

INTRODUCTION

The relatively high costs of production and low returns from Ventura County walnut orchards in recent years have caused growers to look toward more efficient operations. This study, the second in a current series, is being conducted to survey the current economic situation.

These 6 records, totaling 625 acres were selected from all walnut growing sections of the county. All records are for mature (average age 28 years) irrigated orchards of the budded varieties (Placentia, Wasson, and Payne). They are presented, not as an average for the county, but merely as indicative of the industry situation.

We wish to express our appreciation for the cooperation of the growers furnishing their figures and to the packing house managers for their assistance.

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EXPLANATION OF TERMS

Labor Costs: Includes hired labor, value of operator's labor and use of tractors and trucks charged at an hourly rate to cover operating and overhead costs. Where contract work is reported, such as for spraying or hulling and dehydrating, overhead costs on equipment and facilities are usually covered.

Material Costs: Includes water cost, pest and disease control materials, fertilizer, and cover crop seed.

TABLE I - MAIN PROFIT DETERMINING FACTORS IN INDIVIDUAL RECORDS - PER ACRE

Serial Number	Av. Yield Total Pounds	Per cent Merchantable	Total Income per Acre	Cultural Labor & Field Power	Total Material Costs	Total Harvest Costs	Total Cash Overhead Costs	Depreciation Costs	Interest on Invest.	Total all Costs	Management Income	Capital and Mgt. Income
W-5	1861	89.4	\$457.97	\$84.30	\$34.37	\$55.87	\$34.60	\$26.43	\$120.61	\$356.18	\$101.79	\$222.40
W-9	1227	92.3	311.47	27.70	19.53	48.02	25.72	24.92	69.99	215.88	95.60	165.59
W-10	1506	87.2	376.94	37.60	36.84	51.26	33.97	21.84	118.43	299.94	77.00	195.43
W-3	1539	85.6	360.13	57.78	26.62	94.66	33.27	27.38	110.36	350.07	10.06	120.42
W-7	1600	-	269.00	56.40	26.30	45.59	33.52	27.59	98.88	288.28	7.72	106.60
W-6	1147	93.7	255.34	44.47	57.49	36.61	26.49	25.95	111.87	302.88	-47.54	64.33
Av. All	1394	91.2	322.71	53.46	45.44	45.12	29.70	25.73	111.61	311.06	11.65	123.26
Av. 8 1950	831	91.2	174.00	57.74	35.43	30.21	28.59	26.34	109.68	287.99	-113.99	-4.31
Av. 7 yr. 1928-34	1704	87.4	288.96	22.19	16.02	23.79	21.47	17.45	112.96	213.88	15.08	128.04

The above table is a general summary of the yields, income, and costs per acre for the six records covering 625 acres in the Walnut Enterprise Study for the year 1951 in Ventura County. Each record is given a serial number and they are arranged in descending order of management income per acre. A weighted average of all records is shown for all records for the 1951 and 1950 studies. The last line (for comparison) shows the average for a seven year (1928-34) study which included 102 records covering 3256.1 acres.

Average yields per acre, which were abnormally low for the 1950 crop, showed some improvement for the 1951 crop, but were still far below the 7-year average, 1928-34.

Cultural labor, field power, and material costs have increased about $2\frac{1}{2}$ times over the 1928-34 average, while fixed overhead shows a small increase.

TABLE II - PERCENTAGE OF GRADES, PRICES, COSTS, AND INCOME PER HUNDREDWEIGHT

Serial Number	Percentage					Culls and Blows	Av. Price		Costs per Cwt.			Income	
	Light	Sound	Merchantable				Merch-antable	All	Total Cash Costs	Int. & Deprec.	All Costs	Management	Capital & Management
			Large	Medium	Babies								
W-5	52	92	50.2	23.5	15.7	10.6	26.34	24.60	\$11.23	\$ 7.90	\$19.13	\$ 5.47	\$11.95
W-9	80	96	48.3	19.9	24.1	7.7	25.70	24.49	9.51	7.46	16.97	7.52	13.02
W-10	35-67	89-97	53.1	23.2	10.9	12.8	27.26	25.02	10.63	9.28	19.91	5.11	12.97
W-3	36.3	80.7	79.5	3.4	3.7	14.4	25.61	23.41	13.80	8.95	22.75	.66	7.83
W-7	Sold field run		-	-	-	-	-	18.50	10.12	7.90	18.02	.48	6.66
W-6	47-52.5	83.5-89.5	74.8	14.4	4.4	6.3	22.76	22.27	14.40	12.02	26.42	-4.15	5.61
Av. All	-	-	62.9	18.4	9.9	8.8	24.65	23.15	12.46	9.85	22.31	.84	8.84
Av. 8 1950	-	-	56.9	22.2	12.1	8.8	22.21	20.93	18.28	16.36	34.64	-13.71	-.52
Av. 7 yr. 1928-1934	-	-	57.6	22.4	6.7	13.3	14.84	13.44	4.90	7.68	12.55	.89	7.52

The above table is set up similar to Table I, showing the percentage of the crop graded as "Light" and "sound" nuts and the merchantable graded as to size. Prices, costs and income are calculated on a hundredweight basis.

Prices and income are estimates based on the book records of the packing houses and may be more or less when final settlement is made.

Costs per hundredweight were abnormally high primarily because of low yields per acre. Investment, depreciation, and many operation (except harvesting) costs per acre are much the same, regardless of yield. Costs per acre, divided by yield per acre, equals cost per pound. Because of high fixed costs per acre, yield per acre is the most important factor in determining cost per pound. $\text{Yield} \times \text{Price} = \text{Income}$. $\text{Income} - \text{Costs} = \text{Profit}$.

TABLE III - SOME IMPORTANT COSTS AND PRACTICES

Items	Serial Numbers						Av. All
	W-5	W-9	W-10	W-3	W-7	W-6	
Irrigation							
Number applications	2	3	2	2	2	2	-
Acre inches per acre	-	16.6	18	10.5	13	-	-
Water costs per acre	\$9.12	\$11.94	\$6.00	\$17.19	\$10.82	\$8.67	\$9.02
Labor costs per acre	9.46	13.07	8.83	8.80	5.78	5.27	6.66
Depreciation on facilities	1.39	4.12	3.20	2.41	2.38	7.78	5.24
Int. on Investment - 5%	.82	2.43	1.85	2.41	1.06	4.48	3.35
Total cost per acre	20.79	31.56	19.88	30.81	20.04	26.40	24.27
Fertilizer							
Kind	-	None	NH ₃	None	None	Manure	
Pounds per acre	-	"	150	"	"	Am. N. 2840 416	
Material cost per acre	10.63	"	19.50	"	"	23.95	
Labor cost per acre	1.02	"	-	"	"	3.04	
Total cost per acre	11.65	"	19.50	"	"	26.99	
Pest Control							
Labor cost per acre	2.71	4.11	11.50	5.80	6.48	10.98	8.70
Material cost per acre	14.62	7.59	11.34	9.43	12.97	20.90	17.06
Total cost per acre	17.33	11.70	22.84	15.23	19.45	31.88	25.76
Cultivation Cost per Acre	16.55	7.46	8.83	9.31	33.99	11.78	14.63
Harvest & Dehydrate or dry per Cwt.	3.00	3.78	3.43	6.15	2.85	3.19	3.24
Capital Investment per Acre							
Trees*	300.00	300.00	300.00	300.00	300.00	300.00	300.00
Irrigation System*	16.43	48.62	37.08	48.28	21.25	89.59	66.94
Tillage Equipment*	5.76	15.35	5.11	8.80	15.93	1.96	4.88
Harvest Equipment*	45.40	20.29	-	23.42	19.88	21.80	24.44
Other*	44.54	15.48	26.36	26.62	120.53	24.02	28.55
Land	2000.00	1000.00	2000.00	1800.00	1500.00	1800.00	1807.55
Total Capital Invest.	2412.13	1399.84	2368.55	2207.14	1977.69	2237.37	2232.36

*One-half Original Cost

Cash Overhead Costs: Includes general expense, county taxes, compensation and other insurance, and repairs on facilities and equipment other than tractors and trucks.

Depreciation: That portion of the original cost of facilities and equipment which is chargeable to current year's operations. Depreciation on trees of \$15.00 per acre is based on an estimated original cost of establishing the orchard of \$600.00 per acre, and a productive life of 40 years. Tree depreciation was figured the same for all orchards.

Interest on Investment: This cost is computed at 5 per cent of the average value of facilities and equipment. Average values, except for land, are figured at one-half of the original cost or replacement cost as the case may be. Land values are based on estimated long-term agricultural values. Average tree values were figured the same for all orchards at \$300.00 (one-half of \$600.00 estimated original cost).

Management Income: Total income less total cost of production. It is the amount available to reimburse the operator for his management after all other costs are met. If income is insufficient to meet costs, the loss is shown by a minus sign (-) preceding the amount.

Capital & Management Income: The management income plus the interest on investment. It may be considered as profit if interest is not considered a cost. It is the amount available to reimburse management and invested capital.

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