

THE FLORIDA AVOCADO INDUSTRY

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ACREAGE and PRODUCTION

The records available indicate that the avocado was first introduced to Florida in 1833. By 1900, a few growers had established small seedling orchards in the vicinity of Miami, and, by 1920, several hundred acres of budded trees had been planted. During the 1939-40 season, commercial production reached about 88,000 bushels (55 lbs.), produced on an estimated 2,500 acres of bearing trees. In the 1950-51 season, about 4,000 bearing acres produced 220,000 bushels. In the 1955-56 season just closed, the Florida Avocado Administrative Committee reported that a total of 516,000 bushels were marketed. Unfortunately, no accurate statistics are available indicating the current acreage planted to avocados in Florida. From correspondence with county agents and others, it is estimated that this 1956 production came from about 8,500 bearing acres, with about 8,000 located in Dade County and 500 mostly in Highlands, Martin and Pinellas Counties. A high proportion of this bearing acreage is quite young, and may be expected to continue to increase in bearing capacity for some years. There is an additional 2,000 or more acres of young plantings which have not yet come into commercial bearing, located mostly in Dade County.

From these figures, it is clear that the Florida avocado industry is growing very rapidly. Production has more than doubled in the past five years, and is likely to double again in the next five years if no major disaster interferes. Also, there has been a trend to varieties which mature a large portion of the crop in the period from October through December. This trend to late fall varieties will probably continue.

VARIETIES

Of the 516,000 bushels produced in Florida in 1955-56, about 44 per cent of the production was accounted for by Booth 8, Lula, Waldin, and Booth 7. The remaining 56 percent of the production was distributed among about 30 varieties. In the opinion of many, such varieties as Winslowson, Itzamana, Schmidt, Collinson and others need elimination by topworking to make for greater standardization. Harvesting of Waldin begins early in August, and is usually nearly complete early in October. The Booth 8 season begins in the latter part of September, and is about finished by the middle of December. Lula and Booth 7 begin around the middle of October and wind up around

the first of February. Currently, the major part of the harvest season for the entire Florida crop is the period August through February, with September, October, November, December and January being the peak months in which about three-fourths of the crop is marketed.

The leading Florida avocado, currently being planted, is Booth 8. The next most popular variety, being currently planted, is the Lula, which, together with Booth 8, accounts for about seventy-five per cent of new plantings. About 15 per cent are Booth 7 and W.aldin. Miscellaneous varieties account for the remaining 10 per cent.

Despite the improvement in varieties now being- planted over those used 20 years ago, Florida growers do not feel that they have yet achieved a satisfactory solution to their variety problems. They would like improved summer-maturing sorts resistant to scab and cold. Also, good hardy late-maturing sorts are needed. Little or no work has been done on rootstocks for avocados in Florida.

PRODUCTION OUTLOOK

Under favorable conditions in the Homestead area, a planting of Booth 8 will begin substantial commercial production in three years and may be virtually in full production after 7 or 8 years. A fifteen-year-old Booth 8 orchard would be considered, by successful growers, a poor producer at 125 bushels per acre, an average producer at 250-300 bushels per acre, and 400-500 bushels per acre would be considered good production. Cash production costs range between \$250 and \$350 an acre per year. Average production per acre is, of course, currently much lower because of the high proportion of young orchards, and many marginal orchards.

In Dade County, most of the choice avocado land has now skyrocketed to about \$1,500 per acre because of subdivision activity. In the opinion of many, very little land purchased at this price will be planted to avocados. Land that is now being planted to avocados was purchased several years ago, at less than \$300 per acre. Raw land costs about \$50 an acre to clear, and another \$150 to \$175 an acre to scarify and ditch. The current high price of land will sharply limit further planting of avocados in the Homestead area rock lands.

In the Lake Placid area, avocado land is worth about \$300 an acre and can be prepared for planting for about \$50 to \$100 an acre. This area is characterized by deep, very sandy soil. There is some apprehension on the part of avocado growers on this sandy land, because it has been discovered that the spreading decline nematode is frequently found associated with avocado roots. Until its effect on the avocado is clarified, rapid expansion of avocado plantings in this area is unlikely. However, land at a reasonable price is much more available than in the Homestead area.

FERTILIZATION and PEST CONTROL

In the Dade County area, the common practice is to apply 4 or 5 applications per year of mixed fertilizer like 6-6-6, containing also 3 or 4 units of MgO. Some growers use urea sprays in connection with pest control programs. One of the serious problems in Florida

is a fungus disease known as "scab", which scars the fruit. For susceptible varieties, one dormant copper spray is recommended in December or January before bloom; another (sometimes with zinc and manganese added as nutritional) when the fruit are .about pea sizej another in May and a final in June. Also, two or three scalicides may be applied before fruit set. Mite and thrips sprays are applied as needed, and sulphur may be applied in the spring for spider control. The biggest hazards to avocado production in the Homestead area are hurricanes, and their aftermaths, floods.

PROPAGATION

Seeds are planted in beds or directly in containers about September 1. The sprouted seeds are transferred to tar paper or other containers about 6 to 8 inches in diameter and 9 to 12 inches deep around November 1. When they have a caliper of about 3/16 to 5/16 of an inch, the side graft, or veneer graft is inserted. The scion wood used is obtained from terminal soft wood. The tops are lopped off after the buds or grafts have taken. The lopping cut is painted with asphalt. The plants are taken out of the lathhouse into full sun about 60 days before planting in the field, which is usually done between April and June. Hence, propagation requires only 6 to 9 months. In Florida, almost all of the avocados propagated are handled in this- way. In large lots, such container-grown nursery plants sell for around ninety cents to one dollar each. Originally, the rootstocks used in Florida were miscellaneous seed imported from Cuba in July and, hence, would be West Indian. A quarantine on seed weevils stopped this. Now seed of the Waldin variety, a West Indian type, is widely used for commercial propagation because it matures at a convenient time to plant and is readily grafted. Many of the old groves in the ridge section of Florida are propagated on Lula seed.

Avocados in Florida may be very readily topworked, and can be back in production at the end of 18 months. As a general rule, the cuts for cleft grafting are made about January 1. Wood from 1-year-old growth is obtained, leaving one internode above the inserted portion of the scion. Winter and summer soil and air temperatures average about 10 degrees higher in Florida's avocado growing areas than in California's, hence, the very rapid regeneration of a new bearing top after topworking. A marketing order, under the supervision of the U. S. Department of Agriculture, was voted in July, 1954, to regulate the handling of£ avocados in Florida. This program is the responsibility d the Avocado Administrative Committee, composed of elected members from the Homestead (Dade County) and Lake Placid (Highlands County) districts. So far, the committee has sought to make for a more orderly marketing of higher quality fruits by imposing by varieties minimum weight and earliest date maturity and other grade standards, standardizing containers, controlling exports, and otherwise regulating shipment to markets.

MEDITERRANEAN FRUIT FLY

In April, 1956, the State Plant Board of Florida announced that an infestation of Mediterranean fruit fly, *Ceratitidis capitata*, had been found in Florida in the Miami area. Recent survey reports (June) indicate that it has been found in the avocado producing

area of Dade County below Miami. In addition, it is reported in at least 16 counties in the southern half of the state, including Highlands County, which is next to Dade in importance in the production of avocados.

Just what effect of this infestation with this serious insect pest will have on the shipment of avocados out of the infested area and to other states remains to be determined. Currently, shipment of avocados from Hawaii to the mainland is prohibited because of the danger of introducing this and closely related insect species. So far, a completely satisfactory method for fumigating avocados to eliminate this insect has not been devised.