Mango is regarded as the queen of fruits in tropical areas of the world. Mango trees have been cultivated and grafted for hundreds of years. Grafting was a 'secret' in many cultures and tasty mangoes were status symbols for the royalty only. Ancient kings would steal limbs off each others' mango trees and bribe and kidnap the other kings' gardeners. Peasants were beheaded for possession of mango fruit or unauthorized cultivation of mango fruit trees. Royalty would try to surpass each other with lavish mango parties and huge gifts of perfect, ripe, delicious mango fruits. Some of today's Indochinese awesome varieties existed many, many years ago exactly as we have them now.

Mango trees are evergreens. Their leaves make superior mulch. Prior to the severe freezes of the 1980s, numerous mango trees were in production in yards across the lower Rio Grande Valley, including a small orchard near Mercedes. Grown for its large, colorful and delicious fruit, the medium to large evergreen mango tree is also attractive in the home landscape. Its rounded canopy may be low and dense to upright and open, with dark green foliage that is long and narrow.

Mango fruit from seeds is never the same as the mother tree's fruit. So the seed out of a great tasting fruit will likely produce a tree yielding horrible tasting fibrous fruit. The only certain way to be sure you'll have tasty fruit is to propagate (by grafting, and in some cases cloning) an existing particular, individual tree (DNA-wise) whose quality is proven.

Climate: Mango is adapted to lowland tropical and subtropical areas. Winter temperature is a major consideration, as leaves and twigs, especially on younger trees, can be damaged at temperatures below 30 degrees. Flowering and fruiting are seriously affected at temperatures below 40 degrees during bloom. There is no apparent difference in cold hardiness among varieties.

Soil and Site Selection: Mango requires soil having good internal drainage, but is not particular as to soil type. Trees can tolerate minor flooding, but have low tolerance for salts, boron and lawn herbicides. Because of its extreme sensitivity to cold, mango should be planted in the most protected site in the yard--within 8 to 12 feet of the south or east side of the house. The tree must receive full sun for optimum growth and fruiting. FOR PLANTS, SUNLIGHT IS FOOD. Not enough means less growth, less flowering and less fruiting. The more than 6-7 hours of daily direct sunlight...the more tree growth, flowering and fruiting. Also if you reposition the potted tree suddenly, sunburn and leaf dropping can occur because of any change in the amount of light.

Varieties: Alphonso is a traditional Indian mango renowned for it’s rich flavor and smooth texture. When ripe the skin is greenish yellow to yellow and pulp is deep orange and highly aromatic. The trees tolerate the abundant rain and high humidity of South Florida very well which is somewhat unusual for traditional Indian types. This makes the tree a good producer of high quality fruit typically weighing 0.5-0.75 lbs and ripening in late June to July.

Carrie is a fiberless Florida cultivar that is sickening sweet and delicious as can be. Its compact size makes it an excellent dooryard tree that requires minimal care. Both fruit and tree have little to no problem with fungus or disease. Lack of color and firmness are the only shortcomings of this superb variety. The fruit ripens from June to July.

Julie, on a scale of one to ten, Jamaicans would rate a solid twelve. In Florida it is sought after for its dwarf growing habit. Florida’s humidity makes this tree a challenge to grow however. Fungus problems which lead to stem die back are common, making fungicide applications necessary for success. Like the Ice Cream variety they thrive in more arid climates. The fruit itself is sweet and tangy having somewhat of a pineapple flavor. We no longer grow this variety due to it's difficult nature, but it will remain on the site to contrast varieties that do thrive in Florida. The fruit ripens late June to July.

Lancetilla is a Honduran selection made famous by Dr. Richard Campbell. Its debut at the 2001 International Mango Festival at Fairchild Tropical Botanical Gardens made it an instant South Florida sensation. Its immediate acceptance by homeowners can be attributed to the tree’s ability to be maintained at just ten feet. The five pound blood red fruit is firm, sweet, and completely fiberless. The fruit ripens from mid August to September.

Nam Doc Mai is a premium cultivar introduced to Florida from Thailand in 1973. It is hands down the most sought after of the Asian mangos and for good reason. The fruit is firm, sweet, aromatic, completely fiberless, and is born on a tree suitable to a small backyard. The fruit
Planting:  Because of frequent freezes, mango trees may not achieve maximum size, so they can be spaced 12 to 15 feet from each other or other trees.

Because trees are normally grown in containers of soilless media, much of the outer layer of media should be washed off the sides and top of the root ball immediately prior to setting the tree in the ground. This practice exposes the outer part of the root system to the actual soil in which the tree must grow, thereby enhancing tree establishment. Newly planted trees should be staked for support for the first year.

Build a water ring several inches high and thick atop the soil around the tree. The ring should be a little wider than the planting hole--take soil from elsewhere in the yard if there's not enough left over from planting. Fill the basin with water--after it soaks in, a little soil may be needed to fill in holes made as the soil settles around the root system.

**Young Tree Establishment:** Newly planted trees should be watered two or three times the first week, then once or twice per week for several weeks. Simply fill the water basin and let the water soak in. The water ring will gradually erode away over four to six months, at which time the tree can be considered established.

Delay fertilization until new growth occurs after planting, then apply monthly from mid-March into September. Scatter the fertilizer on the ground under the tree and promptly water thoroughly. Using Rainbow Gardens Premium 19-5-9, applying 1/2 cup every other month in the first year, one cup per every other month in the second and two cups every other month in the third year.

**Mature Tree Care:** Cultural practices are designed to maintain good growth and production. Irrigation, nutrition, and weed and grass control are the major practices in mature mango tree care. Irrigation is the same as for other established fruit and nut trees--water slowly, deeply and thoroughly. Repeat as needed, based on soil type and prevailing weather. Weekly soakings during the summer are more than adequate.

Fertilization, using 19-5-9, should be at the rate of one to two cups per inch of trunk diameter per year, split into equal applications in February, May and August. Simply scatter the fertilizer on the soil surface under the tree, then water thoroughly.

Weed and grass control under the tree is desirable to reduce competition and can be easily maintained by use of organic mulch replenished as necessary. Organic acidifying mulches, like pine bark, are excellent for mango trees. All lawn grass and weeds should be eliminated for several feet around the young mango, as the tree cannot compete for water and nutrients until it is much larger. As the tree grows, widen the grass-free area beyond the canopy.

Winter frost protection is essential. Here are some cold weather ideas. In some places the threat of frost or freeze is normal only at night for a few nights each year. You can either keep the tree in a container and drag it inside during the hours of frost or freeze or plant it in the ground where you will have to cover it up for only the duration of the frost or freeze. If you cover it with an insulating blanket and 6 mil plastic on top of that, be sure to fasten the 'skirt' to the ground all around with metal staples so as to trap the ground warmth radiating upward, you can add a light bulb for added warmth or even a little electric space heater...just watch out for rain. Incandescent lights, Christmas lights, camp lanterns or stoves are good heat sources. Also where the covering tarp/plastic touches the tree the freeze will 'burn' it, no big deal usually, but you can get elaborate and build a skeleton frame to stretch the cover over, just remember the wind. Remember to open a vent hole or uncover the mango tree in the morning after temperatures get back above 40 F. You could 'cook' it if you forget.

No pruning or training should be necessary except to remove deadwood.

The only pruning necessary is to remove dead or damaged branches, which will occur following major freezes unless excellent cold protection methods are practiced. Then, pruning should be delayed until the extent of freeze damage can be ascertained.

**Production, Maturity and Use:** Grafted trees will begin to produce in the third year after establishment, with mature trees capable of producing three to five bushels. The mango fruit develops rapidly, as the time from flowering to maturity is only 100 to 150 days, depending upon variety. Mangoes will ripen to best quality on the tree. Mangoes can be harvested at color break and ripened in the kitchen. Color break is the change from pure green to yellow, usually on the blossom end of the fruit. Another indicator of maturity is a change in color of the flesh around the seed from white to yellow.

Fresh consumption is the most important use of mango, but the fruit can be frozen, dried or canned. Mango can be used in jams, jellies, preserves, pies, chutney and ice cream. Green mangoes are sometimes eaten raw in the tropics.

**Problems:** The largest problem of mango is anthracnose because it attacks all parts of the tree and is probably most damaging to the flower panicles. On maturing fruit, the fungus causes irregular black spots that may be sunken slightly and show surface cracks. A grouping of spots forms a large, damaged area. Tear streaking is common, resulting from fungal spores that wash down the fruit from infected twigs or flower stalks. The disease can be controlled with fungicides.

Get some 'Kocide' (brand name for copper sulfate fungicide) from us and spray the trees thoroughly in humid/warm conditions twice a week! Follow the directions on the bag. Add a teaspoonful of spreader sticker or liquid dish washing detergent in each sprayer load to make it stick. Powdery mildew can be a serious problem under conditions of high humidity and rainfall during bloom because the disease would limit fruit set. Serious defoliation would not be expected under Texas conditions. Mites and scale insects can attack mango trees, but they rarely limit growth or production unless populations build to high levels. Check with us for correct insecticides.