

THE SAN DIEGO COUNTY AVOCADO INDUSTRY— 1975

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I. Introduction

The avocado industry in San Diego County has expanded rapidly during the last five years. Despite the high development costs and high land costs, acreage has been planted at an unprecedented rate. This is the second expansion period. The first one occurred between 1945 and 1959.

Most of the orchards are being planted on relatively steep hillsides, ranging from 30 % to 60 % slope. Land values for virgin, uncleared and developed land are from \$3,000 to \$7,000 per acre. Planted orchards up to 3-5 years of age bring \$8,500 to \$12,500 per acre. Asking price for mature and producing orchards are between \$15,000 and \$20,000 per acre.

The great interest in planting and growing avocados is directly related to the improved grower returns during the last three to five years. The industry average return to growers (cents/pound) ranged from 18c in 1970-1971 to 45c for the 1971-1972 crop. Production has been steadily increasing and the largest crop on record was approximately 205,000,000 pounds in the 1974-1975 season. The high grower returns are the result of; 1) more favorable supply and demand relationship in the industry, 2) improved marketing procedures and strategies by growers and handlers, and 3) the extensive trade promotion and advertising programs operating under a state marketing order.

II. Acreage

According to the most recent industry acreage survey, conducted by the California Crop and Livestock Reporting Service, with a grant from the California Avocado Advisory Board, San Diego County is the leading avocado county. The 1974-1975 state avocado acreage was reported as 25,705 acres, with a total of 13,420 acres in San Diego. The up-dated 1975 total acreage is 18,463 acres out of the state's 38,659 acres.

Included in the 18,463 acres are, 13,755 bearing acres, and 4,708 non-bearing acres. Ventura County is second with 9,219 total acres, followed by Santa Barbara County with 4,369 acres. In San Diego County, 1,363 acres were planted in 1973, 1,781 acres in 1974, and 1,305 acres in 1975, through mid-September. The future trend indicates increased plantings.

Commercial avocado production is concentrated in an area bounded by the Riverside County line on the north; Bonsall and Vista on the west; Rincón Springs and Pauma Valley on the east; and Poway on the South. The old areas of La Mesa, El Cajón and the coastal cities still contribute some fruit from the trees that are still productive. Very few orchards in these areas, however, are large acreages. Most of them are being

cared for by the people who have built a home on a half-acre, an acre, or two acres. The newest areas for the development of avocados are in Highland Valley, (Ramona), Lilac, Valley Center, Rainbow and Bonsall. These districts either adjoin or are in between the older commercial areas of Fallbrook, Pauma Valley, Vista and Escondido.

III. Varieties

The varietal composition is changing in San Diego County as it is throughout California. Five varieties are recommended for commercial planting; Fuerte, Hass, Zutano, Bacon and Reed. There are other varieties, or a mix of varieties depending upon the size of the acreage. The larger the acreage, the more chance there is for a grower to plant more than one variety. Following is a resume of the varieties planted and the total acres of each:

<i>Variety</i>	<i>Total Acres</i>
Fuerte	8,124
Hass	7,243
Zutano	1,160
Bacon	902
Others (Jim, Santana, Covocado, Nabal, etc.)	512
Reed	323
Jalna	195
Rincon	3
Mac Arthur	1
Total	18,463

Since 1965 there have been more Hass trees planted than any other variety. Peak planting was reached in 1974 when 1,296 acres were planted. Hass continues to be the leading variety in the state with a total of 19,210 acres, of which 8,047 acres are non-bearing. Fuerte is second with 10,152 acres, with 1,252 acres non-bearing. Bacon is third with a total of 4,200 acres, and 1,845 non-bearing acres.

Avocados from San Diego County are marketed each month of the year, with light supplies in September and October. The marketing season begins November 1. Zutano and Bacon, which are planted primarily in cold areas, are harvested from October to January. The Fuertes are marketed from November to April. Hass can be marketed as early as February, but the usual harvesting period is from April to August. The Reed has a marketing season from July to September.

Other varieties are being grown, but on a limited scale. Newly introduced varieties such as Jim, Santana and Susan are being tested around the county to determine their bearing habits under different climatic conditions. Some old varieties are still being grown on a limited basis and they are: Anaheim, Nabal, Wurtz and Jalna.

IV. Production Problems

A. *Yields.* Fuerte production continues to be erratic. Alternate bearing is marked, and the fruit set is definitely influenced by climatic conditions during the months of April and May. Hass crops have been larger than the Fuerte on less acreage. The early production of the Hass, plus the large amount of fruit produced, makes this variety more desirable, and are the reasons for its increased planting. The Reed is increasing in popularity as a new variety because fruit quality is excellent and production is good. The Reed is a round fruit weighing up to a pound and looks similar to the Nabal fruit. The internal (eating) quality is good. Increased numbers of cross-pollinator varieties are being planted among Fuerte and Bacon trees to aid in increasing their yields. They are Topa Topa, Zutano, Covacado, and other Mexican varieties.

B. *Diseases.* Avocado root rot continues to be the most serious disease affecting the avocado industry. Sunblotch is being gradually reduced by the fine work of nurserymen in good bud selection and seed selection. A relatively new malady is affecting Guatemalan type varieties, such as Hass and Reed. During the last two years there has been an increased number of trees, both young and mature, that developed a "bleeding" problem. A sugar exudation with some reddish-brown discoloration occurs on the trunk and branches of the affected tree. Trees eventually die, some in a short period of time and others over a year or two. Cause of the problem is unknown, as is a cure.

C. *Pests.* Brown mite is the pest giving the industry the most problem. Natural build-up of beneficial insects such as the Stethorus beetle, reduces the amount of leaf damage and the number of mites on the leaves. All other pests seem to be under biological control. Only occasionally there will be flareups of pests such as looper, latania scale, and greenhouse thrips. Control of ants and dust helps make biological control more effective.

D. *Water Quality and Quantity.* Colorado River water is used on most avocado orchards in San Diego County. Water quality is adequate. The only exception is the relatively high level of chlorides. The avocado tree is sensitive to this specific ion and less leaf damage would result if the chloride content were lower. With proper irrigation, including periodic leaching, the tipburn of the leaves can be kept to a minimum. Quantity of water should be sufficient for the future with the addition of the California Aqueduct water. There will be less chlorides and less total salts. The blending of Feather River and Colorado River water will result in better quality, at a higher cost.

E. *Labor.* Labor supply will become increasingly hard to obtain. If labor is available, the cost will be high. The avocado growers should give considerable attention to labor saving devices and methods in their operation. If a grower can 'do most of the work himself, with a minimum of hired help, the net return should be good, providing the production is high.

F. *Material Costs.* The materials needed for production of avocados will continue to rise in cost. The materials include water, fertilizer, weed oil, rodent control baits, etc.

V. Marketing

There are two types of marketing organizations and philosophies of marketing: (1) Cooperative, and (2) Cash Buyer. There is one cooperative packing house, another cooperative's receiving dock, and ten cash buyer packing houses. An avocado growers' bargaining group was formed two-three years ago to handle members' fruit. Harvesting is done by the grower, or by picking crews supplied by packing houses. Field boxes used in harvesting vary with packer. One packing house uses a bin that holds 800-900 pounds of fruit. Another uses a bin half this size, or about 400-450 pounds. One cooperative is using bins and field boxes. Other packers use field boxes of various shapes and sizes and hold 35-45 pounds. The standard field box is 40 pounds. Increased emphasis is being placed upon improved fruit handling so fruit of higher quality reaches the consumer. Advertising and sales promotion is accomplished through a marketing order paid for by the growers.

VI. Future Trends

Acreage in San Diego County continues to increase. It is estimated that there is a potential for at least 25,000 acres in the county as compared with the present state acreage of about 38,659. Production will continue to increase, not only because of more trees coming into bearing, but because of improved cultural practices, use of cross-pollinators, and a better understanding of how to handle the crop. Costs will continue to spiral. This means the grower must do a lot of the work himself, as well as become increasingly efficient in irrigation practices, in the use of various fertilizer and herbicide materials, and pursue an excellent weed and rodent control program. Varieties should be confined to Fuerte, Hass, Bacon (in the cold areas), and possibly the Zutano and Reed.

Problems affecting the grower will be similar to what they are today. Solution to the root rot disease, especially the development of resistant rootstock to this disease, is being diligently worked upon. Production of high quality fruit must be increased. Though there are many problems in the cultural field to be solved, there are just as many in the marketing field. Improved fruit handling, more widespread distribution of fruit, increased promotion of avocados, and utilization of latest marketing techniques should go hand in hand with increased production of higher quality fruit. The industry is relatively small compared to other commodities, but with proper promotion and advertising, a cooperative spirit throughout the industry, and a constant search for ways to improve every facet of the industry can only result in an expanded and profitable industry.

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