

## Hawaii's Avocado Industry. A Marketing Threat to California Production?

### Historical Background

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King Kamehameha the Great, the "George Washington" of the Hawaiian Islands, appointed a European as the royal horticulturist in the early 1800s. In 1853, he arranged for the first planting of seedling avocado trees in Lahaina, the old whaling capital on the island of Maui. Even at this early date, there was speculation that the avocado might have value as an export to the west coast of the United States.

Avocado, or "alligator pear," quickly became a popular "backyard" crop. Most fruit was produced on seedling trees or on cultivars of local origin. There was little commercial production.

### Recent History

In the 1980s, two events triggered the emergence of an avocado industry in Hawaii:

1. The percentage of trees planted to a cultivar named 'Sharwil' passed the 50% mark. The fruit produced was green when ripe, pear-shaped, with a small seed, and matured in the winter. Previous production was dominated by seedling trees that produced variable fruit. Island consumers became accustomed to it, and 'Sharwil' emerged as the "standard" for the fledgling industry.
2. Growers, packers, and distributors formed the Hawaii Avocado Association. They actively promoted consumer use of the fruit and petitioned the USDA to allow the export of avocado to the US mainland from Hawaii. This would exempt it from quarantine regulations against the export of fruit which might spread fruit fly.

### Current Situation

The most recent *Hawaii Agricultural Statistics* book reported in 1992 that there were 100 farms in the islands producing avocado. A total of 500 acres were planted, of which 220 contained bearing trees. The average yield was 3,200 pounds per acre, and the average farm price for the year was \$0.46 per pound. The value of farm sales was \$322,000.

Most of the state's avocado is grown on the volcanic slopes of Kona on the "Big Island" of Hawaii. Farms at lower elevations produce the early fruit.

### **Critical Event**

In October of 1990, the USDA lifted the quarantine on shipping 'Sharwil' to the west coast, declaring that the cultivar was not a host to fruit flies. Growers and shippers scrambled to establish practices for air shipment. There was suddenly new interest in establishing industry standards, particularly for maturity indexes.

The export of the fruit to California was a short-lived boom. USDA inspectors found 'Sharwil' fruit in a Big Island orchard infested with Oriental fruit fly. All mainland shipments were immediately stopped.

The present situation, according to Glenn Heensdale of the USDA Plant Protection Service, is that "all movement of fresh avocado to the mainland is prohibited."

Rick Robinson wrote in *Aloha Avocado*, an industry newsletter, that "USDA-ARS research of avocado will restart from scratch" and focus on: (1) why and under what conditions 'Sharwil' is stung by fruit flies, and (2) finding a treatment that controls the pest in harvested fruit without damaging the fruit. Some treatments under consideration are heat, cold, and methyl bromide. The last controls the insect infestation, but causes the fruit to blacken.

### **Conclusions**

Returning to the initial question of whether Hawaii's avocado industry poses a marketing threat to California production, we can conclude that it does not.

Short-term, it is unlikely that an effective treatment to control the pest without damaging the fruit will be developed in the near future. Long-term, the Hawaii avocado industry is small, with only about 200 bearing acres; and California currently provides over 50% of the avocados (the variety is 'Hass') sold in Hawaii's supermarkets. Each year, the popularity of 'Hass' has increased.

The slight chance for any great change in Hawaii's avocado industry depends upon the development of effective methods of controlling fruit fly infestation and root rot. If these should occur, then the industry growth will depend upon whether the ban on export is permanently lifted, inspiring renewed confidence of the farmers to invest in the crop. Planting could then be directed to the Hamakua region of the Big Island, where sugar is being phased out, making 35,000 acres of land potentially available for new crops. The area has high rainfall, and the soils are heavy clays that are prone to root rot. Tree-crop production is one of the recommended alternatives for the acreage. Avocado could be one of the next crops if control methods for fruit fly and root rot are developed.

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