being disturbed. It seems succulent seedlings like to be close to each other when small. When they become bigger and able to be handled, carefully separate the plants, trying not to disturb the roots. Pot up 2 or 3 plant in a 3" pot. This whole process from seed planting to transplanting may take anywhere from 6 months to a year. So be patient.

Propagating by cuttings:

- Filling a pot with 1/3 potting mix then topping with 2/3's fine grit. Moisture evaporates from the mix to encourage rooting and the grit stops the cutting from rotting.
- Carefully pull a young healthy leaf away from the mother plant or cut it off at the base. Leave the cutting in a bright warm, dry place to heal or callus over. This can take 1 to 2 days. When ready, place callus end into the rooting mix.
- Fill pot with small washed grit to help hold the cutting. Place in a partial shady spot with a minimum temperature of 64°
 - o Keep potting mix slightly damp.
- A leaflet may get roots or will grow a baby plant. In either case transplant when plant gets a good root system plant into a small pot. Use the potting mix suggested at the beginning of this info sheet.
- Some succulents reproduce by supplying many babies on the edges of their leaves, which makes it easy to propagate. Just pluck the babies off and place in a potting mix.

A very short list of succulents that you might know:

- **Agave**, mother in laws tongue, when it blooms the plant dies, it creates runners before it blooms
- **Aloe**, the burn plant, heals burns and has been used for centuries
- **Euphorbia**, crown of thorns, poinsettia
- **Hoya**, wax flower
- **Pelargonium**, scented geranium (who knew?), swollen stems with a cork coat or wax coating
- **Plumeria**, Frangipani plant, very fragrant
- **Sedum**, stone crop
- **Stapelia**, this is the succulent that has the foul smelling flowers, sometimes called Carrion plant