

GROWING *Elaeis oleifera* IN PALM BEACH COUNTY

Submitted by Charlie Beck

Elaeis oleifera is native to tropical Central and South America. In Central America it ranges from Honduras to Panama. In South America it's found in coastal countries ranging from Surinam in the east to Peru in the west. A population can be found in central Brazil but some consider these to be introduced by man. *E. oleifera* mostly occurs in low lying wet areas and can be found by mangrove swamps.

The genus *Elaeis* contains two species, the more familiar *E. guineensis*, the African Oil Palm, and *E. oleifera*, the American Oil Palm. The current theory is that *Elaeis* originated in the Americas and was later introduced into Africa. The only other genus found in both Africa and America is *Raphia*. Both *Elaeis* species are used for palm oil production, although the African Oil Palm is used to a much greater extent. Hybrids between the two species are being tested for oil production because the short stature of *E. oleifera* is a desirable feature, which eases fruit harvest.

E. oleifera has a short or sometimes a procumbent stem. It may grow vertically to 20' or may grow horizontally along the ground, rooting from the lower surface of the stem. The stem remains covered with tightly packed persistent leaf bases. Stems stripped of leaf bases measure up to 16" in diameter. Fronds measure 10 - 18' long and petioles are armed with recurved teeth. Leaflets are arranged in a single plane. This is a monoecious palm but inflorescences usually alternate either male or female. The inflorescences are born right next to the stem and are tightly packed within the leaf bases. Female flowering branches terminate in a sharp point.

When young, *E. oleifera* and *E. guineensis* inflorescences and stems look similar, so differentiate *E. oleifera* by the arrangement of leaflets about the rachis. Leaflets of *E. guineensis* are arranged in several planes and on *E. oleifera* they are in a single plane. Of course stem height is another distinguishing feature. *E. guineensis* has an erect stem which can reach 60' tall.

E. oleifera has been grown in South Florida for quite some time. Fairchild Tropical Botanic Garden's (FTBG) first planting dates back to 1959. Fairchild's last planting was in 1994 which is the same year that we planted the specimen in our garden. Ruth Sallenbach has an attractive mature specimen growing in her garden. I'd bet that Ruth's palm is older than 22 years and is probably the largest specimen in Palm Beach County. In 32 years of touring private palm gardens in South Florida, I cannot remember seeing this palm other than in Ruth's garden. On a trip to Ecuador in 1996, I did photograph a palm which was a hybrid between *E. oleifera* and *E. guineensis*. It was planted in Don Brainard's fabulous palm garden. See photo on page 3 to see how fantastic this palm looks when cultivated in the tropics.

E. oleifera is rarely available for sale in South Florida or from mail order palm nurseries. I purchased three of these palms in 1993 at a South Florida Palm Society sale at FTBG. Of those three palms, two were actually *E. guineensis*. Whether our *E. oleifera* is a true species or a hybrid with *E. guineensis* is not certain, but it has all of the characteristics of the true species.

Of all of the palms that we have planted in our garden, *Attalea crassispatha* and *E. oleifera* are the two palms that I am the most proud of. *Attalea crassispatha* is one of the rarest palms on the planet and I was lucky to obtain one of these palms from FTBG's effort to save this palm from extinction in Haiti. My attachment to this palm was deepened when I saved it from decline by recognizing a boron deficiency which would have probably killed it. I also saved *E. oleifera* from likely death after extreme cold damage caused by the record cold temperatures experienced in 2009. The emerging frond collapsed and the bud was damaged by exposure to repeated cold temperatures. I have never had a palm survive such bud damage. Norm Moody, palm expert extraordinaire, told me that I could improve its chance of survival by cutting away fronds and exposing the bud. This was major surgery that I would have never done without Norm's guidance. I used a reciprocating saw armed with a pruning blade to cut away all petioles. It was radical surgery but I thought it was the palm's only chance to survive. Once the bud was exposed, I cut out any rotted portions and then applied hydrogen peroxide on an almost daily basis until I could see healthy emerging growth. I was surprised that this palm survived. After that experience, whenever temperatures are predicted to dip below 40°F, I place a propane heater beside this palm and run it on the low setting throughout the night. After 22 years the bud is only 5' above ground so this is great way to protect this short palm.

The photos of this palm do not show its true scale. It's larger than it appears. Fronds measure 17' in length and its slow vertical growth translates to requiring a lot of garden space. If the stem decides to grow horizontally

along the ground even more space is required. Luckily the stem on our palm is growing vertically and has shown no tendency to lean over. Locating this palm next to our driveway was not the best choice but we do get to admire it every time we enter or exit the property. I fertilize this palm every 3 months with a high quality palm fertilizer. The leaves are always a beautiful emerald green color and have never shown any nutritional deficiency.

If you can find this palm for sale and have the space, give it a try. Due to cold sensitivity, I would not recommend growing this palm too far west of Military Trail. Cold hardiness must vary individually because the many specimens planted at FTBG survived the 1989 Christmas freeze when temperature dropped to 27°F on two consecutive nights. Ruth's Sallenbach's specimen probably survived even colder temperatures in her garden that year. Even though this palm loves wet soil any regularly irrigated garden should suffice. It grows well in full sun or shady areas. It is not invasive like its African relative. I've noticed no concentration of seedlings around the base of this palm.



Elaeis oleifera
in the Sallenbach garden



Elaeis oleifera x guineensis
Don Brainard's garden in Ecuador



Elaeis oleifera
22 years old in the Beck garden



Elaeis oleifera
22 years old in the Beck garden



Elaeis oleifera
infructescence



Elaeis oleifera petiole



Elaeis oleifera
male inflorescence



Elaeis oleifera
fibrous stem