Fruit Tree Horticulture 101

Darryl McCullough

Tropical Fruit Society of Sarasota October 23, 2018

(these slides are posted at sweetsonggroves.com)

Me

- Retired from a long career in academia. Living in paradise.
- Hobby farmer ("Some people like to spend their money on ski trips--- I like to spend mine on farming.").
- SweetSong Groves is my 2-acre home and botanical park at Mink Road and Myrtle Street in north Sarasota County. It has approximately 200 fruiting plants, plus native plants and some ornamentals.



 SweetSong Groves LLC is my hobby business that sells fresh fruit locally (to private customers, at Jessica's Farm Stand, and who knows where someday...). Its website is sweetsonggroves.com

The Bad News About Citrus

- These days citrus is one of the most difficult kinds of fruit to grow, due to so many pests and diseases.
- If you have an established citrus tree, it's worth keeping it going as long as it will give good fruit. Use both soil fertilizer and foliar spray fertilizer (e.g. liquid kelp).
- Lemons (and perhaps limes) seem to be more disease resistant and sometimes do fairly well. Perhaps still worth a try.

The Good News About Tropical Fruit

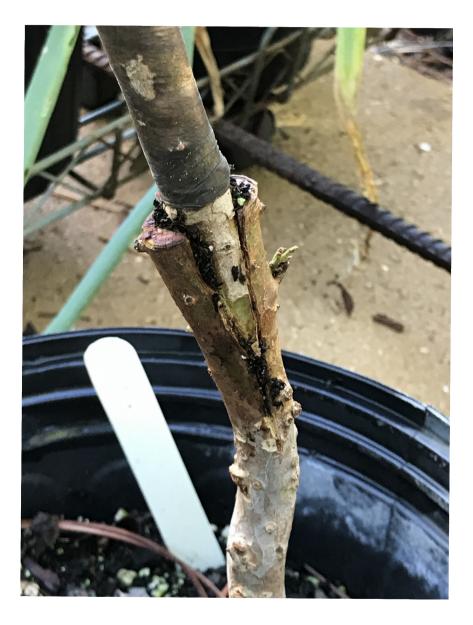
Except for citrus, coastal Southwest Florida is one of the best places *in the world* to grow tropical fruit:

1. Very mild winters allow a large variety of species to be grown.

2. We have *some* cold weather, which keeps the worst of the tropical fruit insect pests from surviving here.

3. The sandy soil that can make life difficult for vegetable growers and some ornamentals is *perfect* for many species of tropical fruit trees.

Grafted Trees





Advantages of Grafted Trees

For most species, it is well worth spending the \$30 or \$40 to obtain a grafted tree of a named variety:

1. As an exact genetic copy of the scion tree (branch), it has been selected to have desirable characteristics, such as high-quality fruit, small tree size, disease resistance, or adaptability to our climate.

2. Hormonally it is a mature tree, and will produce fruit as soon as the tree is physically large enough. With a seedling tree, you might have a ten-year wait for some species. And the fruit will generally turn out to be mediocre.

3. It's easier to prevent a grafted tree from growing upward--- it's actually a big branch that wants to spread, not a juvenile tree that wants to rush upward to compete for light.

Fruit Tree Horticulture In Six Words

Prune aggressively, mulch heavily,

fertilize conservatively.

Prune Aggressively

1. Control tree size--- keep most trees at 12 feet height or less.

2. Strengthen the tree against wind, climbing animals.

3. Open up the interior to light and air.

4. Increase the root-to-foliage ratio to promote new growth and provide energy for fruiting.

Prune Aggressively To Limit Size



Mango



Mango





Peach

Loquat

Prune Aggressively To Limit Size



Black Sapote



Mango



Sapodilla



Avocado





Starfruit

Prune Aggressively To Limit Size



Papaya

Tip Pruning to Promote Shrubby Branching







Tip Pruning to Promote Shrubby Branching





Mulch Heavily and Fertilize Conservatively

1. My main fertilizer is MULCH. It breaks down slowly, adding nutrients while building the **soil ecology** to improve plant health and disease resistance.

2. Mulch stabilizes soil temperature and moisture, prevents erosion, suppresses weeds, and interrupts the life cycles of some insect pests such as Sri Lankan weevils and Diaprepes.

3. For most fruit trees, we minimize (sometimes even avoid) nitrogen-containing fertilizers except on immature trees. *Notable exception: bananas are heavy feeders, especially nitrogen and potassium.*

4. I favor organic fertilizers (and minerals such as azomite, for minor elements) that break down slowly over time. And gypsum for calcium without alkalinizing the soil.

5. An occasional foliar application of liquid kelp seems to work wonders.

Free mulch from local tree pruners



Other Advice

1. Unless you are a very devoted grower, avoid species that present special challenges: temperamental fruiters (lychees, annonas), poorly-adapted temperateclimate or dry-climate fruits (stone fruits, pomegranates, apples), pest and diseaseprone species (citrus, guava, peaches), freeze-intolerant species (jakfruit, coconuts, soursop, ...). Grow the easy fruits!

2. Remove fruit from young grafted trees, so they can spend their energy growing, not making a few fruit.

- 3. Plant on mounds ------
- 4. Free and perhaps prune the roots when you plant.

5. Invest in automatic irrigation if you possibly can.



Bananas

1. Feed heavily. Drought tolerant but they *love* water.

2. Go to the trouble of obtaining dwarf varieties--- Dwarf Nam Wah, Jamaican Red, Dwarf Orinoco, Dwarf Iholene, etc.--- from reliable providers (mislabeling of banana varieties is extremely common). Locally I recommend Sulcata Grove as a provider.

3. My preferred style is to allow only one stalk to grow at a time. Cut off the stalk after fruiting--- it cannot fruit again. Use a serrated carving knife to remove spent leaves, and a trenching shovel to chop off shoots until you want to let one grow.

Bananas









- Wonderful, productive fruit trees for west of I-75
- Beautiful evergreen tree, hardy but subject to fungal diseases (generally controllable with non-toxic sprays)
- Can mix varieties to stretch fruiting season from April to October or even beyond
- Select semi-dwarf or dwarf varieties







Avocados

- West of I-75, or east if a cold-tolerant variety
- Vigorous evergreen tree, easy to grow but famously flood intolerant
- Can choose varieties to fruit most times of year except spring
- Take a few years to reach fruiting size
- Very aggressive pruning needed to control size



Sapodilla

- Tastes like pears with brown sugar, long fruiting season, extremely productive
- Very easy to grow
- Harvested still hard and allowed to ripen on shelf--not attractive to wildlife
- Get a good variety -- Alano, Silas Wood, Tikal, or the dwarf variety Makok





Carambola (Starfruit)

- Fruits throughout the second half of the year, very productive
- Beautiful medium-sized tree, small pink flower, evergreen
- Fruit does not attract wildlife, probably because of oxalic acid content
- More **shade tolerant** than most fruit trees --- in fact some afternoon shade may be better than full sun
- Obtain a high-quality variety such as Kary, Sri Kembangen





Canistel

- Long season, rich, excellent-tasting fruit if you obtain a named variety (Trompo, Ross, Fairchild #2)
- Attractive evergreen tree, easy to grow
- Fruit is harvested still hard, not attractive to wildlife
- Damaged by hard freezes, not for east of I-75





Loquat

- Fruits December to February, depending on variety
- Evergreen, highly ornamental, small white flower
- Very cold tolerant, but **not** flood tolerant
- Fruit should be thinned and may require bagging to protect from fruit flies
- Get a good variety ---Christmas, Bradenton





Longan

- Similar to lychee, but fruits every season
- Fruits in August, September
- Evergreen, very attractive tree, vigorous grower
- Good varieties: Biew Kiew, Big Jim
- Thin the fruit for larger size, and to prevent branches from breaking under weight

A Possible Urban Backyard Grove

(Don't buy any fruit or variety until you have tasted the fruit.)

1. Pickering Mango – a true dwarf, *disease-resistant* variety, with fine fruit. (The Ice Cream variety is dwarf, but not very disease-resistant in our region.)

2. Makok Sapodilla – a dwarfish, fine-tasting sapodilla. Fruit is picked unripe before raccoons and squirrels go after it, long season.

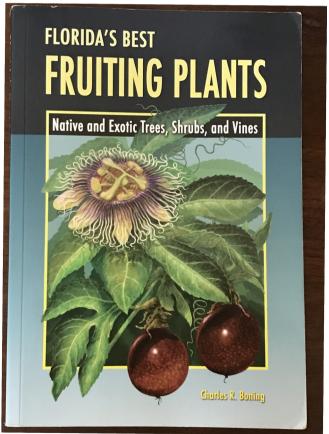
3. Trompo Canistel – fabulous tasting fruit, easy to grow, beautiful tree, fruit is picked unripe, long season.

4. Day Avocado – dwarfish, cold-tolerant, productive, rich-tasting fruit.

5. Kary Carambola – productive, excellent fruit not attractive to raccoons and squirrels (contains some oxalic acid), long season, beautiful tree and can fruit in part shade.

An Excellent First Book

Florida's Best Fruiting Plants, by Charles Boning. Excellent, but be aware that the information on varieties is generally out of date.



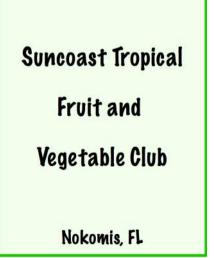
Learn From Experienced Growers

Our area has many local fruit tree clubs:

- Tampa Bay Rare Fruit Council
- Tropical Fruit Society of Sarasota
- Manatee Rare Fruit Council
- Suncoast Tropical Fruit and Vegetable Club







Take A Class At An Urban Organic Tropical Fruit Farm

My 3-hour introductory class, the Fruit Tree Paradise Workshop, is taught in spring and in fall – free handouts and info on the class are on my website:

sweetsonggroves.com

Next class is Saturday, October 27, 9:30-12:30.



Online Information Sources

- YouTube videos some are excellent, especially Richard Campbell's videos on pruning of mango trees
- growables.org lots of good information specific to our region
- Info on mango varieties, see Alex Salazar's website, Tropical Acres Farms, and also the Pine Island Nursery website
- UF/IFAS publications can be informative, but generally are oriented toward commercial growers
- Tropical Fruit Forum a discussion board
- *Fruits of Warm Climates*, by Julia Morton, freely available online an older reference but an excellent source for rare, tropical species
- It's a good idea to include the word "Florida" when you do a web search



Bagging

1. Protects against insects, birds, squirrels, possums and raccoons.

2. Not as tedious to do as it sounds.

3. Organza bags are light and very easy to use. Also there are other brands that are more durable.







Raccoons and Possums

1. One option is a 10 or 12-foot solid wall around your entire property.

 Raccoons and possums can be stopped by poultry netting, charged by a solar-cell battery (Intellishock). It is reasonably portable.
Effective, although expensive. It does not stop squirrels, at least not completely.

3. The other main alternative is humane trapping and shooting (NOT relocating).

