**Succulent Plants**

Succulents planted in 1/3 cat litter and 2/3 pea gravel in dish gardens make for the ideal planter for snowbirds who disappear for the summer or year around residents who don't like to constantly water during the dry season. The first part of the summer, when the snowbirds have left, April and May, can be very dry but succulents don’t need to be watered, they will survive once established. Indeed, succulents will make it through the complete dry season without supplemental water. Water every two weeks for the best plants.

If the succulents are planted in 1/3 cat litter, they can usually make it through the rainy season of June, July, August and September without rotting. Succulents (with the notable exception of larger agaves and aloes) do poorly planted in the ground in Florida. Even LaBelle’s sandy soils hold too much rainy season moisture for succulents. I've even had large agaves planted in poorly draining soil rot in the rainy season.

Succulents which do well outside in planters in Florida include Agaves, Aloes, Senecios, Hylotelephiums, Euphorbias, Rhipsalis, Kalanchoes, Crassula, Gasteria, Portulaca, Purslane, Pencil Plants, Sanseverias, Sedums and Cacti. Succulents which don’t do well outside in Florida in planters include Sempervivums (“Hen’s and Chickens”), Echeverias, and Aeoniums.

Typical succulent dish garden
A smaller dish garden

There are hundreds of sedum varieties which do well in Florida. They do well in drought and don’t look out of place in tropical Florida. They prefer full sun.
Here is a few more varieties of sedums that are in character for tropical Florida.

Showy Stonecrop 'Mediovariegatum' (*Hylotelephium erythrosectum* 'Mediovariegatum')
doesn’t even look like the succulent it is.
Hylotelephium spectabile 'Carmen', this hardy plant blooms in the spring.

Sanseveria “Golden Hahnii” is a well behaved member of the Sanseveria genera.
Pencil Cactus, *Euphorbia trucalli*, must be grown in a container to keep it in bounds. Red *Pseudorhipsalis Ramulosa* cactus grows on a tree or as a hanging basket.

Large *Agaves* do well in our poor sandy soil and do well in our dry season. Don't try to grow them where water pools during the rainy season.
Small agaves like *Agave lophantha* ‘Quadricolor’ look quite well in small rock gardens in containers.

*X Gasteraloe batesiana x aristata*, an intergeneric hybrid between *Gasteria* and *Aloe*. 
Gasteria brachyphylla, a plant with unusual symmetry

The larger Aloes, such as Aloe 'principes', do well in our sandy soils and do well in our dry season.
*Aloe striata* is unusual among succulents in that it is grown mainly for its blooms. It grows well in well-drained soil in LaBelle.

*Aloe Cameronii* is grown for its beautiful foliage. Needs full sun to develop color.
Smaller aloes such as the partridge breast aloe (*Aloe variegata*) do better in a well drained container than in the ground.

Dusty Miller Plant, *Senecio cineraria*, looks like a normal plant but will withstand months of drought and is a succulent. There is another plant, *Artemisia schmidtiana* (Wormwood) that similar but isn't as drought resistant. It has finer foliage.
Cape Ivy 'Variegata' (*Senecio mikanioides* "variegata"), looks like an English ivy but is actually a drought resistant succulent.

*Senecio rowleyanus*, String-of-pearls, likes some shade and grows well in hanging baskets. Very drought resistant.
Panda plant, *Kalanchoe tomentosa*, does well in well drained containers. It is a very attractive plant year around and doesn't appear out of character in Florida even though it is very drought resistant.
Florist Kalanchoe, *Kalanchoe blossfeldiana*, blooms in the late fall, early winter and needs protection from frosts to be a perennial succulent.

*Kalanchoe daigremontiana*, "Mother of Thousands", hundreds of small plantlets line the edge of each leaf. It does well in Florida as a succulent.
Kalanchoe millotii variegated, a variegated succulent which does well in Florida growing in pots of well-draining soil. Like all kalanchoes it resists drought.
*Kalanchoe luciae* 'Fantastic’. Colors up very well in full sun, large leaves are "fantastic".

"Ghost Plant", *Graptopetalum paraguayense*, gets leggy and is best planted in a group.
Graptopetalum pachyphyllum, another plant which is best planted in a group.

Haworthia attenuate, a good small plant for containers.
Haworthia retusa, a small plant with translucent fat leaves.

Crassula argentea ("jade plant"), a plant which grows huge in small containers. Don’t plant this in the ground. It will rot. It does require protection from frosts.

*Crassula arborescens*, “Silver Dollar Jade”. This can become a large plant.
Crassula species 'Red Edge'

Bromeliads of all sorts can be used as shady spot succulents in containers. They will act as succulents and live through drought (except cryptanthus, which is a swamp plant).
If you like flowers instead of foliage portulaca in containers in sunny positions will fill the bill. It is succulent which can go dry between waterings.

Purslane is like a large variety of portulaca. It withstands drought as well as portulaca. Both portulaca and purslane are perennial only if they aren't hit by a frost.
Crown of Thorns, a Euphorbia, does well with perfect drainage. Blooms year around.

Snow on the Mountain, a euphorbia, is easily raised from seed and is drought proof.
*Euphorbia Pulcherrima*, or poinsettia, grows into a large shrub in LaBelle. It should be grown in an area with no light at night and kept pinched back for bushiness. It grows in the local sandy soil quite well. It will not take a frost. Note the sparse small flowers. Hormone treatments are required for the flowers to be the size of store poinsettas.

*Euphorbia characias* ‘Glacier Blue’ shows the tremendous variation in the Euphorbia clan. This is a large succulent deserving of its own pot.
Many euphorbias look just like cactus, spines and all. I find euphorbia varieties like these “out of character” for tropical Florida. I personally don’t like them.

Many types of cactus grow well in South Florida. I just don’t like them, they are out of character for tropical Florida and are literally a pain to handle and plant.
Pricklypear (*Opuntia humifusa*) is a cactus which is actually native to the interior drylands of Florida, so cactus can do well here.

Opuntia subulata cristata is the one cactus I grow. It has so much character!
*Cereus peruvianus*, the true night blooming cereus cactus, has five inch thick stems and can grow to five foot across and fifteen foot high. It is common in LaBelle and I do not find it an attractive succulent. It is just out of character in tropical South Florida. It belongs in the desert.
There are at least three succulent types of night blooming epiphytic ("grows in trees") Jungle cacti: *Selenicereus grandiflorus*, "climbing snake cactus" (round stem), *Epiphyllum oxypetalum*, "queen of the night" (flat stems), and *Hylocereus undatus*, "Pitahaya" or "Dragon fruit" (edible red fruit and triangular stems). All are night blooming large white flowered epiphytic jungle cacti that have small (one to two inch) stems and are rather weedy in appearance. Some are considered invasive exotics in Florida. I grow very few cactus as I just don't like them.
*Echeveria* don’t grow well in Florida, they sunburn very easily, can’t take any frost and can’t go completely dry. There are many *echeverias* to avoid. They will constitute easily 50% of any “mixed succulent” collection shipped from California.

Aeoniums want to grow with water in Florida winters and have a dry rest period during our hot, wet summers. They don’t do well here. These are several *aeoniums* to avoid.
“Hen’s and Chickens” (*Sempervivum*) do very poorly in Florida. They generally need some cold dormancy and can’t go completely dry.

**Choosing Succulents and Companion Plants for Florida**

The key for me is finding attractive succulents that don't look out of character in tropical Florida, i.e. finding drought resistant succulents that don’t look like thorny cactus. There are many succulents with "normal" plant leaves and no thorns and that is what I personally like. Some people find thorny round cactus to be attractive plants, I just don't happen to be one of those people. Especially since this is tropical Florida I want plants that don't appear to be cactus. Even crown of thorns is a little too much "desert" for me. Some non-succulents such as most bromeliads (NOT cryptanthus!) can make it through a drought in a container just fine and can be treated as companion plants for the succulents. Most bromeliads do like more shade than most succulents.

Some succulents do so well in Florida it is recommended they never be planted in the open ground, they take over if they are planted in open ground. This includes most sanseveria and pencil cactus. On the other hand I can personally attest that “Hen’s and Chickens” (*Sempervivums*), *Echeverias*, and *Aeoniums* die in Florida. I obtained about five to fifteen of each of these genera in internet obtained “collections” before I saw the IFAS warning that they don’t do well in Florida. All these plants have died.
**Container Media for Succulents**

Succulents like to go completely dry in between watering. This is possible in the Florida rainy season only in containers with a very well draining large particle mix. At the very least succulents want a lot of air around their roots in the rainy season. This is really difficult in Florida's rainy season, especially if the media is an organic media which packs down with time. The formula I use is inexpensive and it grows succulents well:

1. Most of the container is 1/3 $1 “EverPet Basics Litter Unscented” cat litter bags from Dollar General Store mixed with 2/3 pea gravel. If you have a deep container fill most of the container with empty water bottles, pea gravel, Styrofoam packing material and the like. The succulents only use the top three inches of litter mix. Note than I don't add sand, during the rainy season sand won't allow enough air to reach the roots of the succulents. Organic material of any sort holds too much moisture, especially as it decomposes and packs down over time. Vermiculite also packs down with time. This cat litter holds moisture but still drains fast and holds a lot of air, even in the rainy season.

2. The last one inch on top is 3/4 white aquarium gravel mixed with 1/4 cat litter for aesthetics (obviously this is optional).

If light weight is the main objective replace 2/3 of the cat litter with perlite. One can fill most of the container with 2/3 perlite and 1/3 cat litter and top of the last one inch with 3/4 white aquarium gravel and 1/4 cat litter for a lightweight container where rain won't dislodge the perlite particles. Note to stay away from commercial cactus mixes. They are largely ground up wood chips and will ultimately pack down and kill the succulent, all the time robbing the succulent of Nitrogen fertilizer.

**Sun**

Full sun is best to maintain strong foliage coloration and vigorous growth. Most succulents tolerate low-light to shade. Many succulents have red, brown, black or variegated foliage and this coloration and variegation will generally be considerably reduced or nonexistent in the shade.

**Propagation**

Propagation is generally done through leaf or stem cuttings but it is difficult to make generalizations about such a large and varied group. Some succulents root easily in peat moss while others require rooting hormones and greater care. Other succulents form large clumps which can be split into sections to propagate. Some such as *Sanseveria* throw off pups which can be started on their own.
**Fertilizer**

Succulents do better if given an occasional shot of 20-20-20 balanced soluble fertilizer.

**Sources of Succulents**

There is one succulent nursery in South Florida with acres of greenhouses. Isaac Nursery, 18800 SW 177th Ave., Miami, FL 33187. (786) 282-0923. It also has pottery. It is a great place to visit. Many succulents can be obtained at Lowes or Home Depot. The internet can also be used to obtain plants but always use only those internet nurseries who pay for shipping or have reasonable shipping charges.

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