Friday’s Feature
By
Theresa Friday
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Palm production depends on viable seed

Palms are synonymous with Florida. Swaying in soft breezes, many local palms are in the process of setting their annual flush of seed.

Palms, despite their ability to grow to great heights, have more in common with lawn grasses and corn than with oaks, maples or other hardwood trees. They belong to a division of flowering plants known as the monocotyledons—monocots for short.

Palms go through many distinct growth phases: seed, embryo, seedling, establishment, mature vegetative and mature reproduction. It may take many years for the palm to enter the mature reproductive phase of their lives when they will start producing inflorescences—flowers for short. This is an important stage in palm development because, with a very few exceptions, palms can only be started by seed.

The individual flowers of a palm are generally quite small but they are borne in such large numbers that they can often be quite showy. Many palm owners will remove the flower stalk before the fruit and seed develops. If you are not interested in propagating more palms, this is probably a good practice since fruits are “resource-sinks” meaning, that it takes a lot of energy from the palm to develop its fruit.

In contrast to the small-sized flowers, the fruits of many palm species are fairly large and conspicuous. In fact, the largest seed of any plant known on the face of the earth belongs to a palm, Lodoicea maldivica—Coco de Mer for short.

The anatomy of a palm seed is quite interesting. The embryo, or new plant, is very tiny. The bulk of a palm seed is taken up by nutritive tissue called endosperm that provides food for the germinating seedling for a longer period of time than most flowering plants. The "milk" and white meat of a coconut are its endosperm.
Although palms are notorious for slow and uneven germination, growing them from seed can be an interesting project for the palm enthusiast.

With few exceptions, seed should be collected when the fruit is completely ripe (showing full color) or as soon as it falls from the tree. The seeds are typically enclosed by a fleshy or fibrous fruit wall. This must be removed prior to storage or planting.

Soaking the fruit in water for several days will typically soften the pulp enough that it can be removed using a knife. Be sure to change the water daily or you’ll be in for an odorous surprise. Be careful however, since a number of palms have an irritant in the fruit pulp that can make hand cleaning a painful experience.

The greatest cause of poor germination is dead seeds. There are several ways to test seeds for freshness. One of the oldest methods is the float test. For most seeds, this test works well. Place the seeds in a large container filled with water. If the seeds float, they are dead. The problem with this test is that many seeds have evolved to be dispersed by water, so they float naturally. It has been observed that if the floating seeds of non water dispersed seeds are planted, many will still germinate.

It is best to plant the palm seed shortly after cleaning. Due to uneven germination, a pretreatment such as a water soak, soaks in chemical or scarification might improve germination. For an explanation of these pretreatments, read the University of Florida online publication at [http://edis.ifas.ufl.edu/ep238](http://edis.ifas.ufl.edu/ep238).

Virtually all palms require high temperatures (86 to 95 degrees F) for germination. Be sure to choose an appropriate container and a well drained potting media. Palms will require uniform moisture, so no extreme dryness and wetness.

Even though most palm seeds take more than a hundred days to germinate and have a germination rate of less than 20 percent, palm seed propagation can be a rewarding and interesting experience.

Theresa Friday is the Residential Horticulture Extension Agent for Santa Rosa County. The use of trade names, if used in this article, is solely for the purpose of providing specific information. It is not a guarantee, warranty, or endorsement of the product name(s) and does not signify that they are approved to the exclusion of others. For additional information about all of the county extension services and other articles of interest go to: [http://santarosa.ifas.ufl.edu](http://santarosa.ifas.ufl.edu).

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