

## **A WORD OR TWO ABOUT GARDENING**

### **Some more rare and exotic tropical fruit trees for Miami-Dade Yards**

Although growing tropical fruit in Miami-Dade yards has been the subject of three previous articles, the topic is still far from exhausted. There are many less familiar tropical/sub-tropical fruit crops for backyard growers involving plants ranging from large impressive trees to small trees/shrubs and climbers. The plants discussed below encompass just such a range. Before deciding which if any of these could be of interest, you may wish to catch up with the three previous articles. There you will find some factors to consider before purchasing any fruit tree including: Will I be able to consume all of the fruit? Do I have room for the tree and time to adequately care of it? These articles along with others in the 'A Word or Two about Gardening' series can be found online at <http://miami-dade.ifas.ufl.edu/publications.htm> by going to the section titled 'Articles from the Local Media'. The first half of the present article will concentrate on two groups of fruit trees that can also double as attractive additions to any local landscape. Finally if do not have space for the smallest of these trees, then consider installing a trellis for two quite different, but showy, fruit bearing climbers.

If you are looking for fruit trees that will double as attractive medium to large specimen trees, consider two members of Sapotaceae, the sapodilla and star apple. The **sapodilla** is a large, evergreen tree, initially upright, but later developing a dense rounded crown. The handsome leaves are glossy, dark green to about 4½ x 1½", spirally arranged toward the branch tips. The fruit is a more or less rounded berry having a diameter up to 4", a rough scurfy skin and light brown pulp with a taste reminiscent of a pear with an added hint of butterscotch. The tree is well adapted to the infertile limestone soils of Miami-Dade, can withstand salt spray from the ocean and exhibits good wind resistance if given space for adequate root development. Although slow growing, the sapodilla will eventually become too large for a small yard if not regularly pruned. The tree should be maintained below 20', unless there is sufficient space and it is grown more for shade than as a fruit tree.

In order to ensure early fruit production (within 3 years as opposed to 8 -10 years) of known quality, purchase a grafted sapodilla of a named variety rather than one grown from seed. Some sapodilla cultivars set little or no fruit because they are self incompatible and need another tree for pollination. The following cultivars, suggested by Dr Carlos Balerdi (Commercial Fruit Crops Agent, UF-IFAS/Miami-Dade County Extension Office) give good fruit production from a single tree. Two older cultivars, 'Brown Sugar' and 'Prolific' as well as more recent introductions, 'Tikal', 'Hasya' and 'Molix', can be recommended. The more recent introductions are preferred by some for the smoother less granular pulp. Fruit can ripen at any time of year, but usually during late summer. When ripe, the surface of the fruit becomes less scurfy and if gently scratched should appear light brown rather than green.

The **star apple** (caimito - not to be confused with the carambola, star fruit), develops a more upright, less dense canopy than the sapodilla with attractively flaking bark and drooping branch tips. It is very similar in appearance to the Florida

native satin leaf, the principal attribute of both trees being their foliage – leaves with a glossy, bright green upper surface and a silky, rusty brown underside. The caimito fruit is a rounded 3” berry with a smooth skin that can be yellow or purple and contains a sweet gelatinous pulp. Ripening occurs in late winter and fruit must be left on the tree. Harvest when the fruit turns from green, to yellow or purple (depending on cultivar), and becomes slightly soft. The rind is full of bitter tasting white latex so it is usual to cut the fruit in half and carefully spoon out the soft flesh. The satin leaf bears smaller, single seeded, inedible purple berries and is purely of landscape interest. It is ironic that this much esteemed Florida native is regarded as potentially invasive in Hawaii (moist forests) due to bird dispersal.

Both caimito and satin leaf are prone to sucker from the base, and can become rather spindly with sparse foliage and frequent die-back of branches. Die back can be especially pronounced following prolonged winter cold snaps. Dead wood should be removed and new growth pinched back to stimulate development of a fuller canopy. Visit Fairchild tropical gardens to see very impressive mature specimens of both caimito and satin leaf, with flared trunks, growing to more than 35’.

Caimito occurs naturally in open woodland, and appears not to do as well in fully exposed sites. It favors a more enriched soil (mulching is beneficial) than sapodilla and although drought tolerant, will thrive more in evenly moist but free draining soils. Avoid poorly draining sites, and those close to the ocean (caimito is far less tolerant of salt than sapodilla). The caimito is stable in high winds, though some limb breakage is likely especially in poorly maintained trees. Both the sapodilla and caimito require little fertilizer, about 2-3lbs of a 6/6/6 three or four times per year, and weekly irrigation during prolonged dry weather when bearing a crop

If you do not have space for either of the above trees, then there are some very attractive small fruit trees/shrubs in the Myrtaceae that should be considered. Most frequently seen is the **jaboticaba**, a very slow growing tree from Brazil which locally is rarely more than 15’. Jaboticabas have smooth, flaking, reddish brown bark, branch frequently from close to the ground, eventually developing a vase like shape. New leaves are pale red becoming dark green to no more than 4”, but the most outstanding feature is the cauliflorous habit of flowering. Several times a year, fluffy white flowers are borne directly on the multiple trunks and branches. From a distance the tree appears to be covered with patches of fresh snow. The flowers are soon followed by reddish purple to almost black grape like fruit with a thick skin and pleasantly sweet to sub-acid pulp.

Jaboticabas should be grown with full sun exposure in moist enriched, but free-draining soil – they will not survive flooding. They have very limited tolerance of drought or salt. On Miami-Dade’s limestone soils jaboticabas usually develop nutritional deficiencies, which should be corrected using appropriate soil drenches (iron) and nutritional sprays (manganese, zinc etc.). Periodic applications of fertilizer are necessary, about 2 lbs every 3 months. Do not allow the soil to become dry, applying water on a regular basis as needed – an organic mulch helps to conserve soil moisture as well as enriching the soil. Vegetative methods of propagation are difficult. Fortunately seeds are polyembryonic, so seed grown jaboticabas are very similar to the parent tree. One slight caveat concerning

jaboticabas: you will need patience since it will take about 8 years before you can expect the tree to be fruitful.

The **grumichama** is another slow growing small tree in the Myrtaceae from Brazil. It develops a more upright less shrubby appearance than the jaboticaba, growing into a very attractive slender tree to about 20'. The leaves are larger and thicker (up to 5 x 2½") than those of the jaboticaba, with recurved edges. During April the tree suddenly bursts into a showy mass of 1" white flowers that form in the leaf axils - flowering can occur again but with fewer blooms. Flowering occurs in response to rainfall, and is followed about 4-6 weeks later by a crop of fruit similar in appearance to jaboticaba. However the flavor is less grape-like and closer to that of a cherry - there may be a slightly resinous taste, though not as objectionable as in the related Surinam cherry. In order to obtain a heavy crop the tree needs to be in full sun, and well watered once it has flowered. Mulching is especially beneficial to protect the shallow roots from drying out. The grumichama is also prone to nutritional deficiencies on local limestone, and for this reason has a reputation as being difficult to grow in Miami-Dade. Trees will look attractive and set heavy crops if soil moisture is maintained and the fertilizer recommendations for jaboticaba are followed. If you can grow gardenias, you are on your way to succeeding with these trees.

Can you install a sturdy trellis in your yard? Answer yes, and there are several types of tropical fruits you can grow, including popular **purple** and **yellow passion** fruits. You can grow them on a chain link fence, but it is easier to maintain the vines using a purpose built trellis. Place two or three 6' metal posts firmly in the ground (angle iron is satisfactory) north to south about 8-10' apart. Choose a part of the yard that drains freely and will not flood. Stretch 3 lengths of number 9 galvanized steel wire between each post at about 15" intervals starting at the top. Plant the vines in an organically enriched soil, mulch (to help suppress parasitic soil nematodes), and train the stems on the wire trellis.

Effective pollination is required for fruit production. The presence of honey bees can help, but carpenter bees (solitary bees) are more suited to the task. Try placing a few hollow logs near the vines to attract carpenter bees. Alternatively where there are only two or three vines it may be easier to hand pollinate using a fine artists' paint brush to transfer pollen. While the purple passion vine is self compatible, yellow passion vine is not and you will need at least two unrelated vines (derived from different seedlings) to obtain a crop. You can attempt to ensure this by purchasing yellow passion fruit vines from two different nurseries, ideally located as far apart as possible. There is at least one yellow passion vine cultivar that is self compatible but it produces smaller fruit.

Apply 4-6 oz of a 6/6/6 fertilizer every 4-6 weeks plus nutritional sprays containing trace elements as required. Do not allow the soil to dry out, especially when there is fruit maturing on the vines. Fruit should ripen during May through early July, and allowed to fall from the vine then collected as soon as possible (keep the ground under the vines clear of weeds). Yellow passion fruit can give a second crop late fall through mid winter. After about two years the vine will need to be pruned. Late winter is a good time, removing first dead and diseased growth then

cutting back to healthy growth where there are plenty of buds forming. Fruit production is limited to current season growth, so avoid pruning too late. Passion vines are generally short-lived and expect to replace them after 3-5 years. The **giant granadilla** is not as frequently grown as the above passion vines. It is more rampant with showier flowers, producing larger melon like fruit. Unlike the purple or yellow passion vines, granadillas set little fruit during summer. Fruit that sets during spring will ripen during summer, and can be removed for home consumption when a deep golden color.

**Pitaya** is the name given to both a climbing epiphytic cactus and the fruit it produces. It will be more familiar to long time Miami-Dade residents as the night-blooming cereus (*Hylocereus undatus*) at one time quite common in local landscapes for the large, fragrant night time flowers. The varieties of *H. undatus* now being used for fruit production have been specifically selected for their larger superior fruit. The pitaya has segmented leafless, fleshy stems, each segment with three prominent longitudinal wings with horny margins. Stems branch frequently and produce strong aerial roots which attach the cactus to its support. As with all cacti, the stems have scattered areas of meristematic tissue (areoles), some of which give rise to ¼" spines. Areoles also produce new stems, while floral areoles develop flowers. *Hylocereus* blooms during summer, the fragrant, creamy white 14" goblet shaped flowers being the largest of any found in cacti.

Flowers commence to open in early evening the exact time depending on factors such as cloud cover, and may be pollinated by bees prior to sunset. However pollination mainly involves night flying moths, and is completed well before sunrise, after which the petals close and the flower wilts. Developing fruit should be visible 10 days after flowering, and ready for harvesting after 5-6 weeks. Mature fruit is ovoid, 12 – 16 oz, with an overall rosy red color. Further ripening does not occur once the fruit is picked, at which time it should be consumed as soon as possible.

Although trees have been used to support pitayas, the weight of the stems can cause tree limb breakage, especially if growth is not controlled. It is far better to construct a sturdy horizontal trellis using 5-6' posts to support a horizontal frame of the type used for grape culture. To prevent wire slats from cutting into the soft pitaya stems, cover the wire with lengths of hose pipe. Plant two or three 6-8" stem sections, after curing for 5-6 days, in a moistened, light organic soil mix. After rooting train the cactus to climb up each trellis post, removing any branches. Once at the top, the pitaya can grow along the trellis frame allowing branches to hang down to permit flowering.

*Hylocereus* are not desert cacti (found in seasonally dry woodland) and so do not thrive in hot day long sun - some light afternoon shade is beneficial. They require occasional watering, but will rot where there is excess rainfall and the stems remain wet. Diseases (anthracnose and bacterial rots) are the most serious problems affecting fruit grown in Miami-Dade. Maintaining good air circulation by not allowing stems to become congested will help to prevent disease. Since pitayas grow quickly, pruning is essential to keep them within bounds. There should be a major thinning out of stems after harvest, then throughout the year as needed.

The yellow pitaya *Selenicereus megalanthus*, is not as well known but reputedly has superior fruit. While pitayas are ideal for those impatient to grow fruit, as with any other fruit crop you need to be prepared to put in the effort to reap the rewards.

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May 24, 2005