



## **Tips on Site Preparation, Selection, Placement, Planting, Mulching, Watering, Fertilizing, and Care of Your Native Plants in the Ground and in Containers**

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**Site Preparation:** The importance of site preparation is underrated. Having a good foundation for planting sets the pace for a successful landscape. I do not recommend you purchase plants until the area is prepared for planting. This could include removing lawn and plants not desired. When grading or adding elevation to an area (less than 8"), it is recommended that sand or gravel be used rather than soil, as soil high in organics will breakdown and dissipate (shrink) in a few years. If you plan on adding more than 8" of elevation, use a soil that is less than 50% organic (peat). Don't use potting soil, unless you plan on mixing it with sand or gravel. Be sure that elevations grade away from the house in case of heavy rains or flooding. When preparing a site for multiple plantings be mindful that trees and shrubs occupy space in the soil, and soil level will be raised overtime as roots grow and plants drop leaves. This may take 20 years, but it will happen, and could impact drainage down the road.

**Selection:** Before purchasing plants, make certain to wait until all site preparation for the given area is completed. Before buying, determine the number of plants necessary for the area, remember to figure the amount needed and spacing based upon the size of each species. When purchasing, I recommended that only plants grown in smaller containers (1 gallon, 3 gallon, or 7 gallon) be purchased. Plants in small containers are cheaper, require less watering, and establish much more quickly than those in large containers. In just a couple years, if planted under the correct conditions appropriate to the species, these plants will outperform larger plants installed (certain species of palms are an exception to this rule). In addition, in some areas, due to the large trees nearby, soil space underground is limited, making it difficult to plant, and difficult for the plant to grow.

When selecting plants at a nursery, *ask* the seller whether one may pull the plant out of its container; this is done so that you may inspect its roots. Young plants, which may appear small for the container size, will have few roots, this is okay, but you may want to allow the plant to grow in the pot for a month or so before planting in the ground. Overly fertilized plants may have poor root development. So if a plant is luxurious and green above, and then almost no roots below, one should avoid this plant. If one were to put it in the ground it could die from shock of lack of nutrients, and also it will not be able to draw enough water from the ground. Some plants have been in the pots too long, and have lots of roots twining around the pot. This is less of a big deal for most native species, but if there is a better plant, choose it instead. So remember to pay attention to the health of the roots, not the size of the plant above the soil surface. During installation, should any plants appear pot bound (with roots that encircle the bottom of the pot), one needn't worry. Although it is true that encircling roots prevent the plant's ability to grow well, almost all south Florida trees and shrubs are tough enough to survive the following. First, cut the pot away from the plant and remove it. Then take a long sharp knife, and slice off the bottom portion of the plant where the roots are encircling (like carving a loaf of bread). Then install.



Any tap root that a native species had will adapt to the soil in which it's placed. Cutting off these twining roots will prevent the continued spiral habit as it creates new lateral roots after installation.

**Placement:** Placement will depend upon the size of the species in most cases. However keep the following things in mind.

**Powerlines, Cable lines, and Phone lines:** Use shrubs and small trees when planting under powerlines. Most palms are inappropriate for planting under powerlines. If your powerlines, cable lines, and/or phone lines are buried underground, do not plant near them.

**Fences & Walls:** When planting along a fence or wall, I recommend you keep the plantings 2-4 feet from the fence depending on the size of the species. This is done so that when the time comes, the fence or wall may be accessed for painting or replacement without damaging your plants. In addition, you will be able to get behind your plants to prune and maintain them. The exception is with vines, which may be planted close to the fence or wall with the understanding that they will need to be replaced along with the fence when that time comes.

**House:** I generally do not recommend planting anything next to the house, as it allows rodents and pests to access the roof and potentially compromised areas undetectable by the eye. In addition, houses need to be painted, and on occasion tented for termites. Plants will need to be removed or may die in those cases.

Many home owners wish to screen their A/C unit, or some other "eyesore". This appliance will eventually need to be accessed should it break. In addition, adequate airflow is important in maintaining the A/C unit. If you must plant next to the house, I recommend you keep plantings 2-3 feet from the walls. Small sized trees should be at least 10 feet from the house's roof edge, Medium sized 15 feet from the roof edge, and large trees 25 feet from the house's roof edge.

**Septic Tank:** Find out where it is, and do not plant any trees or large shrubs on top of it. Do not plant any large trees within 10 feet of your septic tank. Don't allow trucks to drive on top of it when dropping off soil, mulch, or plants.

**Planting:** No soil amending is recommended when planting in the ground. Dig a hole slightly wider than the size of the pot, but not deeper. Remove the plant from the pot by turning the pot over in one hand, grasping the trunk of the plant with one hand, and then pulling the pot away from the plant. If the container is too large, place the pot on its side, and wriggle the pot away from the plant. Avoid pulling the plant out of the pot by grabbing the trunk or stem. If need be, cut the pot away from the plant. Place the newly removed plant in the hole and be sure not to bury your plant too deeply. The top of the soil of the plant from the pot should be level with the surrounding soil. It is better to have the plant exceed the hole than below it so that the crown roots can grow adequately. Backfill the gaps of the hole with the existing soil, and then water it in soaking it more than you think necessary. Lots of water will help prevent air pockets in the ground which could kill your plant's roots. I like to create a berm ring around my newly planted plant (like a donut) so that the water does not run off away from the plant. An excellent video on tree planting in Miami-Dade County is:

<https://www.youtube.com/watch?v=2TgaHECjupE>



**Fertilization:** Chemical fertilizer is not needed when planting in the ground. Too much fertilizer can cause problems such as poor root development, root burn (fertilizer is basically a salt), and poor flowering. In lieu of fertilizer, a dressing of mulch is recommended for any newly installed native plants (except pineland or prairie plantings). Natives are well adapted to our soil conditions, and the idea is to mimic nature in the restored area in order to achieve a successful landscape.

**Mulch:** For all newly installed landscaped plants (excepting pineland and prairie plantings) apply mulch surrounding the trees and shrubs. Mulch mimics the leaf litter and surficial organic soil that occupies most of Florida's forested plant communities. When applying, mulch should be 3-4 inches away from the trunk of the plant, and 5-6 inches deep (roughly 2-3 cubic feet of mulch per shrub or tree, less for ground covers).

Tree trimmer (arborist) mulch is optimal as it is local and you are preventing sending more debris to the landfill. However it is often fresh (green), and should be "cured" before use. Have the tree trimmer mulch sit in a large pile in your yard for 2-3 months or longer. The natural processes of composting heats the mulch, thereby killing any unwanted weed seeds. Mulch should be re-applied annually till the trees planted produce sufficient leaf drop to replace the need for mulch. If you have someone trim your trees, consider keeping the mulch in your yard (or even logs to use in the landscape). You can get free mulch by contacting tree trimmers directly or alternatively sign up to [www.chipdrop.com](http://www.chipdrop.com) to have a truck load of mulch delivered. Chip drops should be used for large projects as each delivery contains up to 20 cubic yards of wood chips, and drops cannot be scheduled. This is a newish program, and some members have waited up to 4 months to get their "drop". I recommend you watch their videos describing what to expect.

If you don't have room for a large mulch pile in your yard, or for small plantings, you have two options. Many County-owned Waste Transfer Stations have free mulch available to the general public. In addition, the [www.chipdrop.com](http://www.chipdrop.com) site members will often advertise that folks can come and get some mulch from their chip drop. Alternatively, among the commercial bagged mulches, I recommend using Florimulch, or Eucalyptus mulch. Bagged mulch is already heat sterilized, and should contain no weed seeds. Avoid using colored mulches, and never use Cypress mulch as natural forests are cleared in order turn into mulch. Eucalyptus mulch is sold at most box stores. Florimulch is sold at Bernie's Garden Center on Krome Avenue around 147th street. I recommend you call them before driving out there to be sure that they have the quantities you need (phone number is: 786.242.4443)

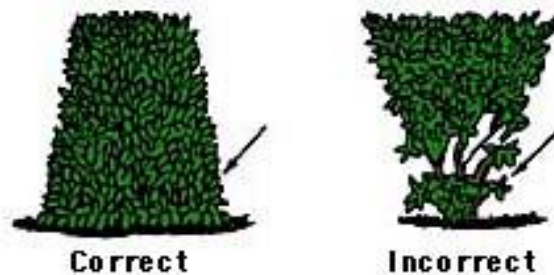
**Watering Regime:** Watering schedule of newly installed plants is as follows: Every day for the first two weeks, every other day for the following two weeks, twice a week for the following two weeks, and then once per week for the following four weeks. In other words, only a total of ten weeks of watering are needed to establish most plants (plants from larger than 7-gallon containers will need longer watering). Afterwards, existing trees & shrubs should be watered when they appear to be wilting or stressed. After following this regime, watering should not be needed except in cases of severe drought.

**Pests and Disease:** Should you notice any diseases appear on your plants, I recommend that you ignore them, or passively treat them. Most disease problems will go away in time if you have a balanced landscape (with appropriate mulch and watering etc.). I do not recommend using pesticides (including



"organic" ones) as in the long run, they cause more problems for the plants as they eliminate both the beneficial insects (those that prey on pests such as lady bird beetles and wasps) as well as the harmful ones. A passive treatment for diseases such as aphids, scale insects, and sooty mold is utilizing soapy water in a spray applicator (it can be a reused spray bottle) directly on the insects or affected area. Recipe is 2 tablespoons dish soap per gallon of water.

**Hedges and Screenings:** When planting a hedge it is good to select species which require minimal maintenance. Using fast growing large trees may fill the space quickly, but require a great deal of pruning throughout the year, so I recommend you use small trees and shrubs when creating a hedge. Before pruning your hedge, imagine taking a slice through the middle of it, and look at the cross section. It should be trapezoidal in shape with the top narrower than the bottom. This is so that light can penetrate to lower leaves and branches. If your hedge is wider at the top, lower leaves will die and disappear, leaving gaps and bare spots. Below is a diagram for trimming hedges from: <https://aggie-horticulture.tamu.edu/earthkind/landscape/proper-pruning-techniques/>.



**Figure 11. Proper Hedge Pruning**



**Container Plants:** Many of the above recommendations do not pertain to plants grown in containers. Several native plant species may be successfully grown in containers. Slower growing species are the most easily grown in containers, however I have also had success with moderately fast growing shrubs and trees. When selecting a container, be sure and use one that is of suitable size for your shrubs or trees. Be sure that the container has been sterilized in case there were any pests/diseases from the prior user (if applicable). You can use a weak solution of bleach, or leave the container out in the sun for a week. Make certain your container has drainage holes. Herbaceous (non-woody) plants and ground covers may do well enough in smaller shallower containers, but most shrubs, trees, and palms should be in containers that are 15 gallons or larger in size. I recommend you purchase a potting soil which is *well drained*; this is extremely important or your plant could rot inside the container. I also recommend a potting soil with perlite. Perlite, which looks like little balls of Styrofoam, is much lighter than sand, making your containers easier to move around. When placing a plant in its new container, follow the procedure covered for planting in the ground (be sure to not bury the plant too deeply, and water it well initially). Place 2-3 inches of mulch on top of the soil in the pot. You will need to fertilize eventually (most potting soils have some fertilizer).

Most container plants will need to be watered daily, especially if you use a potting soil with perlite in the mix, and mornings are the best time to water. Another watering tip is to water the plant when the soil begins to pull away from the sides of the container. Rainfall isn't necessarily sufficient for container plants, as the amount of soil for water retention is much reduced in a container. If you miss a watering period, and your plant loses its leaves/fronds, it may recover with subsequent watering. I recommend using a slow release fertilizer such as Osmocote or so that you do not burn your container plants (fertilizer is essentially a salt). Application frequency of the slow release fertilizer will depend on the type, the package should read how many months it is good for. Organic fertilizers or a light layering of compost may also be used in lieu of Osmocote. For some flowering plants, you may not wish to over-fertilize, and use fertilizers lower in Nitrogen, as most fertilizer types promote vegetative growth reducing the plant's drive to reproduce (flower). Container plants will need to be pruned on a regular basis, and older shrubs and trees may need to be root pruned every 2-3 years or so once they have grown into the container.