

Some Basic Information About Cacti and Succulents

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What is a succulent? What is a cactus? Plants that store water for use during drought are called succulents. There are many succulents in many different plant families, including the daisy, geranium, and lily families. Members of the cactus family are succulents, too.

The cactus family can be distinguished from other plant families by the structure of the flower and by a structure called the areole. This is the little dot from which come spines, flowers, hairs, or new growths. Look closely at a saguaro and you will see that the spines come from a small felty grey pad. This is the areole. Other plants may have spines but they will not have areoles. If it doesn't have areoles, it's not a cactus. Our club logo depicts an areole from the Saguaro cactus, *Carnegiea gigantea*.

Not all cacti nor succulents are from blazing deserts; some are from wet rain forests. Some grow in areas with freezing winters, covered by snow. Some grow on the highest, coldest mountain peaks of South Africa and the Americas, and some in areas that have never seen recorded rain, just fog and dew.

General Culture

Most, but not all, succulent plants are adapted to drought, and most, but not all, to high light intensity, though not necessarily full Arizona sun all day long. Many will do well with bright light but not full sun; dappled light; or, morning sun and afternoon shade. Some plants are strict winter growers and will die if watered regularly during our summers.

Watering (soaking) year-round when the soil mass is dry will suffice for many desert plants. The watering interval will vary with ambient temperature and humidity, so watering by the calendar doesn't work. Ask the sales clerk how to grow your newly-purchased cacti and succulents. If they don't really know, and you really want the plants, be sure you get the names. There are many books and Internet resources for plant culture. You can also ask your friends in the Central Arizona Cactus and Succulent Society how to grow the plants or look them up in our library.

Light and Heat

Our climate is hotter and drier than that experienced by cacti from most other parts of the Americas. Many non-native cacti and succulents will sunburn in our hot Arizona sun without protection, especially if planted against south- or west-facing walls. They are like us in this respect.

For landscape plants, sun protection might mean planting where they will have some afternoon shade, or under the broken cover of a shrub or tree. For plants in pots, the problem is more important because pots heat up more than does the ground. They may need light overhead shade, from trees or shade cloth, or careful siting to avoid hot midday and afternoon sun in the summer.

Some succulents from cooler climates than ours grow in full shade here in Arizona, and some are even winter growers, needing little water or light during our long, hot summers. Many cacti do fine unprotected through our winters, but some will freeze in light frosts.

It's Summer and It's Hot!

This is the hottest part of the year. Most of your plants will need some, or perhaps a lot of, shade. When nights are above 90 degrees, do not water most of your small cacti. The little ones tend to stop metabolizing when nights are this hot, and they may rot if watered. With the arrival of the monsoon, nights will be a little cooler, and you can resume watering when the plants are dry.

Exceptions to this are columnar cacti, which continue growing throughout the hottest weather. Be sure your large columnar cacti do not spend long periods of time during hot weather with dry soil, and fertilize them heavily if you want to see lots of growth. In your landscape, the saguaro stand-in from Argentina, *Neocardenasia herzogiana*, and the Mexican Cardon, *Pachycereus pringlei*, may grow three feet or more during the summer if kept well-watered and fertilized.

Saguaros here in the landscape taller than two feet can easily grow a foot or more per year if watered well. Be careful not to scratch their skin with weed whippers or garden tools during the monsoon season; this may permit bacterial rot to enter.

Many Euphorbia love this heat, so long as they do not burn in the sun. Water them throughout the summer when they are almost dry. Some favorite rosette succulents in the family Crassulaceae cannot tolerate much heat. Bring *Aeonium*, *Crassula*, *Dudleya*, *Echeveria*, *Sedum*, and *Sempervivum* into the house, and keep them dry all summer. Resume watering when night temperatures dip into the low 70s, probably in late September or early October.

Though tempting, plants brought back from California in the summer are very hard to establish in our heat. It is best to wait for cooler fall weather.