

ECONOMIC TRENDS IN THE CALIFORNIA AVOCADO INDUSTRY

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California and Florida are the principal suppliers of avocados for United States markets. Before 1961, substantial quantities of avocados were imported into the United States from Cuba during the summer months.

California currently has nearly 21,000 acres of avocados most of which are planted in the seven southern counties of San Diego, Ventura, Orange, Los Angeles, Santa Barbara, Riverside, and San Bernardino. A small but expanding area is developing in the San Joaquin Valley. During the last three seasons, the size of the avocado crop has ranged from a short crop of 24,000 tons during the 1964-65 season to a record high of 74,500 tons for the 1966-67 season. The 1967-68 season approximated 40,000 tons. Average seasonal grower price has ranged from a low of 5.5 cents per pound for the large 1959-60 crop to a high of 26.0 cents per pound for the small 1964-65 crop.

Varietal differences in maturity date and climatic differences between areas permit avocado harvests every month of the year in California. The two principal varieties are Fuerte and Hass. Fuerte, a green-skinned fruit, is marketed during November through June. Hass, a dark-skinned fruit, is marketed mainly during June through October, although some shipments occur during most other months of the year. A number of other varieties, including Bacon, Zutano, Mac-Arthur, and Rincon, are marketed in smaller quantities.

Florida avocados are principally grown southwest of Miami in Dade County. In recent years, annual production has varied from a low of 1,800 tons in 1960 to a high of 13,900 tons in 1963. The Florida avocado crop is harvested during the summer, fall, and early winter, with heaviest shipments during October, November, and December. Important varieties include Booth 8, Lulu, Booth 7, and Waldin.

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.

The Florida avocado industry has operated under a federal marketing order since 1954. Under this program, the industry operates under regulations covering maturity, grade and size, containers, pack specifications, as well as marketing research and development for Florida fruit.

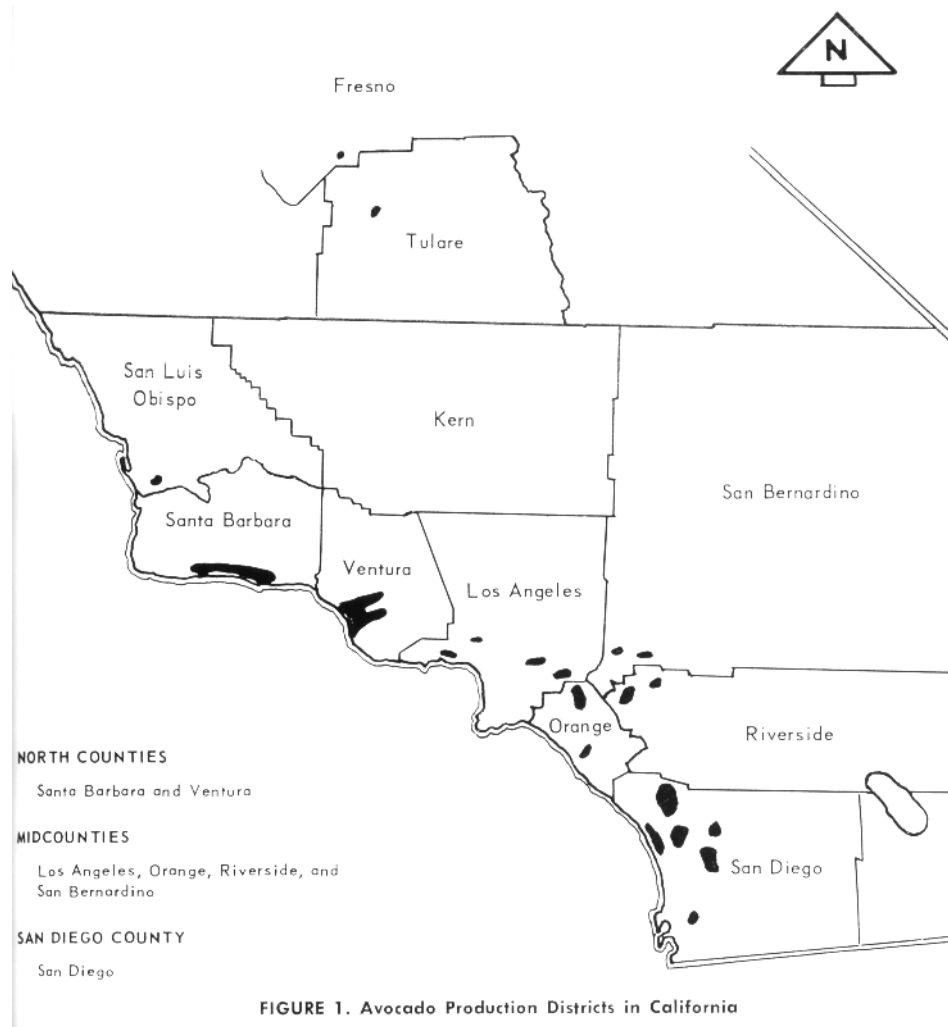
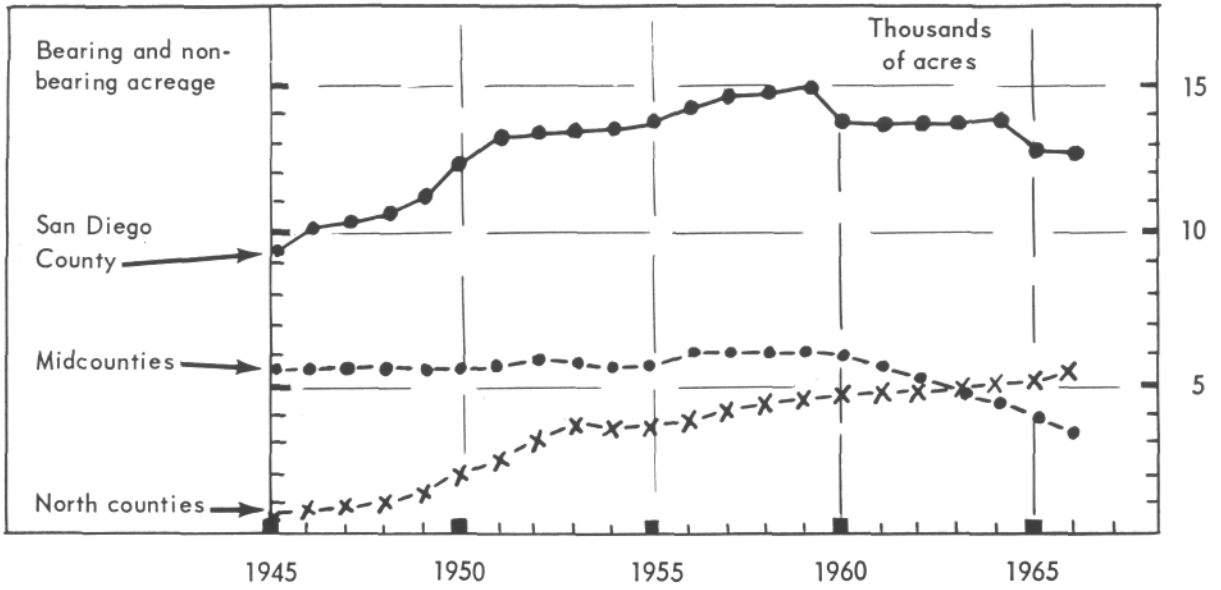


FIGURE 1. Avocado Production Districts in California

California Acreage by Districts

Avocado acreage in California can be divided into three areas: San Diego County, the mid-counties, and the north counties. The mid-counties include Orange, Los Angeles, Riverside, and San Bernardino. The north counties include Ventura and Santa Barbara. The trend in acreage in these three areas is shown in figure 2. A small (approximately 300 acres) but expanding area is developing in Tulare and Fresno Counties.

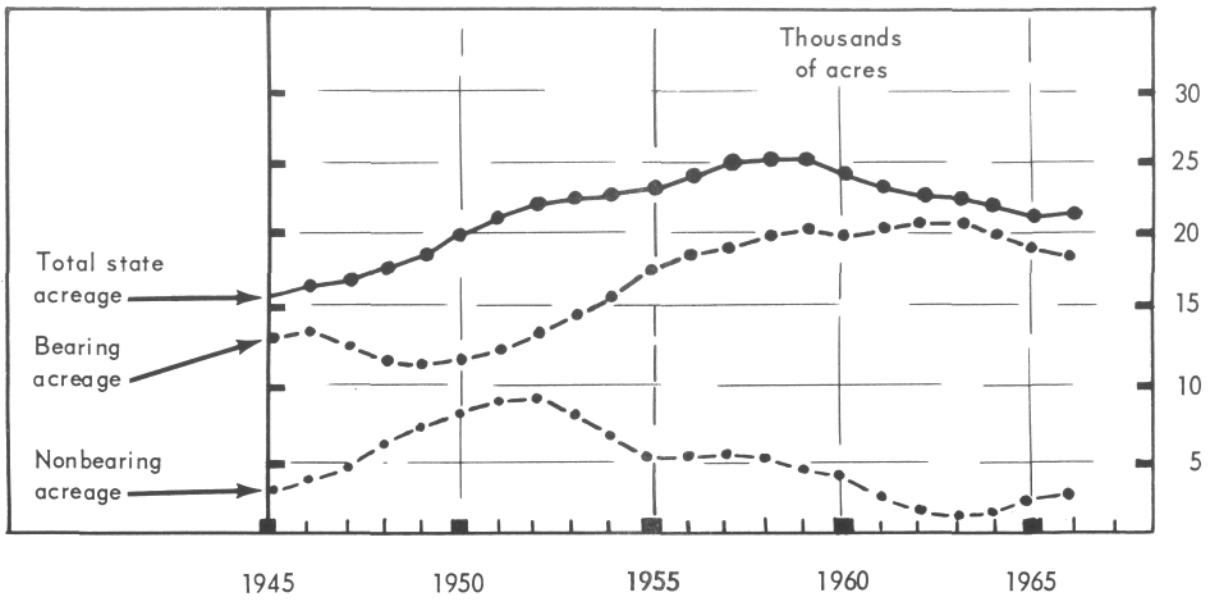
San Diego leads all counties in avocado acreage. The greatest acreage increase in this area occurred in the late 1940's and early 1950's. Plantings are principally Fuerte, which supply a large volume of this variety for market. The mid-counties acreage remained stable for a number of years, but began to decline in 1960. This area has been most affected by urbanization. The north counties acreage is increasing. Summer varieties -- predominantly Hass with some acreage of MacArthur and Rincon -- make up the bulk of the acreage. Closer tree spacing in this area of high producing varieties such as Hass is resulting in high yield per acre.



Midcounties include: Los Angeles, Orange, Riverside, San Bernardino.
 North counties include: Ventura and Santa Barbara.

Source: Table 3

FIGURE 2. California Total Avocado Acreage by Areas.



Source: Table 1

FIGURE 3. California Total Avocado Acreage, Bearing and Nonbearing.

Total California Acreage

Total avocado acreage in California rose from 16,287 acres in 1945 to 21,480 in 1966, a rise of 32 percent. Figure 3 shows that this increase has not been constant. During the late 1940's, bearing acreage actually declined from 13,403 to 11,292 acres, which contributed to the favorable supply and demand relationship of that period. Larger crops followed, resulting in lower returns and a slowing of new plantings. Nonbearing acreage reached a low of 1,224 acres in 1964. The pressure of urbanization on avocado land and the effects of the avocado root rot fungus (*Phytophthora cinnamomi*) were also factors tending to limit net increases in total acreage. New plantings have been increasing since 1964 and nonbearing acreage stood at 2,860 acres in 1966. The sharp drop in acreage between 1964 and 1965, indicated on figures 2 and 3, is partially the result of revisions of acreage estimates in San Diego County following a complete tree census in 1965.

Florida Acreage

A survey in 1965 by the United States Department of Agriculture reports 5,120 acres of avocados, averaging 100 trees per acre and consisting of a total of 512,000 trees. Of this total 57 percent of the acreage was planted before 1950, 35 percent during the 1950's and 8 percent of the acreage from 1960 to 1966.

Avocado Supply

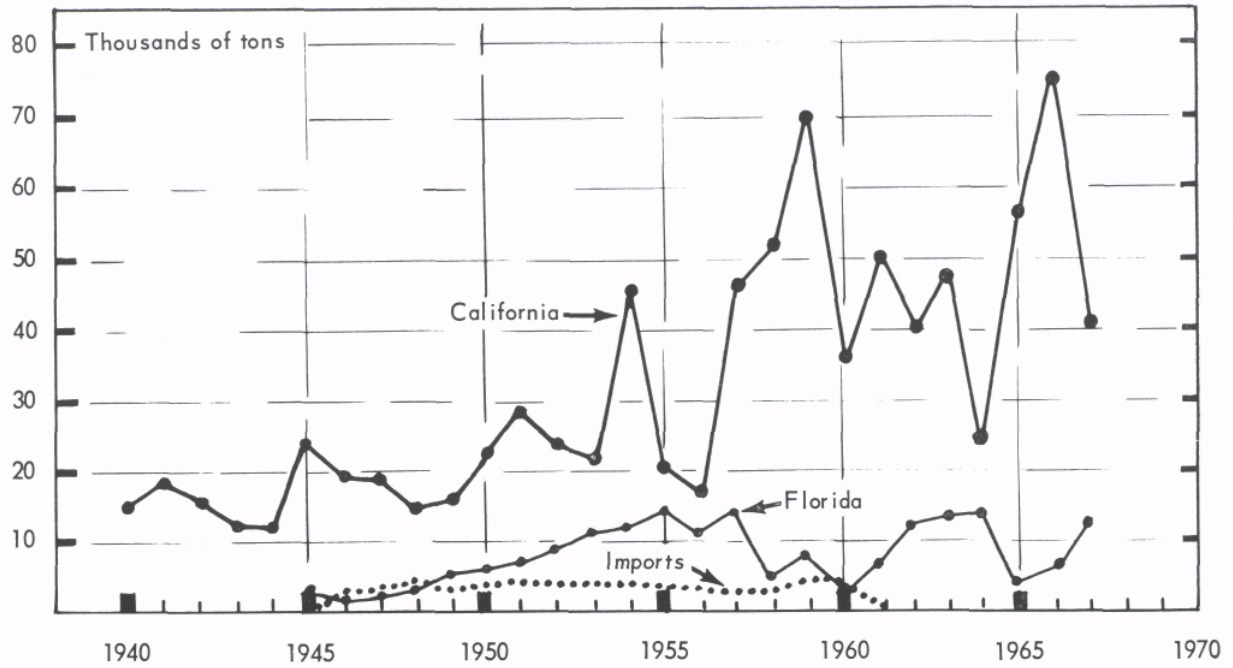
California and Florida are the principal suppliers of avocados for United States markets. Before 1961 substantial quantities of avocados were imported into the United States from Cuba during the summer months. The trend in California and Florida avocado production and U.S. avocado imports since 1940 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 current 1967-68 crop is estimated to be slightly less than the most recent ten-year average.

Florida production has dropped to low levels twice in the last ten years as a result of freeze and hurricane damage. Since the last short crop in 1965, production has returned to the 13,600-ton level for the 1967 season.

Avocado Supply and Grower Price

The relationship between the size of the California avocado crop and seasonal average price received by California growers for fruit at first delivery point is shown in figures 5 and 6. The inverse relationship between the size of the crop and grower price from year to year is clearly shown.



NOTE: Season beginning year shown, imports for year indicated. Imports mainly from Cuba.
 Source: Table 3.

FIGURE 4 California and Florida Avocado Production and U.S. Imports.

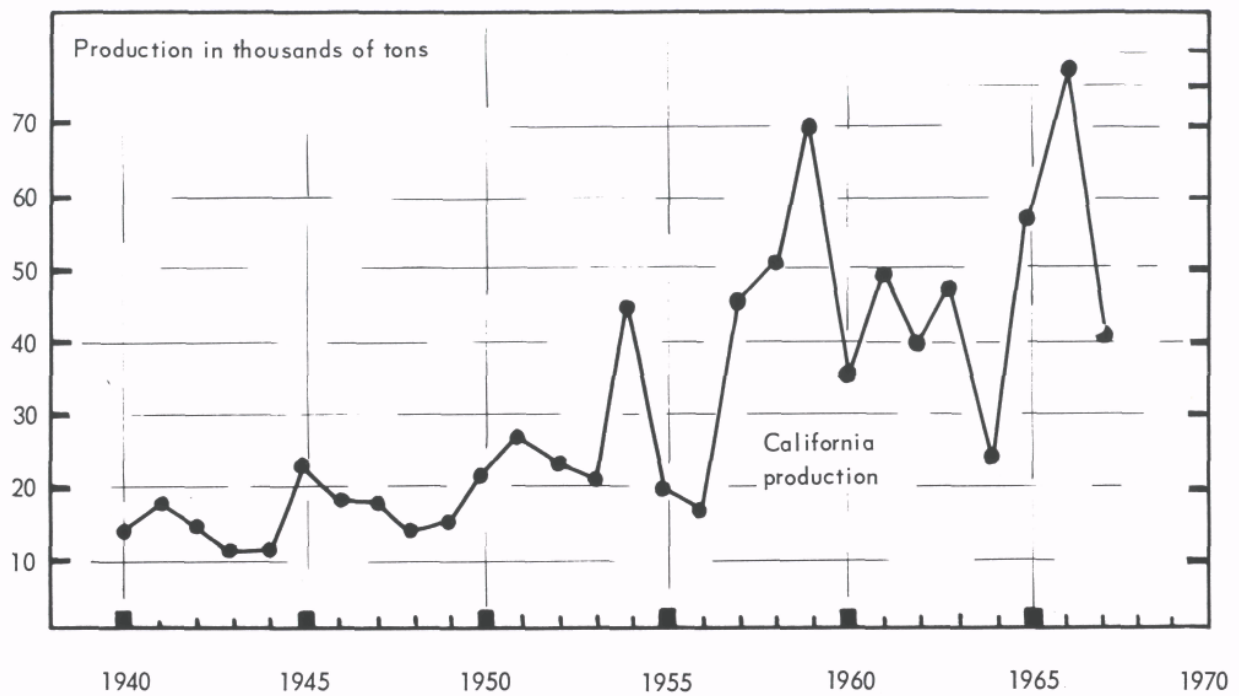


FIGURE 5. California Avocado Production.

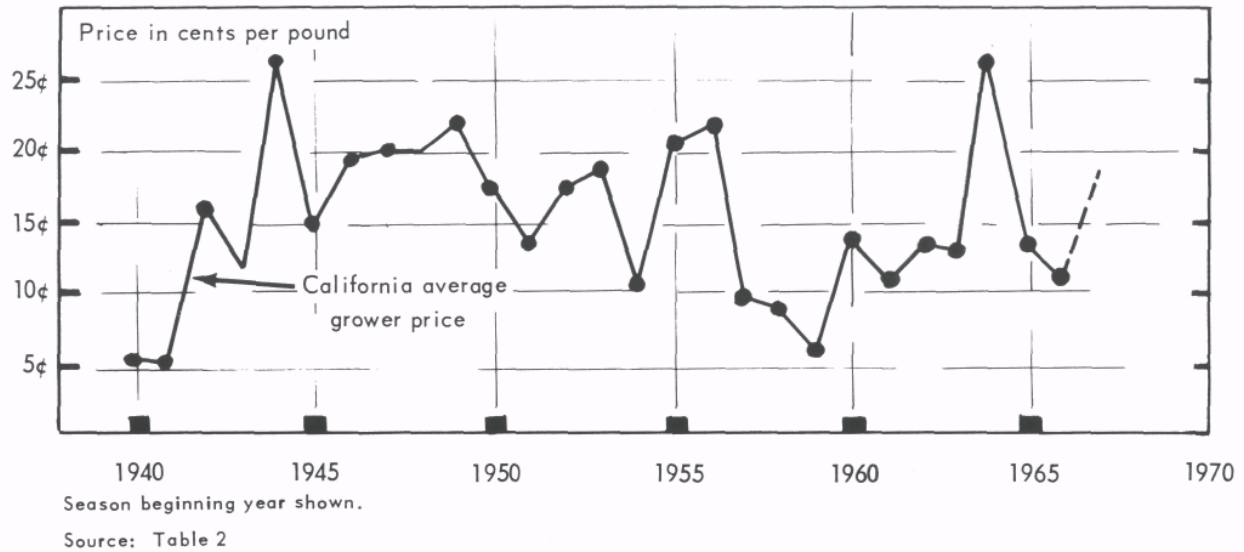
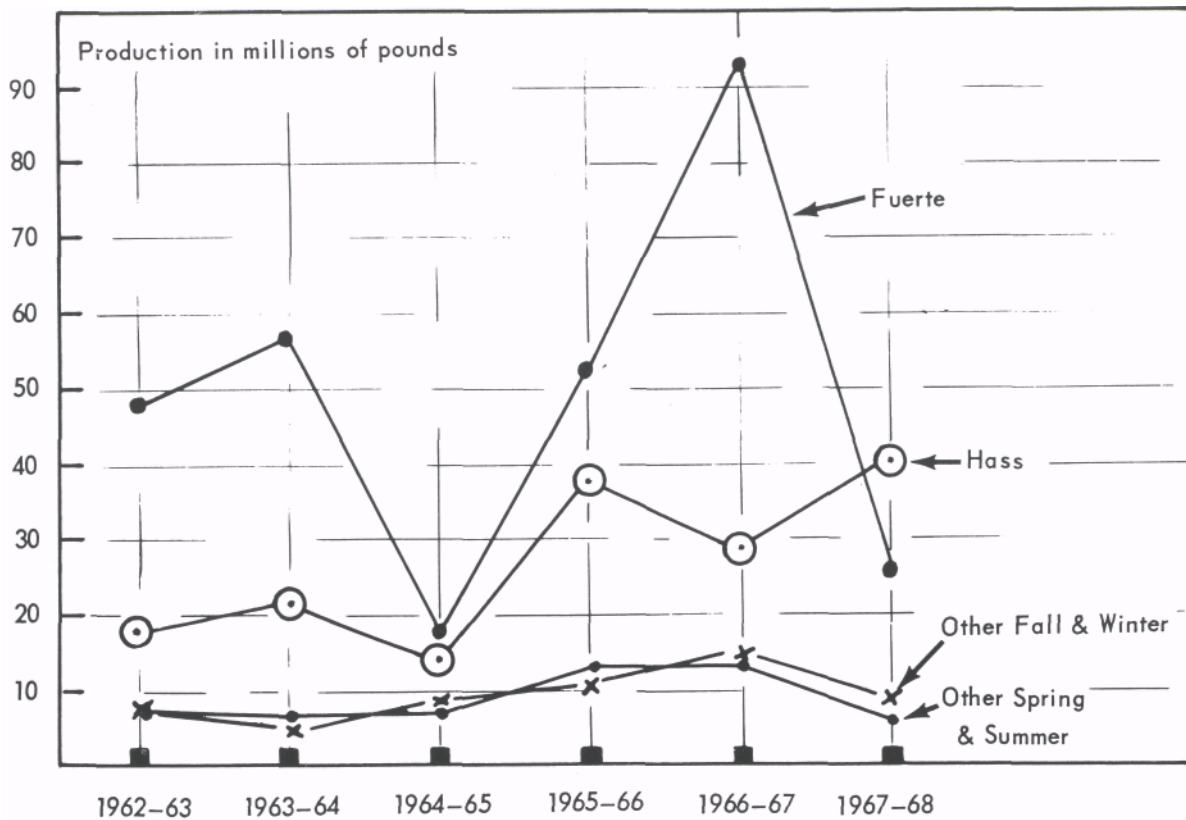


FIGURE 6. California Avocado Average Grower Price.

California Production by Varieties

The production trend of California avocados by varieties for the last six years is shown in figure 7. Production of the Fuerte variety was short in both the 1964-65 and 1967-68 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.



Source: Table 4

FIGURE 7. California Avocado Production by Variety.

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 1965-66 and 1966-67. 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 at the beginning of the 1965-66 season were at record levels as a result of short crops the preceding season in both California and Florida.

There was no Figure 8 in the original article.

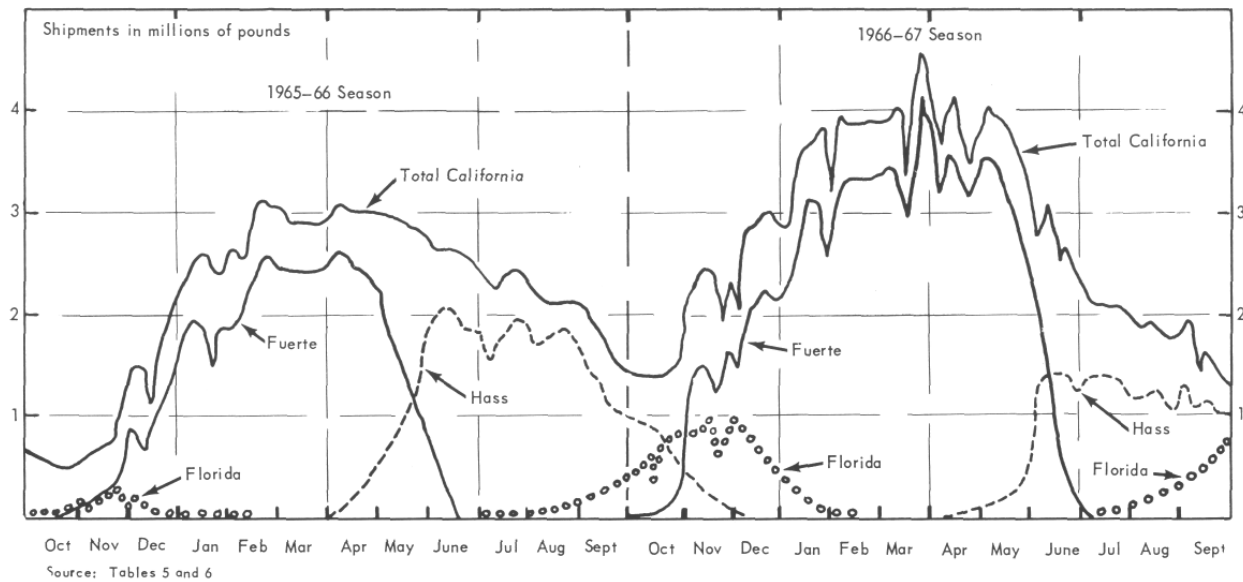


FIGURE 9. Weekly Shipments of California and Florida Avocados, 1965-66 and 1966-67 Seasons.

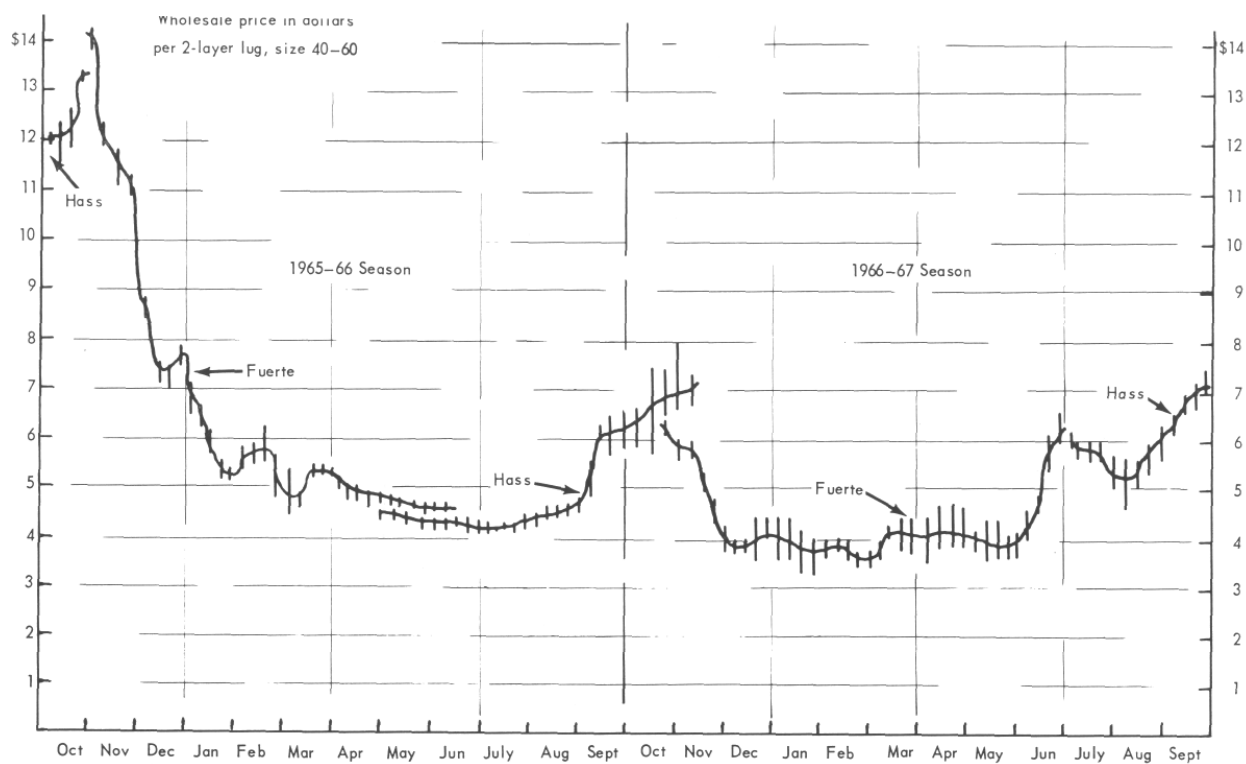


FIGURE 10. Weekly Los Angeles Wholesale Market Prices for Avocados, 1965-66 and 1966-67 Seasons.

TABLE 1. California Avocado Acreage, Production, Yields and Returns to Growers, 1949-50 Season to Date.

CROP YEAR ¹	ACREAGE		PRODUCTION	YIELD	GROWERS' RETURNS ²			VALUE OF PRODUCTION
	Bearing	Nonbearing	Total	Per bearing acre		dollars/ton	cents/pound	1,000 dollars
	acres	acres	tons	tons	dollars			
1949-50	11,292	7,131	15,500	1.4	612	446	22.3	6,913
1950-51	12,008	8,464	22,400	1.9	640	343	17.1	7,683
1951-52	12,579	9,108	28,000	2.2	601	270	13.5	7,560
1952-53	13,566	9,135	23,200	1.7	595	348	17.4	8,074
1953-54	15,040	8,023	21,300	1.4	524	370	18.5	7,881
1954-55	16,292	6,709	45,200	2.8	580	209	10.4	9,447
1955-56	18,036	5,127	20,000	1.1	459	414	20.7	8,280
1956-57	19,119	5,348	15,800	0.8	364	440	22.0	6,952
1957-58	19,794	5,439	46,300	2.3	456	195	9.7	9,028
1958-59	20,205	5,061	51,500	2.5	428	168	8.4	8,652
1959-60	21,301	4,754	70,000 ³	3.3	360	111	5.5	7,659
1960-61	20,045	4,378	35,500	1.8	496	280	14.0	9,940
1961-62	20,862	3,066	50,000	2.4	513	214	10.7	10,700
1962-63	21,194	2,628	40,000	1.9	506	268	13.4	10,720
1963-64	21,921	1,706	46,800	2.1	553	259	12.9	12,121
1964-65	21,574	1,224	24,000	1.1	578	520	26.0	12,480
1965-66	18,810	2,225	58,000	3.1	806	262	13.1	15,196
1966-67 ⁴	18,620	2,860	74,500	4.0	808	202	10.1	15,049

¹ The crop year starts October 1 of the first year shown and continues for a period of 12 months.

² Equivalent returns for naked fruit at packinghouse door.

³ Includes 1,000 tons production of no value.

⁴ Preliminary.

Source: California Crop and Livestock Reporting Service, Sacramento, California.

TABLE 2. Avocado Production, Imports, and Supply, United States, 1930, 1935, 1940, and 1945 to Date

Year	DOMESTIC AVOCADO PRODUCTION				
	California ¹	Florida	Florida & California	Avocado imports ²	Total U.S. Supply
	tons				
1930	2,150	620	2,770	4,896	7,666
1935	5,200	1,000	6,200	3,765	9,965
1940	14,600	880	15,480	5,854	21,334
1945	24,000	3,200	27,200	446	27,646
1946	18,500	1,600	20,100	2,444	22,544
1947	18,600	2,300	20,900	2,993	23,893
1948	14,400	3,100	17,500	3,763	21,263
1949	15,500	5,000	20,500	3,206	23,706
1950	22,400	5,500	27,900	3,944	31,844
1951	28,000	6,500	34,500	4,586	39,086
1952	23,200	8,700	31,900	3,460	35,360
1953	21,300	10,600	31,900	4,138	36,038
1954	45,200	11,800	57,000	3,698	60,698

Table 2 Continued

1955	20,000	14,300	34,300	2,671	36,971
1956	15,800	10,800	26,600	3,304	29,904
1957	46,300	14,800	61,100	2,860	63,960
1958	51,500	4,100	55,600	3,534	58,985
1959	70,000	8,000	78,000	4,384	82,384
1960	35,500	1,800	37,300	3,068	40,368
1961	50,000	6,100	55,600	84	55,684
1962	40,000	11,700	51,700	15	51,715
1963	46,800	13,900	60,700	7	60,700
1964	24,000	13,400	37,400	37	37,400
1965	58,000	2,800	60,800	--	60,800
1966 prelim.	74,500	5,800	80,300	--	80,300
1967 prelim.	40,000	13,600	53,600	--	53,600

¹ Season beginning year shown.

² Imports, year beginning July.

Source: U. S. Department of Agriculture and U.S. Department of Commerce.

TABLE 3. California Avocado Acreage by Major Producing Counties, 1945, 1950, and 1960 to Date

YEAR	SOUTH		MIDCOUNTRIES				NORTH COUNTIES			OTHERS	STATE TOTAL
	San Diego	Los Angeles	Orange	Riverside	San Bernardino	Total	Santa Barbara	Ventura	Total		
acres											
Nonbearing											
1945	1,885	358	366	25	1	750	83	164	247	2	2,884
1950	5,591	409	953	183	24	1,569	600	691	1,291	13	8,464
1960	2,386	75	401	176	32	684	386	843	1,229	79	4,378
1961	1,597	110	265	112	38	525	294	554	848	96	3,066
1962	1,018	63	158	71	33	325	637	555	1,192	93	2,628
1963	515	27	80	33	15	155	609	321	930	106	1,706
1964	579	18	42	20	4	84	579	310	889	---	1,224
1965*	1,070	6	35	70	4	115	602	348	950	90	2,530
1966	1,260	30	30	70	10	140	670	630	1,300	160	2,860
Bearing											
1945	7,650	3,098	1,829	51	66	5,044	333	343	676	33	13,403
1950	6,970	2,515	1,525	51	47	4,138	406	488	894	6	12,008
1960	11,230	2,535	2,441	335	147	5,458	1,260	2,084	3,344	13	20,045
1961	12,031	2,128	2,397	383	138	5,046	1,389	2,383	3,772	13	20,862
1962	12,610	2,097	2,257	417	137	4,908	1,349	2,314	3,663	13	21,194
1963	13,113	2,078	2,134	445	138	4,795	1,450	2,550	4,000	13	21,921
1964	13,481	2,024	1,438	404	117	3,983	1,634	2,466	4,100	10	21,574
1965*	10,911	2,004	1,389	357	116	3,866	1,679	2,372	4,051	26	18,810
1966	11,180	1,240	1,350	370	120	3,080	1,760	2,540	4,300	60	18,620

* Acreage adjusted to complete tree census in 1965. State total acreage revised. Therefore, county estimates do not equal total.

Source: California Crop and Livestock Reporting Service, Sacramento, California.

TABLE 4. California Avocado Shipments and Production by Variety,
1963-64 to 1967-68 Season.

VARIETAL GROUP **	CALIFORNIA SHIPMENTS				PRODUCTION ESTIMATE *
	1963-64	1964-65	1965-66	1966-67	1967-68
	millions of pounds				
Fuerte	57.2	17.3	52.3	92.1	25.6
Other fall and winter	6.4	7.8	10.2	14.1	9.2
Hass	21.0	14.6	37.6	28.4	40.0
Other spring and summer	7.7	7.6	12.1	13.0	5.5
Total	92.3	47.3	112.2	148.4	80.3

* Handler estimate as of February 1968.

** The four varietal classifications used are (1) Fuerte, (2) other fall and winter varieties, (3) Hass, and (4) other spring and summer varieties. The avocado season begins October 1, and other fall and winter varieties are defined as fruit other than Fuerte shipped during the first six months of the season (Bacon, Zutano) and other spring and summer varieties as fruit other than Hass shipped during the last six months of the season (Rincón, MacArthur).

Source: Federal-State Market News Service and California Crop and Livestock Reporting Service.

NOTE: Current weekly shipment estimates for California avocados may be received without charge by writing to the Federal-State Market News Service, 300 Wholesale Terminal Building, Los Angeles, 90021. A monthly handler estimate of annual production may be received without charge by writing to the California Crop and Livestock Reporting Service, State Department of Agriculture, P. O. Box 1258, Sacramento, 95806.

TABLE 5. Monthly Avocado Shipments from California and South Florida Production Areas — 1965-66 Season to Date

Months	California			Florida		
	1965-66	1966-67	1967-68	1965-66	1966-67	1967-68
	pounds			pounds*		
October	2,494,355	5,460,265	5,622,069	612,040	3,303,740	5,796,010
November	2,529,315	7,904,146	3,928,793	863,005	3,180,980	7,901,850
December	7,523,480	13,306,030	6,414,358	378,730	2,998,325	6,726,445
January	9,904,514	13,437,479	6,497,826	11,715	854,370	3,686,815
February	11,392,566	15,737,757	6,443,586	2,255	32,340	1,213,575
March	11,530,272	19,844,596	8,964,797	-	2,915	74,525
April	15,400,963	15,135,300	6,969,957	-	-	-
May	11,400,491	15,359,474	8,537,610	-	-	-
June	10,655,174	13,577,595	6,461,263	1,430	13,640	8,525
July	12,076,990	8,565,059	n.a.	281,050	1,219,240	n.a.
August	8,749,330	7,273,485		424,985	1,869,065	
September	9,032,08	8,105,037		929,665	2,678,280	

*Converted from bushels on basis of 55 pounds per bushel.

Source: Federal-State Market News Service, Los Angeles, and Florida Avocado Administrative Committee, Homestead, Florida.