

Kenyan Avocado Industry

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Under the auspices of the International Executive Service Corps, I had the privilege of studying some avocado production and export problems for seven weeks during January-March, 1990, in Kenya. My client was The Fresh Produce Exporters Association of Kenya, which had 140 licensed horticultural exporters that exported fruits, vegetables, and flowers to Europe. My counterpart was Mr. M. A. S. Mulandi, Managing Director of Horticultural Crops Development Authority (HCDA). HCDA was a member of the Exporters Association.

Avocado exports from Kenya for 1987, 1988, and 1989 were 2,208, 4,137, and 3,781 U.S. tons, respectively. The vast majority of this was by expensive air freight. Container export by sea was still in the developmental stage. I obtained no figures on the avocado acreage in Kenya. If I had, I would not believe the figures because 85 % of the export avocados came from small farms—an acre or two—which raised many fruit, vegetable, and flower crops. Avocado trees per farm could vary from three to twelve. Because of the small farms, they are not in a position to use modern day agricultural technology.

The vast majority of the export avocados, primarily the Fuerte variety, came from the area between Nairobi and Mt. Kenya, to the north. Elevations ranged from 5,000 to 6,500 feet. The volcanic soils are deep, generally well-drained, and fertile. Generally, the need for irrigation and fertilization is minimal. If there is a period for supplemental irrigation, it would be during flowering and fruit setting.

Many of the avocados were in fields where irrigation was supplied for vegetables and flowers with no regard for the trees. Although most soils were well-drained, I saw some where over irrigation could be encouraging root rot, which has been identified in the area. I had the opinion that many of the trees were large and very vegetative and dense. No micronutrient deficiency symptoms were observed.

At one time there was a flourishing avocado industry in the Kitale and Eldoret area in northern Kenya. When I was there, some of these orchards had died or were near death. Trees at the African Development Corporation were abandoned and in the final stages of dying from root rot. Among the reasons for diminishing interest in avocado in this area were heavy-textured soils, where root rot has taken its toll, and distance from Nairobi, where the exporters were located. I went to this area with one exporter who was looking into obtaining fruit and trucking it to Nairobi. He decided against it.

The major problem in exporting fresh fruit was anthracnose (*Colletotrichum gleosporioides*), commonly called "Black Spot." This was not a serious problem until there were two consecutive years of high rainfall. Kenyan fruit declined in reputation in the European market. Kenya's competitors in this market were South Africa and Israel. This disease can be controlled with proper timing of properly applied copper sprays. The chemicals are available in the country, but adequate spray equipment is not.

The HCDA, can best be described as functioning similarly to the Cooperative Extension Service and Agricultural Commissioners in the United States, plus exporting fruit for small growers who cannot make proper contact with an exporter. The HCDA made backpack manual and power sprayers available to the small growers. However, these were far from adequate because the trees were too big and too dense. If modern spray machines were available, one would have to drag hoses great distances because there are not ways of getting the equipment to the trees without going through plantings of vegetables and flowers.

Another factor affecting fruit quality is time of collecting fruit and transport over very rough roads. Two to three days from harvest to packing house was not uncommon.

Still another problem was immature fruit getting into the market. In the climate very close to the equator, the Fuerte normally sets three crops of fruit annually, about six weeks apart. Early in the marketing season, the temptation is great to harvest proper size but immature fruit. Adequate controls on fruit maturity were not in place.

Although the HCDA makes sincere efforts to educate growers, adequate information is not getting down to the farm. The HCDA officers have to cover many crops and may not be fully informed on one specific crop. Growers are very receptive to production information.

Because prices have not been good, a number of growers did not harvest their fruit. Not only does this adversely affect future production, but it perpetuates the "Black Spot" inoculum. Dead wood and fruit on the ground should be removed from the orchard.

Mother Nature provided to Kenyans an environment very favorable for avocado production. That includes most water and fertility needs, good soil drainage, no salinity problems, and no frost or heat problems. Their competitors spend substantial amounts of their product costs on the above factors.

Should means of planting large acreages of avocado and modern methods of technology be used, enough fruit would be produced to rapidly fill containers for sea transport, and the future of avocado production in Kenya would look very promising.