

TROPICAL FRUITS ON THE FLATWOODS

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This part of your program will beyond all doubt refer to developments over a period of several years. We recognize that most individuals do not enjoy excessive dwelling on experiences of years long gone by. In spite of this handicap it seems advisable to have some of these facts securely placed in the proceedings of our Florida State Horticultural Society for possible reference for those who come after us.

It was my fate to come into Palm Beach County just before the land boom of the early twenties suffered its well-advertised and colossal collapse. Those of us who decided to stay with Florida then had our fortitude badly shaken by three severe hurricanes, known to those of us who experienced them from various locations, as the Lauderdale and Miami storms of 1926 and the third, simply as the 1928 storm. All three storms took their terrible toll of lives and property, especially around the southern half of Lake Okeechobee.

These calamities would seem to be sufficient for South Florida or any other area, when along came the National Business and Financial Collapse of 1929. Only one bank in Palm Beach County remained open after the toll of these disasters. I will name this institution because it was in an agricultural area and largely directed by farmers—The Bank of Pahokee—still open and doing business.

A good many of our younger members may have some doubt about the extent of this financial tragedy.

People were hungry!

Many undernourished!

These are facts in spite of the present prosperity of the post World War II period.

In the very late twenties Mrs. Edith Y. Barus our Home Demonstration Agent at that time, was discussing our work plans for the coming year with me, and the problem of family food was important in every community. We knew that most homes were deficient in fruits, home gardens and the vitamins so important in our daily diet.

We began to discuss this problem with the people of the County as we made our calls in both urban and rural areas. Most people admitted

they had no fruits, but an interest was apparent. We then began a series of visits to the Sub-tropical Experiment Station and enlisted the help of the late Dr. George Ruehle, John Lynch and even a young man by the name of Willard Fifield.

In order to contact more interested individuals we organized a group we called the "Tropical Fruit Study Group" and in spite of the burden of such a name the organization thrived over a period of several years. We found a few individuals willing to give more than lip service. David Sturrock of West Palm Beach gave us the benefit of his years of experience and training.

Laurence Zill of Delray Beach, Jack Faircloth of West Palm Beach, H. L. Speer of Pahokee, Floyd Erickson of Canal Point, James Miner of Boynton Beach, all worked to help this slow development and also associated themselves with the Mango Forum also interested in all fruits.

We would bring bags of seeds from all sorts of fruits and give them away to one and all. How many of these seeds actually germinated and grew is a question but I know of many odd little trees that got their start from seeds from one of those little paper bags in this early missionary work.

It was our belief that home owners, certainly rural and suburban home owners, should use fruits as shade trees, as specimen plants in their home plantings and also as a source of food, nutrition and vitamins. We know from observation many of our urban home owners have often used our fruits effectively.

Our County Commissioners in 1954 wisely felt the growing importance of agriculture and provided us with a beautiful, useful and effective office building. This building is located on the Military Trail immediately west of the West Palm Beach Airport. More important to us is the fact that land on which the building is placed is one of our hard-pan soils as are hundreds of acres in our sand land areas in Eastern Palm Beach County. We are located on Immokalee fine sand and in the same general area there is Leon sand, another soil with a hard pan base.

Beyond all doubt many hundreds of new homes will be located on this soil eventually. Many hundreds of homes have already become homesites for our expanding population.

With our new location we felt we had an opportunity to demonstrate what could be ac-

complished with fruits on this extensive soil type. Many of these new citizens were unaccustomed to our climate, our soils and our fruits. It is amazing how provincial people may be in their tastes and appetites. I have found it is good advice to insist on first taste that fruit be fully matured and fully ripe. One of my home owners, the recipient of some early seeds, insists the Jambolan-plum, *Syzygium cumini*, is really delightful after you have eaten the first fruit.

We approached our County Commission concerning the possibility of developing an Arboretum on the grounds. The term Arboretum was too much, it indicated thoughts of extra labor and expensive upkeep. We gave up the Arboretum idea and began planting a few plants at a time. So we have at present sixty-nine plants that produce fruits, not all delicious, but all edible. Not all have produced fruits, but all are possibilities. If a certain variety seems unworthy we throw it away.

Most of our plants are planted on the level. We dig a hole thru the hard pan, fill in the hard pan area with some sort of lime material and use our own top-soil for the remainder of the fill.

I must admit we have one advantage, our office grounds are on the north side of a lateral canal of the Lake Worth Drainage District and flooding is not a major problem, although there have been some problems.

We have eleven varieties of mangos. These include: Julie, Carrie, Kent, Irwin, Palmer, Parvin, Keitt, Sensation, Edward, Zill and Duncan. We have had satisfactory growth on all these varieties, with the exception of the Julie and Duncan. The Julie was planted on a poor location, the Duncan came out badly in an encounter with a power mower. All of these varieties produced good crops in 1963 and all had reduced yields in 1964. It is impossible to keep a record of fruitfulness as we are open to a busy road and we have night visitors who apparently like green and ripe fruit.

We had been warned of cold damage in the flatwoods. When the trees were small we wrapped the base of the tree with Pangola hay. The only fruit killed by cold was a Mountain Sour Sop, *Anona montana*. Our one coffee plant had considerable branch damage but now is again an attractive plant.

Many of our visitors have asked concerning strawberry guavas, *Psidium cattleianum*, so we planted two of these to satisfy curiosities.

We have planted two Sapodillas, *Achras zapota*, the Brown Sugar and the Prolific. The Prolific is prolific, the Brown Sugar has produced one fruit which was stolen before we could test the aptness of its name.

We have four Barbados-cherry bushes, *Malpighia glabra*. They have done especially well, having grown to large specimens and having fruit on the plants almost continually. David Sturrock gave us two of these plants, one of them being especially outstanding in yield and flavor.

We planted five Bignay, four *Antidesma bunius* and one *Antidesma dallachyanum*. They have become large trees and produce a terrific yield of fruit that makes wonderful jelly and jams, but no one is interested in this activity now.

Our one and only Sugar-apple (*Annona squamosa*) is a thrifty, well-grown plant that has produced ample fruit with excellent flavor and quality.

We have three improved guavas. One is the Page Jelly Guava. It has grown very well and has produced fruit constantly. It does make excellent jelly; my wife has proven this. The other two guavas are seedlings resulting from crosses made by Dr. Geo. Ruehle. The fruit of both trees is delicious, of good quality and size.

Two plants of the Grumichama (*Eugenia dombeyi*), have grown well. Only one has fruited, producing a fair crop of good but not exciting quality. The plant is attractive and could be used effectively in small gardens if a little more fruit would appear.

A Pitomba (*Eugenia lushnathiana*) has produced a typical pretty little bush but the fruit is not real interesting in quantity or flavor.

We have five Surinam-cherries (*Eugenia uniflora*); four are red and one is dark, all are typical of this common plant.

Not all of our plantings have responded as we hoped. Longan (*Euphoria longana*), two Star-apples (*Chrysophyllum cainito*), one Lingaro (*Eleagnus philippensis*) and one Spanish-lime (*Melicocca bijuga*) have all grown well but have produced no fruit.

For some of our friends from North Florida and South Georgia we secured one Pomegranate (*Punica granatum*). This plant has grown and fruited about like plants I have seen in the above-mentioned locations.

Muntingia calabura has responded with too much growth and an over-abundance of fruit. It does as well on flat wood as any other location.

Our Jaboticaba (*Myrciaria cauliflora*) has also developed well in our location. It is, as everywhere, a slow grower but it puts out an abundance of fruit if mulched, fertilized and watered.

An occasional odd fruit is interesting so we planted some Imbe seed (*Garcinia livingstonei*). It has grown better than actually expected and has put on more fruit than needed. When we have visiting groups of children they take care of the surplus of this odd little fruit.

The Karanda (*Carissa carandas*) has grown aggressively and has produced an abundance of fruits.

We have four Persimmons (*Diospyros kaki*). They have been irregular in their growth. The Tanenashi has grown very satisfactorily and had sixty-five fruits this summer. The fruit was of good size and quality. The Ormond and Gailey have grown slowly.

Our two *Macadamia* nut trees were planted with little hope of success, but one of them attained a height of twelve feet and has produced fruit two years. This year it had thirty-seven nuts. The other tree is about eight feet tall and has never produced blossoms.

Two White-Sapotes (*Casimiroa edulis*) have, as expected, grown to large plants. They will be discarded as the fruit is of poor quality, in spite of being supposedly budded plants.

Our Tamarind (*Tamarindus indica*) have grown to be large beautiful trees and have fruited heavily for two years.

A Red Ceylon peach seedling was tried and discarded. Growth was satisfactory but the fruiting was not.

Over all, our plantings have grown satisfactorily, most of the plants have fruited well but not without help in the way of good cultural practices. We have used basic slag as our soil amendment and have what we think has been good results in quality and quantity of growth and fruit.

Since most of the above was written we have had two hurricanes. Small plants such as persimmons, surinam cherries, the grumichama, strawberry guavas and jaboticaba were not damaged excessively but all larger plants were damaged severely. Our best Macedonia was snapped off ten inches above the ground line. The Sensation Mango was left with about two feet of stump. Most damage was from broken branches but one Tamarind, one Barbados-cherry and the Muntingia were blown out of the ground.

We believe a program of pruning and thinning is essential for future plantings. We are convinced this can be accomplished with satisfactory results. But this is a subject for more study and an additional report.

NOTES ON BRAZOS BLACKBERRIES IN THE INDIAN RIVER AREA

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Introduction.—Interest in blackberry production in Florida was stimulated by the release in 1958 of "Flordagrاند," a self-sterile trailing type blackberry. Six Flordagrاند and two Brazos plants received from the University of Florida Department of Fruit Crops were planted at the Indian River Field Laboratory January 10, 1961. Because of the early success with the Brazos variety, additional plantings were made during June, 1962, and a large-scale cooperative test

was established with a local grower in June and July, 1963.

Large yields of fine quality berries have been obtained from these preliminary trials (Figure 1). The following discussion of methods used in production, harvesting, and marketing may be of interest to those who plan to produce blackberries for home or commercial use.

Selection and preparation of soil.—Blackberries were grown on four soil types: (1) Immokalee fine sand limed to pH 6.00, (2) a Felda type fine sand limed to pH 5.00 and containing some organic matter, (3) a fill soil of sandy loam with a pH of 6.75 spread over and partially mixed with a Charlotte type sand, and (4) a Charlotte type sand with a pH of 4.85. Best growth was obtained from (2), (1), (3), and (4) in that order, however, (3) and (4) had an excessively