

ECONOMIC TRENDS IN THE CALIFORNIA AVOCADO INDUSTRY

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INDUSTRY HIGHLIGHTS

The California avocado industry is now in the second expansion period in twenty years. Improved returns in the 1940's led growers to expand total acreage during the period 1945 to 1959 by close to 50%. The resulting larger crops during the late 1950's and early 1960's brought depressed markets and a low level of new plantings during the early and mid-1960's. For the last ten years, total state bearing acreage has remained close to the 22,000-acre level and annual production, while varying widely from year to year, has averaged around the 100-million-pound level.

Since the early 1960's, grower returns have improved as a result of the more favorable supply and demand relationship in the industry, the extensive trade promotion program operating under a state marketing order, and improved marketing procedures and strategies by growers and handlers. Currently the rate of new planting is increasing and higher levels of acreage and production are projected for the remainder of the 1970's. Projections also indicate a changing varietal composition in the crop in the years ahead. The trend is toward increased acreage of the Hass variety relative to the Fuerte variety and proportionately larger spring, summer, and fall crops than in past years.

During this period of growth, the industry should be alert to the opportunities of orderly growth as well as to the dangers of excessive expansion. Increased production is needed if California is to supply the expanding market for avocados in the United States. Otherwise, other production areas may supply the market. Excessive expansion, particularly in certain varietal groups, could lead to marketing problems and lower grower returns.

Because of the difficulty of measuring the extent and the effect of the current expansion upon markets, growers should continually evaluate and revise their plans based on information as it becomes available. The rate of expansion of the industry and its effect on future grower returns will largely be determined by the following factors: 1) The loss of existing avocado acreage in California resulting from root rot infection and the encroachment or urban land uses; 2) The availability of land with suitable soil, climate and water available for new plantings and the high cost of orchard development; 3) The expansion of avocado production in other competing areas both domestic and foreign and changes of movement of avocados in foreign trade; 4) The success of the industry promotion program in creating demand in line with expanded production; and 5) The ability of growers and handlers to orderly market the crop.

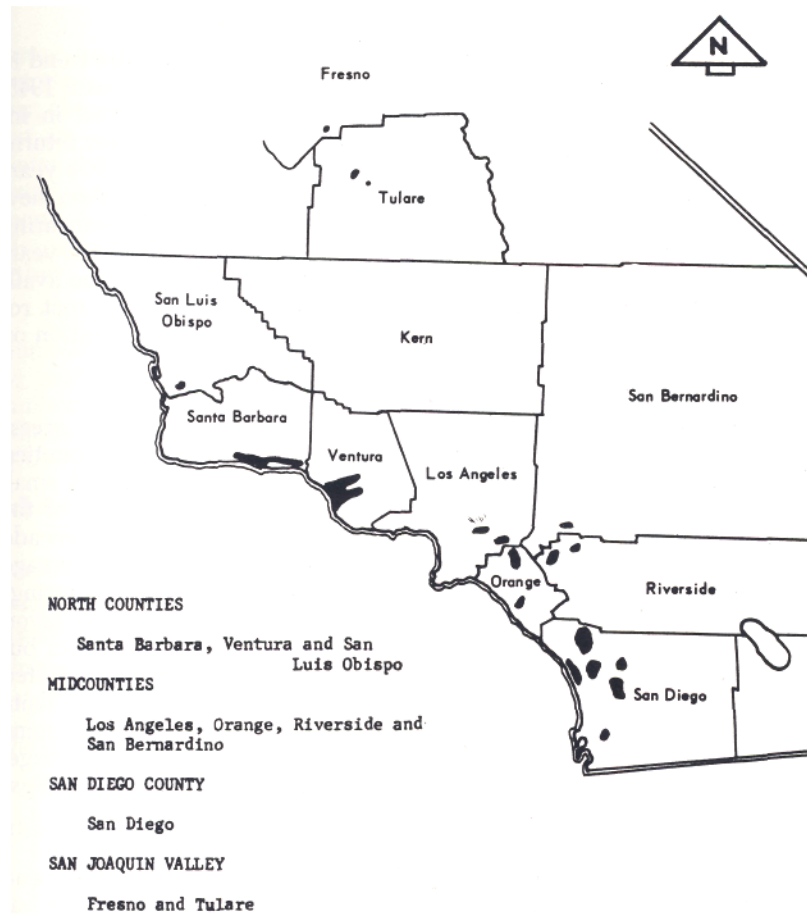


FIGURE 1. COMMERCIAL AVOCADO PRODUCTION DISTRICTS IN CALIFORNIA

THE CALIFORNIA INDUSTRY

Commercial plantings of avocados in California started in the 1920's with a noticeable expansion in the 1950's and the current expansion starting in the late 1960's. California currently has nearly 22,500 acres of avocados, most of which are planted in the southern counties of the state including San Diego, Ventura, Santa Barbara, Los Angeles, Orange, Riverside, and San Bernardino. A small but expanding area is developing in the San Joaquín Valley.

Since the 1961-62 season, the California avocado industry has operated under a state marketing order designed to increase the demand for California avocados. Under the order a comprehensive trade promotion and advertising program for California avocados has been financed through grower assessments.

Total California Acreage

Total avocado acreage in California expanded from the 16,000-acre level in 1945 to the 25,000-acre level in the late 1950's and since that time has leveled off close to the

22,000-acre level. Figure 2 shows the trend in bearing, nonbearing, and total avocado acreage for California since 1945. During the late 1940's and early 1950's, new plantings resulted in increased bearing acreage. Larger crops followed resulting in lower returns and a slowing of new plantings. Nonbearing acreage (acreage five years of age or less) reached a low of 1,224 acres in 1964. Since then new plantings have increased nonbearing acreage, with 4,227 nonbearing acres reported in 1970. Most of the 1970 bearing acreage is over ten years of age. Future increases in total acreage will be influenced by the availability of suitable land with water and the effects of avocado root rot fungus (*Phytophthora cinnamomi*), and the pressures of urbanization on avocado acreage.

California Acreage by Districts

Avocado acreage in California can be divided into three areas: 1) San Diego County; 2) the midcounties; and 3) the north counties. The trend in acreage in these three areas is shown in Figure 3. A small but expanding area is developing in Tulare and Fresno counties of the San Joaquín Valley. San Diego County leads all counties in avocado acreage, accounting for 57% of total state acreage. The greatest acreage increase in this area occurred in the late 1940's and early 1950's. Plantings are heavy to the Fuerte variety with the Hass variety gaining in favor. Acreage in the midcounties remained stable for a number of years but began to decline significantly in 1960. This area has been most affected by urbanization. Acreage in the north counties of Ventura and Santa Barbara is increasing. Summer varieties, predominantly Hass with some acreages of MacArthur and Rincón, make up the bulk of the acreage. Closer tree spacings of this area of high producing varieties such as Hass are resulting in high yield per acre.

California Acreage by Varieties

The two principal varieties grown in California are the Fuerte and Hass. Fuerte, a green-skinned fruit classified as a fall and winter variety, is marketed mainly during November through May. Hass, a dark-skinned fruit classified as a spring and summer variety, is marketed mainly during May through November, although some shipments occur during most other months of the year. While it should be recognized that time of harvest of different varieties varies somewhat from year to year, the general practice is to refer to all varieties marketed during the first six months of the season (November through April) as fall and winter varieties and the second six months (May through October) as spring and summer varieties. Principal fall and winter varieties are Fuerte, Bacon, and Zutano with most of the Rincón also marketed during this period. Principal spring and summer varieties are Hass and Mac-Arthur.

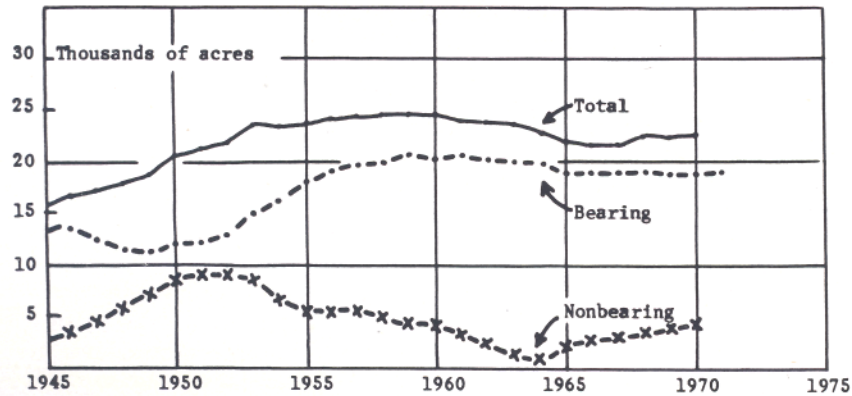


FIGURE 2. CALIFORNIA TOTAL AVOCADO ACREAGE, BEARING AND NONBEARING

The trend toward increased Hass acreage relative to Fuerte acreage continues. The trend in total acreage of the two varietal groups during the period 1958 to 1970 is shown below. Projections based largely on numbers of avocado trees available for sale by nurserymen in California indicate that this trend will continue and could accelerate into the late 1970s.

Fall & Winter	1958		1970		Spring & Summer	1958		1970	
	acres					acres			
Fuerte	17,766	10,155	Hass	3,265	7,484				
Bacon	318	1,373	MacArthur	679	704				
Zutano	497	857		3,944	8,188				
Rincon	612	487							
	<u>19,193</u>	<u>12,872</u>							

Source: California Crop & Livestock Reporting Service, Sacramento

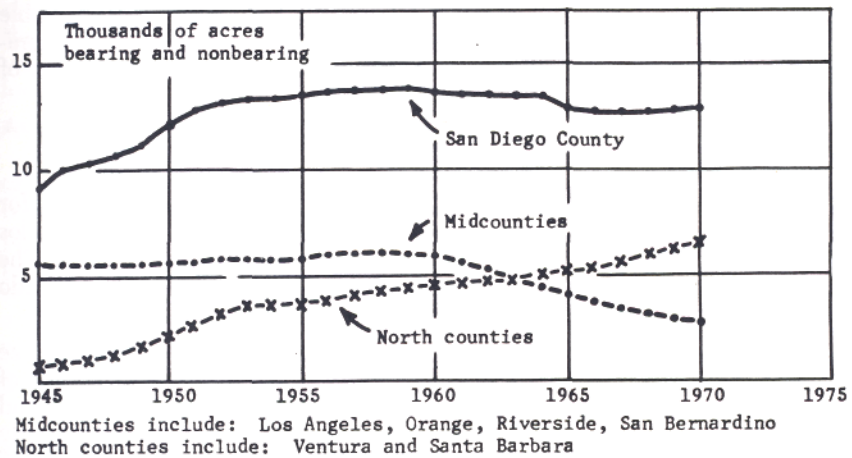


FIGURE 3: CALIFORNIA TOTAL AVOCADO ACREAGE BY AREAS

OTHER U. S. PRODUCTION AREAS AND IMPORTS

Florida

Florida has produced avocados since the 1930's with the industry centered in Dade County in the farm area just south of Miami. Total acreage in Dade County at the end of 1971 was reported at 6,028 acres, up 12 percent from the 5,381 acres reported two years earlier. Most of the acreage is 15 years of age or older with 3,861 acres planted prior to 1955. During the period 1966 to 1971 new acres planted amounted to 1,273 acres or 21.6 percent of the total. Some interest in increased plantings is evident but urban expansion, high costs, not to mention hurricanes are tending to limit the industry to about its present size.

Other States

Small acreages of avocados supplying local markets have been grown in Hawaii for a number of years. Growing avocados has been tried in the lower Rio Grande Valley of Texas but severe freezes have limited commercial production.

Imports

Wide variation has occurred in the quantity of avocados imported into the United States. Prior to 1961 substantial quantities were imported from Cuba ranging from five to nine million pounds annually. Since that time imports have been relatively small. However, imports have increased since 1969 reaching 2.2 million pounds in the year beginning July 1, 1970. The principal supplier of these imports was the Dominican Republic.

Mexico and other Latin American countries produce and consume large quantities of avocados but none are exported to the United States. The main factor limiting imports has been regulations to protect the U.S. industry against seed weevil and various other fruit flies common in tropical countries and islands south of the United States. Duty on imports is 7.5c per pound the year around on all imports fresh and processed.

Mexico has an avocado industry equal to or larger than that of California. Reliable records of acreage and production are not available but informed sources indicate Mexican avocado acreage with a magnitude of 30-40,000 acres, much of which is in young trees five years of age or younger.

U. S. AVOCADO SUPPLY AND PRICE

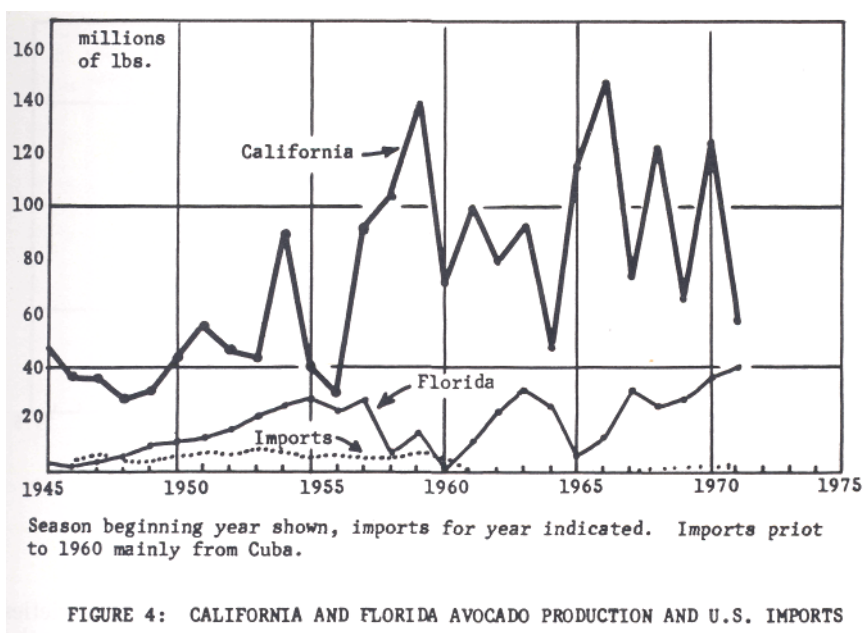
Avocado Supply

California and Florida are the principal suppliers of avocados for United States markets. Before 1961, substantial quantities of avocados were imported into the U.S. from Cuba during the summer months. The trend in California and Florida avocado production and U.S. avocado imports since 1940 is shown in Figure 4.

While the trend in California production has been upward, the size of the crop has

varied widely from year to year. The large crops of 1957-58 to date reflect the heavy plantings during the late 1940's and early 1950's. A severe heat wave in September 1963 and an abnormally cool spring in 1964 contributed to a light fruit set and a small 1964-65 crop. This small crop was followed by the second largest crop of record in 1965-66 and an all-time record large crop in 1966-67. The short crop of 1969-70 was due to a severe freeze in December 1968. A record small Fuerte crop contributed to the small 1971-72 crop.

Florida production has dropped to low levels twice in the last ten years as a result of freeze and hurricane damage. Total production has been increasing since the last hurricane in 1965 and reached a record high of 40 million pounds for the 1971-72 season.



Projections based largely on the number of avocado trees for sale by nurserymen in California indicate that bearing acreage of California avocados could move from the current 18,000-acre level to the 23-25,000-acre level by 1977. Based on these assumptions, total production could rise from the 100-million-pound annual average production potential to the 150-million-pound level by 1977. As in the past, crops from year to year could vary significantly above or below this production potential level.

Avocado Grower Price

The inverse relationship between the size of the California avocado crop and the seasonal average price received by California growers for fruit delivered to the packinghouse can be seen by studying the price and production data in Figures 4 and 5. An upward trend in prices is apparent in recent years but, again, wide fluctuations occur depending upon supply. During the last 15 years average grower prices have

varied from a low of 5.5c per pound during the record large crop of 1959-60 to 33c per pound for the short crop of 1969-70.

Crop Value

The value of the California avocado crop delivered to the packinghouse door after deduction of marketing order assessments, reached \$23,433,000 for the 1970-71 season - over double the value of the crop ten years previous. The gross returns at the packinghouse door on a per-bearing-acre basis have also increased significantly during the last ten years, rising from \$500 per bearing acre in 1960 to \$1,336 per bearing acre in 1970 (see Table 2). The rising trend in grower prices, returns per bearing acre, and crop value since 1960 has resulted largely from the more favorable supply and demand relationships in the industry, the extensive trade promotion program operating under state marketing order, and improved marketing procedures and strategies by growers and handlers.

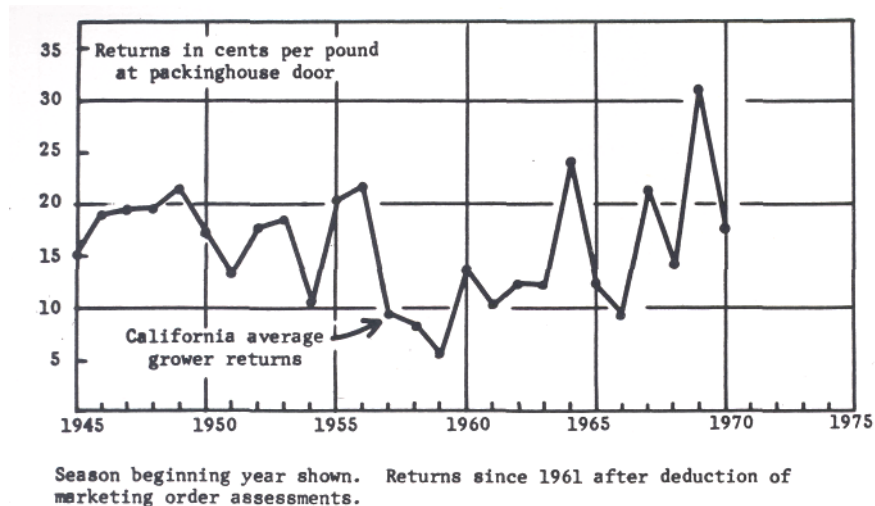


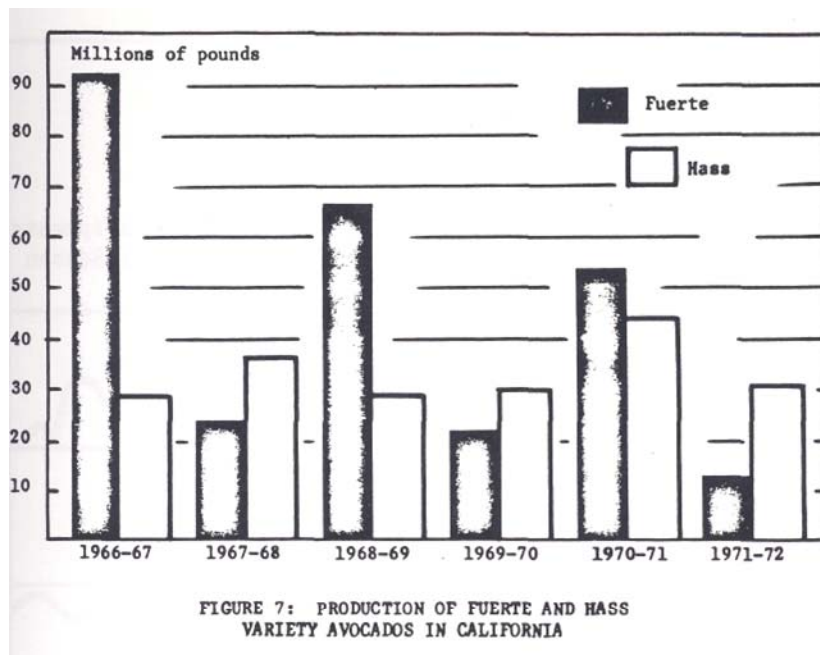
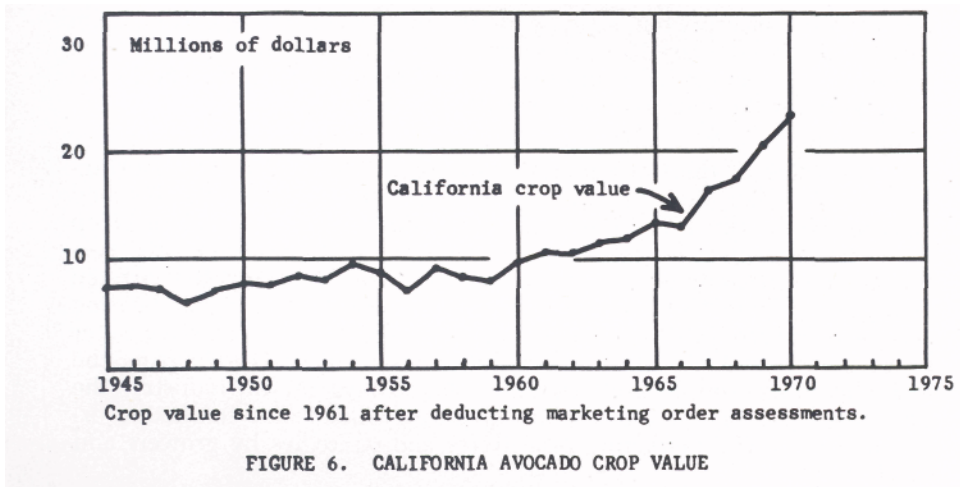
FIGURE 5: CALIFORNIA AVOCADO AVERAGE GROWER RETURNS

California Production by Varieties

The production trend of the two major California avocado varieties is shown in Figure 7. Production of the Fuerte variety was short in the 1964-65, 1967-68, 1969-70, and 1971-72 seasons. The record large crop in the 1966-67 season resulted largely from the record large Fuerte crop: Variations in the size of the Hass crop from year to year have not been as great as for the Fuerte variety. In recent years the Hass variety has accounted for a larger percentage of the total crop with production of Hass in 1967-68 actually exceeding for the first time the size of the Fuerte crop.

The trend toward increased Hass variety production relative to Fuerte production and proportionately larger spring and summer crops continues. Projections of future production based largely on information on the number of nursery trees available for planting indicate that by 1977 the composition of the crop could be 60% Hass and other

spring and summer varieties and 40% Fuerte and other fall and winter varieties. Currently these percentages are reversed.



Weekly Avocado Shipments

The pattern of weekly shipments of California and Florida avocados to market affects prices and grower returns. For this reason growers should study weekly shipment and price information and consult with their handler before picking. This is particularly important at the beginning of the season when price levels adjust to heavier supplies. Under such conditions there is a possibility of growers picking too early and too heavily in an attempt to beat the price decline.

Figure 8 compares the weekly California avocado shipments for the 1969-70 and the 1970-71 seasons. During the 1969-70 season, 65.1 million pounds of avocados were shipped compared with 124 million pounds in the 1970-71 season.

Avocado Prices

For a better understanding of supply and price relationships in the avocado industry, study the two charts below. Figure 9 shows the pattern of weekly shipments of California and Florida avocados for the two seasons 1969-70 and 1970-71. Shipments of the Fuerte and Hass varieties for California are also shown. Compare this shipment information with the corresponding price information shown in Figure 10. Note the inverse relationship between price levels and corresponding weekly shipments. Prices during the 1969-70 season reflected the short Fuerte crop and Hass crop.

WORLD PRODUCTION AND THE EUROPEAN MARKET

The first commercial production outside the western hemisphere was in Israel in the 1950's. Expanding their planting very rapidly, they now have nearly 6,000 acres planted and are expanding at a rate of 300-500 acres annually.

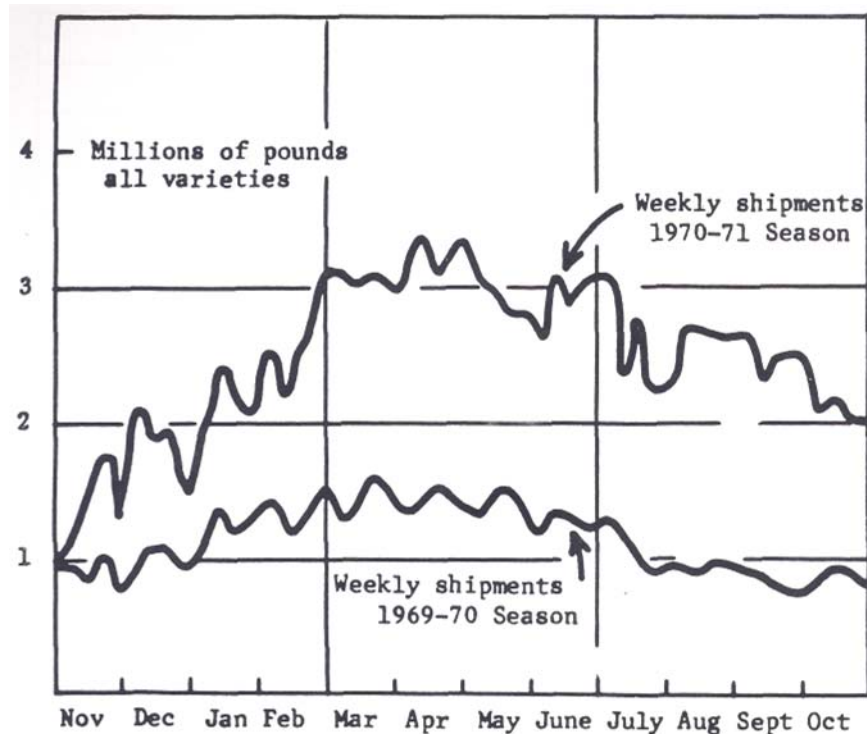


FIGURE 8. CALIFORNIA WEEKLY AVOCADO SHIPMENTS, 1969-70 AND 1970-71 SEASONS

There are many similarities between Israel and California in varieties, production techniques, and maturity. They have exported to western Europe, particularly England

and France, more than 70% of their production. They have advertised their fruit heavily (partly government subsidized) to aid in the expansion of an exportable commodity. Although the Israelis do not have the root rot disease, they have serious problems with irrigation water and salinity.

The Republic of South Africa has an avocado industry consisting of approximately 3,000 acres. Three-fourths of their exports go to the United Kingdom, mainly during the summer months. Although large acreages suitable for avocado production are available in South Africa, the root rot disease is very rampant and a control or prevention procedure is necessary before production can expand.

Other minor suppliers of the growing European market include Martinique, Cameroon, Morocco, Swaziland, Canary Islands, Angola and Kenya.

(Note: Charts in this paper are from tables of data contained in University of California AXT-279.)

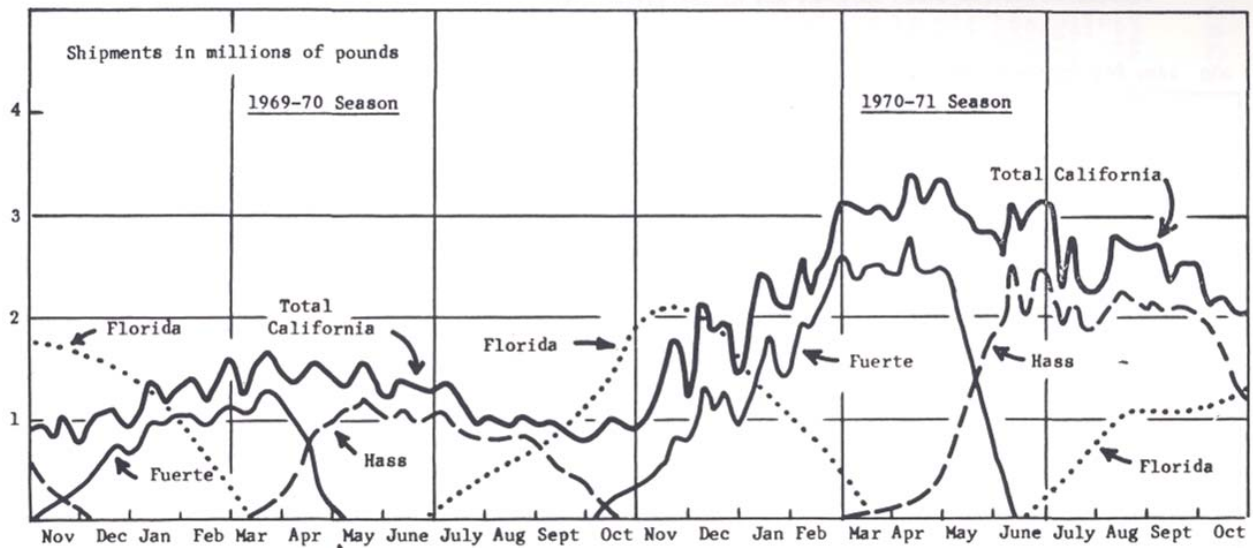


FIGURE 9. WEEKLY SHIPMENTS OF CALIFORNIA AND FLORIDA AVOCADOS, 1969-70 and 1970-71 SEASONS

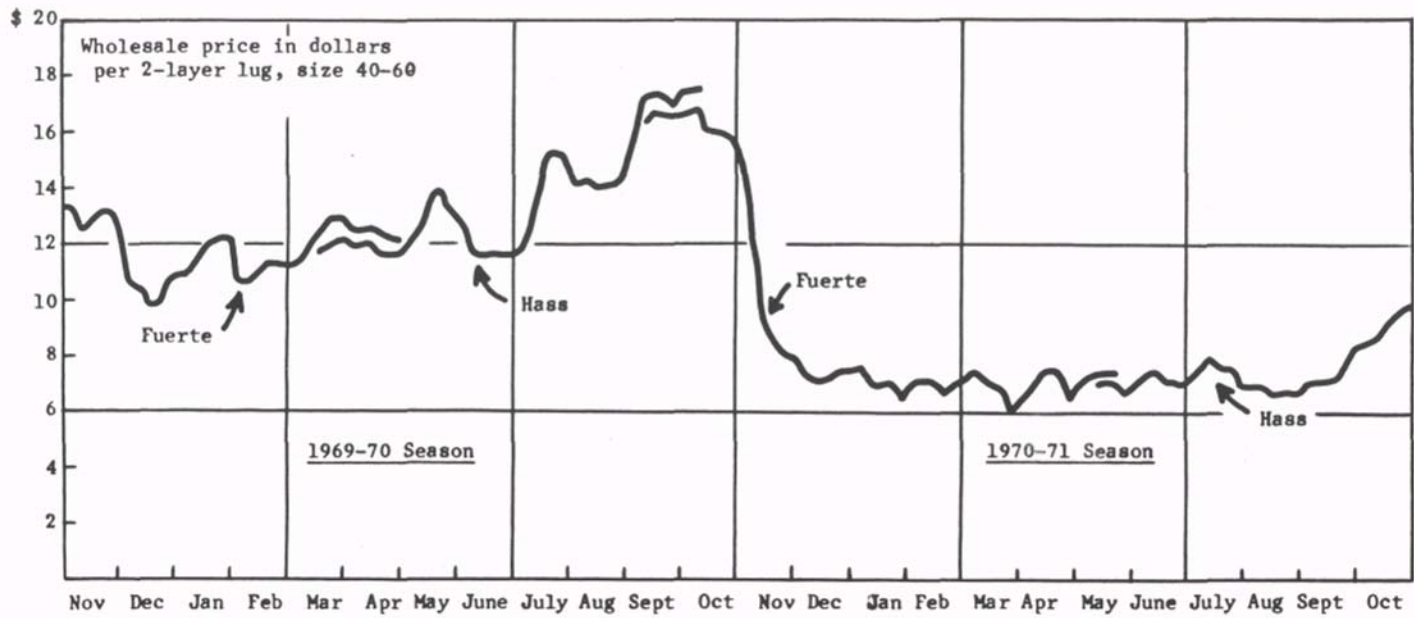


FIGURE 10: WEEKLY LOS ANGELES WHOLESALE MARKET PRICES FOR AVOCADOS, 1969-70/1970-71 SEASONS