General Care for Cacti & Succulents

Growing cacti and succulent plants can be easy and fun if you understand a little plant anatomy, natural growing conditions and a few basic guidelines. First, all cacti and succulents are succulents. "Succulent" is a term for plants that have special physical features that allow them to survive long periods of drought, such as thick fleshy stems, leaves or roots that store water. Their skin may be grooved to allow shriveling without cracking or to catch dew, fog or scarce seasonal rainwater. Knobby skin reduces a plant's drying surface and moisture loss. Spines add shade, catch dew and protect from pests. Thick roots store water, whereas thin shallow roots spread out to rapidly harvest scarce surface water.



Succulents and cacti come in many forms and shapes. Many will bloom every year.

Some succulents have thick roots that pull the plant down into the soil for shading and cooling from the sun. Some grow in almost nothing but rocks and heavy gravel, in dry heat or harsh sun and others grow in the shade of "nurse" plants. Most succulents have periods of growth when conditions are favorable in their native environment and when it becomes to dry or hot or cold, they will rest or become dormant; many of the cacti and succulents in our collections have retained this cycle and allowing for this is important for a plant's health and survival.

Even with these special adaptations, careful watering is necessary. The most common cause of cactus and succulent death is rotting roots from over watering. Generally, they only need watering when in active growth and little or no water while dormant. Many are dormant during the winter months and may also have a dormant period during the hot weeks of sum-



mer. Usually, you will notice growth has slowed or flowering is finished. During active growth, water thoroughly until the water

runs out the bottom of the pot, every 1-2 weeks when the soil is almost dry and the pot feels light. During dormancy, once a month may be enough depending on the plant.

Watering frequency is also affected by the type of pot used (plastic holds water longer than terra cotta), cooler temperatures, rain exposure, dry winter house air or a more humid greenhouse. Water on a sunny day and never leave the plant standing in water. On the other hand, not enough water can eventually kill off delicate feeder roots and when the plant is finally watered, it will rot.



The gritty soil mix(left) will drain faster and hold less water than the more organic mix (right).

Soil must be well draining so that excess water runs out the bottom of the pot and the soil is left moist but not wet. Do not use garden soil or poorly prepared compost that may harbor diseases and pests, fine sand (compacts into concrete), peat moss (very hard to re-wet when dried out) or used potting soil (may hold diseases, pests and decaying plant matter and may be depleted of nutrients). A commercial cactus mix with added course grit, perlite, pumice, or bark is fine.

Soil toppers are important for more than decoration. It helps prevent rot by keeping stems and leaves from touching wet soil, helps support shallow rooted plants, adds weight to light or top heavy plants, reduces soil erosion and splashing when watering, and may even help deter some pests. Use something like small-sized aquarium gravel. Use a cactus fertilizer once a month during the growing season or a good liquid plant food diluted to 1/4 of the regular strength.

Repot every 2 years to replace spent soil and remove dead roots. If a larger pot is needed, make sure it is only slightly bigger than the plant to prevent over watering. If potting several plants in one dish, make sure they have similar care requirements and growth patterns. All used pots must be washed and then soaked in a 10% bleach solution for 20 minutes before reusing. Also clean your tools, especially cutting utensils, between plants.



Carefully repot to replace old soil, remove old roots or to move up to a larger container--plastic or clay pots can be used.

Plants must be grown in sufficient light or they will not flower and will be pale, lanky and susceptible to disease. Some types require less than others and may be more suitable for windowsills. Indoors may be a problem for plants that grow during short days (winter growers) and they may need artificial lighting.

Provide good ventilation with a fan year round. Do not expose a plant to temperatures below its minimum tolerance, especially when soil is damp. If you're moving your plants outside for the summer, acclimate them gradually to prevent sun burn and wait until nights are above 50F, about the end of May in northeastern Ohio. Pests include mealy bugs, scale, spider mites, and fungal and bacterial infections. Good growing conditions will prevent many problems, and they are easy to treat if you catch them early.



Cacti do have pest problems such as scale (top, on fig) and mealybug (below, on roots).

Knowing what your plant needs will reward you something beautiful, healthy and long lasting. It might even outlive you!