

Cactus and Succulents

Introduction

Types of Cactus and Succulents –

Climate – Mostly desert or semi-arid plants, but some live in the tropical jungles and on snow covered mountains.

Plant Care –

Potting Plants

- Place one or two pieces of broken pot over the drainage hole.
- Place a portion of soil mix into the pot.
- Place the plant inside a well that is deep enough to cover the root ball.
- Fill the pot with soil mix until the root crown is covered, but no more.
- Water plants thoroughly so the soil is saturated each time. Then allow drying before watering again.

Repotting

- Best to repot in early spring or autumn. In the spring the cactus will start growing. In the autumn, a repotted plant will adjust to the light and temperature change.

Light Requirements

- Photoperiod (light duration) will affect the stem color as well as the formation of flower buds.
- Once flower buds form, keep the plant in the same location; buds could drop if the plant is moved to a new location.
- Low light may cause the stems to turn light green or yellow, and grow long stems (etiolation) in the direction of light.

Soil Requirement

- Succulents produce healthy growth in an equal mix of garden loam, leaf mold, and sand.
- Cactus require more drainage than succulents, so add more sand.

Container Culture –

Succulents and cactus grow in all types of containers. Common containers used by gardeners growing succulent plants include clay pots, wooden tubs, glazed pots, and plastic containers. Clean all pots with a brush, hot water and light detergent. If disease or pests are found on plants, use a diluted solution of water and Clorox.

Fertilizing –

Check stems and flowers for color. Some succulents and cactus can grow for many years on the nutrients in the soil mix. If fertilizer application is needed, then apply a bone meal in the soil. One teaspoon (10-5-5) of bone meal in a 6-inch pot will last for one to two years.

Rest Period –

Succulents and cactus need a rest period once a year. The rest period will provide a period for the plants to produce sugars and other organic compounds needed for growth and flower production. The rest period is generally one month, but rarely more in a cool place (50⁰F). New growth will start when the rest period is over.

Propagation Techniques -

Seeds

Plant seeds in a container with vericulite and perlite mix. Bury seeds twice the diameter of the seed. Place seeds in a warm area without sun light and cover with a plastic cover. Water the flat so the soil is wet. After germination, move flat so plants receive more light and remove cover.

Cuttings

Stem Cuttings

- Cut stem and leaf sections during the summer months. Cactus produce roots on tip sections, while succulents produce roots on stem nodes.

Leaf Cuttings

- After cutting a leaf, let it dry for a few days and place it in a sandy loam.

Offsets

- Small plantlets are separated and sometimes divided from the stock plant. Succulents that produce offsets include aloe, agave, haworthia, and crassula.

Plant Problems –

Symptoms	Problem	Solution
No new growth	To much water, soil compact or roots decayed	Repot, adjust water and amounts.
Stems or leaves yellow	Too dry, too much wind	Redirect ventilation, increase water
Stems or leaves turn yellow	Iron deficiency, too alkaline	Test pH
Pale color on new growth	Root injury	Repot
Elongated growth	Not enough light	More light
Failure to bloom	Too much nitrogen, rest period not long enough	Low nitrogen fertilizers, rest period
Flower buds drop	Temperatures too low, or draft	More plants to warmer area
Soft or mush growth	Too much moisture, temperature too low	Reduce moisture, cut away parts and dust with fungicide

Popular Succulents and Cactus

Succulents -

1. Aeonium – with woody stems crowned with rosettes of succulent leaves. Native to Africa.
2. Agave – in the Amaryllis family, leaves are sword shaped often toothed and carried in rosettes. Native to North America.
3. Aloe – in the lily family, leaves are often banded or streaked with contrasting colors. Native to Africa, the Mediterranean, and Atlantic islands.
4. Cotyledons – Shrubby with thick rounded leaves covered with whitish powder. Native to semi-arid Africa areas.
5. Crassula – in the Crassula family. Native to the Americas.
6. Dudleya – rosette-shaped with chalky-white leaves. Native to coastal California and Mexico.
7. Echeveria – rosette succulents with fleshy leaves of green or gray-green. Native to the Americas.
8. Gasteria – in the lily family, leaves often blunt and held in a fan shape. Native to South America.
9. Haworthia – Resemble the aloes. Native to South America.
10. Kalanchoe – Usually with branching and shrubby parts. Leaves may be smooth or felted.
11. Sansevieria – thick, patterned leaves grown in clusters and radiate up and out from the base. Native to Africa and India.
12. Sedum – Tiny and trailing plants. All with fleshy leaves.
13. Sempervivum – Stemless plants with rosettes of leaves. Native to the mountains of central and southern Europe, Asia minor, and north America.

Cactus –

1. *Astrophytum* – Sea urchin cactus, bishop's cap and goat-horn cactus. With globular shapes or with prominent ribs.
2. *Cephalocereus* – Old man cactus, tall columnar or branching growth, usually with long, woolly hair.
3. *Cereus*- Tree-sized cactus, stems usually blue-green.
4. *Chamaecereus* – Small, clump-forming plants with short shoots branch from the base to produce the clump effect.
5. *Cleistocactus* – with a narrowing stem near the growing point. Stems are usually no more than one inch thick, often leaning, and so thickly covered with spines that the stem surface is hardly visible.
6. *Echinocactus* – Barrel cactus, heavily spined with flowers at the crown.
7. *Echinocereus* – With free-branching stems, sometimes prostrate.
8. *Mammillaria* – Small, cylindrical or globe-shaped with either single or clustered stems.
9. *Notocactus*- small ball-shaped cactus.
10. *Opuntia* – Prickly pear, beaver tail, and chollas. With either flat pads, tall cylindrical stems or globe shaped stems.
11. *Rhipsalis* – Epiphytic, trailing plants.
12. *Schlumbergera* – Christmas cactus without hooks or spines.
13. *Zygocactus* – similar to *schlumbergera* and *epiphyllum* plants.