



**Plants for Use in a Traditional African-American Yard in  
Miami-Dade County**

**Vegetable and Fruit Crops Including a Selection of those Grown in  
Africa**

**John McLaughlin**

Miami-Dade Extension Office  
18710 SW 288 Street  
Homestead, FL 33030

## Vegetables

For African-Americans in the rural south, planting a garden meant growing vegetables and was a significant means of supplementing what was often a meager diet. From records of early garden plots in E. Florida, black-eye peas, watermelons, turnips, sweet potatoes, collards, okra, squash and Irish potatoes were grown and credited with making a considerable contribution to the nutrition of those African Americans fortunate enough to have gardens (see Rivers<sup>2</sup>, 2000). More contemporary information is available from Westmacott's<sup>2</sup> 1992 survey of African American yards in several southern states. The selection of vegetables shown below is based principally on this latter study. Notable for not being recorded in the literature reviewed are broccoli, cauliflower, lettuce, parsnips, pumpkins or spinach and for this reason they are not included in this publication.

Some of the listed plants in Table 1 are either not suited to, or are marginal in South Florida and this is indicated in the entries below. Footnotes are provided, particularly for vegetables with an African heritage and for any related crops presently in cultivation in Africa. Whilst seeds can be used for most of the listed vegetables, it is often easier to buy plants that have already been started in small containers and are ready to be transplanted into the garden – these are referred to as transplants. Some vegetable seed is small and therefore difficult to handle and is available as pelleted seed for ease of sowing.

If you are not familiar with growing vegetables in Miami-Dade it is important to realize that for the most part these are cool season crops. This means that planting commences early to late fall with crops harvested in late winter to early spring. You should begin planning your garden and preparing the ground for planting no later than mid July to early August. Choose an area that will receive at least 8 hrs of direct sun each day. Crops grown for their fruit, such as tomatoes and peppers, should receive the maximum amount of sunlight available to the garden, whereas leafy vegetables such as collards, cabbage and turnip greens can be situated in an area that receives slightly less sun exposure. Since the principal period for growing vegetables is during the dry season (winter), it will be necessary to water the garden, so you should decide how this can be accomplished – watering by hand or some sort of irrigation system?

*For detailed fact sheets on the cultivation of a given crop, consult your local County Extension Office.*

---

<sup>2</sup> For further information go to [Resources and Links](#)

**Table 1. Vegetables for a traditional African American garden**

<b>Vegetable</b>	<b>Origin</b>	<b>Season (days to harvest<sup>♦</sup>)</b>	<b>Remarks</b>
Artichoke – Globe <i>Cynara scolymus</i>	Mediterranean (S.W.)	N/A	Poorly adapted to S. Florida summers. Not recommended
Artichoke – Jerusalem <i>Helianthus tuberosus</i>	N. America	N/A	Better suited to a drier, cooler climate. Related to sunflower.
Asparagus <i>Asparagus officinalis</i>	Mediterranean Basin	N/A	Edible asparagus is not suitable for S. Florida. There are ornamental types – some can be invasive here.
Butter/Lima Bean <i>Phaseolus lunatus</i>	S. America	Sept – April (65 – 75) <sup>∇</sup>	Bush and pole types – Henderson Bush known as butter bean. Space: rows 2-4' / seed 2-6"
Snap/String Bean <i>Phaseolus vulgaris</i>	C. America	Sept – April (50 – 60) <sup>∇∇</sup>	Many varieties: French (pods and immature seed eaten), Haricot (pods with string - some eaten, others just mature seed) and Field (dried seed eaten) <sup>a</sup> . Spacing as above
Cabbage <i>Brassica oleracea</i> var. <i>capitata</i>	Coastal areas of W. Europe <sup>b</sup>	Sep – Jan (70 – 90)	Cool season crop – chewing insects can destroy leaves. Requires cool weather and an even supply of water.

<sup>♦</sup> This symbol indicates vegetables that are difficult to transplant and the days to harvest refers to the time from sowing seed. For all other plants the time given to harvest is for the use of transplants.

<sup>∇</sup> 120 days from seeding if harvesting dried beans.

<sup>a</sup> Other “beans” have origins in, or other connections with Africa: the **sword bean** (*Canavalia gladiata*) originated in Africa but is more common in SE Asia as a home garden crop; the **cluster bean** (*Cyamopsis tetragonolobus*) believed African in origin but more widely used in India/Pakistan; **hyacinth bean** (*Lablab purpureus*) although common in India, some believe it was introduced from Africa (also known as **Egyptian bean**), and it is grown mainly for pods; the **Marama bean** (*Tylosema esculentum*) is found in southern Africa and grown for both seed (similar to soy beans) and tuberous storage roots. **The African yam bean** (*Sphenostylis stenocarpa*) is also grown for its starchy storage root (similar to white potato) in Central Africa, but more for the edible seed in W. Africa - they require prolonged cooking.

<sup>b</sup> **African** or **Ethiopian cabbage** (*Brassica carinata*) also known as **Abyssinian mustard** - requires cool temperatures (60-70°F) and moist soil. Young leaves and stems are cooked; flower buds and immature leaves are eaten raw.

			<u>Space: rows 3'/plants 18"</u>
Canteloupe (Melon) <i>Cucumis melo</i>	Africa	Dec- March. Feb – March (75-90) <sup>∨</sup>	Actually a musk melon. Must not be over watered and does best in dry months; pickleworms can spoil fruit. Hand pollinate if no bees. <u>Space: rows 5'/plants 2½'</u>
Collards <i>Brassica oleracea</i> var. <i>acephala</i>	Coastal areas of W. Europe	Nov – Feb (40 – 60)	More drought tolerant than other Brassicas. Closely related to kale. <u>Space: rows 2'/plants 15"</u>
Cucumber <i>Cucumis sativus</i>	N.E. India to W. China <sup>e</sup>	Sept – March (40 – 50) <sup>∨</sup>	Varieties for salads (slicers) and picklers. Can be pollination problems without bees. <u>Space: rows 4'/plants 18"</u>
Eggplant <sup>d</sup> <i>Solanum melongena</i>	Sri Lanka	Sept – Feb (75 – 90)	May be grown through summer, but can develop bitterness. Seed, transplants easier. Mites and thrips. <u>Space: rows 3'/plants 2'</u>
Okra <sup>e</sup> <i>Abelmoschus</i> <i>esculentus</i>	Old World Tropics - Includes W. Africa Ethiopia	Feb – Sept. (50 – 75) <sup>∨</sup>	A summer annual - highly susceptible to damage from soil nematodes. Soak seeds before planting. Prune plants after removing crop. <u>Space: rows 2'/plants 10"</u>
Onion <i>Alium cepa</i>	Pakistan – W. Iran	Oct – Nov, Bulbing (110 – 120) Oct-Feb Scallions (50-75)	Choose short day types adapted to Florida conditions. Bulbing and bunching types available. Scallions are green non-bulbing onions. <u>Space: rows 14"/plants 5"</u>
Peanut	S. America <sup>f</sup>	Feb.-	<u>Restricted period for planting</u>

<sup>c</sup> No longer found in the wild. The **West Indian gherkin** (*Cucumis anguria*) is grown widely in the Caribbean, but is indigenous to Africa – it is usually eaten as a pickle. Closely related is the **kiwano fruit** (*C. metuliferus*) also known as the **African horned cucumber**, which is eaten as a fresh fruit (cf. melon). Although rarely seen, both can be grown in Miami-Dade.

<sup>d</sup> In W. Africa *S. macrocarpon* (**Gboma eggplant or Wild jakato**) is an important food crop now also widely grown in Surinam. The **Chinese scarlet eggplant** (*S. integrifolium*) is believed to have originated in Africa.

<sup>e</sup> In the same family (Malvaceae) as hibiscus - **False roselle** (*Hibiscus acetosolla*) is cultivated in various parts of tropical Africa for the pleasantly tart leaves and young shoots (p.9) Unlike okra it is not attacked by root knot nematodes.

<sup>f</sup> **Bambara** (*Vigna subterranea*) is a groundnut native to drier areas of W. Africa, where both the immature and mature seed are consumed, the latter requiring prolonged cooking.

<i>Arachis hypogaeae</i>		March 75 – 80 125 - 150 <sup>Ⓟ</sup> √	severely limits success in Miami- Dade. Requires hot dry weather for pods to mature. Use only recommended early varieties.
Peas – Southern <sup>g</sup> <i>Vigna unguiculata</i>	S. Asia	Aug – April (60 – 90)√	Many different types including black-eyed <sup>h</sup> , cream, and crowder peas. Bush and vining varieties. Drought tolerant, good cover crop. <u>Space:</u> rows 3’/ plants, thin to 18”
Peas – English (Garden or Sweet) <i>Pisum sativum</i>	S. Europe	Oct- Feb (50 –70)√	Plant only in coolest part of the year. Unreliable if daytime temperatures are above 70’s. Use only varieties recommended for Florida.
Pepper – Bell <i>Capsicum annuum</i>	Tropical America	Aug – April (60 – 80)	Both sweet and hot varieties <sup>i</sup> . Small- fruited varieties (i.e. Jalapeno) more tolerant of heat. Summer weevil problem. Seed, transplants easier. <u>Space:</u> rows 3’/plants 18”
Potato – Irish <i>Solanum tuberosum</i>	South America	Nov. – Jan. (85 – 110)	Grow only varieties recommended for Florida. Need sufficient depth of soil – containers useful. Pests. <u>Space:</u> rows 4’/plants 12”

<sup>Ⓟ</sup> Time to harvest is if roasting peanuts; shorter time above is for boiling peanuts.

<sup>g</sup> **Pigeon peas** (*Cajanus cajan*) are a perennial legume native to Africa and widely grown there and other tropical areas (i.e. Caribbean) as an important food crop. Likes dry soil conditions but is grown successfully in S. Florida.

<sup>h</sup> Collectively known as cowpeas. They were brought to the Americas during the slave trade. As well as **black-eyed peas** (*V. unguiculata* ssp. *unguiculata*) there are types with pink or brown eyes. **Catiang pea** (*V. unguiculata* ssp. *cylindrica*) is a primitive type that is widely grown in Africa.

<sup>i</sup> Wild “**Bird Peppers**” now naturalized and widely used as a hot pepper in W.Africa. Bird Peppers are found wild in S. Florida and were grown by early settlers.

Potato – Sweet <sup>j</sup> <i>Ipomoea batatas</i> <sup>k</sup>	Central to S. America <sup>l</sup> .	Feb – July (120 – 140)	Plant 6 – 12” slips removed from sprouted tuber. Not tolerant of wet soils or shade. Weevils main problem
Squash <i>Cucurbita pepo</i> <sup>m</sup>	Central America	Sept.- March 40 – 55 <sup>v</sup>	Mostly summer squash in S. Fl <sup>n</sup> . Need bees otherwise hand pollinate. Pickle worms and mildews. Gourds <sup>o</sup> are closely related, many grown in Africa. Space: plants 2”/rows 3’
Sweet corn <i>Zea mays</i>	N. America	Sept.- March 60 – 95 <sup>v</sup>	Use recommended varieties. Rich soil and adequate water required. Many pest problems in Miami-Dade – armyworms and silk fly. Close plant in a block.
Tomato <i>Lycopersicon esculentum</i>	Ecuador/Peru	Sept. – March 75 – 90	Bush tomatoes mature at the same time, “vining” types over an extended period. There are also intermediate types. <sup>p</sup> Seeds, transplants easier Space: Rows 3’/plants 18”
Turnip Greens <i>Brassica rapa</i> subs.	Central/ Southern Europe	Oct. – Feb. 40 - 60 <sup>v</sup>	Choose varieties grown for use as leafy greens, rather than root crops. <sup>q</sup> Mustard greens more

<sup>j</sup> Sometimes referred to as yams, however **true yams** (*Dioscorea* spp.) are totally unrelated plants, native to tropical areas in both the new and old world tropics (see below).

<sup>k</sup> A type of *I. batatas* having “potatoes” with a white interior is widely grown in Miami-Dade, and known as **boniato** (Cuban sweet potato). In W. Africa leaves are used as a cooked green vegetable, tubers are cooked with other root crops such as cassava to make a stew called yebbeh.

<sup>l</sup> Introduced to W. Africa by early Portuguese traders.

<sup>m</sup> There are other less important species: *C. maxima* (**Boston, Hubbard, Turk’s turban**), *C. argyrosperma* (**pumpkins and winter squashes**), *C. moschata* (winter squashes and pumpkins including **Canada crookneck, butternut and golden cushaw**). Pumpkins are prone to mildew and fruit rot in S. Florida.

<sup>n</sup> Planting times given are for summer squashes such as **cocozelle, summer crookneck, straightneck, scallopini and zucchini**.

<sup>o</sup> Most gourds are native to Central/South America or S.E. Asia, however some are important food crops in Africa: **bottle gourd** (*Lagenaria siceraria*) is used as a cooked vegetable and scooped out as a container - it can be grown in Florida on well drained soil; **fluted pumpkin** (*Telfairia occidentalis*) is grown extensively in W. Africa for its’ edible leaves and seeds. Three other cultivated gourds are native to Africa, **oyster nut** (*Telfaira pedata*, E. Africa) and **white seeded melon** (*Cucumeropsis manii*, W. Africa) both grown for their edible seeds, and **ivy gourd** (*Coccinia grandis*) used more widely in India where it is cultivated for fruit.

<sup>p</sup> Pollen dispersal, fertilization, fruit set and ripening are all dependent on light exposure, day/night temperatures and humidity. Only small-fruited varieties of tomatoes such as cherry tomatoes are successful in Miami-Dade during the summer. *Trichosanthes cucumerna* (**snake tomato**, a gourd see above) is used as a tomato substitute in W. Africa.

<sup>q</sup> Time given is for root crop. Used as greens the tops should be harvested when they have reached a height of 4 – 12”

<i>Rapifera</i>			heat tolerant. <u>Space</u> : Rows 18"/Seed 4".
Watermelon <sup>r</sup> <i>Citrullus lanatus</i>	South Central Africa	Jan.- March Aug.- Sept. 85 - 95 <sup>v</sup>	May need to hand pollinate; plant early to avoid damage to fruit from late spring rains. For home gardens choose small varieties. Difficult in Miami- Dade (disease problems).

### Vegetables of Importance in Africa

The footnotes in Table 1 reference vegetable crops grown in Africa that are related, either botanically or by common name, to vegetables grown in the U.S. There are other vegetable crops commonly found in W. Africa many of which can be grown in Miami-Dade.

#### Starchy Root Crops

The importance of starchy root crops to the countries of equatorial Africa was mentioned above, particularly the use of the tubers of *Dioscorea spp.* (yams), and the corms and cormels of the edible aroids *Xanthosoma spp.* and to a lesser extent *Colocasia esculenta* (tannia and taro respectively).

**Yams** Worldwide *Dioscorea alata* (**winged yam**), native to India and S.E. Asia, is the most widely distributed species, however *D. rotundata* (**white or Eboe yam**) is the principal species under cultivation. This latter species is considered derived from *D. cayanensis* (**yellow yam**), both having been cultivated in W. Africa for thousands of years. Africa supplies 95% of the world production of true yams, most of this coming from Nigeria. *D. rotundata* requires a warm to hot climate with a long wet season and is not drought tolerant. Yams are the tropical counterpart of white (Irish) potatoes and are boiled, fried and baked whilst in Central and West Africa *D. rotundata* is esteemed for preparing fufu (see below). Wild species of *Dioscorea spp.* often contain toxic levels of the alkaloid dioscorene and need to be correctly processed before consumption. Cultivated yams have negligible levels of this alkaloid. *D. bulbifera* (air potato) is prohibited in Miami-Dade as a noxious weed, and should not be consumed because of the risk of poisoning.

**Tannia**, *Xanthosoma sagittifolium*, is native to the N.E area of South America and was taken to W. Africa during the beginning of the slave trade where it became an important food crop. It now ranks behind cassava, also introduced from S. America (see below), as the most important starchy crop grown in W. African countries (principally Nigeria and Ghana), together the leading world producers of tannia. The underground storage portion of the plant (cormels) must be boiled before consumption, and in W. Africa a paste like product known

<sup>r</sup> Seedless watermelons were developed in Japan. Watermelon cultivation has spread from Africa, with China being the leading producing nation.

as fufu<sup>3</sup> is then prepared. In Miami-Dade tannia is known more commonly as malanga (there are other common names) and is grown commercially. Tannia requires adequate moisture, a free draining soil of sufficient depth for tuber development, and can be harvested 9-10 months after planting.

Taro was introduced to E. Africa from India, and its use spread across wet lowland areas of equatorial Africa. Since it is more difficult to cultivate than tannia and not as palatable, it is becoming less commonly planted. Taro is closely related to dasheen, a crop that can be grown throughout Florida, with some commercial production in Miami-Dade.

**Cassava** (*Manihot esculenta*) is native to the northern Amazon region of Brazil, and was taken to W. Africa in the 16<sup>th</sup> Ct. during the early years of the slave trade. It is now an important food staple in equatorial Africa, where most of the world production occurs (Nigeria, Zaire and Ghana). Depending on the type grown, the storage roots require extensive washing to remove poisonous cyanide containing glucosides. After this treatment they are dried then grated, ground into flour or roasted (to produce gari) which can be used to make a thick sticky paste (fufu – see above). Cassava requires a 10-11 month period of frost-free conditions, and was at one time a commercially important crop in Miami-Dade, though production is now much less. It is possible to grow cassava in a home garden if there is sufficient space and depth of soil.

### Minor Root Crops

In addition to those mentioned in the footnotes to table 1, other less frequently grown plants are also used for their storage roots:

**False Yam** (*Ipomoea pes-caprae*) is grown as a subsistence crop in W. Africa for the thick fleshy hypocotyls. The tuber has to be leached of toxins and is then dried and pounded and strained to remove fibers leaving behind a product enriched in starch. Although a fairly good source of starch, it is barely palatable and is not widely grown.

**Sudan or Hausa potato** (tumuku – *Solenostemon rotundifolia*) is related to ornamental coleus, and grown in Nigeria for the starchy tubers in areas with high rainfall and well-drained sandy soils. A related plant, the **Livingston potato or rizga** (*Plectranthus esculentus* syn. *Coleus dazo*), is grown in sub-Saharan Africa, though its use is declining.

### Leafy Vegetables.

Probably no region in the world makes use of such a variety of leafy vegetables to the extent found in sub-Saharan Africa. In most instances they are added to stews, and a large range of plants are used as pot-herbs. Many of the plants used are found growing wild, especially in rural areas, and efforts are being made to both prevent their disappearance and develop improved varieties. Some of the more common plants include:

---

<sup>3</sup> In E. Africa a similar mush like dish called ugali is prepared using maize (corn), which was originally introduced to Africa by Europeans where it has replaced grain sorghum (millet).



**Krin-krin**, West African Sorrel (*Corchorus oleratus*) better known as a source for fiber (jute), the leaves are harvested and cooked with other vegetables, especially okra and lima beans, as a stew and served with rice.

**Shokotoh-yokotoh** (*Celosia argenta*) and **ajefawo** (*Celosia leptostachya*) are grown in W. Africa for the nutty flavored leaves that are steamed and either used as a side dish or added to stews. These plants are closely related to the ornamental celosia (Cock's Comb), grown as a winter annual in South Florida yards. *Cleome gynandra* grows as a weed in many parts of Africa, but is widely used as a source of leafy greens. This too is closely related to another popular South Florida bedding plant, the spider plant.

**Bologi** (*Crassocephalum bialafrae*) is a climbing plant grown on a support in rich moist soil, the leaves being used as a steamed vegetable. **Broad Bologi** (*Basella alba*) is used in a similar manner and is grown in South Florida as Malabar Spinach. **Lagos bologi** (*Talinum triangulare*) is a semi succulent perennial plant, related to purslane, with edible fleshy leaves. **Efonyori**, two species of *Emilia* (tropical annual herbs in the daisy family), including *E. coccinea* (familiar as the tassel flower, a showy garden annual) and *E. praetermissa*, as well as **patmenji** (*Ocimum basilicum*, common or sweet basil) are also used as potherbs. These are a tiny fraction of the plants used, with other leaves utilized including **bean plants** (*Phaseolus*), the **horseradish tree** (*Moringa*) and young leaves of *Gnetum* spp. (unusual tropical lianas - **eru** or **afang**). **False Roselle** or **cranberry hibiscus** (*Hibiscus acetosella*) is cultivated in various parts of tropical Africa, but is no longer seen in the wild. The plant is grown from seeds or cuttings, and grows rapidly at which time leaves and shoots can be removed as required. After cooking, they have a pleasantly piquant taste. False roselle also makes an attractive, if sprawling, flowering, short-lived woody perennial. In addition to being edible the coppery red leaves are also decorative.

As well as being a source of green vegetables, leaves are also used to wrap foods (e.g. cassava paste) when cooking, with those of the banana plant being widely used. However leaves of the calathea relative, *Megaphrynium macrostachyum* are particularly sought after for the enhanced flavor they impart.

## Fruit Crops

### Fruit trees grown in African American yards

The most widely grown fruit/nut trees reported in Westmacott's 1992<sup>1</sup> survey were, in order of frequency: peach, apple and pecan. **Peaches** require a certain number of chilling hours (exposure to low winter temperatures) in order to initiate development of blossom buds and foliage, and are therefore difficult to grow in Miami-Dade. Even the newer low-chill varieties are not reliable in our climate, though there is a tropical peach (the Ceylon red), which requires only 30 chilling hours that will successfully set fruit in Miami-Dade. This peach was once quite common in Miami-Dade as a dooryard fruit tree, however since the introduction of the Caribbean fruit fly in 1960, it is difficult to avoid worm damage to the fruit. As a consequence local interest in this fruit tree has declined.

Both **apple** and **pecan** trees require chilling to produce a reliable crop, and as with the peach a number of low chill apple trees, such as Anna, Dorsett Golden and Tropical Beauty, have been developed. Fruit set in Miami-Dade is erratic depending on sufficient chilling, and the presence of at least two trees to permit cross-pollination. The hot humid climate of Miami-Dade renders the trees susceptible to numerous serious disease problems. Pecan trees will grow in Miami-Dade, but over the years there have only been very isolated reports of trees producing nuts.

**Grapes** are also listed in the survey, with scuppernongs being found more often than bunch grapes in Westmacott's survey. Scuppernongs are native to the Carolinas and are a white form of the muscadine grape (*Vitis rotundifolia*). Unlike the more familiar bunch grapes the fruit is harvested as single berries, and has a sweet rather musky flavor. Muscadine grapes are usually easier to grow in Florida than bunching grapes. However in Miami-Dade muscadines can suffer nutritional problems because of the highly alkaline soil, and it will be necessary to prepare the soil by incorporating organic matter and some sharp builders sand, or grow them in a large container using prepared soil.

To grow bunch grapes in Miami-Dade, it is important to choose one of the varieties developed by the University of Florida, such as 'Blue Lake', 'Stover' or 'Lake Emerald' that are resistant to Pierce's disease. In Miami-Dade bunch grapes should be grafted onto a suitable rootstock (dog ridge or Em). For all grapes choose a site with full sun and excellent drainage (marl or heavy peaty soils are not suitable), then provide a support and correctly prune the plant each year to ensure correct growth for maximum fruit production.

Other fruit crops in the survey list included **pear**, **plum** and **walnut**, none of which succeed in Miami-Dade. **Figs** and **mulberry** were also listed and both of these will grow successfully in south Florida, though they are susceptible to disease (rust especially) and parasitic soil nematodes. Choose figs with a closed eye (Brown Turkey is a good variety), and black mulberries are better adapted to local conditions than white or red varieties. **Strawberries** too were listed and can be grown from transplants as an annual cool season crop in Miami-Dade, making sure to choose varieties suitable for Florida. **Persimmons** are more suited to cooler parts of the state, astringent types can be grown in Miami-Dade. More detailed information on all of these fruit crops is available from your local county extension office.

One fruit tree that is popular with African Americans in Miami-Dade is the **Indian jujube** tree (*Zizyphus mauritiana*), the fruit being known locally as "zizables". This is an attractive evergreen tree with fissured bark and cascading branches that bear small sharp stipular spines. The flowers are insignificant, and are followed by small 1-1½" green round fruit that resembles a miniature apple. The flesh is crisp, somewhat acidic, and can be rather bland, but is especially popular with children. Fruit set is improved if two or more trees are grown.

Although not a fruit, **sugar cane** (*Saccharum officinarum*) has been popular in the past with local African Americans as a source of syrup or for chewing. Use 1-1½' stem cuttings with 2-4 nodes for propagation, laying them end-to-end in a rich free draining soil. On the hard limestone of south Miami-Dade it is easier to

plant in a raised bed. Consult the Miami-Dade Extension Service for more detailed information.

### **Fruit trees commonly grown in W. Africa**

Conditions in Miami-Dade are more suited to growing a range of tropical to subtropical fruit trees, many of which are widely grown in W. Africa. **Bananas** and **plantains** originated in S.E. Asia-Northern Australia, but were present in W. Africa in the early 16<sup>th</sup> Ct, from where they were taken to S. America by Portuguese explorers. Today they are widely grown in the humid areas of W. Africa, along with **mangos**, **pineapples** and **papayas**, none of which are indigenous to Africa. All of these fruit crops can be grown in Miami-Dade, some are important commercially.

Other fruit trees introduced to W. Africa include: **breadfruit** (*Artocarpus communis*, native to a large area of S.E. Asia and the W. Pacific centered on New Guinea), **soursop** (*Annona muricata*, native to northern S.America), **avocado** (*Persea americana*, native from southern Mexico through Central America, the West Indian<sup>4</sup> varieties being found in W. Africa), **carambola** (*Averrhoa carambola*, native to Sri Lanka), **cashew** (*Anacardium occidentale* originally found in tropical S. America), traditionally grown in W. Africa for the cashew apple - in reality the swollen stalk of the true fruit - rather than the cashew nut of commerce. **Coconuts** (*Cocos nucifera*, native to islands in the W. Pacific/Indian Ocean) are also widely grown in the humid areas of W. Africa.

Most of this latter group of trees can be grown successfully in Miami-Dade, though breadfruit and soursop are extremely susceptible to cold damage and are only fully reliable in the Florida Keys. Coconut palms in South Florida have been severely impacted by lethal yellowing disease for which there is no practical cure. The resistance of a number of formerly recommended cultivars to this disease appears to be suspect.

**Roselle** (*Hibiscus sabdariffa*, **Jamaican sorrel** or **Florida cranberry**) was brought to the Americas by Africans during the period of the slave trade. Although native from India to Malaysia, it had been grown in various parts of tropical Africa for many hundreds of years before being introduced to the New World. *H. sabdariffa* is an annual or weakly perennial herbaceous plant, growing rapidly to about 6'. After the yellow to orangey yellow flowers loose their petals, the red calyces enlarge with the sepals becoming thicker and fleshy. It is these calyces that are harvested, for processing into a refreshingly tart juice that is often compared to cranberries. The true fruit, found within the calyx, is a capsule containing 15-20 seeds that are occasionally consumed in Africa as a coffee substitute, or after grinding to a meal. The acidic leaves are also used as a green vegetable (see cranberry hibiscus above). Roselle is grown from seeds or cuttings and since flowering is highly influenced by day length, it needs to be planted at the correct time of year. For South Florida this is May, with flowering being stimulated by the shortening day length of fall, and calyces ready for harvesting by November-December. Like okra, to which it is closely related,

---

<sup>4</sup> This group of avocados originated on the Pacific coast of Central America, not the West Indies, being adapted to humid tropical lowlands. These were the first avocados to be grown in Miami-Dade County.

roselle can be severely attacked by parasitic soil nematodes (cyst nematode Heterodera). Mulching can help reduce build of pathogenic soil nematodes.

### **Fruit trees indigenous to W. Africa**

The two most familiar native W. African fruit trees grown in Miami-Dade are the **akee** (*Blighia sapida*) and the **tamarind** (*Tamarindus indica*). The tamarind is grown for the brittle seed- pods that contain an acidic pulp surrounding the seeds, much used in preparing relishes and beverages, as well being an important ingredient in bottled sauces for meat dishes. It is also a very attractive storm- fast landscape tree, slow growing to about 60' with drooping branches and attractively fissured bark. The tree is evergreen and has delicate compound leaves, cream-colored flowers followed by the plump cinnamon colored seed pods.

Extreme caution is in order when growing akee since the arils (the part of the fruit that is eaten) are highly poisonous if consumed before the fruit splits and they are exposed to light. This is a tree that should never be grown in an area where children have unsupervised access. In W. Africa the immature fruit are used as soap, and the leaves of a related species, *Blighia unijugata* are cooked as a vegetable. In Miami-Dade akee is especially popular within the Jamaican community, where it is often served as a breakfast dish with salt cod.

The **miracle fruit** (*Synsepalum dulcificum*), so called because chewing it makes highly acidic fruit such as lemons taste sweet, is mainly grown in the US as a novelty. Native to tropical W. Africa, *S. dulcificum* is a small, slow growing tree found in moist, deep, acidic soils and for that reason is better as a container plant when grown in Miami-Dade.

Fruits found in other parts of Africa that are sometimes grown in Miami-Dade include **Otaheite gooseberry** (*Phyllanthus acidus*), known as jumbling in Jamaica. Native to Madagascar, this shrubby tree is grown more often in SE Asia and the Caribbean basin than the rest of Africa. The **Imbe** (*Garcinia livingstonei*) is a small tree from E. Africa that produces fruit with a large seed surrounded by a thin layer of refreshingly tart pulp. The tree makes an unusual landscape item because of the manner in which the straight smaller branches are whorled at right angles along the main limbs. The **Kei apple** (*Dovyalis caffra*), found in SW Africa, is a large shrubby plant that can easily grow into a dense spiny thicket, and is grown for the small acidic fruit with a taste reminiscent of apricot. A similar species, *Dovyalis abyssinica* (**Abyssinian gooseberry**) is found in E. Africa.

The **Natal plum** (*Carissa macrocarpa*), native to coastal areas of South Africa, is more widely known in Miami-Dade. Though primarily used as an ornamental plant (see Appendix I below), it also produces a deep red, small, plum like fruit with a taste and texture faintly reminiscent of strawberries. Cultivars have been developed with improved fruit (e.g. 'Extra Sweet' was a 1960's Florida selection), though more effort has been devoted to developing plants for the ornamental trade. Because of the beads of white latex contained in the flesh of the ripened fruit, the opened fruit has been likened in appearance to strawberries and cream.

All of this last group of plants can be grown in Miami-Dade, however *Dovyalis* spp. can quickly grow out of bounds, and the Otaheite gooseberry is susceptible to caterpillar damage.

There are very many native plants that bear fruit crops, little known outside of the regions of Africa where they grow. Many grow wild and are used by local inhabitants for both the flesh and seeds they produce. Some are threatened through deforestation (many are trees that yield valuable timber) and urbanization, so there are active programs aimed at conservation as well as efforts to develop improved varieties. It is beyond the scope of this publication to describe in detail the vast number of trees used as sources of “bush” fruit, however a brief list of some of the more important species is presented below in

### **A Selection of Lesser Known African Fruit Trees**

This brief selection of trees demonstrates the wide range of plant families used as sources of edible fruit. For more detailed information return to the main menu and select the [Resources and Links](#) section of this guide. Most of the species listed are not available in the U.S., though it may be possible to purchase seed from overseas sources, or through seed exchange groups. Some of the trees listed require a truly tropical climate and are too tender to survive in Miami-Dade.

**ANACARDIACEAE** – *Sclerocarya birrea* (sespinal, morula, many local names) is a small tree bearing much prized fruits the size of a small plum. Both the pulp and seeds are consumed: the pulp is very high in vitamin C, the seeds are rich in protein and the skins use to make a coffee substitute. Found in E Africa from Ethiopia south to South Africa where it is a protected species.

**ANNONACEAE** - *Annona chrysophylla* (wild custard apple), savannas from Guinea to the Transvaal; *Annona senegalensis* grown principally for fresh fruit and found in semi humid areas (savanna woodlands to open bush to swampy forest); *Pachypodanthium confine* (humid W. Africa; used for timber as well as fruit). The fruit of *Uvaria angolensis* is consumed during periods of food shortage. The seeds of *Xylopiya aethiopica* and *Xylopiya staudfii* are used as spices (Guinea pepper), as well as those of *Monodora myristica* (calabash nutmeg), also from W. Africa. The latter tree has very showy fragrant orchid-like flowers.

**BALANITACEAE** – *Balanites aegyptiaca* syn *Ximenia aegyptiaca* (desert date), found in sub-Saharan Africa south to Malawi. Fruit eaten both ripe and unripe, pulp is bitter sweet. *Balanites maughamii* (Torchwood), multiple use tree from South Africa, with fruit used fresh and as a beverage source.

**BURSERACEAE** - *Canarium schweinfurthii* – a distant relative of the gumbolimbo, is found in central and west Africa, and produces fruit (which is first

softened in hot water) with edible pulp and oil rich seeds. The closely related pili nut, *Canarium ovatum*, from The Philippines is an important local food crop with other *Canarium* spp. cultivated in S.E. Asia. The African pear (safou), *Dacryodes edulis*, is found in humid areas of central and west Africa, and is also softened with heat. The fruit contains an oily pulp with a pear-like flavor. It is eaten with cooked maize in areas such as southern Nigeria.

**CAESALPINIOIDACEAE** (sub-family in the Fabaceae) – *Dalium guineense* (velvet tamarind) is grown for the fruit (pods) and is used as a chewing stick<sup>5</sup>. *Azelia africana* (Doussie) and *Azelia bella* - the seeds are used as food thickeners. Several Caesalpinids are used as ornamental trees in Miami-Dade, though these are mostly native to Mexico and the southwestern U.S.

**EUGENIA** – *Syzygium guineense* found in mountain and lowland forests having constantly moist soil and used as a source of fresh fruit and timber.

**EUPHORBIACEAE** - *Uapaca* spp. Require moderately high rainfall, often found growing in woodland clearings where there is poor rocky soil. The sweet fruits are highly esteemed in certain areas, however the tree also provides quality timber and produces a high-grade charcoal. In Zambia musuku wine is produced commercially from the fruit of *U. kirkiana*.

**GUTTIFERAE** – *Garcinia cola* (bitter cola) is grown for the edible fruit and seed, the latter being used extensively throughout W. Africa for their medicinal properties. The related *Garcinia polyantha* occurs in wet sites and apart from providing edible fruit, the sap is used as a wound dressing in local medicine. *Mammea africana* is found in tropical areas of Africa where the fruit is collected for the sweet yellow aril. It is related to the New World species (*Mammea americana* - Mammee apple), which produces a large fruit with a taste similar to apricot. Neither of these latter two trees should be confused with mammee sapote, (*Pouteria sapota*, native to S. America), and rapidly gaining in popularity as a fruit tree in Miami-Dade.

**FABACEAE** - *Pentaclethra macrophylla* (oil bean tree) is a moderate sized tree that provides large edible seeds that are much in demand. The tree has the added advantage of improving soil fertility through the presence of nitrogen fixing root nodules. *Parkia biglobosa*, dawadawa, is used as a source of fruit pulp which is usually fermented and used like tamarind. The seeds are processed and used as a condiment. *Prosopis africana* (kirya) is a tree of variable size, up to 60', with a drooping canopy found in sub-Saharan Africa in a dry belt from Guinea to Ethiopia. Like *P. biglobosa*, the fermented seeds are used as a condiment – overexploited as a source for charcoal.

---

<sup>5</sup> Chewing sticks (obtained from the roots, twigs and stems of various shrubs and trees) have been widely used in many parts of the Middle East, Africa and Asia for oral hygiene for thousands of years. Recent research has identified anti-microbial compounds in these sticks that are believed to be effective against bacteria that cause plaque and tooth decay

**IRVINGIACEAE** – *Irvingia gabonensis* (wild mango, Dika nut, ugiri or ogbono) is not related to the common mango (*Mangifera indica*, native to India) and is grown for both the sweet pulp (used for juice and jams) and the kernels which are toasted, pounded and used as a soup thickener or as a valuable source of oil. *I. gabonensis* is the most important indigenous fruit in rural southern Nigeria. Twigs are used as chew sticks<sup>5</sup>.

**LECYTHIDACEAE** – This is a predominantly tropical family of trees and shrubs, with most genera native to the Amazon basin and includes the familiar Brazil nut (*Bertholletia excelsa*). The *Napoleanaea* are an exception, being native to Central and W. Africa where they are found as under-story trees of the rain forest. *Napoleana imperealis* provides edible fruit and chew sticks<sup>5</sup>, as well as being recognized as an unusual flowering tree for tropical areas.

**MALVACEAE** - *Adansonia digitata* (the baobab tree). This is one of Africa's most impressive and familiar trees, with its' massive squat trunk, and is found in the savannas of sub-Saharan Africa where some specimens are more than 2000 years old. The tree provides edible fruit used to prepare local beverages. It is occasionally planted in Miami-Dade, but suited only for parks, public gardens and the largest of private residences. *Adansonia digitata* was formerly in the Bombacaceae but this plant family has now been absorbed by the Malvaceae. The same is true of *Cola* spp. trees (formerly Sterculiaceae) and *Grewia bicolor* (formerly Tiliaceae). *Cola acuminata*, a large, attractive, slow-growing tree native to W. Africa, is the source of the kola or goora nut, chewed as a stimulant (contains caffeine, theobromine and other minor components). The tree and nuts have had great local social and cultural significance, and are produced commercially. There are other species (e.g. *Cola hispida* and *Cola pachycarpa*) used for the edible fruit pulp. *Cola* spp. trees are too cold sensitive to survive in Miami-Dade. *Grewia bicolor* is a slow growing tree that provides fruit that can be eaten out of hand or dried. It is also processed to yield a fruit drink or alcoholic beverage.

**MOREACEAE** – *Myrianthus holstii*, *Myrianthus muellerianthus* and *Myrianthus arboreus* (bush pineapple) provide fruit, and the foliage is consumed as a leafy vegetable

**OLACACEAE** – *Ximenia caffra* (sour plum) is found in E. Africa - consumption of the fruit increases during times of food shortages.

**RUBIACEAE** – *Nauclea diderrichii* – medium size tree with fragrant flowers and edible berries. Two indigenous species of coffee (*Coffea stenophylla* and *Coffea liberica*) provide berries that are used to prepare beverages.

**SAPOTACEAE** – *Vitellaria paradoxa*, a small to medium-sized tree found in a belt extending from Senegal to the Central African Republic, which experiences at least 25" annual rainfall and a distinct dry season. Fruit has edible pulp, but

seeds are much more important as a valuable source of vegetable fat (shea butter), the tree substituting for oil palms where insufficient rainfall precludes their cultivation. Timber of excellent quality, but trees usually felled only when fruit production declines. *Bailonella toxisperma* (Maobi) is found in humid areas of W. Africa where the flesh of the fruit is eaten, and oil extracted from the seeds.

**VERBENACEAE** – *Vitex keniensis* is a fast growing medium size tree found in east and east central Africa where it is most valued as a source of timber, but produces a small edible fruit (drupe) of poor quality. Consumption normally limited to periods when there are food shortages.

Many more trees also supply seeds that are used as spices or condiments, and foliage that is consumed as a leafy vegetable.