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The Avocado and Mango on the Sand Lands of Palm Beach and St. Lucie Counties

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Mango and Avocado trees seem to thrive well on the sandy soils along the coast in Palm Beach and St. Lucie counties, as evidenced by many old Avocado trees six to eight feet in circumference, and 40 to 50 feet in height, and by Mangos less lofty, but running larger in girth.

The soils, where almost all of these old trees are found, are classified by the U. S. Soil Survey as various grades of St. Lucie sand, Palm Beach sand, and Gainesville sand. Nine-tenths of them are on the former, owing mainly to the fact that this alone has proven suitable for pineapple growing, and this was for many years the only form of agriculture in this region; all the dooryard trees were planted in it. The Palm Beach sand embraces what is locally known as "beach hammock," and lies on the ocean side. It consists of a good percentage of calcareous material, largely organic, with humus, mingled with silicious sand. The Gainesville sand is confined in this section to the so-called "red hammock," underlaid with rock, only occurring on the eastern shores of Lake Worth and Jupiter Island.

On Palm Beach sand the Mango does not seem to thrive so well, bears poorly, and is often troubled with a fungus blight. Avocados, however, thrive, and make huge, productive trees. Where found on the Gainesville sand, both trees seem vigorous and productive, although there is sometimes a tendency to blight among the Mangos. Of the St. Lucie sand areas, that described as the "yellow sub-soil phase," where yellow or orange sub-soil appears near the surface, is the best for both trees, as is the case with almost anything else planted, trees, pineapples or vegetables. However, little of the famous Pineapple Ridge in St. Lucie County has this sub-soil.

The other determining factor is the humus content. St. Lucie sand is described as pure silica, with nothing else but humus. In the absence of the yellow sub-soil phase, all depends on the percentage of humus. Hundreds of acres of old pineapple fields, which have been abandoned to grow up in Natal grass and weeds, and which we all hope will some day recover their former productiveness, are at present useless as well as unsightly, and all would be glad to see them producing Avocados. Mangos are easier started, and require very little fertilizer, but not being such money-makers, few care to plant them. We know from the big, old, bearing Avocado trees of the door-yard plantings of the past 25 to 30 years that the land will grow them, but it is a question of getting them started. I have talked with a number of people who have been trying this, and it is apparently mainly a matter of water. After the second summer they are sufficiently established to stand any ordinary drought without need of watering, but faithful watering is required to bring them to this condition. Planting in a basin 12 to 18 inches deep, and

at the same time mulching very heavily, seems to be of much assistance; and shading with slatted lath frames, with the top covered over with burlap, seems to be well worth the cost involved. This frame may be covered with old sacks, temporarily, if a frost is threatened during the first winter.

Planting the young trees in a young pineapple field, simultaneously with the pineapples, is a splendid plan, and works out beautifully, as has been often demonstrated with citrus trees also. Carroll Dunscombe, at Stuart, has some Trapp trees which were planted seven years ago in common St. Lucie sand (which is now well supplied with humus) among a field of young pineapples. They look as well as any trees of their age that I have seen anywhere in Florida, outside of custard-apple hammock. He reports them to be very productive, and they appeared to be setting a good crop when I saw them a few weeks ago. He is so well pleased that he plans to plant 50 to 100 acres this year, provided he can get the slips and trees.

In planting out old pineapple fields, it is often an open question as to whether it will pay. If you cannot plant out pineapples at the same time to help pay expenses, and provide the surplus fertilizer needed, it may still be worth the trouble and cost to get something growing on the old unsightly field. Avocado trees stand more cold than pineapples, and even if we did not have the old trees to prove it, we could safely assume that fields that had produced pineapple crops successfully would serve to support an Avocado grove, without danger of loss from that factor. L. C. Harbrecht on the north bank of the St. Lucie at Rio, has some very promising Avocado trees, mainly Trapps with a few Guatemalans, which he has successfully brought to the bearing stage, upon one of the highest, sandiest old pineapple fields to be found anywhere. He prefers Solano among the Guatemalans.

Water seems the great factor on these sandy ridges. At the residence of the late John Sorensen of Jensen, there is a row of seedling Avocado trees, planted many years ago, as evidenced by their size. One stands close by the well, and rises to the full altitude of the 50-foot windmill tower, and is easily 50% bigger than the one which comes next to it, and is 20 or 30 feet farther from the well. This apparently tells its own story.

In a grove I am planting a mile west of the shores of Lake Worth on "fine St. Lucie sand, yellow sub-soil phase" (as described by the U. S. Soil Survey), I have this clearly demonstrated. It is an old abandoned orange grove, which was destroyed by fire some years ago, and has been cleared 18 or 20 years, and until I acquired it recently, had been swept pretty regularly by fire every year. One tree, close to the negro cabin where the family washing is done, is now three times as large as any of the rest, all having had equal advantages of water and fertilizer, aside from the weekly wash water.

Avocado planting on the flatwoods west of the coastal ridge is of course in its infancy, owing to the fact that little of it has been drained even four or five years, and little of that has been drained perfectly for that length of time. However, it looks very promising, so far as we have seen, not only for Avocados, but citrus stock as well. There were 50 Avocado seedlings planted four miles west of here (West Palm Beach) about eight years ago. They were planted on ridges to keep them out of the water, and have been subjected to frequent inundations at intervals ever since. When about three years of age we had a 15-inch rainfall in 24 hours about August 1st, and water stood within a foot of

the top of the ridges for two weeks. This only killed four out of the original fifty, and the others are alive today, and as thrifty and productive as could be expected of trees that have never been properly fertilized or cared for.