

# Tucson Cactus and Succulent Society

Presents

## ABC - 123 CARE CODE\*

While the different requirements for all species cannot possibly be covered in a simple code with only 9 permutations, a code with more variables might be too complex to be workable and would then be of no use to the general public. This simple code has thus far been quite useful in giving general guidelines for plant lists and was designed for the climate in and around Tucson and cannot be applied to other areas without modifying the codes appropriately. This would mean that in hotter areas, like Phoenix, many of the "A" rated plants would become "B"s and in areas with long sustained cold periods and lower temperatures the cold hardiness would not be accurate. This code was also designed with mature plants, not seedlings, in mind and also for plants that are receiving adequate care (water and fertilizer).

\* Courtesy of Miles To Go

### NOTES:

**1. The first list is sorted alphabetically by Botanical Name; followed by lists sorted by Full Sun, Partial Shade, and Shade.**

**2. Some plant names may have changed since this information was compiled. We will be updating as time permits.**

**A - FULL SUN** - Species that will tolerate day long full summer sun.

**B - PARTIAL SHADE** - Species which require some protection from prolonged hot sun, but which will tolerate about a half-day of full summer sun. Often these species prefer morning sun and afternoon shade.

**C - SHADE** - Species that will tolerate only a few hours of morning sun in the summer, if that. These species will often tolerate considerable winter sun and generally do well planted so that they can take advantage of the annual shift in the sun's angle.

**1 - FULL COLD** - Species that will tolerate full cold without protection. Most of the species have only been tested down to 18F for the duration which occur around Tucson. Some of the species rated "1" are probably not hardy to the extreme temperatures in some locations around Tucson which will drop to the low teens in colder years.

**2 - SOME COLD PROTECTION** - These species will often survive the winter without injury in the warmer Tucson locations without any additional cover. However in the colder locations or during cold years, they will need to be covered. Often, only the tender tips are susceptible to cold and a covering of burlap or other cloth is adequate.

**3 - TENDER** - These species are damaged by any frost, even when covered. Those species rated with an "A" or "B" often makes good potted plants for the patio, but care must be taken to move them inside during the winter.

## Alphabetical Plant List

Code	Botanical Name	Code	Botanical Name
A1	Acanthocalycium klimpelianum	B1	Agave utahensis v. utahensis
A1	Acanthocalycium peitscherianum	B3	Agave verschafeldtii cv. 'Ohi Raijin'
A1	Acanthocalycium violaceum	B1	Agave victoria-reginae
A3	Adansonia fony	B1	Agave victoria-reginae ornata
B3	Adenia fruticosa	B1	Agave victoria-reginae v. compacta
B3	Adenia glauca	A1	Agave x Leopoldtii
B3	Adenia venenata	B3	Alluadia procera
B3	Adenium arabicum	B1	Aloe aristata
B3	Adenium boehmianum	B2	Aloe aristata hybrid
B3	Adenium obesum	A2	Aloe barbadensis Healing Aloe
B3	Adenium obesum 'Bill Jones'	B3	Aloe brevifolia
B3	Adenium obesum hybrid	B3	Aloe ciliaris
B3	Adenium obesum ssp. multiflorum	B3	Aloe claviflora
B3	Adenium somalense	C3	Aloe descoingsii
B3	Adenium somalense x A. obesum	C3	Aloe descoingsii X haworthioides
B3	Adenium swazicum	A2	Aloe dichotoma
B3	Adenium swazicum	C3	Aloe dorothea
B3	Adenium x Crimson Star	A2	Aloe ferox
B1	Adromischus cooperi	B3	Aloe harlinii
B1	Adromischus cristatus	C3	Aloe haworthioides
B1	Adromischus marianiae v. hallii	B1	Aloe humilis
B1	Adromischus marianiae v. immaculatus	B3	Aloe jacunda
B1	Adromischus marianiae v. kubusensis	A1	Aloe longistyla
B1	Adromischus rupicolus	A2	Aloe marlothii
B1	Adromischus schuldtianus	B3	Aloe melanocantha
B1	Adromischus subviridus	B2	Aloe nobilis
C3	Aeonium arboreum	B3	Aloe peglerae
C3	Aeonium arboreum crest	B3	Aloe plicatilis
C3	Aeonium arboreum cv. Sunburst	A3	Aloe ramosissima
C3	Aeonium decorum	A2	Aloe saponaria
C3	Aeonium tabulaeforme	B3	Aloe sincatana
A1	Agave americana medio-picta alba	B2	Aloe striata
A1	Agave angustifolia variegata	B3	Aloe striata hybrid
A2	Agave bovicronuta	A1	Aloe variegata hybrid
A1	Agave colorata	A1	Aloe variegata Partridge Breast
A1	Agave colorata dwarf	A3	Aloe wickensii
A1	Agave felgeri	B3	Aloe x Doran Black
A1	Agave ferdinand-regis	B3	Aloe x Lizard Lips
A1	Agave ferdinand-regis X scabra	B3	Aloe zanzibarica
A1	Agave filifera	B1	Aloinopsis shooneesii
A1	Agave geminiflora	B2	Ammocharis coranica
B3	Agave ghiesbreghtii	B3	Anacampseros rufescens
B3	Agave guadalajarana	B3	Anacampseros rufescens cv. Sunrise
A1	Agave murphyi	B3	Anacampseros telephiastrum
A1	Agave ochaui	A1	Ancistrocactus uncinatus (Hamatocactus) v. wrightii
B2	Agave parrasana	C3	Aporocactus flagelliformis
A1	Agave parryi v. couesii	B2	Ariocarpus agavoides
A1	Agave parryi v. huachucensis	A1	Ariocarpus fissuratus v. fissuratus
A2	Agave parryi v. patoni	B1	Ariocarpus fissuratus v. hintonii
A1	Agave parryi v. truncata	A1	Ariocarpus fissuratus v. lloydii
A1	Agave parviflora	B1	Ariocarpus kotschoubeyanus
B3	Agave potatorum	B1	Ariocarpus kotschoubeyanus elephantidens
B2	Agave sp. FO76 (Sierra Mixteca)	B1	Ariocarpus kotschoubeyanus v. albiflora
A1	Agave stricta	A1	Ariocarpus retusus v. furfuraceus
B2	Agave stricta nana	A1	Ariocarpus retusus v. retusus
A1	Agave toumeyana v. bella	A1	Ariocarpus retusus v. retusus "scapharostroides"
B1	Agave utahensis v. eboraspina	A1	Ariocarpus retusus v. retusus long grey tubercles
B1	Agave utahensis v. nevadensis	A1	Ariocarpus retusus v. retusus San Rafael form
		B1	Ariocarpus scapharostrus

## Alphabetical Plant List

Code	Botanical Name	Code	Botanical Name
B2	Ariocarpus trigonus	B3	Cereus peruvianus monstrose minima
C3	Astroloba dodsoniana	B3	Cereus tetragonus monstrose
C3	Astroloba herrei	C3	Ceropegia linearis ssp. woodii
B1	Astrophytum asterias	B1	Chamaecereus silvestrii
B1	Astrophytum asterias x A. capricorne	B1	Chamaecereus x Fire Chief Johnson hybrid
B1	Astrophytum capricorne	B1	Chamaecereus x Flame Johnson hybrid
B1	Astrophytum capricorne v. niveum	B1	Chamaecereus x King Kong
B1	Astrophytum carpicorne x A. asterias	B1	Chamaecereus x Tourmaline
A1	Astrophytum coahuilense	B1	Chamaecereus x Yellow Peanut Johnson
A1	Astrophytum myriostigma	B1	Chamaecereus x Mephisto Johnson hybrid
B1	Astrophytum myriostigma v. nudum	B1	Cheiridopsis candissimus
A1	Astrophytum myriostigma v. quadricostatum	B3	Cissus tuberosus
A1	Astrophytum ornatum	A2	Cleistocactus straussii Silver Torch
A1	Astrophytum ornatum "niveum"	B1	Cleistocactus X Oreocereus cv. Old Torch
C3	Astroworthia skinneri	A2	Cochemiea setispina
B3	Austrocephalocereus dolichospermaticus	B3	Coleocephalocereus geobelianus
B3	Austrocephalocereus estevesii	B3	Consolea rubescens
B1	Austrocephalocereus streckeri	B3	Copiapoa humilis
B3	Aztekium ritteri	B3	Copiapoa krainziana
B3	Azureocereus hertlingianus	B3	Copiapoa lembckeii
B3	Backebergia militaris	B3	Copiapoa marginata
B3	Backebergia militaris crest	B3	Copiapoa tenuissima
B2	Beaucarnea recurvata	B3	Copiapoa tenuissima monstrose
B2	Beaucarnea stricta	B3	Corallocarpus bainesii
C3	Blossfeldia liliputana	B2	Coryphantha andrea
B3	Bombax ellypticum	B2	Coryphantha bumamma
B3	Borzicactus chacoanus crest	A1	Coryphantha cornifera
A1	Brachychiton australis	B1	Coryphantha durangensis
A1	Brachychiton rupestris	A1	Coryphantha echinus
B3	Buiningia brevicylindrica v. longispina	A2	Coryphantha elephantidens
B3	Buiningia purpureus	A1	Coryphantha erecta
A3	Bursera fagaroides	B1	Coryphantha fragrans
A2	Bursera microphylla	B1	Coryphantha henricksonii
A3	Bursera schlechtendalii	A1	Coryphantha hesteri
A1	Calibanus hookeri	A1	Coryphantha macromeris
B3	Caralluma lutea	A1	Coryphantha poselgeriana
B3	Caralluma schweinfurthii	A1	Coryphantha recurvata
B3	Caralluma socotrana	B1	Coryphantha runyonii inermis
B3	Caralluma speciosa	B1	Coryphantha sulcata
A1	Carnegiea gigantea	B1	Coryphantha vivipara v. kiababensis
B3	Cephalocereus alensis crest	B1	Coryphantha vivipara v. neomexicana
B3	Cephalocereus chrysacanthus crest	B1	Coryphantha vivipara v. vivipara
B3	Cephalocereus euphorbioides crest	B2	Cotyledon ladismithensis
B3	Cephalocereus maxsonii	B2	Cotyledon ladismithensis variegata
B3	Cephalocereus palmeri	B2	Cotyledon orbiculata
B3	Cephalocereus palmeri crest	B2	Cotyledon orbiculata Chalk Sticks
B2	Cephalocereus polylophus	B2	Cotyledon sinus-alexandri
B2	Cephalocereus senilis	B2	Cotyledon undulata
B3	Cephalocereus senilis crest	C3	Crassula ausiensis v. giessii
B3	Cephalopentandra ecirrhosa	C3	Crassula columella
B3	Ceraria pygmaea	C3	Crassula cornuta ssp. pillansii
C3	Ceratozamia hildae	B3	Crassula falcata
A3	Cereus aethiops	C3	Crassula lycopodioides
A2	Cereus forbesii	C3	Crassula marnieriana
A2	Cereus grandicostatus	C3	Crassula obvallata
A2	Cereus peruvianus	C3	Crassula perforata
A2	Cereus peruvianus monstrose	B3	Crassula portulacea DWARF JADE
A2	Cereus peruvianus spiral form	B3	Crassula portulacea Jade Tree
B3	Cereus peruvianus monstrose Ming Thing	C3	Crassula portulacea variegata

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Code	Botanical Name	Code	Botanical Name
B3	Crassula portulacea 'Dwarf Hobbit'	C2	Echeveria harmsii
B3	Crassula portulacea 'Gollum'	C1	Echeveria lilacina
B3	Crassula portulacea 'Hobbit'	C2	Echeveria minima
C3	Crassula pyramidalis	C1	Echeveria nodulosa
C3	Crassula rupestris hybrid	C2	Echeveria purpurorum
C3	Crassula streyei	C1	Echeveria runyonii monstrose
C3	Crassula teres Rattlesnake Plant	C1	Echeveria setosa
C3	Crassula x Buddha's Temple	C1	Echeveria subsessilis
C3	Crassula x Christine	C2	Echeveria subsessilis variegata
C3	Crassula x Coralita	C2	Echeveria x Arlie Wright
C3	Crassula x Emerald	C1	Echeveria x Dondo
C3	Crassula x Fernwood	C2	Echeveria x Doris Taylor
C3	Crassula x Ivory Pagoda	C2	Echeveria x Firelight
C3	Crassula x Moonglow	C1	Echeveria x Lola
C3	Crassula x Morgan's Pink	C3	Echeveria x Mona Loa
C3	Crassula x Tiny Tim variegata	C3	Echeveria x Paul Bunyon
C2	Cremnosedum x Little Gem	C1	Echeveria x Perle von Nurnberg
B1	Cycas revoluta SAGO PALM	C1	Echeveria x Topsy Turvy
A2	Cyphostemma juttae	C2	Echeveria x Wavy Curls
A2	Cyphostemma juttae	A1	Echinocactus grusonii
B3	Cyphostemma montagnaci	B2	Echinocactus grusonii crest
B3	Cyphostemma sandersii	B2	Echinocactus grusonii albispina White Barrel
A1	Dasyilirion longissima	A1	Echinocactus horzonthalonius v. horzonthalonius
A1	Dasyilirion wheeleri	A1	Echinocactus ingens
B1	Delosperma bosseranum	A1	Echinocactus texensis
A1	Denmoza rhodacantha	B1	Echinocereus adustus
A1	Dioone edule	A1	Echinocereus baileyi
B3	Dioone spinulosum	A1	Echinocereus baileyi v. bruniespinus
B3	Dioscorea elephantipes	B1	Echinocereus berlandieri
B3	Discocactus albispinus HU 390	B1	Echinocereus coccineus v. inermis
B3	Discocactus alteolens HU 232	B1	Echinocereus coccineus v. paucispinus
B3	Discocactus araniespinus	B1	Echinocereus delaetii
B3	Discocactus bueneckeri	B1	Echinocereus enneacanthus
B3	Discocactus catingicola HU 392	A1	Echinocereus fendleri v. boyce-thompsonii
B3	Discocactus cephaliaciculosus HU 644	A1	Echinocereus fendleri v. rectispinus
B3	Discocactus chrystallophyllus HU 582	A1	Echinocereus fitchii
B3	Discocactus chrystallophyllus HU 582	B1	Echinocereus knippelianus v. knippelianus
B3	Discocactus horstii	B1	Echinocereus knippelianus v. kruegeri
B3	Discocactus insignis HU 347	B1	Echinocereus knippelianus v. reyesii
B3	Discocactus latispinus HU 146	B1	Echinocereus lauii
B3	Discocactus nigrisaeetosus HU 448	A1	Echinocereus ledingii
B3	Discocactus placentiformis HU 105	B3	Echinocereus leucanthus (Wilcoxia albiflora)
B3	Discocactus pugionacanthus HU 402	B2	Echinocereus luteus
B3	Discocactus sp. nova HU 544	A1	Echinocereus melanocentrus
B3	Discocactus sp. nova HU 639	B1	Echinocereus morricallii
B3	Discocactus sp. nova HU 640	A1	Echinocereus nicholii
B3	Discocactus sp. nova HU 645	B1	Echinocereus nivorus
B3	Discocactus sp. nova HU 646	B3	Echinocereus pacificus
B3	Discocactus sp. nova HU 651	B1	Echinocereus papillosus
B3	Discocactus subviridigriseus HU 438	B1	Echinocereus parkerii v. gonzalesii
B3	Dorstenia crispa	A1	Echinocereus pectinatus v. pectinatus
C3	Dudleya greenii cv. White Sprite	A1	Echinocereus pectinatus v. rigidissimus
B2	Dyckia marnier-lapostolle	B1	Echinocereus pectinatus v. rubispinus
C2	Echeveria affinis	B1	Echinocereus pentalophus
C2	Echeveria agavoides	B2	Echinocereus pentalophus crest
C2	Echeveria bella	B1	Echinocereus pentalophus monstrose
C1	Echeveria chihuahuensis	B1	Echinocereus polyacanthus
C2	Echeveria derenbergii	A1	Echinocereus polyacanthus v. nova
C1	Echeveria glauca	B1	Echinocereus poselgerii (Wilcoxia)

## Alphabetical Plant List

### Code Botanical Name

B1 Echinocereus pulchellus v. pulchellus  
 B1 Echinocereus pulchellus v. weinbergii  
 B1 Echinocereus reichenbachii v. albertii  
 B1 Echinocereus reichenbachii v. albispinus  
 B2 Echinocereus reichenbachii v. albispinus crest  
 A1 Echinocereus rigidissimus  
 B2 Echinocereus rusanthus v. vulpis-cauda  
 B1 Echinocereus scheerii v. obscurensis  
 B1 Echinocereus scheeryi v. gentryi  
 B1 Echinocereus schmollii (Wilcoxia)  
 B2 Echinocereus spinigemmatum  
 A1 Echinocereus stramineus  
 B2 Echinocereus subinermis v. ochoterenae  
 A1 Echinocereus triglochidaitus v. rosei  
 A1 Echinocereus triglochidiatus SB201  
 A1 Echinocereus triglochidiatus v. gonacanthus  
 A1 Echinocereus triglochidiatus v. mohavensis  
 A1 Echinocereus triglochidiatus v. octacanthus  
 B1 Echinocereus viridiflorus  
 B1 Echinocereus viridiflorus v. correllii  
 A1 Echinomastus intertextus  
 B1 Echinopsis ancistrophora crest  
 B1 Echinopsis argentinensis  
 B1 Echinopsis chloranthus  
 B1 Echinopsis grandiflorus  
 B1 Echinopsis hauscha v. rubra  
 B1 Echinopsis multiplex crest  
 B1 Echinopsis pelecyrachis  
 B1 Echinopsis silvestrii  
 B1 Echinopsis sp. nov. P255  
 B1 Echinopsis subdenudatum  
 B1 Echinopsis tubiflora cv. HAKUJOMARU  
 B1 Echinopsis turbinata  
 B1 Echinopsis x "Pragochameacereus - Fric hybrid"  
 B1 Echinopsis x Apricot Glow Dimmitt hybrid  
 B1 Echinopsis x Arachnacot M2G hybrid  
 B1 Echinopsis x Atomic Paramount hybrid  
 B1 Echinopsis x Aurora Paramount hybrid  
 B1 Echinopsis x Barber Pole Paramount hybrid  
 B1 Echinopsis x Betelguese Paramount hybrid  
 B1 Echinopsis x Blaze Paramount hybrid  
 B1 Echinopsis x Blue Lights Paramount hybrid  
 B1 Echinopsis x Blush Paramount hybrid  
 B1 Echinopsis x Bowl of Orange "Chamaelobivia"  
 B1 Echinopsis x Cherry Red Bach's hybrid  
 B1 Echinopsis x Dainty Bess Paramount hybrid  
 B1 Echinopsis X Epic B&B hybrid  
 B1 Echinopsis x First Light Dimmitt hybrid  
 B1 Echinopsis x Flaming Orange Chamaecereus hybrid  
 B1 Echinopsis x Fluffy Ruffles Paramount hybrid  
 B1 Echinopsis x Flying Saucer  
 B1 Echinopsis x Giant Peanut Johnson hybrid  
 B1 Echinopsis x Glorious  
 B1 Echinopsis x Harlequin Paramount hybrid  
 B1 Echinopsis x Hemaglow M2G hybrid  
 B1 Echinopsis x Hollyberry M2G hybrid  
 B1 Echinopsis x Iridina M2G hybrid  
 B1 Echinopsis x Iris Myers Chamaecereus hybrid  
 B1 Echinopsis x Japan NO 1 Chamaecereus hybrid

### Code Botanical Name

B1 Echinopsis x Jean's Delight "Chamaelobivia"  
 B1 Echinopsis x June Noon Dimmitt hybrid  
 B1 Echinopsis x Kawinai Chamaecereus hybrid  
 B1 Echinopsis x Kent Sunrise "Chamaelobivia"  
 B1 Echinopsis x Los Angeles Paramount hybrid  
 B1 Echinopsis x Mars Paramount hybrid  
 B1 Echinopsis x Mephisto Johnson hybrid  
 B1 Echinopsis x Northern Lights Paramount hybrid  
 B1 Echinopsis x Oh Wow! Dimmitt hybrid  
 B1 Echinopsis x Pacific Sunset  
 B1 Echinopsis x Pink and White Johnson hybrid  
 B1 Echinopsis x Pink Flamingo Chamaecereus hybrid  
 B1 Echinopsis x Pink Glory  
 B1 Echinopsis x Ralph's Orange Chamaecereus hybrid  
 B1 Echinopsis x Red King Paramount hybrid  
 B1 Echinopsis x Red Meteor Paramount hybrid  
 B1 Echinopsis x Red Paramount Paramount hybrid  
 B3 Echinopsis x Red Riding Hood crest  
 B1 Echinopsis x Salmonella M2G hybrid  
 B1 Echinopsis x Scarlett O'Hara Paramount hybrid  
 B1 Echinopsis x Son of Shot Scarlet Chamaecereus hybrid  
 B1 Echinopsis x Stars & Stripes Paramount  
 B1 Echinopsis x Sunset Paramount hybrid  
 B1 Echinopsis x Toxic Waste Miles' To Go hybrid  
 B1 Echinopsis x Tropic Sunset Paramount hybrid  
 B1 Echinopsis x Uncle Arthur Chamaecereus hybrid  
 B1 Echinopsis x Volcanic Sunset Dimmitt hybrid  
 B1 Echinopsis x Watermelon Paramount  
 B3 Echinopsis x White Knight variegata  
 B1 Echinopsis x White Peanut Chamaecereus hybrid  
 B1 Echinopsis x Yellow Bird Chamaecereus hybrid  
 B1 Echinopsis multiplex crest Johnson's Pink Flowered Hedgehog  
 C3 Edithcolea grandis  
 B1 Encephalocarpus strobiliformis  
 B1 Epithelantha micromeris  
 B1 Epithelantha micromeris v. rufispina  
 B1 Epithelantha polycephala  
 B1 Epithelantha unguispina  
 A2 Erythrina flabelliformis  
 B1 Escobaria chihuahuensis  
 B1 Escobaria vivipara v. bisbeeana  
 B1 Escobaria zilziana  
 B2 Espostoa lanata  
 B2 Espostoa melanostele  
 B3 Espostoa melanostele v. nana  
 B3 Espostoa mirabolis  
 B3 Espostoa ritteri  
 B3 Espostoa saxitilis v. densilanatus  
 B3 Euphorbia acruensis  
 B3 Euphorbia aeruginosa  
 B3 Euphorbia ammak variegata  
 A1 Euphorbia antisyphilitica  
 B3 Euphorbia bupleurifolia  
 B3 Euphorbia cactus  
 B3 Euphorbia canariensis  
 A3 Euphorbia candelabrum  
 C3 Euphorbia cap-saintmariensis

## ***Alphabetical Plant List***

<b>Code</b>	<b>Botanical Name</b>	<b>Code</b>	<b>Botanical Name</b>
B3	<i>Euphorbia carlsonii</i>	B1	<i>Fenestraria</i> cv. "Fireworth"
C3	<i>Euphorbia decaryi</i> v. <i>decaryi</i>	B2	<i>Fenestraria</i> hybrids BABY TOES
C3	<i>Euphorbia decaryi</i> v. <i>spirosticha</i>	A1	<i>Ferocactus chrysacanthus</i>
B3	<i>Euphorbia echinus</i>	A1	<i>Ferocactus covillei</i>
B3	<i>Euphorbia enopla</i>	A2	<i>Ferocactus cylindraceus</i> v. <i>tortulospinus</i>
B3	<i>Euphorbia ferox</i>	A2	<i>Ferocactus diguettii</i>
B3	<i>Euphorbia flanaganii</i> arm crest	A2	<i>Ferocactus echidne</i>
B3	<i>Euphorbia flanaganii</i> MEDUSA'S HEAD	A2	<i>Ferocactus fordii</i>
B3	<i>Euphorbia francoisii</i>	A2	<i>Ferocactus gatesii</i>
B3	<i>Euphorbia fruticosa</i> "spines form"	B2	<i>Ferocactus glaucescens</i>
B3	<i>Euphorbia fruticosa</i> Blue form	A1	<i>Ferocactus gracilis</i>
B3	<i>Euphorbia gorgonis</i>	A1	<i>Ferocactus gracilis</i> v. <i>coloratus</i>
B3	<i>Euphorbia grandicornis</i>	A1	<i>Ferocactus hamatacanthus</i> v. <i>hamatacanthus</i>
B3	<i>Euphorbia hermentiana</i>	A1	<i>Ferocactus hamatacanthus</i> v. <i>sinuatus</i>
B2	<i>Euphorbia horrida</i> v. <i>horrida</i>	A1	<i>Ferocactus herrerae</i>
B3	<i>Euphorbia horrida</i> v. <i>nova</i>	A2	<i>Ferocactus hystrix</i>
B2	<i>Euphorbia horrida</i> v. <i>striata</i>	A1	<i>Ferocactus latispinus</i>
B2	<i>Euphorbia horrida</i> x <i>polygona</i>	A1	<i>Ferocactus latispinus</i> (yellow spined)
B3	<i>Euphorbia inermis</i> v. <i>huttonae</i>	B2	<i>Ferocactus macrodiscus</i>
B3	<i>Euphorbia ingens</i> monstrose	A2	<i>Ferocactus nobilis</i>
C3	<i>Euphorbia knuthii</i>	A1	<i>Ferocactus orcuttii</i>
B3	<i>Euphorbia lactea</i>	A1	<i>Ferocactus peninsulæ</i>
B3	<i>Euphorbia lactea</i> crest	A1	<i>Ferocactus pilosus</i>
B3	<i>Euphorbia lactea</i> White Ghost	A2	<i>Ferocactus pottsii</i> v. <i>alamosanus</i>
B3	<i>Euphorbia lactea</i> variegata crest White Ghost Crest	A1	<i>Ferocactus pringlei</i>
B3	<i>Euphorbia makallensis</i>	A1	<i>Ferocactus rectispinus</i>
B3	<i>Euphorbia mammillaris</i>	B2	<i>Ferocactus robustus</i>
B3	<i>Euphorbia mammillaris</i> variegata	A1	<i>Ferocactus schwarzii</i>
B3	<i>Euphorbia meloformis</i>	B1	<i>Ferocactus stainesii</i>
C3	<i>Euphorbia millii</i> v. <i>imperatae</i> Mini Crown of Thorns	B1	<i>Ferocactus viridescens</i>
B3	<i>Euphorbia nesmannii</i>	A1	<i>Ferocactus wislizenii</i>
B2	<i>Euphorbia obesa</i>	A3	<i>Ficus palmeri</i>
B3	<i>Euphorbia obesa</i> crest	A3	<i>Ficus petiolaris</i>
B3	<i>Euphorbia obesa</i> hybrid	C3	<i>Fockea edulis</i>
B3	<i>Euphorbia opuntioides</i>	B3	<i>Folotsia</i> sp.
B3	<i>Euphorbia piscidermis</i>	A1	<i>Fouquieria fasciculata</i>
B3	<i>Euphorbia polyacantha</i>	A1	<i>Fouquieria splendens</i>
B3	<i>Euphorbia polygona</i>	B3	<i>Frailea castanae</i>
B3	<i>Euphorbia polygona</i> hybrid	B3	<i>Frailea phaeodisca</i>
B3	<i>Euphorbia pulvinata</i>	B2	<i>Frithia pulchra</i>
A2	<i>Euphorbia resinifera</i>	B3	<i>Gasteraloe</i> hybrid
B3	<i>Euphorbia restricta</i>	B3	<i>Gasteria armstrongii</i>
A1	<i>Euphorbia rigida</i>	B3	<i>Gasteria armstrongii</i> hybrid variegata
A2	<i>Euphorbia rowyleana</i>	B3	<i>Gasteria batesiana</i>
B3	<i>Euphorbia samburuensis</i>	C3	<i>Gasteria liliputana</i>
B3	<i>Euphorbia squarrosa</i>	B3	<i>Gasteria nigricans</i> v. <i>marmorata</i>
B3	<i>Euphorbia stenoclada</i>	B3	<i>Gasteria nigricans</i> variegata
B3	<i>Euphorbia suzannae</i>	C3	<i>Gasteria obtusifolia</i>
B3	<i>Euphorbia suzannae</i> crest	C3	<i>Gasteria verruculosa</i>
B3	<i>Euphorbia symmetrica</i>	C3	<i>Gasteria</i> x <i>Frosty</i>
B3	<i>Euphorbia tirucallii</i>	C3	<i>Gasterworthia</i> x <i>Gordo</i>
B3	<i>Euphorbia tortirama</i>	B2	<i>Gonolobus</i> ( <i>Matelea</i> ) <i>cyclophyllum</i>
A3	<i>Euphorbia trigona</i>	B2	<i>Grahamia coahuilensis</i>
A3	<i>Euphorbia trigona</i> Red Form	C1	<i>Graptopetalum bellum</i> ( <i>Tacitus</i> )
B3	<i>Euphorbia trigona</i> variegata	C3	<i>Graptopetalum superbum</i>
B3	<i>Euphorbia viguieri</i> v. <i>capuroniana</i>	B1	<i>Gymnocactus beguinii</i> v. <i>senilis</i>
B3	<i>Euphorbia</i> x <i>Cocklebur</i>	B1	<i>Gymnocactus gielsdorfianus</i>
B3	<i>Euphorbia</i> x <i>Thumbelina</i>	B1	<i>Gymnocactus saueri</i>
B2	<i>Faucaria tigrina</i> TIGER JAWS	B1	<i>Gymnocactus subterraneus</i> v. <i>zaragosae</i>

## Alphabetical Plant List

Code	Botanical Name	Code	Botanical Name
B1	<i>Gymnocactus ysabelae</i>	C3	<i>Haworthia herrei</i> v. <i>herrei</i>
B1	<i>Gymnocalycium andrea</i> v. <i>longiflorum</i>	C3	<i>Haworthia herrei</i> v. <i>jacobseniana</i>
B1	<i>Gymnocalycium artigas</i>	C3	<i>Haworthia koelmaniorum</i>
B1	<i>Gymnocalycium baldianum</i>	C3	<i>Haworthia limifolia</i>
B1	<i>Gymnocalycium bayrianum</i>	C3	<i>Haworthia lockwoodii</i>
B1	<i>Gymnocalycium bruchii</i>	C3	<i>Haworthia magnifica</i> v. <i>magnifica</i>
B1	<i>Gymnocalycium cardenasianum</i>	C3	<i>Haworthia magnifica</i> v. <i>major</i>
B2	<i>Gymnocalycium damsii</i> v. <i>rotundolum</i>	C3	<i>Haworthia magnifica</i> v. <i>paradoxa</i>
B1	<i>Gymnocalycium denudatum</i>	C3	<i>Haworthia magnifica</i> v. <i>major</i>
B1	<i>Gymnocalycium doppianum</i>	C3	<i>Haworthia marumiana</i>
B1	<i>Gymnocalycium erinaceum</i>	C3	<i>Haworthia marumiana</i>
B2	<i>Gymnocalycium eurypleurum</i>	C3	<i>Haworthia maughanii</i>
B2	<i>Gymnocalycium fleischerianum</i>	C3	<i>Haworthia maughanii</i> X <i>truncata</i>
C3	<i>Gymnocalycium friederichii</i> Red Cap	C3	<i>Haworthia minima</i>
B1	<i>Gymnocalycium friederickii</i>	C3	<i>Haworthia mirabilis</i>
B1	<i>Gymnocalycium gibbosum</i>	C3	<i>Haworthia mutica</i>
B1	<i>Gymnocalycium horridispinum</i>	C3	<i>Haworthia nigra</i>
B1	<i>Gymnocalycium horstii</i>	C3	<i>Haworthia parksiana</i>
B1	<i>Gymnocalycium leeanum</i>	C3	<i>Haworthia pumila</i>
B1	<i>Gymnocalycium manzanense</i>	C3	<i>Haworthia pygmeae</i>
B1	<i>Gymnocalycium matoense</i>	C3	<i>Haworthia reinwardtii</i> v. <i>chalumnensis</i>
B1	<i>Gymnocalycium monvillei</i>	C3	<i>Haworthia reinwardtii</i> v. <i>chalwinii</i>
B1	<i>Gymnocalycium multiflorum</i>	C3	<i>Haworthia reinwardtii</i> v. <i>conspicua</i>
B2	<i>Gymnocalycium ourselianum</i>	C3	<i>Haworthia reinwardtii</i> v. <i>kaffirdriftensis</i>
B1	<i>Gymnocalycium paediophilum</i>	C3	<i>Haworthia reinwardtii</i> v. <i>tenuis</i>
B2	<i>Gymnocalycium pflanzii</i> v. <i>albopulpa</i>	C3	<i>Haworthia reinwardtii</i> v. <i>zebrina</i>
B2	<i>Gymnocalycium pflanzii</i> v. <i>camaparense</i>	C3	<i>Haworthia resendeana</i>
B1	<i>Gymnocalycium pflanzii</i> v. <i>marquezii</i>	C3	<i>Haworthia reticulata</i> v. <i>hurlingii</i>
B2	<i>Gymnocalycium ragonessii</i>	C3	<i>Haworthia reticulata</i> v. <i>reticulata</i>
A1	<i>Gymnocalycium saglione</i>	C3	<i>Haworthia retusa</i>
B1	<i>Gymnocalycium schroederianum</i>	C3	<i>Haworthia retusa</i> (large)
B1	<i>Gymnocalycium spegazzini</i>	C3	<i>Haworthia retusa</i> fm. <i>geraldii</i>
B2	<i>Gymnocalycium stenogonum</i>	C3	<i>Haworthia retusa</i> v. <i>acuminata</i>
B1	<i>Gymnocalycium tillianum</i>	C3	<i>Haworthia retusa</i> v. <i>dekenahii</i>
B1	<i>Gymnocalycium triacanthum</i>	C3	<i>Haworthia retusa</i> v. <i>multilineata</i>
B2	<i>Gymnocalycium valnicekianum</i>	C3	<i>Haworthia retusa</i> X <i>truncata</i>
B3	<i>Harrisia justbertii</i>	C3	<i>Haworthia retusa</i> X <i>truncata</i> Harry Johnson III
C3	<i>Hatiora salicornoides</i>	C3	<i>Haworthia roseoluteus</i>
C3	<i>Haworthia angustifolia</i> Riebeeck East	C3	<i>Haworthia scabra</i>
C3	<i>Haworthia attenuata</i>	C3	<i>Haworthia scabra</i> v. <i>morrisae</i>
C3	<i>Haworthia attenuata</i> v. <i>clariperla</i>	C3	<i>Haworthia sordida</i>
C3	<i>Haworthia baccata</i>	C3	<i>Haworthia springbokvlakensis</i>
C3	<i>Haworthia baccata</i> X <i>reinwardtii</i>	C3	<i>Haworthia translucens</i> v. <i>tenera</i>
C3	<i>Haworthia bolusii</i> v. <i>bolusii</i>	C3	<i>Haworthia truncata</i>
C3	<i>Haworthia browniana</i>	C3	<i>Haworthia turgida</i> v. <i>rodinii</i>
C3	<i>Haworthia coarctata</i> v. <i>coarctata</i>	C3	<i>Haworthia turgida</i> v. <i>turgida</i>
C3	<i>Haworthia coarctata</i> v. <i>coarctata</i> greenii	C3	<i>Haworthia unicolor</i>
C3	<i>Haworthia comptoniana</i>	C3	<i>Haworthia variegata</i>
C3	<i>Haworthia cooperi</i>	C3	<i>Haworthia venosa</i> ssp. <i>tesselata</i>
C3	<i>Haworthia cooperi</i> v. <i>leightonii</i>	C3	<i>Haworthia viscosa</i> v. <i>caespitosa</i>
C3	<i>Haworthia cymbiformis</i> <i>lepida</i>	C3	<i>Haworthia viscosa</i> v. <i>viscosa</i>
C3	<i>Haworthia cymbiformis</i> <i>mucronata</i>	C3	<i>Haworthia wooleyii</i>
C3	<i>Haworthia cymbiformis</i> <i>obtusa</i>	C3	<i>Haworthia</i> x <i>Fatso</i>
C3	<i>Haworthia cymbiformis</i> <i>transciens</i>	C3	<i>Haworthia</i> x <i>Manda's Hybrid</i>
C3	<i>Haworthia emelyae</i> v. <i>mutlifolia</i>	C3	<i>Haworthia xyphiophylla</i>
C3	<i>Haworthia fasciata</i>	C3	<i>Haworthia zantneriana</i>
C3	<i>Haworthia fouchei</i>	C3	<i>Haworthia emelyae</i> ( <i>picta</i> )
C3	<i>Haworthia herbacea</i>	B3	<i>Herreroa dyeri</i>
C3	<i>Haworthia herrei</i> v. <i>glauca</i>	A1	<i>Hesperaloe funifera</i>

## Alphabetical Plant List

Code	Botanical Name	Code	Botanical Name
A1	Hesperaloe parviflora	B1	Lithops schwantesii v. christinae
B3	Hoodia gordonii	B1	Lithops verruculosa
B3	Hoodia macrantha	B1	Lobivia acanthoplegma v. rosieflora
B3	Hoodia (Trichocaulon) officinale	B1	Lobivia andalgalensis
B3	Huernia thuretii	B1	Lobivia arachnacantha
B3	Huernia zebrina	B1	Lobivia aurea red flowered form
B1	Ibervillea sonorae v. penninsulae	B1	Lobivia aurea (syn. L. luteaflora) yellow flowered form
B2	Ibervillea tennuisecta	B1	Lobivia cardenasiana
A1	Idria columnaris BOOJUM	B1	Lobivia cinnabarina
A2	Ipomoea platense	B1	Lobivia ferox
B3	Jacaratia hasseleriana	B1	Lobivia jajoiana v. nigristoma
B2	Jatropha cathartica =(bertlandieri)	B1	Lobivia kermisina
A3	Jatropha cordata	B1	Lobivia leucomalla
A3	Jatropha cuneata	B1	Lobivia obrepanda calorubra
B3	Jatropha plantanifolia	B1	Lobivia pojoensis v. grandiflora
B3	Jatropha podagrica	B1	Lobivia winteriana
B3	Kalanchoe beharensis minima	B1	Lobivia wrightiana
C3	Kalanchoe beharensis monstrose	A2	Lophocereus schottii Sonita
B3	Kalanchoe beharensis `Fang`	A2	Lophocereus schottii monstrose TOTEM POLE
C3	Kalanchoe eriophylla	B3	Luckhoffia buekmannii
B3	Kalanchoe scapigera	B3	Luckhoffia buekmannii crest
B3	Kalanchoe thrysifolia	B3	Macrozamia moorei
C3	Kalanchoe tomentosa	B2	Malacocarpus sellowii
B3	Kalanchoe tomentosa Chocolate Soldier	B1	Mammillaria ahniana
B2	Lapidaria margaretae	B2	Mammillaria albicans
C3	Ledebouria socialis	B3	Mammillaria albiflora
A1	Leuchtenbergia pricipis	B2	Mammillaria albilanata
B1	Lithops aucampiae	B2	Mammillaria albilanata v. fauxiana
B1	Lithops bromfieldii	A1	Mammillaria apozolensis v. saltensis
B1	Lithops dorotheae	B1	Mammillaria auriehamata
B1	Lithops fulviceps v. lactinae	B1	Mammillaria aurielanata
B1	Lithops gesinae v. annae	B2	Mammillaria aurielanata fma. alba
B1	Lithops gracilidelineata	B1	Mammillaria bachmannii
B1	Lithops hallii	B3	Mammillaria bambusiphilla
B1	Lithops helmutii	B1	Mammillaria baumii
B1	Lithops hookeri	B3	Mammillaria baxteriana
B1	Lithops hookeri "vermiculate form"	B2	Mammillaria beisellii
B1	Lithops hookeri v. elephina	B3	Mammillaria beneckeii variegata
B1	Lithops hookeri v. sussannae	B2	Mammillaria berkeana
B1	Lithops jullii	A3	Mammillaria blossfeldiana
B1	Lithops karasmontana	B1	Mammillaria bocasana multilanata
B1	Lithops karasmontana v. eberlanzii	B1	Mammillaria bocasana roseiflora
B1	Lithops karasmontana v. lericheana	B2	Mammillaria bocasana monstrose cv. Fred
B1	Lithops karasmontana v. tischeri	A1	Mammillaria bocensis
B1	Lithops karasmontana [Mickbergensis]	B2	Mammillaria bombycina
B1	Lithops karasmontana [Summitatum]	A3	Mammillaria boolii
B1	Lithops lesliei	A1	Mammillaria buchareliensis
B1	Lithops lesliei "warrenton"	B2	Mammillaria camptotricha
B1	Lithops lesliei fma. albinica	A1	Mammillaria candida
B1	Lithops lesliei v. burchellii	B2	Mammillaria canelensis
B1	Lithops lesliei v. rubrobrunnea	B2	Mammillaria carmenae
B1	Lithops lesliei v. venterii	B1	Mammillaria carnea
B1	Lithops marmorata v. elishae	B2	Mammillaria carrettii
B1	Lithops otzeniana	B2	Mammillaria casoii
B1	Lithops pseudotruncatella	B1	Mammillaria celsiana
B1	Lithops pseudotruncatella v. dendritica	B1	Mammillaria coahuilense (Porfiria schwartzii)
B1	Lithops ruschiorum	B3	Mammillaria columbiana
B1	Lithops salicola	A1	Mammillaria compressa
B1	Lithops schwantesii		



## Alphabetical Plant List

Code	Botanical Name	Code	Botanical Name
B2	<i>Mammillaria cowperae</i>	B1	<i>Mammillaria lloydii</i>
A1	<i>Mammillaria craigii</i> Lau 086	B1	<i>Mammillaria longiflora</i> fma. <i>longiflora</i>
B1	<i>Mammillaria crassimammillis</i>	B1	<i>Mammillaria longiflora</i> fma. <i>stampferi</i>
B1	<i>Mammillaria crispiseta</i>	B1	<i>Mammillaria longimamma</i> v. <i>longimamma</i>
B1	<i>Mammillaria crocidata</i>	B2	<i>Mammillaria longimamma</i> v. <i>uberiformis</i>
B2	<i>Mammillaria crucigera</i>	B1	<i>Mammillaria macracantha</i>
B2	<i>Mammillaria dehertiana</i>	B3	<i>Mammillaria magnifica</i>
B2	<i>Mammillaria densispina</i>	A1	<i>Mammillaria magnimamma</i>
B2	<i>Mammillaria dixanthocentron</i>	B1	<i>Mammillaria mainiae</i>
B3	<i>Mammillaria duiformis</i>	A3	<i>Mammillaria maritima</i>
B2	<i>Mammillaria duraspina</i>	B1	<i>Mammillaria marksiana</i>
B1	<i>Mammillaria duwei</i>	B3	<i>Mammillaria matudae</i>
B2	<i>Mammillaria eichlamii</i>	B1	<i>Mammillaria meigeana</i>
A1	<i>Mammillaria elegans</i>	B1	<i>Mammillaria melaleuca</i>
A1	<i>Mammillaria elegans</i> (San Jose Lacheguirii)	A1	<i>Mammillaria melanocentra</i>
B1	<i>Mammillaria elegans</i> v. <i>schmollii</i>	B1	<i>Mammillaria mendeliana</i>
B1	<i>Mammillaria elongata</i>	B1	<i>Mammillaria microhelia</i>
B2	<i>Mammillaria elongata</i> crest	B1	<i>Mammillaria microthele</i>
B2	<i>Mammillaria elongata</i> crest Brown Brain	B1	<i>Mammillaria moelleriana</i>
B3	<i>Mammillaria evermanniana</i>	B1	<i>Mammillaria montensis</i>
B1	<i>Mammillaria fittkauii</i>	A1	<i>Mammillaria morganiana</i>
A1	<i>Mammillaria formosa</i>	A1	<i>Mammillaria movensis</i> Rio Yaqui form
B1	<i>Mammillaria gasserana</i>	B1	<i>Mammillaria mystax</i>
A1	<i>Mammillaria geminispina</i>	B1	<i>Mammillaria napina</i>
A1	<i>Mammillaria geminispina nobilis</i>	B1	<i>Mammillaria nazasensis</i>
A1	<i>Mammillaria gigantea</i>	A2	<i>Mammillaria nejapensis</i>
B1	<i>Mammillaria glassii</i> Lau 1357	B3	<i>Mammillaria nivosa</i>
B1	<i>Mammillaria glassii</i> v. <i>nominis-dulcis</i>	B1	<i>Mammillaria obscura</i>
B2	<i>Mammillaria glochidiata</i>	B1	<i>Mammillaria obscura</i> v. <i>tortulospina</i>
B1	<i>Mammillaria grahamii</i> (syn. <i>M. microcarpa</i> )	A1	<i>Mammillaria ocotillensis</i>
A1	<i>Mammillaria grusonii</i>	A1	<i>Mammillaria pachycylindrica</i>
B1	<i>Mammillaria guelzowiana</i>	B1	<i>Mammillaria papasquiarensis</i>
A3	<i>Mammillaria guerreronis</i>	A1	<i>Mammillaria parkinsonii</i>
B1	<i>Mammillaria guillauminiana</i>	B1	<i>Mammillaria pectinifera</i>
B1	<i>Mammillaria haageana</i> v. <i>schmollii</i>	A3	<i>Mammillaria peninsularis</i>
B1	<i>Mammillaria hahniana</i>	B1	<i>Mammillaria pennispinosa</i>
B2	<i>Mammillaria heidiae</i>	A1	<i>Mammillaria perbella</i>
B1	<i>Mammillaria hemispherica</i>	B1	<i>Mammillaria perezdelarosae</i>
B3	<i>Mammillaria hernandezii</i>	B1	<i>Mammillaria pettersonii</i>
B3	<i>Mammillaria herrerae</i>	B2	<i>Mammillaria pilcayensis</i>
B3	<i>Mammillaria herrerae</i> crest	B1	<i>Mammillaria plumosa</i>
B1	<i>Mammillaria hertrichiana</i>	A3	<i>Mammillaria poselgeri</i>
B1	<i>Mammillaria hildagensis</i>	B1	<i>Mammillaria pottsii</i>
B3	<i>Mammillaria hiutzilopochtli</i>	B1	<i>Mammillaria priessnitzii</i>
B1	<i>Mammillaria humboldtii</i>	B1	<i>Mammillaria pseudoperbella</i>
B3	<i>Mammillaria humboldtii</i> (large form)	B2	<i>Mammillaria rekoi</i> v. <i>aurispina</i>
B1	<i>Mammillaria infernillensis</i>	B1	<i>Mammillaria rekoi</i> v. <i>leptacantha</i>
B1	<i>Mammillaria johnstonii</i> v. <i>sancarlensis</i>	B2	<i>Mammillaria rettigiana</i>
A1	<i>Mammillaria karwinskiana</i>	B1	<i>Mammillaria rhodantha</i> (syn. <i>M. pringlei</i> )
A1	<i>Mammillaria klissingiana</i>	B1	<i>Mammillaria ritteriana</i>
B1	<i>Mammillaria knebeliana</i>	B1	<i>Mammillaria rubrograndis</i>
B1	<i>Mammillaria knuthii</i>	B1	<i>Mammillaria rubrograndis</i> pale flowered
B1	<i>Mammillaria kraehenbuehlii</i>	B1	<i>Mammillaria runyonii</i>
B2	<i>Mammillaria lanata</i>	B1	<i>Mammillaria saboae</i> v. <i>goldii</i>
B1	<i>Mammillaria lasiacantha</i>	B1	<i>Mammillaria saboae</i> v. <i>haudeana</i>
B2	<i>Mammillaria lauii</i> fma. <i>lauii</i>	B1	<i>Mammillaria saboae</i> v. <i>saboae</i>
B2	<i>Mammillaria lauii</i> fma. <i>subducta</i>	B2	<i>Mammillaria sartorii</i>
B1	<i>Mammillaria lenta</i>	B1	<i>Mammillaria schiedeana</i> v. <i>plumosa</i>
B2	<i>Mammillaria lindsayi</i>	B1	<i>Mammillaria schiedeana</i> v. <i>schiedeana</i>

## ***Alphabetical Plant List***

<b>Code</b>	<b>Botanical Name</b>	<b>Code</b>	<b>Botanical Name</b>
A3	Mammillaria schumannii v. globosa	C3	Melocactus pachyacanthus
A3	Mammillaria schumannii v. schumannii	C3	Melocactus rubrispinus
B1	Mammillaria schwarzii	C3	Melocactus violaceus
B1	Mammillaria scrippsiana	C3	Melocactus warasii
B1	Mammillaria sempervivi v. sempervivi	B1	Mestoklema tuberosa
B1	Mammillaria sempervivi v. tetracantha	B3	Micranthocereus streckeri
B1	Mammillaria senilis	A3	Momordica rostrata
A2	Mammillaria setispinus (Cochemiea)	B3	Monadenium coccineum
B2	Mammillaria solisioides	B3	Monadenium invenustum
A1	Mammillaria sonorensis	B3	Monadenium lugardae
B2	Mammillaria sp. Lau 1050 (S.J. Capistrano)	B3	Monadenium ritchiei
B1	Mammillaria sp. nova - heyderi group Ascencion, Neuvo Leon	B3	Monadenium rubellum
B1	Mammillaria sphaerica	B3	Monvillea spegazini crest/monstrose
B2	Mammillaria spinosissima	B1	Morawetzia serricata
B2	Mammillaria spinosissima crest	A3	Moringa ovalifolia
B2	Mammillaria standleyi	B3	Myrtillocactus cochal crest
B2	Mammillaria supertexta	A2	Myrtillocactus geometrizans
B1	Mammillaria surculosa	A2	Myrtillocactus geometrizans crest
B2	Mammillaria swinglei	B1	Neobesseyia similis v. robustior
B1	Mammillaria tayloriorum	B3	Neobuxbaumia euphorbioides crest
B1	Mammillaria tesopacensis	B1	Neochilenia napina
B3	Mammillaria theresae	B1	Neochilenia pulchella
B2	Mammillaria tlalocii	B1	Neolloydia conoidea
B3	Mammillaria vallensis Tenango de Valle	B1	Neoporteria atrispinosa
B2	Mammillaria viperina	B1	Neoporteria laniceps
B2	Mammillaria wiesingeri	B1	Neoporteria nidus-senilis
B1	Mammillaria wildii	B1	Neoporteria occulta
A1	Mammillaria winterae	B1	Neoporteria paucicostata
B3	Mammillaria woburnensis	B1	Neoporteria scoparia
B1	Mammillaria woodsii	B1	Neoporteria sp.Lau 869 (de Taltal)
B1	Mammillaria wrightii	B1	Neoporteria wagenknechtii
B1	Mammillaria wrightii v. wilcoxii	B3	Neoraimondia gigantea
B1	Mammillaria x Pink Nymph	B3	Neoraimondia roseiflora
B1	Mammillaria zeilmanniana	B1	Notocactus agnetae
B1	Mammillaria zephyranthoides	B1	Notocactus antangularis
B3	Matucana aurieflora	B1	Notocactus apricus
B3	Matucana formosa	B2	Notocactus buiningii
B3	Matucana madisoniorum	B1	Notocactus claviceps
B3	Matucana mamillaris KK 1638	B1	Notocactus elegans
B2	Matucana paucicostata	B1	Notocactus euginiae
B3	Matucana weberbaueri	B1	Notocactus glaucinus v. depressus
C3	Melocactus axinophorus	B1	Notocactus graessneri
C3	Melocactus azulensis	C2	Notocactus haselbergii
C3	Melocactus azureus	B2	Notocactus herteri
C3	Melocactus broadwayi	B1	Notocactus horstii
C3	Melocactus concinnus	B1	Notocactus leninghausii
C3	Melocactus conoides	B1	Notocactus magnificus
C3	Melocactus deynacanthus	B1	Notocactus mammulosus
C3	Melocactus diersianus	B2	Notocactus purpureus
C3	Melocactus disciformis	B1	Notocactus roseoluteus
C3	Melocactus ernestii	B1	Notocactus rosieflorus
C3	Melocactus ferrophillus v. longispinus	B2	Notocactus rudibueneckeri
C3	Melocactus guitarti	B1	Notocactus rutilans
C3	Melocactus iacuensis HU 166	B1	Notocactus schlosseri
C3	Melocactus lendselinkianus	B3	Notocactus scopa v. murriellii
C3	Melocactus macrodiscus	B3	Notocactus scopa v. prolifera
C3	Melocactus matanzanus	B3	Notocactus scopa v. scopa
C3	Melocactus neomontanus	B3	Notocactus scopa variegata
		B2	Notocactus succineus

## ***Alphabetical Plant List***

<b>Code</b>	<b>Botanical Name</b>	<b>Code</b>	<b>Botanical Name</b>
B2	<i>Notocactus succineus</i> v. <i>albispinus</i>	B3	<i>Parodia auriespina</i>
B1	<i>Notocactus tureczekianus</i>	B3	<i>Parodia chrysacanthion</i>
B1	<i>Notocactus uebelmannianus</i>	B3	<i>Parodia fuscato-viridis</i>
B1	<i>Notocactus vanvlietii</i>	B3	<i>Parodia herzogii</i>
B1	<i>Notocactus warasii</i>	B3	<i>Parodia lauii</i>
B1	<i>Notocactus winkleri</i>	B3	<i>Parodia mairanana</i>
B1	<i>Obregonia denegrii</i>	B3	<i>Parodia massii</i>
A3	<i>Operculicarya decaryi</i>	B3	<i>Parodia nivosa</i>
A1	<i>Opuntia arbuscula</i>	B3	<i>Parodia penicillata</i>
A1	<i>Opuntia basilaris</i>	B3	<i>Parodia rubellihamata</i>
A1	<i>Opuntia basilaris monstrose</i>	B3	<i>Parodia rubida</i>
A1	<i>Opuntia basilaris</i> X <i>violacea</i> v. <i>Santa Rita</i>	B1	<i>Parodia sanguiniflora</i>
A1	<i>Opuntia engelmannii</i> v. <i>alta</i>	B1	<i>Pediocactus despainii</i>
A1	<i>Opuntia erinacea</i>	B1	<i>Pediocactus simpsonii</i> v. <i>minor</i>
A1	<i>Opuntia fragilis</i> v. <i>denudata</i>	B1	<i>Pelecyphora aselliformis</i>
A1	<i>Opuntia fulgida</i> crest	B1	<i>Peniocereus greggii</i> Queen of the Night
A1	<i>Opuntia leptocaulis</i>	B2	<i>Peniocereus marianus</i>
A1	<i>Opuntia microdasys monstrose</i>	A2	<i>Pereskia diaz-romeroana</i>
A1	<i>Opuntia microdasys</i> v. <i>albata</i>	A2	<i>Pereskia grandiflora</i>
A1	<i>Opuntia microdasys</i> v. <i>albispina</i>	A2	<i>Pereskia weberiana</i>
A1	<i>Opuntia microdasys</i> v. <i>microdasys</i>	B3	<i>Piранthus foetidus</i>
A1	<i>Opuntia microdasys</i> v. <i>rufida</i>	B3	<i>Pilosocereus azureus</i>
A1	<i>Opuntia molesta</i>	B3	<i>Pilosocereus gounellei</i>
B1	<i>Opuntia picardoii</i>	B3	<i>Pilosocereus magnificus</i>
A1	<i>Opuntia ramosissima</i>	B3	<i>Pilosocereus pachycladus</i>
A1	<i>Opuntia robusta</i>	B3	<i>Pilosocereus palmeri</i>
A2	<i>Opuntia subulata</i>	B3	<i>Pilosocereus superfloccosus</i>
A2	<i>Opuntia subulata</i> crest	B3	<i>Pilosocereus tillianus</i>
B2	<i>Opuntia vestita</i>	B1	<i>Pleospilos bolusii</i>
A1	<i>Opuntia violacea</i> v. <i>macrocentra</i>	B2	<i>Pleospilos nelii</i>
A1	<i>Opuntia violacea</i> v. <i>santa-rita</i>	B2	<i>Polaskia chichipe</i>
B2	<i>Opuntia vulgaris</i> variegata cv. <i>Maverick</i>	B3	<i>Portulacaria afra</i>
B3	<i>Orbea melanantha</i>	B3	<i>Portulacaria afra</i> variegata
B3	<i>Orbea pulchella</i> PVB 4262 Humewood, Port Elizabeth	B1	<i>Pterocactus australis</i>
B2	<i>Oreocereus celsianus</i>	B1	<i>Pterocactus fischeri</i>
B2	<i>Oreocereus henricksonianus</i> v. <i>densilanatus</i>	B1	<i>Pterocactus gonjiani</i>
B3	<i>Oreocereus neocelsianus</i> crest	B1	<i>Pterocactus hickenii</i>
B1	<i>Oreocereus trollii</i> v. <i>trollii</i>	B1	<i>Pterocactus kuntzii</i>
B1	<i>Oreocereus fossulatus</i> x <i>Cleistocactus straussii</i> cv. <i>James Pickering</i>	B1	<i>Pterocactus meglioli</i>
B2	<i>Oroya peruviana</i>	B1	<i>Pterocactus valentini</i>
B2	<i>Ortegocactus macdougallii</i>	B1	<i>Puna bonniea</i>
A3	<i>Pachycereus pringlei</i>	B1	<i>Puna clavarioides</i>
A3	<i>Pachycormus discolor</i>	B1	<i>Puna subterranea</i>
C1	<i>Pachyphytum amethystinum</i>	B2	<i>Pyrrhocactus bulbocalyx</i>
C1	<i>Pachyphytum oviferum</i>	B3	<i>Raphionacme flanaganii</i>
C1	<i>Pachyphytum oviferum</i> hybrid	B3	<i>Rathbunia alamosanus</i> crest
B3	<i>Pachypodium baronii</i> v. <i>windsorii</i>	C1	<i>Rebutia albipilosa</i>
B3	<i>Pachypodium bispinosum</i>	C1	<i>Rebutia donaldiana</i>
A3	<i>Pachypodium geayi</i>	C1	<i>Rebutia flavistylla</i>
B3	<i>Pachypodium horombense</i>	C1	<i>Rebutia glomeriseta</i>
A3	<i>Pachypodium lamerei</i>	C1	<i>Rebutia graciliflora</i> v. <i>borealis</i>
B3	<i>Pachypodium lamerei</i> v. <i>ramosum</i>	C1	<i>Rebutia heliosa</i> v. <i>condorensis</i>
B2	<i>Pachypodium namaquanum</i>	C1	<i>Rebutia heliosa</i> v. <i>heliosa</i>
B3	<i>Pachypodium rosulatum</i>	C1	<i>Rebutia jujuyana</i>
B3	<i>Pachypodium saundersii</i>	C1	<i>Rebutia krainziana</i>
B3	<i>Pachypodium succulentum</i>	C1	<i>Rebutia kupperiana</i>
C2	<i>Pachyveria</i> hybrid	C1	<i>Rebutia marsoneri</i>
		C1	<i>Rebutia miniscula</i>
		C1	<i>Rebutia muscula</i>

## ***Alphabetical Plant List***

<b>Code</b>	<b>Botanical Name</b>	<b>Code</b>	<b>Botanical Name</b>
C1	Rebutia perplexa	B1	Sulcorebutia frankiana
C1	Rebutia pulchella	B1	Sulcorebutia glomeriseta
C1	Rebutia pygmaea	B1	Sulcorebutia mentosa
C1	Rebutia violacea	B1	Sulcorebutia rauschii
C1	Rebutia albiflora R. heliosa cv. Sunrise	B1	Sulcorebutia rauschii (green form)
C1	Rosularia platyphylla	A1	Talinum aurantiacum
B3	Sansevieria kirkii pulchra	A1	Tephrocactus articulatus
B3	Sansevieria singularis	A1	Tephrocactus articulatus inermis
B3	Sarcocaulon multifidum	B1	Tephrocactus glomeratus
B3	Sarcocaulon penniculinum	B1	Tephrocactus inarmatus
B3	Sarcocaulon vanderietiae	A1	Tephrocactus paediophylla
B1	Sclerocactus glaucus	A1	Thelocactus bicolor v. bicolor
B1	Sclerocactus mesae-verdae	A1	Thelocactus bicolor v. boiaensis
B1	Sclerocactus parviflorus	A1	Thelocactus bicolor v. flavidispinus
B1	Sclerocactus spinosior	A1	Thelocactus bicolor v. schottii
B1	Sclerocactus spinosior v. schlesseri	A1	Thelocactus bicolor v. tricolor
B1	Sclerocactus wetlandicus	B1	Thelocactus heterochromus
B1	Sclerocactus whipplei	A1	Thelocactus hexaedrophorus
B1	Sclerocactus wrightiae	B1	Thelocactus lausseri
C3	Sedum furfuraceum	B1	Thelocactus leucacanthus v. schmollii
B2	Sedum prealtum crest	A1	Thelocactus macdowellii
B3	Sedum torulosum	A1	Thelocactus rinconensis
C1	Sempervivum aracnoideum	B1	Thelocactus setispinus
C1	Sempervivum calcareum	A1	Thelocactus setispinus fma. flavibaccatus
C1	Sempervivum tectorum	B3	Thrixantocereus blossfeldianus
B3	Senecio crassissimus	B1	Titanopsis calcareum
B3	Senecio herreianus variegata	B2	Titanopsis hugo-schlechteri
B3	Senecio macroglossus variegata	B1	Toumeyia papyracantha
B3	Senecio repens	B3	Trichocereus camarguensis crest
B3	Senecio saginata	B2	Trichocereus chilensis
B3	Senecio stapeliaformis	A1	Trichocereus macrogonus
B3	Seyrigia humbertii	B2	Trichocereus pachanoi crest
B3	Stapelia gettleffii	A2	Trichocereus pachanoi SAN PEDRO
B3	Stapelia leendertziae crest	A1	Trichocereus pasacana
B3	Stapelia nobilis	A2	Trichocereus peruvianus
A1	Stenocactus coptogonus	B1	Trichocereus poco
A1	Stenocactus lloydii	A1	Trichocereus tarijensis
A1	Stenocactus longispinus	A1	Trichocereus terscheckii v. montanus
A1	Stenocactus parksianus	A1	Trichocereus terscheckii v. terscheckii
A1	Stenocactus pentacanthus	B1	Trichocereus thelogonus crest
A1	Stenocactus phyacanthus v. violaciflorus	B1	Trichodiadema bulbosum
A1	Stenocactus sp. nova Lau 738 Rio de Mayo	B1	Trichodiadema densum
A3	Stenocereus dumortieri	B1	Turbinicarpus lauii
B3	Stenocereus eruca	B1	Turbinicarpus lophophoroides
B3	Stenocereus hollianus crest	B1	Turbinicarpus pseudomacrochele v. krainzianus
A2	Stenocereus marginatus	B1	Turbinicarpus pseudomacrochele v. pseudomacrochele
B3	Stenocereus pruinus	B1	Turbinicarpus pseudopectinatus
B3	Stenocereus pruinus	B1	Turbinicarpus roseiflora
B3	Stenocereus pruinus	B1	Turbinicarpus schmiedickianus v. dickisoniae
A2	Stenocereus thurberi	B1	Turbinicarpus schmiedickianus v. flaviflorus
B3	Stenocereus thurberi crest	B1	Turbinicarpus schmiedickianus v. gracilis
A3	Stenocereus victoriensis	B1	Turbinicarpus schmiedickianus v. klinkerianus
A3	Stenocereus victoriensis crest	B1	Turbinicarpus schmiedickianus v. macrochele
B3	Stephanocereus leucostele	B1	Turbinicarpus schmiedickianus v. schmiedickianus
A1	Stetsonia coryne	B1	Turbinicarpus schmiedickianus v. schwarzii
B3	Stetsonia coryne monstrose	B1	Turbinicarpus swobodae
B1	Sulcorebutia arenacea	B1	Turbinicarpus valdezianus (purple flowered)
B1	Sulcorebutia candiae	B1	Turbinicarpus valdezianus albiflora
B1	Sulcorebutia crispata		

## ***Alphabetical Plant List***

### **Code Botanical Name**

B2 Tylecodon sinus-alexandrii  
B3 Uebelmannia buiningii  
B3 Uebelmannia crebispina  
B3 Uebelmannia flavispina  
B3 Uebelmannia gummifera  
B3 Uebelmannia meninensis  
B3 Uebelmannia meninensis rubra  
B3 Uebelmannia pectinifera  
B3 Uebelmannia pectinifera multicostata  
B3 Weingartia erinacea v. catarinense  
B3 Weingartia lanata  
B3 Weingartia neumanniana  
B3 Winterocereus aurispinus  
B3 Winterocereus aurispinus crest  
C1 x Graptoveria Amethorum

### **Code Botanical Name**

C2 x Graptoveria Debbie  
C1 x Graptoveria Silver Star  
B2 x Pachyveria hybrid cristate  
A1 Yucca australis  
A1 Yucca baccata  
A1 Yucca carnerosana (Y. faxoniana)  
A1 Yucca elata  
A1 Yucca filifera  
A1 Yucca rostrata  
A1 Yucca schottii  
A1 Yucca thompsonii  
B3 Zamia furfuracea CARDBOARD PALM  
B3 Zamia pumilla

## **Cactus & Succulents for the Full Sun**

<b>Code</b>	<b>Botanical Name</b>	<b>Code</b>	<b>Botanical Name</b>
A1	Acanthocalycium klimpelianum	A1	Echinocereus fendleri v. boyce-thompsonii
A1	Acanthocalycium peitscherianum	A1	Echinocereus fendleri v. rectispinus
A1	Acanthocalycium violaceum	A1	Echinocereus fitchii
A1	Agave americana medio-picta alba	A1	Echinocereus ledingii
A1	Agave angustifolia variegata	A1	Echinocereus melanocentrus
A1	Agave colorata	A1	Echinocereus nicholii
A1	Agave colorata dwarf	A1	Echinocereus pectinatus v. pectinatus
A1	Agave felgeri	A1	Echinocereus pectinatus v. rigidissimus
A1	Agave ferdinand-regis	A1	Echinocereus polyacanthus v. nova
A1	Agave ferdinand-regis X scabera	A1	Echinocereus rigidissimus
A1	Agave filifera	A1	Echinocereus stramineus
A1	Agave geminiflora	A1	Echinocereus triglochidaitus v. rosei
A1	Agave murphyi	A1	Echinocereus triglochidiatus SB201
A1	Agave ochaui	A1	Echinocereus triglochidiatus v. gonacanthus
A1	Agave parryi v. couesii	A1	Echinocereus triglochidiatus v. mohavensis
A1	Agave parryi v. huachucensis	A1	Echinocereus triglochidiatus v. octacanthus
A1	Agave parryi v. truncata	A1	Echinomastus intertextus
A1	Agave parviflora	A1	Euphorbia antisiphilitica
A1	Agave stricta	A1	Euphorbia rigida
A1	Agave toumeyana v. bella	A1	Ferocactus chrysacanthus
A1	Agave x Leopoldtii	A1	Ferocactus covillei
A1	Aloe longistyla	A1	Ferocactus gracilis
A1	Aloe variegata hybrid	A1	Ferocactus gracilis v. coloratus
A1	Aloe variegata Partridge Breast	A1	Ferocactus hamatacanthus v. hamatacanthus
A1	Ancistrocactus uncinatus (Hamatocactus) v. wrightii	A1	Ferocactus hamatacanthus v. sinuatus
A1	Ariocarpus fissuratus v. fissuratus	A1	Ferocactus herrerae
A1	Ariocarpus fissuratus v. lloydii	A1	Ferocactus latispinus
A1	Ariocarpus retusus v. furfuraceus	A1	Ferocactus latispinus (yellow spined)
A1	Ariocarpus retusus v. retusus	A1	Ferocactus orcuttii
A1	Ariocarpus retusus v. retusus "scapharostroides"	A1	Ferocactus peninsulae
A1	Ariocarpus retusus v. retusus long grey tubercles	A1	Ferocactus pilosus
A1	Ariocarpus retusus v. retusus San Rafael form	A1	Ferocactus pringlei
A1	Astrophytum coahuilense	A1	Ferocactus rectispinus
A1	Astrophytum myriostigma	A1	Ferocactus schwarzii
A1	Astrophytum myriostigma v. quadricostatum	A1	Ferocactus wislizenii
A1	Astrophytum ornatum	A1	Fouquieria fasciculata
A1	Astrophytum ornatum "niveum"	A1	Fouquieria splendens
A1	Brachychiton australis	A1	Gymnocalycium saglionae
A1	Brachychiton rupestris	A1	Hesperaloe funifera
A1	Calibanus hookeri	A1	Hesperaloe parviflora
A1	Carnegiea gigantea	A1	Idria columnaris BOOJUM
A1	Coryphantha cornifera	A1	Leuchtenbergia pricipis
A1	Coryphantha echinus	A1	Mammillaria apozolensis v. saltensis
A1	Coryphantha erecta	A1	Mammillaria bocensis
A1	Coryphantha hesteri	A1	Mammillaria buchareliensis
A1	Coryphantha macromeris	A1	Mammillaria candida
A1	Coryphantha poselgeriana	A1	Mammillaria compressa
A1	Coryphantha recurvata	A1	Mammillaria craigii Lau 086
A1	Dasyliirion longissima	A1	Mammillaria elegans
A1	Dasyliirion wheeleri	A1	Mammillaria elegans (San Jose Lacheguirii)
A1	Denmoza rhodacantha	A1	Mammillaria formosa
A1	Dioone edule	A1	Mammillaria geminispina
A1	Echinocactus grusonii	A1	Mammillaria geminispina nobilis
A1	Echinocactus horizonthalonius v. horizonthalonius	A1	Mammillaria gigantea
A1	Echinocactus ingens	A1	Mammillaria grusonii
A1	Echinocactus texensis	A1	Mammillaria karwinskiana
A1	Echinocereus baileyi	A1	Mammillaria klissingiana
A1	Echinocereus baileyi v. bruniespinus	A1	Mammillaria magnimamma
		A1	Mammillaria melanocentra

## **Cactus & Succulents for the Full Sun**

<b>Code</b>	<b>Botanical Name</b>	<b>Code</b>	<b>Botanical Name</b>
A1	Mammillaria organiana	A1	Yucca schottii
A1	Mammillaria movensis Rio Yaqui form	A1	Yucca thompsonii
A1	Mammillaria ocotillensis	A2	Agave bovicronuta
A1	Mammillaria pachycylindrica	A2	Agave parryi v. patoni
A1	Mammillaria parkinsonii	A2	Aloe barbadensis Healing Aloe
A1	Mammillaria perbella	A2	Aloe dichotoma
A1	Mammillaria sonorensis	A2	Aloe ferox
A1	Mammillaria winterae	A2	Aloe marlothii
A1	Opuntia arbuscula	A2	Aloe saponaria
A1	Opuntia basilaris	A2	Bursera microphylla
A1	Opuntia basilaris monstrose	A2	Cereus forbesii
A1	Opuntia basilaris X violacea v. Santa Rita	A2	Cereus grandicostatus
A1	Opuntia engelmannii v. alta	A2	Cereus peruvianus
A1	Opuntia erinacea	A2	Cereus peruvianus monstrose
A1	Opuntia fragilis v. denudata	A2	Cereus peruvianus spiral form
A1	Opuntia fulgida crest	A2	Cleistocactus straussii Silver Torch
A1	Opuntia leptocaulis	A2	Cochemiea setispina
A1	Opuntia microdasys monstrose	A2	Coryphantha elephantidens
A1	Opuntia microdasys v. albata	A2	Cyphostemma juttae
A1	Opuntia microdasys v. albispina	A2	Cyphostemma juttae
A1	Opuntia microdasys v. microdasys	A2	Erythrina flabelliformis
A1	Opuntia microdasys v. rufida	A2	Euphorbia resinifera
A1	Opuntia molesta	A2	Euphorbia rowyleana
A1	Opuntia ramosissima	A2	Ferocactus cylindraceus v. tortulospinus
A1	Opuntia robusta	A2	Ferocactus diguettii
A1	Opuntia violacea v. macrocentra	A2	Ferocactus echidne
A1	Opuntia violacea v. santa-rita	A2	Ferocactus fordii
A1	Stenocactus coptogonus	A2	Ferocactus gatesii
A1	Stenocactus lloydii	A2	Ferocactus hystrix
A1	Stenocactus longispinus	A2	Ferocactus nobilis
A1	Stenocactus parksianus	A2	Ferocactus pottsii v. alamosanus
A1	Stenocactus pentacanthus	A2	Ipomoea platense
A1	Stenocactus phyacanthus v. violaciflorus	A2	Lophocereus schottii monstrose TOTEM POLE
A1	Stenocactus sp. nova Lau 738 Rio de Mayo	A2	Lophocereus schottii Sonita
A1	Stetsonia coryne	A2	Mammillaria nejapensis
A1	Talinum aurantiacum	A2	Mammillaria setispinus (Cochemiea)
A1	Tephrocactus articulatus	A2	Myrtillocactus geometrizans
A1	Tephrocactus articulatus inermis	A2	Myrtillocactus geometrizans crest
A1	Tephrocactus paediophylla	A2	Opuntia subulata
A1	Thelocactus bicolor v. bicolor	A2	Opuntia subulata crest
A1	Thelocactus bicolor v. bolaensis	A2	Pereskia diaz-romeroana
A1	Thelocactus bicolor v. flavidispinus	A2	Pereskia grandiflora
A1	Thelocactus bicolor v. schottii	A2	Pereskia weberiana
A1	Thelocactus bicolor v. tricolor	A2	Stenocereus marginatus
A1	Thelocactus hexaedrophorus	A2	Stenocereus thurberi
A1	Thelocactus macdowellii	A2	Trichocereus pachanoi SAN PEDRO
A1	Thelocactus rinconensis	A2	Trichocereus peruvianus
A1	Thelocactus setispinus fma. flavibaccatus	A3	Adansonia fony
A1	Trichocereus macrogonus	A3	Aloe ramosissima
A1	Trichocereus pasacana	A3	Aloe wickensii
A1	Trichocereus tarijensis	A3	Bursera fagaroides
A1	Trichocereus terscheckii v. montanus	A3	Bursera schlectendalii
A1	Trichocereus terscheckii v. terscheckii	A3	Cereus aethiops
A1	Yucca australis	A3	Euphorbia candelabrum
A1	Yucca baccata	A3	Euphorbia trigona
A1	Yucca carnerosana (Y. faxoniana)	A3	Euphorbia trigona Red Form
A1	Yucca elata	A3	Ficus palmeri
A1	Yucca filifera	A3	Ficus petiolaris
A1	Yucca rostrata	A3	Jatropha cordata

## ***Cactus & Succulents for the Full Sun***

### **Code Botanical Name**

A3 *Jatropha cuneata*  
A3 *Mammillaria blossfeldiana*  
A3 *Mammillaria boottii*  
A3 *Mammillaria guerrerensis*  
A3 *Mammillaria maritima*  
A3 *Mammillaria peninsularis*  
A3 *Mammillaria poselgeri*  
A3 *Mammillaria schumannii* v. *globosa*  
A3 *Mammillaria schumannii* v. *schumannii*  
A3 *Momordica rostrata*

### **Code Botanical Name**

A3 *Moringa ovalifolia*  
A3 *Operculicarya decaryi*  
A3 *Pachycereus pringlei*  
A3 *Pachycormus discolor*  
A3 *Pachypodium geayi*  
A3 *Pachypodium lamerei*  
A3 *Stenocereus dumortieri*  
A3 *Stenocereus victoriensis*  
A3 *Stenocereus victoriensis* crest



## Cactus & Succulents for Partial Shade

Code	Botanical Name	Code	Botanical Name
B1	Adromischus cooperi	B1	Echinocereus morricallii
B1	Adromischus cristatus	B1	Echinocereus nivosus
B1	Adromischus marianiae v. hallii	B1	Echinocereus papillosus
B1	Adromischus marianiae v. immaculatus	B1	Echinocereus parkerii v. gonzalesii
B1	Adromischus marianiae v. kubusensis	B1	Echinocereus pectinatus v. rubispinus
B1	Adromischus rupicolus	B1	Echinocereus pentalophus
B1	Adromischus schuldtianus	B1	Echinocereus pentalophus monstrose
B1	Adromischus subviridus	B1	Echinocereus polyacanthus
B1	Agave utahensis v. eboraspina	B1	Echinocereus poselgerii (Wilcoxia)
B1	Agave utahensis v. nevadensis	B1	Echinocereus pulchellus v. pulchellus
B1	Agave utahensis v. utahensis	B1	Echinocereus pulchellus v. weinbergii
B1	Agave victoria-reginae	B1	Echinocereus reichenbachii v. albertii
B1	Agave victoria-reginae ornata	B1	Echinocereus reichenbachii v. albispinus
B1	Agave victoria-reginae v. compacta	B1	Echinocereus scheerii v. obscurensis
B1	Aloe aristata	B1	Echinocereus scheeryi v. gentryi
B1	Aloe humilis	B1	Echinocereus schmollii (Wilcoxia)
B1	Aloinopsis shooneesii	B1	Echinocereus viridiflorus
B1	Ariocarpus fissuratus v. hintonii	B1	Echinocereus viridiflorus v. correllii
B1	Ariocarpus kotschoubeyanus	B1	Echinopsis ancistrophora crest
B1	Ariocarpus kotschoubeyanus elephantidens	B1	Echinopsis argentinensis
B1	Ariocarpus kotschoubeyanus v. albiflora	B1	Echinopsis chloranthus
B1	Ariocarpus scapharostrus	B1	Echinopsis grandiflorus
B1	Astrophytum asterias	B1	Echinopsis hauscha v. rubra
B1	Astrophytum asterias x A. capricorne	B1	Echinopsis multiplex crest
B1	Astrophytum capricorne	B1	Echinopsis multiplex crest Johnson's Pink Flowered Hedgehog
B1	Astrophytum capricorne v. niveum	B1	Echinopsis pelecyrachis
B1	Astrophytum carpicorne x A. asterias	B1	Echinopsis silvestrii
B1	Astrophytum myriostigma v. nudum	B1	Echinopsis sp. nov. P255
B1	Austrocephalocereus streckeri	B1	Echinopsis subdenudatum
B1	Chamaecereus silvestrii	B1	Echinopsis tubiflora cv. HAKUJOMARU
B1	Chamaecereus x Fire Chief Johnson hybrid	B1	Echinopsis turbinata
B1	Chamaecereus x Flame Johnson hybrid	B1	Echinopsis x "Pragochamaecereus - Fric hybrid"
B1	Chamaecereus x King Kong	B1	Echinopsis x Apricot Glow Dimmitt hybrid
B1	Chamaecereus x Tourmaline	B1	Echinopsis x Arachnacot M2G hybrid
B1	Chamaecereus x Yellow Peanut Johnson	B1	Echinopsis x Atomic Paramount hybrid
B1	Chamaecereus x Mephisto Johnson hybrid	B1	Echinopsis x Aurora Paramount hybrid
B1	Cheiridopsis candissimus	B1	Echinopsis x Barber Pole Paramount hybrid
B1	Cleistocactus X Oreocereus cv. Old Torch	B1	Echinopsis x Betelguese Paramount hybrid
B1	Coryphantha durangensis	B1	Echinopsis x Blaze Paramount hybrid
B1	Coryphantha fragrans	B1	Echinopsis x Blue Lights Paramount hybrid
B1	Coryphantha henricksonii	B1	Echinopsis x Blush Paramount hybrid
B1	Coryphantha runyonii inermis	B1	Echinopsis x Bowl of Orange "Chamaelobivia"
B1	Coryphantha sulcata	B1	Echinopsis x Cherry Red Bach's hybrid
B1	Coryphantha vivipara v. kiababensis	B1	Echinopsis x Dainty Bess Paramount hybrid
B1	Coryphantha vivipara v. neomexicana	B1	Echinopsis X Epic B&B hybrid
B1	Coryphantha vivipara v. vivipara	B1	Echinopsis x First Light Dimmitt hybrid
B1	Cycas revoluta SAGO PALM	B1	Echinopsis x Flaming Orange Chamaecereus hybrid
B1	Delosperma bosseranum	B1	Echinopsis x Fluffy Ruffles Paramount hybrid
B1	Echinocereus adustus	B1	Echinopsis x Flying Saucer
B1	Echinocereus berlandieri	B1	Echinopsis x Giant Peanut Johnson hybrid
B1	Echinocereus coccineus v. inermis	B1	Echinopsis x Glorious
B1	Echinocereus coccineus v. paucispinus	B1	Echinopsis x Harlequin Paramount hybrid
B1	Echinocereus delaetii	B1	Echinopsis x Hemaglow M2G hybrid
B1	Echinocereus enneacanthus	B1	Echinopsis x Hollyberry M2G hybrid
B1	Echinocereus knippelianus v. knippelianus	B1	Echinopsis x Iridina M2G hybrid
B1	Echinocereus knippelianus v. kruegeri	B1	Echinopsis x Iris Myers Chamaecereus hybrid
B1	Echinocereus knippelianus v. reyesii	B1	Echinopsis x Japan NO 1 Chamaecereus hybrid
B1	Echinocereus lauii	B1	Echinopsis x Jean's Delight "Chamaelobivia"

## **Cactus & Succulents for Partial Shade**

<b>Code</b>	<b>Botanical Name</b>	<b>Code</b>	<b>Botanical Name</b>
B1	Echinopsis x June Noon Dimmitt hybrid	B1	Gymnocalycium manzanense
B1	Echinopsis x Kawinai Chameacereus hybrid	B1	Gymnocalycium matoense
B1	Echinopsis x Kent Sunrise "Chamealobivia"	B1	Gymnocalycium monvillei
B1	Echinopsis x Los Angeles Paramount hybrid	B1	Gymnocalycium multiflorum
B1	Echinopsis x Mars Paramount hybrid	B1	Gymnocalycium paediophilum
B1	Echinopsis x Mephisto Johnson hybrid	B1	Gymnocalycium pflanzii v. marquezii
B1	Echinopsis x Northern Lights Paramount hybrid	B1	Gymnocalycium schroederianum
B1	Echinopsis x Oh Wow! Dimmitt hybrid	B1	Gymnocalycium spegazzini
B1	Echinopsis x Pacific Sunset	B1	Gymnocalycium tillianum
B1	Echinopsis x Pink and White Johnson hybrid	B1	Gymnocalycium triacanthum
B1	Echinopsis x Pink Flamingo Chameacereus hybrid	B1	Ibervillea sonorae v. penninsulae
B1	Echinopsis x Pink Glory	B1	Lithops aucampiae
B1	Echinopsis x Ralph's Orange Chameacereus hybrid	B1	Lithops bromfieldii
B1	Echinopsis x Red King Paramount hybrid	B1	Lithops dorotheae
B1	Echinopsis x Red Meteor Paramount hybrid	B1	Lithops fulviceps v. lactinae
B1	Echinopsis x Red Paramount Paramount hybrid	B1	Lithops gesinae v. annae
B1	Echinopsis x Salmonella M2G hybrid	B1	Lithops gracilidelineata
B1	Echinopsis x Scarlett O'Hara Paramount hybrid	B1	Lithops hallii
B1	Echinopsis x Son of Shot Scarlet Chameacereus hybrid	B1	Lithops helmutii
B1	Echinopsis x Stars & Stripes Paramount	B1	Lithops hookeri
B1	Echinopsis x Sunset Paramount hybrid	B1	Lithops hookeri "vermiculate form"
B1	Echinopsis x Toxic Waste Miles' To Go hybrid	B1	Lithops hookeri v. elephina
B1	Echinopsis x Tropic Sunset Paramount hybrid	B1	Lithops hookeri v. sussannae
B1	Echinopsis x Uncle Arthur Chameacereus hybrid	B1	Lithops jullii
B1	Echinopsis x Volcanic Sunset Dimmitt hybrid	B1	Lithops karasmontana
B1	Echinopsis x Watermelon Paramount	B1	Lithops karasmontana [Mickbergensis]
B1	Echinopsis x White Peanut Chameacereus hybrid	B1	Lithops karasmontana [Summitatum]
B1	Echinopsis x Yellow Bird Chameacereus hybrid	B1	Lithops karasmontana v. eberlanzii
B1	Encephalocarpus strobiliformis	B1	Lithops karasmontana v. lericheana
B1	Epithelantha micromeris	B1	Lithops karasmontana v. tischeri
B1	Epithelantha micromeris v. rufispina	B1	Lithops lesliei
B1	Epithelantha polycephala	B1	Lithops lesliei "warrenton"
B1	Epithelantha unguispina	B1	Lithops lesliei fma. albinica
B1	Escobaria chihuahuensis	B1	Lithops lesliei v. burchellii
B1	Escobaria vivipara v. bisbeeana	B1	Lithops lesliei v. rubrobrunnea
B1	Escobaria zilziana	B1	Lithops lesliei v. venterii
B1	Fenestraria cv. "Fireworth"	B1	Lithops marmorata v. elishae
B1	Ferocactus stainesii	B1	Lithops otzeniana
B1	Ferocactus viridescens	B1	Lithops pseudotruncatella
B1	Gymnocactus beguinii v. senilis	B1	Lithops pseudotruncatella v. dendritica
B1	Gymnocactus gielsdorfianus	B1	Lithops ruschiorum
B1	Gymnocactus saueri	B1	Lithops salicola
B1	Gymnocactus subterraneus v. zaragosae	B1	Lithops schwantesii
B1	Gymnocactus ysabelae	B1	Lithops schwantesii v. christinae
B1	Gymnocalycium andrea v. longiflorum	B1	Lithops verruculosa
B1	Gymnocalycium artigas	B1	Lobivia acanthoplegma v. rosieflora
B1	Gymnocalycium baldianum	B1	Lobivia andalgalensis
B1	Gymnocalycium bayrianum	B1	Lobivia arachnacantha
B1	Gymnocalycium bruchii	B1	Lobivia aurea (syn. L. luteaflora) yellow flowered form
B1	Gymnocalycium cardenasianum	B1	Lobivia aurea red flowered form
B1	Gymnocalycium denudatum	B1	Lobivia cardenasiana
B1	Gymnocalycium doppianum	B1	Lobivia cinnabarina
B1	Gymnocalycium erinaceum	B1	Lobivia ferox
B1	Gymnocalycium friederickii	B1	Lobivia jajoiana v. nigristoma
B1	Gymnocalycium gibbosum	B1	Lobivia kermisina
B1	Gymnocalycium horridispinum	B1	Lobivia leucomalla
B1	Gymnocalycium horstii	B1	Lobivia obrepanda calorubra
B1	Gymnocalycium leeanum	B1	Lobivia pojoensis v. grandiflora

## **Cactus & Succulents for Partial Shade**

<b>Code</b>	<b>Botanical Name</b>	<b>Code</b>	<b>Botanical Name</b>
B1	Lobivia winteriana	B1	Mammillaria pennispinosa
B1	Lobivia wrightiana	B1	Mammillaria perezdelarosae
B1	Mammillaria ahniana	B1	Mammillaria pettersonii
B1	Mammillaria auriehamata	B1	Mammillaria plumosa
B1	Mammillaria aurielanata	B1	Mammillaria pottsii
B1	Mammillaria bachmannii	B1	Mammillaria priessnitzii
B1	Mammillaria baumii	B1	Mammillaria pseudoperbella
B1	Mammillaria bocasana multilanata	B1	Mammillaria rekoii v. leptacantha
B1	Mammillaria bocasana roseiflora	B1	Mammillaria rhodantha (syn. M. pringlei)
B1	Mammillaria carnea	B1	Mammillaria ritteriana
B1	Mammillaria celsiana	B1	Mammillaria rubrograndis
B1	Mammillaria coahuilense (Porfiria schwartzii)	B1	Mammillaria rubrograndis pale flowered
B1	Mammillaria crassimammillis	B1	Mammillaria runyonii
B1	Mammillaria crispiseta	B1	Mammillaria saboae v. goldii
B1	Mammillaria crocidata	B1	Mammillaria saboae v. haudeana
B1	Mammillaria duwei	B1	Mammillaria saboae v. saboae
B1	Mammillaria elegans v. schmollii	B1	Mammillaria schiedeana v. plumosa
B1	Mammillaria elongata	B1	Mammillaria schiedeana v. schiedeana
B1	Mammillaria fittkauii	B1	Mammillaria schwarzii
B1	Mammillaria gasserana	B1	Mammillaria scrippsiana
B1	Mammillaria glassii Lau 1357	B1	Mammillaria sempervivi v. sempervivi
B1	Mammillaria glassii v. nominis-dulcis	B1	Mammillaria sempervivi v. tetracantha
B1	Mammillaria grahamii (syn. M. microcarpa)	B1	Mammillaria senilis
B1	Mammillaria guelzowiana	B1	Mammillaria sp. nova - heyderi group Ascencion, Neuvo Leon
B1	Mammillaria guillauminiana	B1	Mammillaria sphaerica
B1	Mammillaria haageana v. schmollii	B1	Mammillaria surculosa
B1	Mammillaria hahniana	B1	Mammillaria tayloriorum
B1	Mammillaria hemispherica	B1	Mammillaria tesopacensis
B1	Mammillaria hertrichiana	B1	Mammillaria wildii
B1	Mammillaria hildagensis	B1	Mammillaria woodsii
B1	Mammillaria humboldtii	B1	Mammillaria wrightii
B1	Mammillaria infernillensis	B1	Mammillaria wrightii v. wilcoxii
B1	Mammillaria johnstonii v. sancarlensis	B1	Mammillaria x Pink Nymph
B1	Mammillaria knebeliana	B1	Mammillaria zeilmanniana
B1	Mammillaria knuthii	B1	Mammillaria zephyranthoides
B1	Mammillaria kraehenbuehlii	B1	Mestoklema tuberosa
B1	Mammillaria lasiacantha	B1	Morawetzia serricata
B1	Mammillaria lenta	B1	Neobesseyia similis v. robustior
B1	Mammillaria lloydii	B1	Neochilenia napina
B1	Mammillaria longiflora fma. longiflora	B1	Neochilenia pulchella
B1	Mammillaria longiflora fma. stampferi	B1	Neolloydia conoidea
B1	Mammillaria longimamma v. longimamma	B1	Neoporteria atrispinosa
B1	Mammillaria macracantha	B1	Neoporteria laniceps
B1	Mammillaria mainiae	B1	Neoporteria nidus-senilis
B1	Mammillaria marksiana	B1	Neoporteria occulta
B1	Mammillaria meigeana	B1	Neoporteria paucicostata
B1	Mammillaria melaleuca	B1	Neoporteria scoparia
B1	Mammillaria mendeliana	B1	Neoporteria sp.Lau 869 (de Taltal)
B1	Mammillaria microhelia	B1	Neoporteria wagenknechtii
B1	Mammillaria microthele	B1	Notocactus agnetae
B1	Mammillaria moelleriana	B1	Notocactus antangularis
B1	Mammillaria montensis	B1	Notocactus apricus
B1	Mammillaria mystax	B1	Notocactus claviceps
B1	Mammillaria napina	B1	Notocactus elegans
B1	Mammillaria nazasensis	B1	Notocactus euginiae
B1	Mammillaria obscura	B1	Notocactus glaucinus v. depressus
B1	Mammillaria obscura v. tortulospina	B1	Notocactus graessneri
B1	Mammillaria papasquiarensis	B1	Notocactus horstii
B1	Mammillaria pectinifera		

## **Cactus & Succulents for Partial Shade**

<b>Code</b>	<b>Botanical Name</b>	<b>Code</b>	<b>Botanical Name</b>
B1	Notocactus leninghausii	B1	Trichodiadema bulbosum
B1	Notocactus magnificus	B1	Trichodiadema densum
B1	Notocactus mammulosus	B1	Turbinicarpus lauii
B1	Notocactus roseoluteus	B1	Turbinicarpus lophophoroides
B1	Notocactus rosieflorus	B1	Turbinicarpus pseudomacrolele v. krainzianus
B1	Notocactus rutilans	B1	Turbinicarpus pseudomacrolele v. pseudomacrolele
B1	Notocactus schlosseri	B1	Turbinicarpus pseudopectinatus
B1	Notocactus tureczekianus	B1	Turbinicarpus roseiflora
B1	Notocactus uebelmannianus	B1	Turbinicarpus schmiedickianus v. dickisoniae
B1	Notocactus vanvlietii	B1	Turbinicarpus schmiedickianus v. flaviflorus
B1	Notocactus warasii	B1	Turbinicarpus schmiedickianus v. gracilis
B1	Notocactus winkleri	B1	Turbinicarpus schmiedickianus v. klinkerianus
B1	Obregonia denegrii	B1	Turbinicarpus schmiedickianus v. macrochele
B1	Opuntia picardoii	B1	Turbinicarpus schmiedickianus v. schmiedickianus
B1	Oreocereus fossulatus x Cleistocactus straussii cv. James Pickering	B1	Turbinicarpus schmiedickianus v. schwarzii
B1	Oreocereus trollii v. trollii	B1	Turbinicarpus swobodae
B1	Parodia sanguiniflora	B1	Turbinicarpus valdezianus (purple flowered)
B1	Pediocactus despainii	B1	Turbinicarpus valdezianus albiflora
B1	Pediocactus simpsonii v. minor	B2	Agave parrasana
B1	Pelecyphora aselliformis	B2	Agave sp. FO76 (Sierra Mixteca)
B1	Peniocereus greggii Queen of the Night	B2	Agave stricta nana
B1	Pleospilos bolusii	B2	Aloe aristata hybrid
B1	Pterocactus australis	B2	Aloe nobilis
B1	Pterocactus fischeri	B2	Aloe striata
B1	Pterocactus gonjiani	B2	Ammocharis coranica
B1	Pterocactus hickenii	B2	Ariocarpus agavoides
B1	Pterocactus kuntzii	B2	Ariocarpus trigonus
B1	Pterocactus meglioli	B2	Beaucarnea recurvata
B1	Pterocactus valentinii	B2	Beaucarnea stricta
B1	Puna bonniea	B2	Cephalocereus polylophus
B1	Puna clavarioides	B2	Cephalocereus senilis
B1	Puna subterranea	B2	Coryphantha andrea
B1	Sclerocactus glaucus	B2	Coryphantha bumamma
B1	Sclerocactus mesae-verdae	B2	Cotyledon ladismithensis
B1	Sclerocactus parviflorus	B2	Cotyledon ladismithensis variegata
B1	Sclerocactus spinosior	B2	Cotyledon orbiculata
B1	Sclerocactus spinosior v. schlesseri	B2	Cotyledon orbiculata Chalk Sticks
B1	Sclerocactus wetlandicus	B2	Cotyledon sinus-alexandri
B1	Sclerocactus whipplei	B2	Cotyledon undulata
B1	Sclerocactus wrightiae	B2	Dyckia marnier-lapostolle
B1	Sulcorebutia arenacea	B2	Echinocactus grusonii albispina White Barrel
B1	Sulcorebutia candiae	B2	Echinocactus grusonii crest
B1	Sulcorebutia crispata	B2	Echinocereus luteus
B1	Sulcorebutia frankiana	B2	Echinocereus pentallophus crest
B1	Sulcorebutia glomeriseta	B2	Echinocereus reichenbachii v. albispinus crest
B1	Sulcorebutia mentosa	B2	Echinocereus rusanthus v. vulpis-cauda
B1	Sulcorebutia rauschii	B2	Echinocereus spinigemmatum
B1	Sulcorebutia rauschii (green form)	B2	Echinocereus subinermis v. ochoteranae
B1	Tephrocactus glomeratus	B2	Espostoa lanata
B1	Tephrocactus inarmatus	B2	Espostoa melanosteale
B1	Thelocactus heterochromus	B2	Euphorbia horrida v. horrida
B1	Thelocactus lausseri	B2	Euphorbia horrida v. striata
B1	Thelocactus leucacanthus v. schmollii	B2	Euphorbia horrida x polygona
B1	Thelocactus setispinus	B2	Euphorbia obesa
B1	Titanopsis calcareum	B2	Faucaria tigrina TIGER JAWS
B1	Toumeyia papyracantha	B2	Fenestraria hybrids BABY TOES
B1	Trichocereus poco	B2	Ferocactus glaucescens
B1	Trichocereus thelogonus crest	B2	Ferocactus macrodiscus

## **Cactus & Succulents for Partial Shade**

<b>Code</b>	<b>Botanical Name</b>	<b>Code</b>	<b>Botanical Name</b>
B2	<i>Ferocactus robustus</i>	B2	<i>Mammillaria wiesingeri</i>
B2	<i>Frithia pulchra</i>	B2	<i>Matucana paucicostata</i>
B2	<i>Gonolobus (Matelea) cyclophyllus</i>	B2	<i>Notocactus buiningii</i>
B2	<i>Grahamia coahuilensis</i>	B2	<i>Notocactus herteri</i>
B2	<i>Gymnocalycium damsii v. rotundolum</i>	B2	<i>Notocactus purpureus</i>
B2	<i>Gymnocalycium eurypleurum</i>	B2	<i>Notocactus rudibuenackeri</i>
B2	<i>Gymnocalycium fleischerianum</i>	B2	<i>Notocactus succineus</i>
B2	<i>Gymnocalycium ourselianum</i>	B2	<i>Notocactus succineus v. albispinus</i>
B2	<i>Gymnocalycium pflanzii v. albopulpa</i>	B2	<i>Opuntia vestita</i>
B2	<i>Gymnocalycium pflanzii v. camaparense</i>	B2	<i>Opuntia vulgaris variegata cv. Maverick</i>
B2	<i>Gymnocalycium ragonosii</i>	B2	<i>Oreocereus celsianus</i>
B2	<i>Gymnocalycium stenoogonum</i>	B2	<i>Oreocereus henricksonianus v. densilanatus</i>
B2	<i>Gymnocalycium valnicekianum</i>	B2	<i>Oroya peruviana</i>
B2	<i>Ibervillea tennuisecta</i>	B2	<i>Ortegocactus macdougallii</i>
B2	<i>Jatropha cathartica =(berlandieri)</i>	B2	<i>Pachypodium namaquanum</i>
B2	<i>Lapidaria margaretae</i>	B2	<i>Peniocereus marianus</i>
B2	<i>Malacocarpus sellowii</i>	B2	<i>Pleospilos nelii</i>
B2	<i>Mammillaria albicans</i>	B2	<i>Polaskia chichipe</i>
B2	<i>Mammillaria albilanata</i>	B2	<i>Pyrrhocactus bulbocalyx</i>
B2	<i>Mammillaria albilanata v. fauxiana</i>	B2	<i>Sedum prealtum crest</i>
B2	<i>Mammillaria aurielanata fma. alba</i>	B2	<i>Titanopsis hugo-schlechteri</i>
B2	<i>Mammillaria beiselii</i>	B2	<i>Trichocereus chilensis</i>
B2	<i>Mammillaria berkeana</i>	B2	<i>Trichocereus pachanoi crest</i>
B2	<i>Mammillaria bocasana monstrose cv. Fred</i>	B2	<i>Tylecodon sinus-alexandrii</i>
B2	<i>Mammillaria bombycina</i>	B2	<i>x Pachyveria hybrid cristate</i>
B2	<i>Mammillaria camptotricha</i>	B3	<i>Adenia fruticosa</i>
B2	<i>Mammillaria canelensis</i>	B3	<i>Adenia glauca</i>
B2	<i>Mammillaria carmenae</i>	B3	<i>Adenia venenata</i>
B2	<i>Mammillaria carrettii</i>	B3	<i>Adenium arabicum</i>
B2	<i>Mammillaria casoii</i>	B3	<i>Adenium boehmianum</i>
B2	<i>Mammillaria cowperae</i>	B3	<i>Adenium obesum</i>
B2	<i>Mammillaria crucigera</i>	B3	<i>Adenium obesum 'Bill Jones'</i>
B2	<i>Mammillaria dehertiana</i>	B3	<i>Adenium obesum hybrid</i>
B2	<i>Mammillaria densispina</i>	B3	<i>Adenium obesum ssp. multiflorum</i>
B2	<i>Mammillaria dixanthocentron</i>	B3	<i>Adenium somalense</i>
B2	<i>Mammillaria duraspina</i>	B3	<i>Adenium somalense x A. obesum</i>
B2	<i>Mammillaria eichlamii</i>	B3	<i>Adenium swazicum</i>
B2	<i>Mammillaria elongata crest</i>	B3	<i>Adenium swazicum</i>
B2	<i>Mammillaria elongata crest Brown Brain</i>	B3	<i>Adenium x Crimson Star</i>
B2	<i>Mammillaria glochidiata</i>	B3	<i>Agave ghiesbreghtii</i>
B2	<i>Mammillaria heidiae</i>	B3	<i>Agave guadalajarana</i>
B2	<i>Mammillaria lanata</i>	B3	<i>Agave potatorum</i>
B2	<i>Mammillaria lauii fma. lauii</i>	B3	<i>Agave verschafeldtii cv. 'Ohi Raijin'</i>
B2	<i>Mammillaria lauii fma. subducta</i>	B3	<i>Alluadia procera</i>
B2	<i>Mammillaria lindsayi</i>	B3	<i>Aloe brevifolia</i>
B2	<i>Mammillaria longimamma v. uberiformis</i>	B3	<i>Aloe ciliaris</i>
B2	<i>Mammillaria pilcayensis</i>	B3	<i>Aloe claviflora</i>
B2	<i>Mammillaria rekoii v. auriespina</i>	B3	<i>Aloe harlinii</i>
B2	<i>Mammillaria rettigiana</i>	B3	<i>Aloe jacunda</i>
B2	<i>Mammillaria sartorii</i>	B3	<i>Aloe melanocantha</i>
B2	<i>Mammillaria solisioides</i>	B3	<i>Aloe peglerae</i>
B2	<i>Mammillaria sp. Lau 1050 (S.J. Capistrano)</i>	B3	<i>Aloe plicatilis</i>
B2	<i>Mammillaria spinosissima</i>	B3	<i>Aloe sincatana</i>
B2	<i>Mammillaria spinosissima crest</i>	B3	<i>Aloe striata hybrid</i>
B2	<i>Mammillaria standleyi</i>	B3	<i>Aloe x Doran Black</i>
B2	<i>Mammillaria supertexta</i>	B3	<i>Aloe x Lizard Lips</i>
B2	<i>Mammillaria swinglei</i>	B3	<i>Aloe zanzibarica</i>
B2	<i>Mammillaria tialocii</i>	B3	<i>Anacampseros rufescens</i>
B2	<i>Mammillaria viperina</i>	B3	<i>Anacampseros rufescens cv. Sunrise</i>

## **Cactus & Succulents for Partial Shade**

<b>Code</b>	<b>Botanical Name</b>	<b>Code</b>	<b>Botanical Name</b>
B3	Anacampseros telephiastrum	B3	Discocactus placentiformis HU 105
B3	Austrocephalocereus dolichospermaticus	B3	Discocactus pugionacanthus HU 402
B3	Austrocephalocereus estevesii	B3	Discocactus sp. nova HU 544
B3	Aztekium ritteri	B3	Discocactus sp. nova HU 639
B3	Azureocereus hertlingianus	B3	Discocactus sp. nova HU 640
B3	Backebergia militaris	B3	Discocactus sp. nova HU 645
B3	Backebergia militaris crest	B3	Discocactus sp. nova HU 646
B3	Bombax ellypticum	B3	Discocactus sp. nova HU 651
B3	Borzicactus chacoanus crest	B3	Discocactus subviridigriseus HU 438
B3	Buiningia brevicylindrica v. longispina	B3	Dorstenia crispa
B3	Buiningia purpureus	B3	Echinocereus leucanthus (Wilcoxia albiflora)
B3	Caralluma lutea	B3	Echinocereus pacificus
B3	Caralluma schweinfurthii	B3	Echinopsis x Red Riding Hood crest
B3	Caralluma socotrana	B3	Echinopsis x White Knight variegata
B3	Caralluma speciosa	B3	Espostoa melanostele v. nana
B3	Cephalocereus alensis crest	B3	Espostoa mirabilis
B3	Cephalocereus chrysacanthus crest	B3	Espostoa ritteri
B3	Cephalocereus euphorbioides crest	B3	Espostoa saxitilis v. densilanatus
B3	Cephalocereus maxsonii	B3	Euphorbia acruensis
B3	Cephalocereus palmeri	B3	Euphorbia aeruginosa
B3	Cephalocereus palmeri crest	B3	Euphorbia ammak variegata
B3	Cephalocereus senilis crest	B3	Euphorbia bupleurifolia
B3	Cephalopentandra ecirrhosa	B3	Euphorbia cactus
B3	Ceraria pygmaea	B3	Euphorbia canariensis
B3	Cereus peruvianus monstrose Ming Thing	B3	Euphorbia carlsonii
B3	Cereus peruvianus monstrose minima	B3	Euphorbia echinus
B3	Cereus tetragonus monstrose	B3	Euphorbia enopla
B3	Cissus tuberosus	B3	Euphorbia ferox
B3	Coleocephalocereus geobelianus	B3	Euphorbia flanagani arm crest
B3	Consolea rubescens	B3	Euphorbia flanagani MEDUSA'S HEAD
B3	Copiapoa humilis	B3	Euphorbia francoisii
B3	Copiapoa krainziana	B3	Euphorbia fruticosa "spines form"
B3	Copiapoa lembckeii	B3	Euphorbia fruticosa Blue form
B3	Copiapoa marginata	B3	Euphorbia gorgonis
B3	Copiapoa tenuissima	B3	Euphorbia grandicornis
B3	Copiapoa tenuissima monstrose	B3	Euphorbia hermentiana
B3	Corallocarpus bainesii	B3	Euphorbia horrida v. nova
B3	Crassula falcata	B3	Euphorbia inermis v. huttonae
B3	Crassula portulacea 'Dwarf Hobbit'	B3	Euphorbia ingens monstrose
B3	Crassula portulacea 'Gollum'	B3	Euphorbia lactea
B3	Crassula portulacea 'Hobbit'	B3	Euphorbia lactea crest
B3	Crassula portulacea DWARF JADE	B3	Euphorbia lactea variegata crest White Ghost Crest
B3	Crassula portulacea Jade Tree	B3	Euphorbia lactea White Ghost
B3	Cyphostemma montagnaci	B3	Euphorbia makallensis
B3	Cyphostemma sandersii	B3	Euphorbia mammillaris
B3	Dioone spinulosum	B3	Euphorbia mammillaris variegata
B3	Dioscorea elephantipes	B3	Euphorbia meloformis
B3	Discocactus albispinus HU 390	B3	Euphorbia nesmannii
B3	Discocactus alteolens HU 232	B3	Euphorbia obesa crest
B3	Discocactus araniespinus	B3	Euphorbia obesa hybrid
B3	Discocactus bueneckeri	B3	Euphorbia opuntioides
B3	Discocactus catingicola HU 392	B3	Euphorbia piscidermis
B3	Discocactus cephaliaciculosus HU 644	B3	Euphorbia polyacantha
B3	Discocactus chrysallophyllos HU 582	B3	Euphorbia polygona
B3	Discocactus chrysallophyllus HU 582	B3	Euphorbia polygona hybrid
B3	Discocactus horstii	B3	Euphorbia pulvinata
B3	Discocactus insignis HU 347	B3	Euphorbia restricta
B3	Discocactus latispinus HU 146	B3	Euphorbia samburuensis
B3	Discocactus nigrisaeetosus HU 448	B3	Euphorbia squarrosa

## **Cactus & Succulents for Partial Shade**

<b>Code</b>	<b>Botanical Name</b>	<b>Code</b>	<b>Botanical Name</b>
B3	Euphorbia stenoclada	B3	Matucana weberbaueri
B3	Euphorbia suzannae	B3	Micranthocereus streckeri
B3	Euphorbia suzannae crest	B3	Monadenium coccineum
B3	Euphorbia symmetrica	B3	Monadenium invenustum
B3	Euphorbia tirucalli	B3	Monadenium lugardae
B3	Euphorbia tortirama	B3	Monadenium ritchiei
B3	Euphorbia trigona variegata	B3	Monadenium rubellum
B3	Euphorbia viguieri v. capuroniana	B3	Monvillea spegazini crest/monstrose
B3	Euphorbia x Cocklebur	B3	Myrtillocactus cochal crest
B3	Euphorbia x Thumbelina	B3	Neobuxbaumia euphorbioides crest
B3	Folotsia sp.	B3	Neoraimondia gigantea
B3	Frailea castanae	B3	Neoraimondia roseiflora
B3	Frailea phaeodisca	B3	Notocactus scopa v. murriellii
B3	Gasteraloe hybrid	B3	Notocactus scopa v. prolifera
B3	Gasteria armstrongii	B3	Notocactus scopa v. scopa
B3	Gasteria armstrongii hybrid variegata	B3	Notocactus scopa variegata
B3	Gasteria batesiana	B3	Orbea melanantha
B3	Gasteria nigricans v. marmorata	B3	Orbea pulchella PVB 4262 Humewood, Port Elizabeth
B3	Gasteria nigricans variegata	B3	Oreocereus neocelsianus crest
B3	Harrisia justbertii	B3	Pachypodium baronii v. windsorii
B3	Herreera dyeri	B3	Pachypodium bispinosum
B3	Hoodia (Trichocaulon) officinale	B3	Pachypodium horombense
B3	Hoodia gordonii	B3	Pachypodium lamerei v. ramosum
B3	Hoodia macrantha	B3	Pachypodium rosulatum
B3	Huernia thuretii	B3	Pachypodium saundersii
B3	Huernia zebrina	B3	Pachypodium succulentum
B3	Jacaratia hasseleriana	B3	Parodia auriespina
B3	Jatropha plantanifolia	B3	Parodia chrysacanthion
B3	Jatropha podagrica	B3	Parodia fuscato-viridis
B3	Kalanchoe beharensis `Fang`	B3	Parodia herzogii
B3	Kalanchoe beharensis minima	B3	Parodia lauii
B3	Kalanchoe scapigera	B3	Parodia lauii
B3	Kalanchoe thrysifolia	B3	Parodia mairanana
B3	Kalanchoe tomentosa Chocolate Soldier	B3	Parodia massii
B3	Luckhoffia buekmannii	B3	Parodia nivosa
B3	Luckhoffia buekmannii crest	B3	Parodia penicillata
B3	Macrozamia moorei	B3	Parodia rubelliamata
B3	Mammillaria albiflora	B3	Parodia rubida
B3	Mammillaria bambusiphilla	B3	Piранthus foetidus
B3	Mammillaria baxteriana	B3	Pilosocereus azureus
B3	Mammillaria beneckeii variegata	B3	Pilosocereus gounellei
B3	Mammillaria columbiana	B3	Pilosocereus magnificus
B3	Mammillaria duoformis	B3	Pilosocereus pachycladus
B3	Mammillaria evermanniana	B3	Pilosocereus palmeri
B3	Mammillaria hernandezii	B3	Pilosocereus superfloccosus
B3	Mammillaria herrerae	B3	Pilosocereus tillianus
B3	Mammillaria herrerae crest	B3	Portulacaria afra
B3	Mammillaria hiutzilopochtli	B3	Portulacaria afra variegata
B3	Mammillaria humboldtii (large form)	B3	Raphionacme flanaganii
B3	Mammillaria magnifica	B3	Rathbunia alamosanus crest
B3	Mammillaria matudae	B3	Sansevieria kirkii pulchra
B3	Mammillaria nivosa	B3	Sansevieria singularis
B3	Mammillaria theresae	B3	Sarcocaulon multifidum
B3	Mammillaria vallensis Tenango de Valle	B3	Sarcocaulon penniculinum
B3	Mammillaria woburnensis	B3	Sarcocaulon vanderietiae
B3	Matucana aurieflora	B3	Sedum torulosum
B3	Matucana formosa	B3	Senecio crassissimus
B3	Matucana madisoniorum	B3	Senecio herreianus variegata
B3	Matucana mamillaris KK 1638	B3	Senecio macroglossus variegata

## ***Cactus & Succulents for Partial Shade***

### **Code Botanical Name**

B3 Senecio repens  
B3 Senecio saginata  
B3 Senecio stapeliaformis  
B3 Seyrigia humbertii  
B3 Stapelia gettleffii  
B3 Stapelia leendertziae crest  
B3 Stapelia nobilis  
B3 Stenocereus eruca  
B3 Stenocereus hollianus crest  
B3 Stenocereus pruinosus  
B3 Stenocereus pruinosus  
B3 Stenocereus thurberi crest  
B3 Stephanocereus leucostele  
B3 Stetsonia coryne monstrose  
B3 Thrixantocereus blossfeldianus  
B3 Trichocereus camarguensis crest  
B3 Uebelmannia buiningii

### **Code Botanical Name**

B3 Uebelmannia crebispina  
B3 Uebelmannia flavispina  
B3 Uebelmannia gummifera  
B3 Uebelmannia meninensis  
B3 Uebelmannia meninensis rubra  
B3 Uebelmannia pectinifera  
B3 Uebelmannia pectinifera multicostata  
B3 Weingartia erinacea v. catarinense  
B3 Weingartia lanata  
B3 Weingartia neumanniana  
B3 Winterocereus aurispinus  
B3 Winterocereus aurispinus crest  
B3 Zamia furfuracea CARDBOARD PALM  
B3 Zamia pumilla



## Cactus & Succulents for Shade

Code	Botanical Name	Code	Botanical Name
C1	Echeveria chihuahuensis	C3	Aeonium decorum
C1	Echeveria glauca	C3	Aeonium tabulaeforme
C1	Echeveria lilacina	C3	Aloe descoingsii
C1	Echeveria nodulosa	C3	Aloe descoingsii X haworthioides
C1	Echeveria runyonii monstrose	C3	Aloe dorothea
C1	Echeveria setosa	C3	Aloe haworthioides
C1	Echeveria subsessilis	C3	Aporocactus flagelliformis
C1	Echeveria x Dondo	C3	Astroloba dodsoniana
C1	Echeveria x Loia	C3	Astroloba herrei
C1	Echeveria x Perle von Nurnberg	C3	Astroworthia skinneri
C1	Echeveria x Topsy Turvy	C3	Blossfeldia liliputana
C1	Graptopetalum bellum (Tacitus)	C3	Ceratozamia hildae
C1	Pachyphytum amethystinum	C3	Ceropegia linearis ssp. woodii
C1	Pachyphytum oviferum	C3	Crassula ausiensis v. giessii
C1	Pachyphytum oviferum hybrid	C3	Crassula columella
C1	Rebutia albiflora R. heliosa cv. Sunrise	C3	Crassula cornuta ssp. pillansii
C1	Rebutia albipilosa	C3	Crassula lycopodioides
C1	Rebutia donaldiana	C3	Crassula marnieriana
C1	Rebutia flavistylla	C3	Crassula obvallata
C1	Rebutia glomeriseta	C3	Crassula perforata
C1	Rebutia graciliflora v. borealis	C3	Crassula portulacea variegata
C1	Rebutia heliosa v. condorensis	C3	Crassula pyramidalis
C1	Rebutia heliosa v. heliosa	C3	Crassula rupestris hybrid
C1	Rebutia jujuyana	C3	Crassula streyei
C1	Rebutia krainziana	C3	Crassula teres Rattlesnake Plant
C1	Rebutia kupperiana	C3	Crassula x Buddha's Temple
C1	Rebutia marsoneri	C3	Crassula x Christine
C1	Rebutia miniscula	C3	Crassula x Coralita
C1	Rebutia muscula	C3	Crassula x Emerald
C1	Rebutia perplexa	C3	Crassula x Fernwood
C1	Rebutia pulchella	C3	Crassula x Ivory Pagoda
C1	Rebutia pygmaea	C3	Crassula x Moonglow
C1	Rebutia violacea	C3	Crassula x Morgan's Pink
C1	Rosularia platyphylla	C3	Crassula x Tiny Tim variegata
C1	Sempervivum aracnoideum	C3	Dudleya greenii cv. White Sprite
C1	Sempervivum calcareum	C3	Echeveria x Mona Loa
C1	Sempervivum tectorum	C3	Echeveria x Paul Bunyon
C1	x Graptoveria Amethorum	C3	Edithcolea grandis
C1	x Graptoveria Silver Star	C3	Euphorbia cap-saintmariensis
C2	Cremnosedum x Little Gem	C3	Euphorbia decaryi v. decaryi
C2	Echeveria affinis	C3	Euphorbia decaryi v. spirosticha
C2	Echeveria agavoides	C3	Euphorbia knuthii
C2	Echeveria bella	C3	Euphorbia milii v. imperatae Mini Crown of thorns
C2	Echeveria derenbergii	C3	Fockea edulis
C2	Echeveria harmsii	C3	Gasteria liliputana
C2	Echeveria minima	C3	Gasteria obtusifolia
C2	Echeveria purpurorum	C3	Gasteria verruculosa
C2	Echeveria subsessilis variegata	C3	Gasteria x Frosty
C2	Echeveria x Arlie Wright	C3	Gasterworthia x Gordo
C2	Echeveria x Doris Taylor	C3	Graptopetalum superbum
C2	Echeveria x Firelight	C3	Gymnocalycium friederichii Red Cap
C2	Echeveria x Wavy Curls	C3	Hatiora salicornoides
C2	Notocactus haselbergii	C3	Haworthia angustifolia Riebeeck East
C2	Pachyveria hybrid	C3	Haworthia attenuata
C2	x Graptoveria Debbie	C3	Haworthia attenuata v. clariperla
C3	Aeonium arboreum	C3	Haworthia baccata
C3	Aeonium arboreum crest	C3	Haworthia baccata X reinwardtii
C3	Aeonium arboreum cv. Sunburst	C3	Haworthia bolusii v. bolusii
		C3	Haworthia browniana

## Cactus & Succulents for Shade

Code	Botanical Name	Code	Botanical Name
C3	Haworthia coarctata v. coarctata	C3	Haworthia retusa X truncata
C3	Haworthia coarctata v. coarctata greenii	C3	Haworthia retusa X truncata Harry Johnson III
C3	Haworthia comptoniana	C3	Haworthia roseoluteus
C3	Haworthia cooperi	C3	Haworthia scabra
C3	Haworthia cooperi v. leightonii	C3	Haworthia scabra v. morrisae
C3	Haworthia cymbiformis lepida	C3	Haworthia sordida
C3	Haworthia cymbiformis mucronata	C3	Haworthia springbokvlakensis
C3	Haworthia cymbiformis obtusa	C3	Haworthia translucens v. tenera
C3	Haworthia cymbiformis transciens	C3	Haworthia truncata
C3	Haworthia emelyae v. mutlifolia	C3	Haworthia turgida v. rodinii
C3	Haworthia fasciata	C3	Haworthia turgida v. turgida
C3	Haworthia fouchei	C3	Haworthia unicolor
C3	Haworthia herbacea	C3	Haworthia variegata
C3	Haworthia herrei v. glauca	C3	Haworthia venosa ssp. tessellata
C3	Haworthia herrei v. herrei	C3	Haworthia viscosa v. caespitosa
C3	Haworthia herrei v. jacobseniana	C3	Haworthia viscosa v. viscosa
C3	Haworthia koelmaniorum	C3	Haworthia wooleyii
C3	Haworthia limifolia	C3	Haworthia x Fatso
C3	Haworthia lockwoodii	C3	Haworthia x Manda's Hybrid
C3	Haworthia magnifica v. magnifica	C3	Haworthia xyphiophylla
C3	Haworthia magnifica v. major	C3	Haworthia zantneriana
C3	Haworthia magnifica v. major	C3	Haworthia emelyae (picta)
C3	Haworthia magnifica v. paradoxa	C3	Kalanchoe beharensis monstrose
C3	Haworthia marumiana	C3	Kalanchoe eriophylla
C3	Haworthia marumiana	C3	Kalanchoe tomentosa
C3	Haworthia maughanii	C3	Ledebouria socialis
C3	Haworthia maughanii X truncata	C3	Melocactus axinophorus
C3	Haworthia minima	C3	Melocactus azulensis
C3	Haworthia mirabilis	C3	Melocactus azureus
C3	Haworthia mutica	C3	Melocactus broadwayi
C3	Haworthia nigra	C3	Melocactus concinnus
C3	Haworthia parksiana	C3	Melocactus conoides
C3	Haworthia pumila	C3	Melocactus deynacanthus
C3	Haworthia pygmeae	C3	Melocactus diersianus
C3	Haworthia reinwardtii v. chalumnensis	C3	Melocactus disciformis
C3	Haworthia reinwardtii v. chalwinii	C3	Melocactus ernestii
C3	Haworthia reinwardtii v. conspicua	C3	Melocactus ferrophillus v. longispinus
C3	Haworthia reinwardtii v. kaffirdriftensis	C3	Melocactus guitarti
C3	Haworthia reinwardtii v. tenuis	C3	Melocactus iacuensis HU 166
C3	Haworthia reinwardtii v. zebrina	C3	Melocactus lendselinkianus
C3	Haworthia resendeana	C3	Melocactus macrodiscus
C3	Haworthia reticulata v. hurlingii	C3	Melocactus matanzanus
C3	Haworthia reticulata v. reticulata	C3	Melocactus neomontanus
C3	Haworthia retusa	C3	Melocactus pachyacanthus
C3	Haworthia retusa (large)	C3	Melocactus rubrispinus
C3	Haworthia retusa fm. geraldii	C3	Melocactus violaceus
C3	Haworthia retusa v. acuminata	C3	Melocactus warasii
C3	Haworthia retusa v. dekenahii	C3	Sedum furfuraceum
C3	Haworthia retusa v. multilineata		