

"Highlights of Avocado Growing in Florida and Cuba"

D. W. Tubbs

Agricultural Commissioner, Orange County, California

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Some months ago I had the good fortune to take an extended trip through the major avocado producing sections of Florida and Cuba. On several occasions thereafter I have discussed certain points of interest before several groups but these occasions were less formal than the present and it was always possible to either follow the "travelogue" plan of continuity or the "question and answer" system. I feel I must now warn you that what I have to say will be in the nature of highlights rather than a technical development of any one phase of the very broad subject of avocado culture in either of these localities.

I will endeavor to discuss first my impressions of the avocado industry of Florida, next of Cuba and then try to show how I think the California outlook is or may be affected by the natural growth of our contemporaries.

The plantings in Florida which I am told are in excess of 3,000 acres are located largely on the east coast extending from West Palm Beach roughly 100 miles to the southern end of the peninsula. There are some plantings in the Lake Placid region and some near Pahokee on Lake Okeechobee. It is estimated that six-sevenths of the avocado plantings are located southwest of Miami in a small section 7 or 8 miles wide and about 10 miles in length. This area around Homestead, Naranja and Redland is located on a coral reef which is in reality only a few feet above sea level. Prior to recent agricultural development this was mostly pine timber and in many instances the major expense of developing the groves was the clearing of the land. I am told the civil engineers who made the survey for the Florida East Coast Railway were pioneers in the development of the avocado plantings. Later the land boom did much to set back the avocado industry temporarily because many of these original plantings were destroyed in cutting up the land into subdivisions during the wild speculation at that time.

Another factor to be considered in the industry of Florida is the hurricanes or typhoons which must be at least as severe as some of our locally prominent California winds. Around Miami they are referred to often and I personally saw many pine trees which had been blown over by the hurricanes. Also the soil in this area is shallow and hard. In fact, when you desire to see the interior of a grove you merely turn the automobile in the direction in which you desire to go. As a roadbed you cannot tell the difference between the grove and the road excepting for the existence of the ever-present Natal grass which grows as a cover crop. Apropos of the above impression of this coral soil, one grove owner told me that Mr. Carl Newman, while looking at the beautiful trees in her grove, gave vent to one of his famous expressions, "I don't believe it."

It is difficult for Californians to comprehend the wonderful growth obtainable on trees planted in soil of that type. It is certainly obvious that at least the West Indian varieties thrive under more tropical conditions. It is this characteristic that we must bear in mind when we are considering the interrelation of the three avocado producing areas. This fast maturing, together with the high production of the West Indian varieties, has made it possible for them to shift their marketing season by the development of new varieties to a time which does not compete so seriously with the Cuban product. Of course some other difficulties are involved when the season of crop maturity is too greatly changed. Anthracnose spot and other diseases affected by seasonal conditions may be increased to the extent of becoming a limiting factor.

Mr. John R. Mathers, Manager of the Florida Avocado Growers' Exchange at Naranja, Florida, has shown in his annual report the development of some of these new varieties. The Walden and Trapp varieties which at present constitute the bulk of production are largely marketed from August to November. Some of the newer varieties such as Taylor and Lulu which are rapidly gaining in prominence have a later marketing date and therefore do not compete with the Cuban fruit.

It is interesting to note that one of the reasons given for using a commercial fertilizer with slight emphasis on potash is that by so doing the grower is able to hold the fruit on the tree 30 days longer.

The major cultural problems then to produce avocados in Florida seem to be:

Clear the land of stumps or second growth pines; plant in regular orchard form such as is done in California, only without the worry of irrigation pipe lines, etc.

In 4 or 5 years during which continuous applications of commercial fertilizers have been made and the trees have been treated preferably twice a season for scab or "black spot," the grove has reached commercial production at an outside cost of less than \$1,000 per acre. These groves can continue to produce fruit at a good profit at 6c per pound.

During the season of 1934-35 Florida probably marketed over 3 million pounds of avocados. Mr. Mathers assured me that within a very few years one or two groves alone would produce this amount of fruit.

The Floridian's chief worry of competition comes not from California, but from Cuba. Florida has cheap freight rates to large centers of population, being closer either by rail or water than California to some of the best American markets. But let us look at some of Cuba's points of vantage. Until late years the avocados of Cuba grew more or less in a state of nature, the trees not being set out in orchard form. While there were certain favored trees growing in various parts, they were not known as any special variety. Many of these were very old trees and bore very heavy crops. They were sufficiently numerous to supply local markets. The trees being more or less scattered on the farms, were not considered a commercial enterprise and the owners of the trees sold the fruit on the tree to such buyers as might care to purchase them. The excess or cull fruits supplied food for hogs and cattle. In fact, some of the first trees that I saw near Havana were supplying shade for a hog pen.

It was not until after the American occupation of Cuba that Americans returning to the

United States took avocados with them and created a demand for this fruit.

A large part of the fruit exported from Cuba is gathered within 50 or 60 miles of the city of Havana and it is in this area that a few regular orchard form groves are found. In the vicinity of Bejucal, I visited one estate which shipped 80,000 crates of avocados with no cost of production excepting an occasional pruning and then the cost of harvesting. At another estate belonging to a brother of a former President of Cuba I was told that the owner paid \$26,000 for 200 acres without trees and had since developed a beautiful grove containing some 17,000 fruit trees, 4,500 of which were avocados. The Major Domo of this beautiful estate in the rich rolling lands a few miles out of Bejucal beamed his pleasure in showing me a tree of the Itzamna variety which he said was 5 years old. The growth rate had been marvelous considering the unfavorable location. By "boy scoutery" I determined it was 30 feet high. The tree was laden with hundreds of beautiful fruits which I was told were mature from late October to March.

The possibility of a fruit ripening later than September, which is the end of the season of their present varieties, is gaining attention among the more aggressive Cubans. Certainly if they can produce fruits on richer soil with climatic conditions at least as favorable as Florida and with practically no pest control requirements and cheaper labor for harvesting, Florida will be still more keenly interested in the competition and thus in turn will we in California be unable to compete at our present costs. Imagine the demoralizing effect of Cuban fruit selling in the American markets at 3c per pound.

The Cuban avocado trees are not generally treated for insect pests or disease control although I found slight evidence of scab and on one of the newer plantings was told that some Bordeaux was used for anthracnose. Undoubtedly by a natural process of elimination through many years the seedling varieties least susceptible to disease have endured. Thus has developed the rather narrow marketing season of the Cuban fruit, that is to say, from June to September.

Fortunately for us the problem of disease control, as just mentioned, may enter the picture and seasonal winds and new insect pests may also be a controlling factor to prevent the development of new varieties maturing during other seasons. In fact, I saw a scale on the Itzamna tree which appeared to be our old friend the latania scale and I have been unable to find any official record of that scale in Cuba although it is well scattered over the world.

The most recent Cuban reciprocity treaty restricts avocado shipments to the months of June, July, August and September, which is the time the present Cuban fruits are available for export. Perhaps if and when fruits are available during other months of the year our gracious government will extend this shipping period.

I have said little of the Cuban fruit. The crop was harvested at the time I was there but it is of the West Indian type, large round fruits, with low oil content and an extremely large seed. From the standpoint of quality and economy we would not prefer them for shipping. Indeed, it is surprising how fruit such as the Florida variety Lulu which has a seed almost larger than the fruit itself will be accepted by the thrifty housewife when there are available small seeded fruits such as many of the California varieties.

One interesting observation is that in Florida one is assured of the value of the Floridian

type fruit. In Cuba I was told that the oil content of their fruit was much higher (this is probably not true), thus making the fruit more desirable. In New York I learned that the really good fruit comes from California, but California could not compete as long as the others could offer so great a price differential. Upon my return to California with both West Indian and Guatemalan varieties available, I still think the hybrids or Mexican fruits are the best.

It seems to me the whole question involved is whether our government desires to protect the industry of its own people or by the policy of trade agreements encourage the development of an industry in foreign countries which can and will make American competition impossible.