



Walnut Production Costs *in* *California*

Division of Agricultural Sciences
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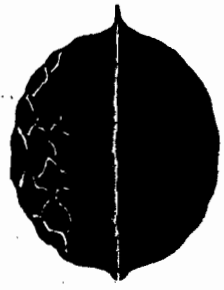
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WALNUT PRODUCTION COSTS

in California



There are over 200,000 acres of walnuts in California producing nearly \$62,000,000 of income each year. The bearing acreage has increased from 113,000 acres in 1954 to 161,850 acres in 1974. All but fifteen of the 57 counties in California report some walnut acreage. However, five counties account for over 50 percent of the bearing acreage. Acreage is found in quantity in all areas of the state except the northern and mountain counties. Yields have averaged .75 ton per acre over the 1964-74 period but varied from .54 to 1.1 tons.

This report summarizes the cost of production studies on walnuts which have been made in California between 1973 and 1975. Farm advisors in four counties have prepared sample costs of production during this period. The costs are not presented as being averages for the counties but represent commercial orchards with good management. Estimated yields are above the county averages. The studies use a wage rate which includes social security, compensation insurance, and other miscellaneous labor costs. Fuel and repairs are based on standard rates of performance for the equipment used. Material costs are for material delivered to the orchard. Investment is based on present replacement costs except land which is market value for agricultural purposes. Depreciation is figured at acceptable lengths of life and interest is charged at 7-8 percent.

WALNUT ACREAGE IN CALIFORNIA BY COUNTY FOR 1973

	WALNUTS		
	Bearing	Nonbearing	Total
Mendocino	564	35	599
Shasta	774	108	882
Alameda	973	39	1,012
Contra Costa.	6,083	514	6,597
Lake.	9,303	674	9,977
Monterey.	349	158	507
Napa.	1,064	5	1,069
San Benito.	4,944	853	5,797
San Luis Obispo	2,660	370	3,030
San Mateo	81	--	81
Santa Clara	4,373	60	4,433
Sonoma.	1,042	61	1,103
Butte	8,288	3,992	12,280
Colusa.	3,668	1,010	4,678
Glenn	3,496	1,969	5,465
Sacramento.	468	3	471
Solano.	1,452	795	2,247
Sutter.	10,730	4,204	14,934
Tehama.	6,050	5,709	11,759
Yolo.	4,952	614	5,566
Yuba.	2,840	1,730	4,570
Fresno.	3,383	1,718	5,101
Kern.	172	1,245	1,417
Kings	3,404	1,768	5,172
Madera.	1,027	514	1,541
Merced.	7,238	1,644	8,882
San Joaquin	22,944	3,187	26,131
Stanislaus.	19,964	5,826	25,790
Tulare.	18,490	11,307	29,797
Amador.	665	71	736
Calaveras	786	49	835
El Dorado	383	55	438
Nevada.	6	5	11
Placer.	155	--	155
Tuolumne.	26	--	26
Los Angeles	337	--	337
Orange.	5	--	5
Riverside	791	--	791
San Bernardino.	118	--	118
San Diego	269	63	332
Santa Barbara	1,690	92	1,782
Ventura	1,965	--	1,965
STATE	158,066	50,448	208,514

CALIFORNIA ACREAGE, YIELD, PRODUCTION, AND SEASON AVERAGE PRICE
OF WALNUTS, 1940-1975

Year	Bearing acres	Non- bearing	Yield		Pro- duction tons	Season average price per ton
			tons	pounds		
1940	126,224	22,744	.37	740	46,400	\$233
1941	124,303	22,364	.51	1,020	63,000	253
1942	124,458	22,093	.46	920	57,600	308
1943	125,768	21,162	.47	940	58,500	483
1944	125,679	21,561	.52	1,040	65,000	446
1945	126,941	22,464	.50	1,000	64,000	514
1946	126,039	25,356	.50	1,000	63,000	570
1947	126,299	27,509	.47	940	59,000	388
1948	121,451	29,018	.51	1,020	62,000	442
1949	115,772	29,575	.69	1,380	80,200	363
1950	115,527	30,051	.50	1,000	58,000	392
1951	114,212	28,687	.60	1,200	68,300	440
1952	114,228	27,421	.66	1,320	75,600	400
1953	114,972	24,958	.48	960	54,800	415
1954	113,263	22,823	.59	1,180	67,000	360
1955	114,215	24,235	.63	1,260	72,000	555
1956	113,922	27,523	.61	1,220	69,000	442
1957	118,746	30,911	.52	1,032	61,300	427
1958	120,721	32,804	.68	1,362	82,200	377
1959	121,796	36,954	.48	940	58,500	483
1960	123,525	36,512	.57	1,137	70,300	535
1961	122,775	41,373	.50	1,000	61,200	473
1962	123,335	39,215	.62	1,240	77,000	469
1963	124,460	38,861	.64	1,280	74,000	460
1964	128,245	36,028	.67	1,260	86,100	458
1965	129,382	34,285	.61	1,220	79,000	432
1966	135,980	33,020	.68	1,360	92,000	460
1967	137,550	40,440	.54	1,080	74,000	560
1968	139,290	36,920	.66	1,320	92,000	650
1969	143,000	41,630	.70	1,400	100,000	420
1970	146,520	47,360	.74	1,480	108,000	407
1971	150,430	47,784	.88	1,760	132,000	420
1972	157,630	48,955	.74	1,480	116,000	564
1973	158,066	50,448	1.10	2,200	174,000	605
1974	162,844	48,398	.96	1,920	155,000	419
1975	167,370		1.17		195,000	450

Source: U.S. Department of Agriculture and California Crop and Livestock Reporting Service.

SUMMARY OF WALNUT COST STUDIES IN CALIFORNIA 1973 - 75

County	Year of study	Yield lbs.	Cost per acre								Cost per lb.	Total investment per acre
			Cultural cash and labor	Harvest	Misc. overhead	Taxes	Management	Depreciation	Interest	Total		
Dollars												
Amador	1975	1200	69.56	154.60	13.45	9.00	12.00	59.64	113.85	432.10	.36	2,247
Calaveras												
-dryland	1975	1200	62.46	98.12	8.85	43.02	12.30	57.22	118.03	400.00	.33	2,151
-irrigated	1975	2500	173.89	189.49	21.84	64.90	25.63	92.22	142.03	710.00	.28	2,951
Central Coast Counties	1975	3000	291.95	212.95	23.74	85.00	40.50	124.07	380.95	1,159.16	.39	5,466
Sacramento Valley	1975	4000	222.25	126.40	20.69	120.00	50.00	318.90	361.76	1,220.00	.31	7,545
San Joaquin Valley	1975	2500	183.30	125.00	20.42	32.00	25.00	101.80	173.32	660.84	.26	3,932
Glenn	1973	4000	144.47	81.20	13.54	13.52	42.00	122.03	145.35	562.11	.14	3,353

SAMPLE COSTS TO PRODUCE WALNUTS
(Dryland)
Amador County - 1975

Based on 80 acres yielding 1,200 pounds per acre. Labor at \$3.00 and \$2.50.

Operation	Hours per acre	Cash and labor cost per acre				Total
		Labor	Fuel & repairs	Materials		
				Kind & quantity	Cost	
Dollars						
Cultural Costs						
Pruning (17 trees/acre)	5.0	12.50		Paint	.50	13.00
Brush disposal 2X	2.5	7.50	2.25			9.75
Cultivation (crawler)	1.0	3.00	3.20			6.20
Cultivation (wheel) 2X	1.6	4.80	3.12			7.92
Fertilizer	.4	1.20	.98	60# N	24.00	26.18
Boron	.7	2.10	1.75	Borax 14#	2.66	6.51
TOTAL CULTURAL COSTS		31.10	11.30		27.16	69.56
Harvest Costs						
Land preparation	.5	1.50	1.10			2.60
Shaking	2.0	6.00	7.00			13.00
Picking	33.0	82.50				82.50
Haul to dryer	3.8	11.40	9.50			20.90
Hulling & drying	3.6	11.80	15.00			26.80
Load & haul to market	1.6	4.80	4.00			8.80
TOTAL HARVEST COSTS		118.00	36.60			154.60
Cash Overhead						
Misc. office					13.45	
Taxes					9.00	
TOTAL CASH OVERHEAD						22.45
TOTAL CASH COST		149.10	47.90		49.61	246.61
Management 5% of 1200 lbs. @ \$400						12.00
Investment						
		<u>Per acre</u>		<u>Annual Cost</u>		
Land		\$ 600		<u>Depreciation</u>	<u>Interest</u>	
Trees		1200		\$ -	\$ 48.00	
Tractor, truck, etc.		259		30.00	48.00	
Huller & building		188		22.14	10.35	
Total		<u>\$2247</u>		<u>7.50</u>	<u>7.50</u>	
TOTAL COST PER ACRE				\$59.64	\$113.85	173.49
Cost per ton @ 1,200 lb. yield						720.00

Source: Plaister, Robert E. and Philip S. Parsons. Sample Costs to Produce Walnuts, (Dryland), Amador County - 1975. Jackson: University of California Cooperative Extension. 1975.

SAMPLE COSTS TO PRODUCE WALNUTS
Calaveras County - 1975

Based on 80 acres, 30' X 30' spacing (permanent alternate rows), yielding 2,500 lbs. per acre. Labor: skilled \$3.00, unskilled \$2.50.

Operation	Hours per acre	Cash and labor cost per acre				Total
		Labor	Fuel & repairs	Materials		
				Kind and quantity	Cost	
Dollars						
Cultural Costs						
Prune	10.0	25.00				25.00
Brush disposal	1.5	3.75	1.74			5.49
Fertilize				100# N applied, contract	40.00	40.00
Spray (husk fly)	0.5	1.50	1.23	Insecticide	10.00	12.73
Sod culture 3X	1.0	2.50	1.40			3.90
Strip weed control	.3	.75	.83	Herbicide	4.00	5.58
Irrigate 4X	2.4	6.00		Power cost 3.3 ac.ft. @ \$5.36	17.69	
				Water cost @ \$15/ac.ft.	50.00	73.69
Misc. pest, etc.	2.0	5.50	2.00	Truck		7.50
TOTAL CULTURAL COSTS		45.00	7.20		121.69	173.89
Harvest Costs						
Pre-harvest weed chop	.3	.84	.42			1.26
Shake	2.0	6.00	4.14			10.14
Picking-hand	37.5	93.75				93.75
Haul to dryer	3.0	7.50	4.50			12.00
Hull and dry	7.5	22.50	30.00			52.50
Load and haul to market	3.2	9.60	10.24			19.84
TOTAL HARVEST COSTS		140.19	49.30			189.49
Cash Overhead						
Misc., office, etc.					21.84	
Taxes					64.90	
TOTAL CASH OVERHEAD						86.74
TOTAL CASH COST		185.19	56.50		208.39	450.12
Management 5% of 1-1/4 tons @ \$410						25.63
Investment						
	Per acre	Annual cost				
		Depreciation	Interest 8%			
Land	\$ 800		\$ 64.00			
Trees	1,200	\$30.00	40.00			
Irrigation system	300	20.00	12.00			
Buildings	20	1.00	.80			
Equipment	331	31.22	13.23			
Irrigation (supply line)	300	10.00	12.00			
Total	\$2,951	92.22	\$142.03			234.25
TOTAL COST PER ACRE						710.00
Cost per ton @ 2,500 lb. yield						568.00

Source: Irving, Daniel, Philip S. Parsons, and Warren Micke, Walnut Production in Calaveras County. San Andreas: University of California Cooperative Extension. 1975.

SAMPLE COSTS TO PRODUCE WALNUTS
(Dryland)
Calaveras County - 1975

Based on 80 acre orchard, 50' x 50' spacing, 17 trees per acre, yielding 1200 lbs. per acre. Labor: skilled \$3.00; unskilled \$2.50.

Operation	Hours per acre	Cash and labor cost per acre				Total
		Labor	Fuel & repairs	Materials Kind & quantity	Cost	
Dollars						
<u>Cultural Costs</u>						
Prune	4.0	10.00				10.00
Brush disposal	1.0	2.50	1.10			3.60
Fertilize (contract)				50# N applied	21.50	21.50
Spray (husk fly)	.5	11.50	1.23	Insecticide	10.00	12.73
Sod culture (1X)	.5	1.25	.70			1.95
Strip weed control	.3	.75	.43	Herbicide	4.00	5.18
Misc. pest, etc.	2.0	5.50	2.00			7.50
TOTAL CULTURAL COSTS		21.50	5.46		35.50	62.46
<u>Harvest Costs</u>						
Pre-harvest weed chop	.3	.84	.42			1.26
Shake	2.0	6.00	4.14			10.14
Picking, hand	18.0	45.00				45.00
Haul to dryer	1.5	3.75	2.25			6.00
Hull and dry	3.6	10.80	15.00			25.80
Load, haul to market	1.6	4.80	5.12			9.92
TOTAL HARVEST COSTS		71.19	26.93			98.12
<u>Cash Overhead</u>						
Misc., office, etc.					8.85	
Taxes					43.02	
TOTAL CASH OVERHEAD						51.87
TOTAL CASH COST		92.69	32.39		87.37	212.45
Management 5% of .6 ton @ \$410						12.30
<u>Investment</u>						
	<u>Per Acre</u>		<u>Annual cost</u>			
Land	800		<u>Depreciation</u>	<u>Interest 8%</u>		
Trees	1,000		25.00	40.00		
Buildings	20		1.00	.80		
Equipment	331		<u>31.22</u>	<u>13.23</u>		
Total	2,151		<u>57.22</u>	<u>118.03</u>		175.25
TOTAL COST PER ACRE						400.00
Cost per ton @ 1,200 lb. yield						666.67

Source: Irving, Daniel, P. S. Parsons, Warren Micke, Walnut Production in Calaveras County. San Andreas: University of California Cooperative Extension. 1975.

SAMPLE COSTS TO PRODUCE WALNUTS
Central Coast Counties - 1975

Based on 80 acre orchard, yielding 1.5 tons per acre, trees 31' X 31', 45 trees per acre. Labor: \$2.75 unskilled; \$4.50 skilled; includes Social Security and Workman's Compensation.

Operation	Hours per acre	Cash and labor cost per acre				Total
		Labor	Fuel & repairs	Materials		
				Kind and quantity	Cost	
Dollars						
<u>Cultural Costs</u>						
Prune	10.0	\$27.50	\$.50			28.00
Brush disposal	1.0	4.50	2.70			7.20
Cultivate	4.0	18.00	13.80			31.80
Fertilize	.5	2.25	1.65	200# @ \$.30	60.00	63.90
Irrigate 4X	4.0	11.00	2.00	24" water	36.00	49.00
Spray 4X	2.0	9.00	21.50	Material	60.00	90.50
Misc. (replants, graft, tie)	4.0	11.00	2.55	Materials	8.00	21.55
TOTAL CULTURAL COSTS		83.25	44.70		164.00	291.95
<u>Harvest Costs</u>						
Cultivate & float	1.0	4.50	3.45			7.95
Shake (custom)	2.0			\$20.00 per hr.	40.00	40.00
Sweep & pick (custom)				\$50.00 per ton	75.00	75.00
Hull (custom)				\$30.00 per ton	45.00	45.00
Dehydrate (custom)				\$30.00 per ton	45.00	45.00
TOTAL HARVEST COSTS		4.50	3.45		205.00	212.95
<u>Cash Overhead</u>						
Misc., office, etc.					23.75	
Taxes					85.00	
TOTAL CASH OVERHEAD						108.74
TOTAL CASH COST		87.75	48.15		477.74	613.64
Management 5% of 1.5 tons @ \$540.00						40.50
<u>Investment</u>						
		<u>Per acre</u>	<u>Annual cost</u>			
Land		\$3,000.00		<u>Depreciation</u>	<u>Interest</u>	
Trees		1,600.00	\$ 53.33	12.50	72.00	
Irrigation system		250.00	5.00	5.00	11.25	
Buildings		100.00			4.50	
Equipment		515.63	53.24		23.20	
Total		<u>\$5,465.63</u>	<u>\$124.07</u>		<u>\$380.95</u>	505.02
TOTAL COST PER ACRE						1,159.16
Cost per ton @ 1.5 ton yield						772.77

Source: Carnill, Gregory. Sample Cost to Produce Walnuts, Central Coast Counties - 1975, Hollister: University of California Cooperative Extension. 1975.

SAMPLE COSTS TO PRODUCE LATERAL BEARING ENGLISH WALNUTS
Lower Sacramento Valley - 1975

Based on 100 acres, 30' x 30' spacing, 48 trees per acre, yielding 2 tons per acre. Labor @ \$3.25 per hour including fringe benefits.

Operation	Hours per acre	Cash and labor cost per acre				Total
		Labor	Fuel & repairs	Materials		
Kind & quantity				Cost		
Dollars						
Cultural Costs						
Pruning	6.0	19.50	7.80			27.30
Brush disposal	1.5	4.90	2.20			7.10
Fertilizer	.3	1.00	.60	150# N @ \$.30	45.00	46.60
Spray 6X*				Application & materials	80.00	80.00
Cultivate & ridge 5X	2.2	7.15	7.35			14.50
Irrigation	6.0	19.50		3 ac.ft. water @ \$4.50 ac.ft.	13.50	33.00
Misc. labor	2.0	6.50				6.50
Replant	1.0	3.25		1 tree/acre	4.00	7.25
TOTAL CULTURAL COSTS		61.80	17.95		142.50	222.25
Harvest Costs						
Landplane	.5	1.65	1.60			3.25
Shake	1.7	5.53	6.37			11.90
Sweep	2.8	9.10	4.50			13.60
Pick-up	1.25	4.05	7.65			11.70
Haul to shed	1.25	4.05	1.90			5.95
Hull & dry				@ \$.02/lb.	80.00	80.00
TOTAL HARVEST COSTS		24.38	22.02		80.00	126.40
Cash Overhead						
Misc., office, etc.					20.69	
Taxes					120.00	
TOTAL CASH OVERHEAD					140.69	140.69
TOTAL CASH COST		86.18	39.97		363.19	489.34
Management 5% of 2 tons @ \$.25/lb. (\$1,000)						50.00
Annual Cost						
<u>Investment</u>	<u>Per acre</u>		<u>Depreciation</u>	<u>Interest 8%</u>		
Land	\$1500			\$120.00		
Trees	4400		\$176.00	176.00		
Irrigation system	300		15.00	12.00		
Buildings	130		6.50	5.20		
Equipment	1214		121.40	48.56		
Total	\$7544		\$318.90	\$361.76		680.66
TOTAL COST PER ACRE						1220.00
Cost per ton @ 2 ton yield						610.00

*This includes three walnut-blight sprays which generally will not be necessary on late-leaving varieties.

SAMPLE COSTS TO PRODUCE WALNUTS WITH NONTILLAGE
Glenn County - 1973

Based on 30' x 30' planting, 48 trees per acre, yielding 2 tons per acre.
Labor: skilled \$2.75/hr., regular \$2.50/hr.

Operation	Hours per acre	Cash and labor cost per acre				Total
		Labor	Fuel & repairs	Materials Kind & quantity	Cost	
Dollars						
Cultural Costs						
Pruning	6.0	15.00	3.90			18.90
Brush disposal (contract)		12.00				12.00
Fertilizer (contract)				250# N.	29.00	29.00
Shred covercrop 7X	1.75	4.81	2.63			7.44
Strip spraying 4X	1.0	2.75	2.00	Chemicals	2.50	7.25
Blight spray 2X	.5	1.38	3.50	Chemicals	25.00	29.88
Insects 2X	1.0	2.75	7.00	Chemicals	20.00	29.75
Sprinkler irriga- tion 6X	1.0	2.50	1.00	3 ac.ft. @ \$2.25	6.75	10.25
TOTAL CULTURAL COSTS		41.19	20.03		83.25	144.47
Harvest Costs						
Shake (contract)				\$22.00 per hr.	11.00	11.00
Sweep	.75	2.06	1.39			3.45
Pickup	.75	2.06	1.50			3.56
Haul	.75	2.06	1.50			3.56
Hull & dry	3.5	9.63	50.00			59.63
TOTAL HARVEST COSTS		15.81	54.39		11.00	81.20
Cash Overhead						
Misc., office, etc.					13.54	
Taxes				\$800/acre x 25% x 6.76 rate	13.52	
TOTAL CASH OVERHEAD						27.06
TOTAL CASH COST		57.00	74.42		121.31	252.73
Management 5% of 2 tons @ \$420						42.00
Investment						
		<u>Per acre</u>	<u>Annual Cost</u>			
Land		\$ 800	\$ -	Interest 7%	\$ 56.00	
Trees		1800	60.00		63.00	
Sprinkler irrigation pipe		250	16.67		8.75	
Pump and well		60	3.00		2.10	
Equipment		443	42.36		15.50	
Total		\$3353	\$122.03		\$145.35	267.38
TOTAL COST PER ACRE						562.11
Cost per ton @ 2 ton yield						281.05

Source: Costs to Produce Walnuts in Glenn County. Orland: University of California Cooperation Extension. 1973.

SAMPLE COSTS TO PRODUCE ENGLISH WALNUTS
Southern San Joaquin Valley - 1973

Based on a 10-year-old orchard with 35 trees per acre yielding 2500 pounds.
Labor at \$2.30 and \$2.65 per hour.

Operation	Hours per acre	Cash and labor cost per acre				Total
		Labor	Fuel & repairs	Materials Kind & quantity	Cost	
Dollars						
<u>Cultural Costs</u>						
Pruning	6.0	15.90	16.00			31.90
Brush disposal	4.0	9.20	1.75			10.95
Fertilizer				150# N @ \$.11/ lb. applied	16.50	16.50
Spray application 1X				Contract 300 gal. @ \$.02	6.00	6.00
Spray material					9.00	9.00
Tillage & harvest preparation	7.0	18.55	9.80			28.35
Irrigation 7X	6.0	13.80		Water 3.5 ac.ft. @ \$5.50 + \$6 district tax	25.25	39.05
Misc. labor and materials	6.0	14.15	1.40		16.00	31.55
Repairs, except tractor					10.00	10.00
TOTAL CULTURAL COSTS		71.60	28.95		82.75	183.30
<u>Harvest Costs</u>						
Shake, pick, hull, dehydrate & haul				Contract @ \$100 per ton	125.00	125.00
<u>Cash Overhead</u>						
Misc., office, etc.					20.42	
Taxes					32.00	
TOTAL CASH OVERHEAD						52.42
TOTAL CASH COST		71.60	28.95		260.17	360.72
Management 5% of 2500 lbs. @ \$400/ton						25.00
<u>Annual Cost</u>						
<u>Investment</u>		<u>Per acre</u>	<u>Depreciation</u>	<u>Interest</u>		
Land		\$1000		\$ 70.00		
Trees		2400	\$ 60.00	84.00		
Irrigation system		252	21.00	8.82		
Buildings & equipment		120	10.00	4.20		
Tractor		160	10.80	6.30		
Total		\$3932	\$101.80	\$173.32		275.12
TOTAL COST PER ACRE						660.84
Cost per ton @ 2500 pound yield						528.67

Source: Brown, L. C., L. T. Browne, K. W. Hench, G. S. Sibbett and E. A. Yeary. English Walnut Orchard Production Costs in the Southern San Joaquin Valley. Berkeley: University of California Cooperative Extension AXT-386, September 1973.

EQUIPMENT INVESTMENT FOR WALNUTS

Glenn County - 1973

Based on 150 acres of walnuts.

Item	Cost	Annual use (acres)	Cost per acre	Life (years)	Depreciation	7% Interest	Cash costs per hour		
							Fuel	Repairs	Total
Pruning tower	\$ 6,000	150	\$ 40.00	10	\$ 4.00	\$ 1.40	\$.35	\$.30*	\$.65
Chain saw & shears	500	150	3.33	10	.33	.116	--	--	.15
Pickup truck	4,000	150	26.67	5	5.33	.933	--	--	2.00
Truck 1-1/2 ton used	3,000	150	20.00	10	2.00	.70	--	--	--
Tractor 40 H.P.W.D.	7,000	150	46.67	10	4.67	1.63	.32	.68	1.00
Flail Shredder 11'	1,600	150	10.67	5	2.13	.37	--	.50	.50
Rotary shredder 10' used	500	150	3.33	5	.67	.116	--	.50	.50
Weed sprayer P.T.O. stainless steel 150 gal.	1,000	150	6.67	10	.67	.233	--	1.00	1.00
Speed sprayer 500 gal.	13,000	150	86.67	10	8.67	3.033	.80	5.20	6.00
Nurse tank	500	150	3.33	10	.33	.116	--	.10	.10
Pickup machine S.P.	3,500	150	23.33	10	2.33	.816	.35	1.65	2.00
Carts (3) @ \$450	1,350	150	9.00	10	.90	.315	--	.60	.60
Sweeper S.P.	3,500	150	23.33	10	2.33	.816	.35	1.50	1.85
Tractor 30 H.P. used	1,000	150	6.67	5	1.33	.233	.35	.50	.85
Huller and dryer and building 20 T./day	20,000	150	133.33	20	6.67	4.67	\$25.00 per ton		
Total	\$66,450		\$443.00		\$42.36	\$15.50			

*6 hrs./acre x 150 acres = 900 hrs. ÷ \$250/yr.

Source: Jeter, Roy B. and Philip S. Parsons. Costs to Produce Walnuts in Glenn County. Orland: University of California Cooperative Extension. August 1973.

MONTHLY CASH FLOW FOR WALNUTS

Glenn County - 1973

Description	Total	Month											
		Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<u>Cultural Costs</u>													
Pruning	\$ 18.90	\$ 9.45	\$ 9.45	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Brush disposal	12.00	6.00	6.00										
Fertilizer	29.00												29.00
Shred cover													
crop 7X	7.44			1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06		
Strip spray 4X	7.25			1.81		1.81		1.81		1.81			
Blight spray 2X	29.88			14.94	14.94								
Insect spray 2X	29.75				14.88			14.88					
Irrigate 6X	10.25				1.71	1.71	1.71	1.71	1.71	1.71			
Total	144.47	15.45	15.45	17.81	32.59	4.58	2.77	19.46	2.77	4.58			29.00
<u>Harvest Costs</u>													
Harvest	81.20									40.60	40.60		
Total	81.20									40.60	40.60		
<u>Cash Overhead</u>													
Miscellaneous	13.54	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Taxes	13.52				6.76								6.76
Total	27.06	1.13	1.13	1.13	7.89	1.13	1.13	1.13	1.13	1.13	1.13	1.13	7.89
TOTAL CASH COST	\$252.73	\$16.58	\$16.58	\$18.94	\$40.48	\$5.71	\$3.90	\$20.59	\$3.90	\$46.31	\$41.73	\$1.13	\$36.89

Source: Jeter, Roy B. and Philip S. Parsons. Costs to Produce Walnuts in Glenn County. Orland: University of California Cooperative Extension. August 1973.

SAMPLE COSTS TO DEVELOP WALNUT ORCHARDS

Lower San Joaquin Valley - 1973

Based on a 28' x 28' planting, 55 trees per acre. Labor at \$2.65 and \$2.30 per hour.

	Year						
	1	2	3	4	5	6	7
Yield - pounds					500	1,000	2,000
Income @ \$.23					\$115.00	\$230.00	\$460.00
Pre-Harvest Cash Costs	dollars						
Land preparation: subsoil, contract	30						
Disc and float: 4 hrs. man and tractor	16						
Trees: 55 @ \$3.50 (+2, 2nd year; 1, 3rd year)	192	7	4				
Survey and plant: 55 @ \$.35 (+ 2, 2nd year; 1, 3rd year @ \$2.00 each)	19	4	2				
Stakes: 60 10-foot @ \$.50	30						
Stake trees: 7 hrs. labor + 1 tractor-hour	18						
Training, tying, pruning	22	15	18	22	30	30	30
Tillage and irrigation preparation: 7 hrs. man and tractor	28	28	28	28	28	28	28
Irrigation: 4 hrs. labor 1st and 2nd years; then 6 hrs. labor per year	9	9	14	14	14	14	14
Water: @ \$5.50/acre-foot + district tax @ \$6.00	12	12	14	17	22	22	22
Sunburn protection (trunk)	10		10				
Fertilizer: nitrogen @ \$.25/lb. applied	8	8	11	11	17	17	17
Spray materials			6	6	6	9	9
Spray application: contract			3	3	3	6	6
Misc. labor: 6 hrs. labor + 1 tractor-hour	16	16	16	16	16	16	16
Misc. materials	16	16	16	16	16	16	16
Repairs, except tractor	10	10	10	10	10	10	10
Total Cultural Costs	436	125	152	143	162	168	168
Harvest Costs							
Shake, pick, hull, and dry: @ \$100/ton					25	50	100
Overhead Costs							
Miscellaneous overhead	27	8	10	9	10	11	11
Taxes	20	20	20	20	20	32	32
Management	36	36	36	36	36	36	36
Depreciation	47	47	47	47	47	47	47
Interest	106	153	180	212	244	274	301
Total Overhead Costs	236	264	293	324	357	400	427
TOTAL COST PER ACRE	672	389	445	467	544	618	695
Net Cost Per Acre					429	388	235
Accumulated Cost		1,061	1,506	1,973	2,402	2,790	3,025
Investment							
Land	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Trees		672	1,061	1,506	1,973	2,402	2,790
Irrigation system	252	252	252	252	252	252	252
Buildings & equipment	120	120	120	120	120	120	120
Tractor	260	260	260	260	260	260	260
Total Investment	1,832	2,504	2,893	3,338	3,805	4,234	4,622

Total cost through the 7th year - \$3,025.

Adapted from: Brown, L. E., L. T. Browne, K. W. Hench, G. S. Sibbett and E. A. Yeary. English Walnut Orchard Development Costs in the Southern San Joaquin Valley. Berkeley: University of California Cooperative Extension, AXT-385, September 1973.