

SAN DIEGO COUNTY
AVOCADO
MANAGEMENT
STUDY

University of California
Agricultural Extension Service
Building 1, 4005 Rosecrans St.
San Diego 10, California

1954

San Diego County

INTRODUCTION

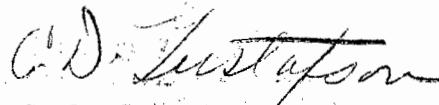
The 19th Annual Summary of the San Diego County Avocado Management Study is an analysis of yields, returns, costs, and management practices. The report is designed to develop information of value to the industry, and to the prospective avocado producer. Growers can benefit by comparing their practices, costs, and results with those presented herein.

Records of 11 growers covering 61 acres have been made available to the Agricultural Extension Service by cooperative growers in the avocado districts of the county. The records show an average yield of 5,357 pounds per acre with an average management income of \$526.71 per acre. The range in yield per acre varied from 9,082 pounds to 2,057 pounds per acre. Total costs per acre averaged \$487.74.

Production figures and other data presented here cannot be considered as the average for, or entirely representative of, the avocado industry in the county. Grower cooperators are volunteers, not selected. An effort has been made to have each major producing district represented.

We acknowledge the cooperation of the 11 growers for their reports and thank them for making possible this summary.

Summarized by
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Copies of this report, as well as other agricultural publications, can be obtained upon request from the Farm Advisor's Office, Building 1, 4005 Rosecrans Street, San Diego 10, California.

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EXPLANATION OF TERMS

Yield and Income data are furnished from packing house figures. Yield is reported in pounds per acre and 13 pound flats per acre. Income is actual return for fruit delivered to the packing house. (Packing and marketing are not costs of production).

Total cost of production includes all possible costs. It includes wages of all labor, costs of materials, picking and hauling. Depreciation and interest charges are made to reimburse for use of capital.

Labor Costs include hired labor, value of operators' actual labor, field power costs (tractors and trucks), plus cost of any contract work.

Material Costs include water, fertilizers, sprays or dusts, and other materials purchased.

Cash Overhead Costs include such cash costs as taxes, repairs, compensation insurance, and miscellaneous items.

Total Cash Cost is the sum of the above three items.

Depreciation is the part of the original cost of facilities that should be charged per year of operation. No depreciation charge made on land or trees.

Interest on Investment is computed at 5%. Investment in land, trees, irrigation system and equipment is considered.

Capital and Management Income is the amount by which income exceeds cash costs and depreciation. From the individual standpoint it is the best net earning figure. In other words, it is the amount available to reimburse the grower and invested capital.

Management Income is the amount by which income exceeds all costs of production, including interest on investment. It is the amount available to reimburse the grower for management. Where income is too small to cover costs, a loss or deficit will occur, which in this study is indicated by a minus sign (-) preceding the amount.

A TEN YEAR SUMMARY _____ OF THE AVOCADO MANAGEMENT STUDY OF SAN DIEGO COUNTY WITH A TEN YEAR AVERAGE YIELD, INCOME, COSTS PER ACRE 1945 - 54

	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	10 Year Average
Yield - Pounds	3675	8986	4730	6953	3932	4985	6622	7834	5240	5357	5830
Income	1016.33	1402.72	918.77	1417.56	815.28	1120.84	1158.63	1045.94	937.65	1011.45	1084.52
Costs - Total	396.45	446.37	446.73	550.92	504.83	531.29	522.41	479.79	452.61	484.74	481.61
Management Income	619.88	956.35	472.04	866.64	310.45	589.55	636.22	566.15	485.04	526.71	602.91

PER HUNDREDWEIGHT

Income	27.66	15.61	19.42	20.39	20.73	22.49	17.50	13.35	17.89	18.88	18.60
Costs - Total	10.79	4.97	9.44	7.93	12.84	10.66	7.87	6.12	8.63	9.05	8.26
Management Income	16.87	10.64	9.98	12.46	7.89	11.83	9.61	7.23	9.26	9.83	10.34

BREAK DOWN OF COSTS PER ACRE

Cultural Labor	87.04	81.11	115.55	148.81	126.59	129.43	103.02	72.32	69.18	87.13	102.01
Harvest Labor	53.99	107.19	56.04	85.85	53.97	55.38	79.32	92.12	65.84	63.85	71.36
Total Labor	141.03	188.30	171.59	234.66	180.56	184.81	182.34	164.44	135.02	150.98	173.37
Material	115.66	110.63	118.88	142.25	143.91	155.83	145.07	110.13	111.11	112.83	126.63
Cash Overhead	37.34	44.85	49.29	61.13	61.42	69.47	71.91	85.50	91.84	87.54	66.03
Total Cash Costs	294.03	343.78	339.76	438.04	385.89	410.11	399.32	360.07	337.97	351.35	366.03
Depreciation	18.03	18.71	18.64	20.46	24.24	24.77	24.51	22.51	15.78	30.48	21.81
Interest on Investment	84.39	83.88	88.33	92.42	94.70	96.41	98.58	97.21	98.86	102.91	93.77
Total All Costs	396.45	446.37	446.73	550.92	504.83	531.29	522.41	479.79	452.61	484.74	481.61

TABLE I. Ten Year Summary of Yield, Income, and Costs.

FACTORS DETERMINING PROFIT OR LOSS

Orchard Number	Acres	Age and Variety	Yields Pounds Per A.	Average Income per Cwt.	Total Income per Acre	Costs per Acre					Capital Management		
						Total Labor	Material	Cash Over-head	Depreciation	Interest on Invest.	Total	Income	Income
47	8.5	24 F, I, N	9,082	18.67	1696.17	114.73	90.78	130.61	16.74	83.32	436.18	1343.31	1259.99
45	2.6	25 F	8,908	19.79	1762.97	307.69	168.63	123.81	7.44	90.60	698.17	1155.40	1064.80
54	10.0	13 F	6,355	18.10	1150.40	84.88	112.54	48.07	16.04	107.77	369.30	888.87	781.10
62	6.5	26 F	6,719	17.84	1198.81	202.31	88.77	49.17	10.72	104.08	455.05	847.84	743.76
66	4.0	12 F	5,179	21.14	1094.92	171.75	87.25	77.70	18.12	101.10	455.92	740.10	639.00
68	3.8	19 F	5,275	18.70	986.46	163.62	81.70	66.21	31.33	96.97	439.83	643.60	546.63
64	1.5	18 F	8,612	17.76	1529.44	243.83	302.52	297.36	35.67	117.25	996.63	650.06	532.81
65	2.5	12 F	4,972	19.27	958.14	88.80	158.89	125.93	9.62	104.31	487.55	574.90	470.59
63	1.5	13 F	5,077	17.45	885.91	122.00	110.39	98.60	40.00	110.00	480.99	514.92	404.92
69	9.2	12 F	2,365	21.43	506.74	158.48	101.07	96.16	47.93	114.24	517.88	103.10	-11.14
70	10.5	9 F	2,057	19.39	398.83	159.33	125.60	68.29	65.28	105.97	524.47	-19.67	-125.64
Av. All	60.6	16	5,357	18.88	1011.45	150.98	112.83	87.54	30.48	102.91	484.74	629.62	526.71

TABLE II. Orchard records are given serial numbers and placed in descending order of management income. Variety abbreviations: (F) Fuerte, (N) Nabal, (I) Itzamna.

COST OF PRODUCING ONE POUND

of avocados ranged from 5 cents to 26 cents depending, of course, on yield. The average total cost per pound was about 9 cents. The variation in returns was -\$6.11 to \$13.87 per hundred-weight.

Orchard Number	Yield Lbs. per Acre	Income per Cwt.	Yield 13 Lb. Flats per A.	Income per Flat	Cultural Labor Costs Per Cwt.	Harvest Labor per Cwt.	Material Costs	Cash Over-head Cost	Depreciation Costs	Interest on Invest.	Total all Costs per Cwt.	Capital and Mgmt. Income	Management Income per Cwt.
47	9,082	18.67	699	2.42	.36	.90	1.00	1.44	.18	.92	4.80	14.79	13.87
45	8,098	19.79	685	2.57	2.32	1.13	1.90	1.39	.08	1.02	7.84	12.97	11.95
54	6,355	18.10	489	2.35	.59	.75	1.77	.75	.25	1.70	5.81	13.99	12.29
62	6,719	17.84	517	2.32	1.29	1.72	1.32	.73	.16	1.55	6.77	12.62	11.07
66	5,179	21.14	398	2.75	1.97	1.35	1.68	1.50	.35	1.95	8.80	14.29	12.34
68	5,275	18.70	406	2.43	1.23	1.87	1.55	1.26	.59	1.84	8.34	12.20	10.36
64	8,612	17.76	663	2.31	1.23	1.60	3.51	3.45	.42	1.36	11.57	7.55	6.19
65	4,972	19.27	382	2.51	.46	1.33	3.19	2.54	.19	2.10	9.81	11.56	9.46
63	5,077	17.45	391	2.27	1.35	1.05	2.18	1.94	.79	2.16	9.47	10.14	7.98
69	2,365	21.43	182	2.79	5.60	1.10	4.27	4.07	2.03	4.83	21.90	4.36	-.47
70	2,057	19.39	158	2.52	6.15	1.59	6.11	3.32	3.18	5.15	25.50	-.96	-6.11
Av. All	5,357	18.88	412	2.45	1.63	1.19	2.11	1.63	.57	1.92	9.05	11.75	9.83

TABLE III. Yield per acre, Income and Costs per flat and per hundredweight.

IRRIGATION - The average cost of one acre foot of water was approximately \$36. The need for conserving water was a factor in several districts, and effected the use of water on some of the groves in the study.

FERTILIZER - Practices are varied, and the range in costs was from \$18 to \$63 per acre, for an average of \$36. Based on evidence available, an adequate fertilizer program for mature orchards need not cost more than \$35 per acre.

Orch. No.	Irrigation							Fertilizer			Total Pounds Nitro. per A.	
	Number Appli-cations	Ac.In. per Appli.	Total Ac.In. per A.	Cost per Acre				Kind & Amount per Acre	Cost per Acre			
				Labor	Water	Int. & Dep.	Total		Labor	Mater-ial		Total
47	--	--	19.0	2.21	60.81	24.84	87.86	SuP.353#, Liquonox 18#, 6-9-6-129#	2.94	27.62	30.56	14
45	16	2.0	31.8	92.31	117.09	8.21	217.61	AmN.430#, 6-9-6-738#	11.54	51.54	63.08	184
54	--	--	22.8	5.10	62.00	22.56	89.66	Vigoro-425, 9-18-16-425#	4.44	48.74	53.18	94
62	--	--	37.7	30.77	65.69	10.28	106.74	AmN-462#	3.84	23.08	26.92	150
66	--	--	--	62.50	50.00	25.30	137.80	Alf.Meal-500#, AmN-450#	8.00	33.25	41.25	181
68	17	1.9	32.7	21.97	53.94	29.82	105.73	Poul.60CuFt., AmN-367#, AmP-153#	8.16	25.79	33.95	194
64	--	--	36.6	50.00	229.97	45.83	325.80	Cal. 733# 16-20-667#				
65	18	4.7	84.8	6.00	122.09	11.43	139.52	AmN-800#	7.20	36.80	44.00	268
63	--	--	21.2	66.67	87.76	38.75	193.18	16-20-333#	2.00	16.63	18.63	53
69	--	--	10.0	56.52	61.18	12.23	129.93	Urea 239#	4.89	20.33	25.22	105
70	--	--	24.0	64.76	71.53	90.00	226.29	AmN 476#	5.00	22.47	27.47	160
Av. All	--	--	26.2	36.85	72.10	32.32	141.27		5.39	30.74	36.13	127

TABLE IV. Irrigation and Fertilizer Practices and Costs.

Fertilizer abbreviations: AMS-Ammonium Sulphate; C.N.-Calcium Nitrate; AmN-Ammonium Nitrate; P-Phosphate; D-Dairy; St-Straw; Ur-derived from Urea; Gyp-Gypsum; Alf. Meal-Alfalfa Meal; Poul-Poultry; Sludge; Rabbit

U.S. SUPPLY OF AVOCADOS

Year	California Production	Florida Production	United States Imports	Total Supply
	Tons	Tons	Tons	Tons
Av. Annual 1930-31 to 1933-34	2,183	1,260	4,210	7,653
1934-35	9,300	2,000	2,811	14,111
1935-36	5,200	1,000	3,765	9,965
1936-37	6,200	600	4,559	11,359
1937-38	5,300	2,000	5,692	12,992
1938-39	14,900	2,100	5,158	22,158
1939-40	7,800	2,200	3,692	13,692
1940-41	14,600	880	5,854	21,334
1941-42	18,600	1,250	5,342	25,192
1942-43	16,100	2,100	865	19,065
1943-44	24,300	4,600	1,718	30,618
1944-45	11,600	5,800	1,018	18,418
1945-46	24,000	3,200	446	27,646
1946-47	18,500	1,600	2,445	22,544
1947-48	18,600	2,300	2,993	23,893
1948-49	14,400	3,100	3,763	21,263
1949-50	15,500	5,000	3,207	23,707
1950-51	22,400	5,500	3,944	31,844
1951-52	28,000	6,500	4,586	39,086
1952-53	23,200	8,700	3,461	35,361
1953-54	22,200	10,600	4,139	36,939
1954-55*	34,600	10,200	3,464**	—

TABLE V. *Preliminary estimate

**Import data for July through December only.

CALIFORNIA BEARING ACREAGE

has steadily increased from 690 acres in 1927 to 16,800 in 1954. 7,034 acres were non-bearing in 1953. New plantings continued to be made in 1951, 1952, and 1953. San Diego County reported 8,814 bearing acres in 1954 and 4,551 non-bearing.