

About Living Treasures™









Altman Plants is the largest supplier of cacti and succulents in the US, with over 1700 acres of growing grounds in six states. In addition to cacti and succulents, we grow annual and perennial color, ornamental grasses, herbs and vegetables, and specialty items.

We supply programs to a wide range of retailers, with a distribution system that covers the United States, and offer expertise in growing plants from cactus to herbs, from grasses to perennials, and more.

Access our Cactus & Succulent catalog and more plant information on our website: AltmanPlants.com.









Altman Plants 3742 Blue Bird Canyon Road Vista, CA 92028 760.744.8191





Cacti & Succulents from Living TreasuresTM

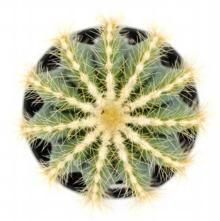






Succulents include all plants that store water. They usually can be watered infrequently, the water will cause the skin to swell, and will gradually contract and shrivel as the water level inside the plant decreases over time. Succulents other than cacti are native to all continents except Antarctica.







All **Cacti** are succulents, but not all succulents are cacti. Simply put, what separates cacti from succulents are the organs that produce the spines, and some other characteristics specific to fruit formation, differences between dicots and monocots and a few other differing charcteristics. Cacti are native to the United States, mostly in the southwestern states, Mexico, Central and South America and a few species are native to Haiti, and other islands. They are grown for their spectacular flowers and plant shapes.







Cactus and Succulent Care Information

Cacti and Succulents need bright lighting conditions, but not scorching sun. They need to be watered thoroughly when the top inch of soil is dry to the touch. Allow water to flush through the soil. The following contains detailed information on how to guarantee the success of your cacti and succulents.



Light

Indoors - Give cacti and succulents the brightest light or sunniest window that you can provide. Most cacti and succulents are not happy in shady corners or north-facing windows as they need at least four to six hours of strong light daily if they are grown indoors. Plants with inadequate light may stretch (skinny growth).

Outdoors - Some cacti and succulents can tolerate full sun. However, it is important to realize that during the hottest days of summer, when the solar radiation exceeds 11,000 foot candles, all plants would welcome some respite from the harsh afternoon sun. Many cacti and succulents prefer to be positioned in an area that receives morning sun, and is protected from the stronger afternoon rays. Some cacti can even sunburn, as in the case of the spineless or naked cacti, unless given some shade in the hottest part of the day. Reddish discoloration, either in part or on the entire plant, is usually the result of overly strong solar radiation. Remember that most cacti and succulents receive shading from grasses, shrubs or trees in their natural habitat, especially when they are young.



Water

The general "Rule of Thumb" is: "When you water, water well." However, with succulent plants you must be careful to make sure the plant needs water. Feel the soil at least one inch down and if the soil is dry it is time to water the plant. Let the water thoroughly drain through the roots and out the bottom, making sure the entire pot of soil is saturated. Drain thoroughly; never let plants sit in water. Top dressings, such as small pebbles or coarse gravel, offer quicker water penetration, slower water evaporation, elimination of a crust on the top of the soil, and a neat, attractive appearance. When plants are vigorously growing and blooming, they will need more water. During their non-growing or resting stage, usually in cold winter weather, they will need very little water.



Soil + Fertilizer

For practically all intents and purposes, any good cactus and succulent mix, prepared and bagged, and available in many nurseries and garden shops can be used for your cacti and succulents.

Most succulents and cacti are benefited by the addition of diluted liquid fertilizer added to the water every second or third watering during their growing season. Any standard houseplant fertilizer with balanced amounts of nitrogen, phosphorous and potash (20-20-20) can be used. It is also convenient to use one of the slow release granular fertilizers. To induce bloom and improve flower size, a fertilizer with low nitrogen and high phosphorous content can be used. Always dilute more than the stated instructions advise, as recommended dosage is too strong for these plants. One caution! If your plants are growing too lushly and/or are losing their characteristic shape, this may be the result of over-fertilizing. As a rule, it is safer to under-fertilize than over-fertilize. We do not recommend fertilizing Mesembs or Stapeliads.

Cactus and Succulent Care Information



Temperature

In the winter time, keep your cacti and succulents in temperatures above freezing. They will go dormant and manage just fine in night time temperatures of 35° to 40°F.

Your more tropical succulents like Adeniums, Euphorbias, Epiphyllums, Rhipsalis, Stapeliads, and Zygocactus prefer warmer night time temperatures of between 50° and 60°F. However, if you harden them off by watering less in the fall, they will tolerate temperatures in the mid-thirties.

Other less tropical succulents, like many cacti, Sempervivums, Sedums and Agaves can tolerate lower night time temperatures into the mid-twenties (or less) when they have been gradually acclimated to cold weather.

In the summer, protect your cacti and succulents from extreme heat. If temperatures reach over 100°F, be sure to shade your plants and provide air circulation. When it is both humid and hot, it is particularly important to have good air circulation and careful watering to avoid fungus and rot problems.



Transplanting

Your newly acquired plants are established in their present pots, but their roots systems have not used all of the space in their pots. They should live and grow in these same pots for at least another few months to a year before re-potting will be necessary. When transplanting, choose one pot size larger. Excess soil in too large a pot may cause soil to sour before roots can grow into and utilize it. Gently tap the plant out of its present pot. Gently brush or scrape away some of the old soil around the root ball, taking care not to disturb the center of the root ball or to break roots. Put some soil mix in the new pot and place the plant on top. Gently fill in around the sides; keep the plant at the same level as it was in the old pot. Let the plant stay dry a few days. This precaution will allow any roots that are damaged or broken during the transplanting process to heal and callous over before watering, avoiding rot of broken roots.

Tip: For handling and transplanting smaller plants, thin rubber gloves can be used to protect the fingers. Tongs also work well. Larger plants can be handled with a short section of hose wrapped around the plant, or even a rolled newspaper can be used.



Common Issues

When plants aren't getting enough light, they tend to stretch toward the light source, which can lead to a leggy, unattractive plant.

Not watering often enough will cause the roots to collapse and they will be unable to take up water when present. Over-watering can cause the roots to rot, thus killing the plants. If the base of the plant should become mushy, this indicates rot and the plant cannot be saved.

> Visit AltmanPlants.com for more information on Cactus and Succulent care.

Cactus & Succulent Breeding Division

Altman Plants Cactus and Succulent Breeding Division has a dedicated staff of the world's most renowned cactus and succulent breeders.

Our Cactus and Succulent Breeding Division's world-recognized hybrids have kept the Altman Plants Collection at the top of the industry with colors, textures, hardiness and consumer choice and durability.

No other cacti and succulent supplier has the quantity of quality introductions each year as Altman Plants.



Echeveria 'Imbricata' variegata



Aeonium 'Mardi Gras' USPP 21407



Echeveria 'Cubic Frost' PPAF

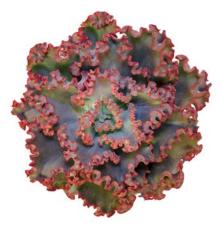
Our recent succulent introductions have been featured in San Diego Home and Garden Magazine, Greenhouse Grower Magazine, and GPN Magazine.



Aloe 'Pink Blush'



Echeveria 'Neon Breakers' USPP 21406



Echeveria 'Crimson Tide' USPP 21496

Types of Cacti and Succulents





Aeoniums grow during the winter and spring seasons. Water adequately during this time of year. Some Aeoniums thrive in full sun or bright light, but a few are very small and will appreciate filtered light.





Echeveria have succulent leaves that grow like petals of a rose. Colors vary from ruby-glow black, grass-green, icy blues, frosty violets or nearly iridescent pastels. Echeveria are drought tolerant succulent plants.





Sempervivum form clusters of geometric rosettes, some with interlaced silken hairs with the appearance of cobwebs. These plants are cold and drought tolerant.





Jade are members of the Crassula family. Many varieties of Jade exist, including Mini Jade with its tight, compact leaves; 'Hobbit' and 'Gollum' or "Fingers" Jade, with their elongated, tube-like leaves;' Ruby' Jade with its red-edged leaves and 'Sunset' Jade, with its yellow tricolor leaves. Pink Jade is a variety that has a soughtafter rosy pink flower that blooms in November and December.





Haworthia are named after the British botanist Adrian Hardy Haworth and are natives to South Africa. These slow-growing succulents are drought tolerant and are especially suitable for indoor plantings.

Types of Cacti and Succulents



Hairy Men Cacti - Botanists suppose that the modified spines that look like hairs have grown to create more shade for the plant, and to create surface area for moisture to collect.



Euphorbia are the African continent's Old World version of cacti. Though they resemble cacti, Euphorbias are succulents that come in a multitude of shapes. They have a white, sticky, caustic sap.



Prickly Pear are *Opuntia* cacti with paddles, sometimes known as beaver-tail cactus and some varieties are considered a food source by indigenous cultures.



Grafted "Moon" Cactus are two plants grafted together. The upper, colorful cacti are born without chlorophyll, they are not green like other plants but can occur in hues of orange, yellow, pink, purple, bright ruby red or multicolored. This portion is grafted to a green Hylocereus species to provide the needed chlorophyll for photosynthesis.



Aloe are native to Africa and come in all sorts of colors and can grow from 2 inches to 5 feet tall. The graceful spikes of orange or reddish tubular flowers are a special treat for hummingbirds. Includes Aloe vera, known for its healing properties.

Types of Cacti and Succulents





Mimicry plants, So named for their ability to mimic other items in nature like stones and pebbles, these succulents would be found nearly buried with the items that they are imitating as a method of survival.





String of Hearts, String of Pearls and Burro's Tails are favorite hanging succulents





Crested Cactus are cacti that are rare freaks of nature that occur when the growing tip multiplies and the stem begins to "go crazy", forming undulating "fan" shapes that can give the appearance of "brains".





Monster Cactus (Montrose varieties) are sometimes confused with "crested cacti" but differ in that the stem does not form fan shapes; rather the stem seems to "sprout" many new growing tips, resulting in a "bizarre" appearance.



Jungle Cactus, unlike their desert cousins, they live as epiphytes (hang on to something, not feed off of it like parasites) high in the trees of steamy jungles.

Variety Specific Labeling

In today's market, information is critical in helping both everyday consumers and collectors make and informed purchase, which will reduce returns due to misconceptions of care needs and growth habits.

Through our variety specific tagging of each plant, and the information provided on on our website (www.altmanplants.com), customers are able to understand the unique care requirements and growth characteristics of each plant.



These variety specific stickers ensure that the information stay with the plants and do not litter the floor of the garden center.

Protect your Fingers!

2.5", 9cm, and 5" cacti come with clear handles securely attached to the pots, as pictured.



New Introduction!



Adromischus cristatus "Key Lime Pie"



Aeonium 'Mardi Gras' USPP 21407



Aeonium 'Blushing Beauty'



Aeonium "Voodoo"



Aloe 'Blizzard' USPP 21408



Aloe "Firebird"



Aloe 'Minnie Belle'



Aloe "Pink Blush"



Aloe "Snowstorm"



Aloe haworthioidies



Aloe haworthioides x descoingsii



Aloe speciosa



Aloe variegata "Partridge Breast"



Aloinopsis schoonesii



Anacampseros rufescens



Anacampseros telephiastrum variegata "Sunrise"



Ceropegia wodii variegata "Keepsake Hearts"



Cotyledon ladismithiensis variegata "Variegated Bear Paws"



Cotyledon ladismithiensis "Bear Paws"



Crassula conjuncta



Crassula falcata "Propeller Plant"



Crassula marginalis rubra "Calico Kitten"



Crassula mesembryanthemoidies



Crassula perforata "String of Buttons"



Crassula perforata variegata "Variegated String of Buttons"



Crassula streyii



Cremnosedum 'Crocodile'



Cremnosedum 'Little Gem'



Cryptanthus spp.



Echeveria 'Atlantis'



Echeveria 'Azulita'



Echeveria 'Black Prince'



Echeveria 'Blue Rose'



Echeveria 'Blue Bird'



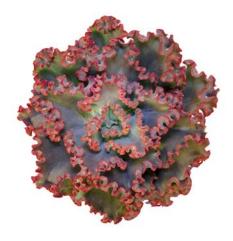
Echeveria 'Byzantine'



Echeveria 'Chroma'



Echeveria 'Cielo'



Echeveria 'Crimson Tide' USPP 21496



Echeveria 'Dusty Rose'



Echeveria 'Gorgon's Grotto' USPP 21444



Echeveria 'Irish Mint'



Echeveria 'Lola'



Echeveria 'Mazarine'



Echeveria 'Melaco'



Echeveria 'Neon Breakers' USPP 21406



Echeveria 'Perle von Nurnberg'



Echeveria 'Raindrops'



Echeveria 'Ramillette'



Echeveria 'Starlite'



Echeveria 'Swirl'



Echeveria 'Tsunami'



Echeveria agavoidies



Echeveria agavoidies x pulidonis



Echeveria 'Albicans'

New Introduction!



Echeveria 'Allegra'



Echeveria 'Cubic Frost'™



Echeveria derenbergii 'Painted Lady'



Echeveria elegans



Echeveria 'Encantada'



Echeveria 'Imbricata' variegata



Echeveria 'Lime n Chili'



Echeveria minima



Echeveria parva



Echeveria peacockii



Echeveria purpusorum



Echeveria runyonii 'Topsy Turvy'



Echeveria shaviana 'Truffles'



Echinocactus grusonii "Golden Barrel Cactus"



Echinocereus rigidissimus rubrispinus 'Rainbow Hedgehog Cactus'



Euphorbia anoplia 'Tanzanian Zipper Plant'



Euphorbia lactea variegata 'Bones'



Euphorbia spiralis cristata



Faucaria tigrina 'Tiger Jaws'



Fenestraria aurantiaca "Baby Toes"



Gasteraloe 'Green Ice'



Graptopetalum paraguayenese Hamatocactus hamatacanthus 'Ghost Plant'





Haworthia fasciata 'Zebra Plant'



Haworthia fasciata variegata 'Variegated Zebra Plant'



Graptoveria 'Amethorum'



Graptoveria 'Debbie'

Living Treasures™ by Altman Plants



Graptoveria 'Moon Glow'



Graptoveria 'Opalina'



Jobivarva hueffelli



Kalanchoe hildebrandtii



Kalanchoe luciae "Flapjacks"



Kalanchoe pumila 'Frosty Pink'



Kalanchoe tomentosa "Chocolate Soldier"



Kalanchoe tomentosa "Teddy Bear"



Kalanchoe tomentosa "Panda Plant"



Lithops spp.



Mammillaria elegans



Mammillaria bombycina



Mammillaria camptotricha 'Birds Nest'



Mammillaria elongata 'Copper King'



Mammillaria elongata 'Pink Nymph'



Mammillaria elongata cristata



Mammillaria gracilis fragilis montrose 'Arizona Snowcap'



Mammillaria gracilis fragilis



Sedeveria 'Blue Elf'

Sedeveria 'Letizia'

Rhipsalis cereuscula



Sedeveria Sorrento™



Sedum adolphii 'Golden Glow'



Sedum hernandezii



Sedum pachyphyllum



Sedum rubrotinctum "Pork and Beans"



Sempervivum arachnoideum 'Cebenese'



Sempervivum tectorum



Sempervivum 'Hens and Chicks'



Senecio jacobsenii 'Trailing Jade'



Titanopsis calcareum

Visit AltmanPlants.com for more information on Cactus and Succulent varieties.

Living Treasures™ Variety List

Adromischus cristatus "Key Lime Pie"	11
Aeonium 'Mardi Gras' USPP 21407	11
Aeonium 'Blushing Beauty'	11
Aeonium "Voodoo"	11
Aloe 'Blizzard' USPP 21408	11
Aloe "Firebird"	
Aloe 'Minnie Belle'	11
Aloe "Pink Blush"	11
Aloe "Snowstorm"	11
Aloe haworthioidies	12
Aloe haworthioides x descoingsii	12
Aloe speciosa	12
Aloe variegata "Partridge Breast"	12
Aloinopsis schoonesii	12
Anacampseros rufescens	12
Anacampseros telephiastrum variegata "Sunrise"	12
Ceropegia wodii variegata "Keepsake Hearts"	12
Cotyledon ladismithiensis variegata "Variegated Bear Paws"	12
Cotyledon ladismithiensis "Bear Paws"	13
Crassula conjuncta	13
Crassula falcata "Propeller Plant"	13
Crassula marginalis rubra "Calico Kitten"	13
Crassula mesembryanthemoidies	13
Crassula perforata "String of Buttons"	
Crassula perforata variegata "Variegated String of Buttons"	13
Crassula streyii	
Cremnosedum 'Crocodile'	13
Cremnosedum 'Little Gem'	14
Cryptanthus spp	14
Echeveria 'Atlantis'	14
Echeveria 'Azulita'	
Echeveria 'Bl ack Prince'	
Echeveria 'Blue Rose'	
Echeveria 'Blue Bird'	

Living TreasuresTM Variety List

Echeveria 'Byzantine'	14
Echeveria 'Chroma'	14
Echeveria 'Cielo'	15
Echeveria 'Crimson Tide' USPP 21496	15
Echeveria 'Dusty Rose'	15
Echeveria 'Gorgon's Grotto' USPP 21444	15
Echeveria 'Irish Mint'	15
Echeveria 'Lola'	
Echeveria 'Mazarine'	15
Echeveria 'Melaco'	
Echeveria 'Neon Breakers' USPP 21406	15
Echeveria 'Perle von Nurnberg'	16
Echeveria 'Raindrops'	16
Echeveria 'Ramillette'	16
Echeveria 'Starlite'	16
Echeveria 'Swirl'	16
Echeveria 'Tsunami'	16
Echeveria agavoidies	16
Echeveria agavoidies x pulidonis	16
Echeveria 'Ālbicans'	17
Echeveria 'Allegra'	17
Echeveria 'Cubic Frost'	17
Echeveria derenbergii 'Painted Lady'	17
Echeveria elegans	17
Echeveria 'Encantada'	17
Echeveria 'Imbricata' variegata	17
Echeveria 'Lime n Chili'	17
Echeveria minima	
Echeveria parva	
Echeveria peacockii	
Echeveria purpusorum	18
Echeveria runyonii 'Topsy Turvy'	18
Echeveria shaviana 'Truffles'	18
Echinocactus grusonii "Golden Barrel Cactus" Echinocereus rigidissimus rubrispinus 'Rainbow Hedgehog Cactus'	18
Echinocereus rigidissimus rubrispinus 'Rainbow Hedgehog Cactus'	18
	18
Euphorbia anoplia 'Tanzanian Zipper Plant'	18
Euphorbia lactea variegata 'Bones'	•••••
Euphorbia spiralis cristata	18
Faucaria tigrina 'Tiger Jaws'	19
Fenestraria aurantiaca "Baby Toes"	19
-	-

Gasteraloe 'Green Ice'	19
Graptopetalum paraguayenese 'Ghost Plant'	19
Hamatocactus hamatacanthus	19
Haworthia fasciata "Zebra Plant'	
Haworthia fasciata variegata 'Variegated Zebra Plant'	19
Graptoveria 'Amethorum'	19
Graptoveria 'Debbie'	19
Graptoveria 'Moon Glow'	
Graptoveria 'Opalina'	
Jobivarva hueffelli	20
Kalanchoe hildebrandtii	20
Kalanchoe luciae "Flapjacks"	20
Kalanchoe pumila 'Frosty Pink'	20
Kalanchoe tomentosa "Chocolate Soldier"	20
Kalanchoe tomentosa "Teddy Bear"	20
Kalanchoe tomentosa "Panda Plant"	20
Lithops spp	21
Mammillaria elegans	21
Mammillaria bombycina 'Silken Pincushin Cactus'	21
Mammillaria camptotricha 'Birds Nest'	
Mammillaria elongata 'Copper King'	
Mammillaria elongata 'Pink Nymph'	
Mammillaria elonaata cristata	21
Mammillaria gracilis fragilis montrose 'Arizona Snowcap'	21
Mammillaria gracilis fragilis Mammillaria nejapensis "Silver Arrows"	21
Mammillaria nejapensis "Silver Arrows"	22
Mammillaria plumosa "Feather Cactus"	22
Notocactus scopa "Silver Ball"	22
Notocactus scopa "Silver Ball" Notocactus magnificus "Balloon Cactus"	22
Opuntia albata "Angelwing"	22
Pleiospilos nelii 'Royal Flush'	22
Rhipsalis cereuscula	

Living Treasures $^{\text{\tiny TM}}$ by Altman Plants

Sedeveria 'Blue Elf'	22
Sedeveria 'Blue Elf'Sedeveria 'Letizia'	22
Sedeveria Sorrento™	23
Sedum adolphii 'Golden Glow' Sedum hernandezii	23
Sedum hernandezii	23
Sedum pachyphyllum	23
Sedum rubrotinctum "Pork and Beans"	23
Sempervivum arachnoideum 'Cebenese'	23
Sempervivum tectorum	23
Sempervivum 'Hens and Chicks'	23
Senecio jacobsenii 'Trailing Jade'	23
Titanopsis calcareum	24
1 ttario por o carcar o arri	· · · · · · · · · · · · · · · · · · ·