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THE AVOCADO SITUATION IN HAWAII

Storey

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The avocado ranks third among fruits produced for fresh consumption and fifth among all orchard crops in Hawaii. In acreage and in value of the crop to the grower, it is exceeded only by the banana and the papaya, which are sold as fresh fruit on the retail market, and by coffee and the macadamia nut which reach the consumer as factory processed products.

All avocados produced in Hawaii are marketed in the Islands. The major center of production is the Kona District on the leeward, western side of Hawaii. Growing conditions are particularly favorable for the avocado in the district, and trees are often planted to provide shade for coffee plantings as well as to produce fruit for the market. A smaller production center is the Kula District in the southwestern part of the Island of Maui. Root rot is not the serious problem in Kona and Kula that it has proved to be in a number of other localities in the Islands where avocado production was attempted commercially only to fail largely due to its ravages.

Figures of production, acreage, and farm value of avocados grown in Hawaii from 1941 through 1952 are given in Table I. Peak acreage devoted to avocado planting was reached in 1941, and has declined in ensuing years. Production and value reached their peaks in 1945, and, after a slight decline, have remained fairly constant to the present. In 1941, about 80 per cent of the acreage planted to orchards was located on the Island of Oahu. By 1952, about 80 per cent of the producing trees were located in Kona, on the Island of Hawaii, with only 20 per cent on the other islands. The shift of the major parts of production from Oahu to Hawaii may be attributed to the decline of orchards on Oahu from root rot in wet years, from drought during a period of several successive unusually dry years in the middle 1940's, and to the more favorable growing conditions in Kona.

Present production of about 500 tons a year is adequate to keep island markets well supplied through most of the year. About 70 per cent of the fruit is marketed in the city of Honolulu. The fruit found on the market is of many types, shapes, and sizes. Purple and green skinned fruits are equally acceptable. Offerings include a number of recognized varieties, but a large percentage of the fruits on sale comes from seedling trees, and considerable variation in quality is often encountered.

Table I. Production, acreage and wholesale value of avocados produced in Hawaii (1941-1952)*

Year	Production (tons)	Acreage	Wholesale Value (Thousands of dollars)
1941	750	500	90
1942**	—	—	—
1943	745	468	149
1944	1,074	279	215
1945	1,181	271	240
1946	680	263	133
1947	538	266	103
1948	528	220	102
1949	490	217	92
1950	528	170	97
1951	510	160	92
1952	505	156	90

*Source: Statistics of diversified agriculture in Hawaii (annual) 1941-1952. University of Hawaii Agricultural Extension Service.

** Figures for 1942 not available.

In recent years, the Territorial Board of Agriculture and Forestry has been working on the establishment of market grades and standards. Avocados marketed through a farmers' cooperative marketing agency in Kona are tested and graded whether they are seedlings or recognized varieties. For fruit marketed in Hawaii, two grades, "T.H.A." and "T.H.B." are specified. For grade A, freedom from stringiness and a minimum of 8 per cent fat is required. Grade B requires no fat test but it is specified that fruits must not be fibrous or watery. Three export grades have been set up although shipments are still on a limited trial basis. These grades are: Hawaii Fancy, Hawaii No. 1, and Hawaii No. 2. Hawaii Fancy and Hawaii No. 1 must be free of strings and contain not less than 12 per cent fat. A small amount of fiber is permissible in Hawaii No. 2 and the minimum oil content for this grade is 10 per cent.

In Hawaii, consumer preference has developed for the larger avocados weighing from 1 to 3 pounds. The smaller 8 to 16 ounce fruits which are favored on the mainland are not readily accepted, and, even though they may be of the best quality, usually sell at lower prices on the retail market. For this reason, Fuerte and Hass have not become popular varieties although they grow well and produce good crops of high quality fruit.

The shortest supply of good quality avocados is during June and July when fruits of the West Indian race usually ripen. However, few good West Indian types are found in Hawaii at present. Many good West Indian trees were cut down during the past 10

years as a result of heavy infestation of the fruit by larvae of the oriental and Mediterranean fruit flies. The thin-skinned West Indian fruits were so completely infested that many persons chopped the trees down despairing of ever getting avocados free from fruit fly larvae. Formerly, there were many good West Indian fruits marketed, mostly from home grown seedling trees, and, in fact, summer was the season when fruit was most plentiful in the market. The summer market is now supplied to some extent by Guatemalan varieties which tend to be late maturing at elevations above 1,500 feet.

The recognized varieties most commonly seen on the market in quantity are: Beardslee, Nabal, Macdonald, Tumin, Itzamna, Ilialu, Kaguah, Pan-choy, and Manik.

The variety Haley, referred to in the variety check list in the 1950 Yearbook of the California Avocado Society[3] as probably a leading variety, on the basis of early information from Hawaii, is not a leading variety. In fact it is extremely doubtful if the variety even exists at the present time. The original tree has been destroyed and no authentic records of other trees of the Haley variety have been found. Trees listed as Haley in variety collections of the Territorial Board of Agriculture and Forestry and the University of Hawaii Agricultural Experiment Station have been identified as Beardslee, an older Hawaiian variety, similar in varietal characteristics and season. The original Beardslee tree is still in existence, and trees labeled Beardslee and Haley have proved to be of the same variety when checked. Incidentally, the Beardslee variety does not develop purple skin color when ripe as stated in the 1919 Annual Report of the Hawaii Agricultural Experiment Station[1], in Hawaii Agricultural Experiment Station Bulletin 51[2], and in the California Avocado Society Yearbook for 1950.[4] the skin color of Beardslee remains green upon ripening.

There has been a recent reawakening of interest in the avocado as a possible export crop for Hawaii. This has resulted from lifting in 1951 of the ban against the shipment of avocados to the mainland United States, provided the fruit is fumigated to destroy fruit fly eggs and larvae according to treatments prescribed by the U.S.D.A. Bureau of Entomology and Plant Quarantine. The results of a survey of mainland markets have recently been published.[3] the gist of the report is that for the present, Hawaii can expect no more than to supplement California's production during seasons of short supply, and that future market opportunities will depend largely on what happens in western markets and to California's production.

The Hawaii Agricultural Experiment Station is continuing to introduce promising new varieties and to test new seedlings of local origin in the hope of getting better summer and early fall varieties to fill in these periods when high quality fruit is often in short supply. Types acceptable to mainland markets are also being kept in mind, should an export trade eventually develop.

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