

Modesto, California
October, 1950

Agricultural Extension Service
Stanislaus County
By A. A. Jungerman, Farm Advisor

WALNUTS AS A CROP IN STANISLAUS COUNTY

Walnuts have been produced in Stanislaus County for quite a few years, but the large acreage increase has occurred during the past fifteen years. An average yield of at least 1200 pounds per acre of merchantable nuts is necessary for success. Bearing acreage in Stanislaus County is at present about 6,000 acres, while the non-bearing acreage is 3,000 acres, or a total of 9,000 acres planted to walnuts.

Requirements -- The deeper, well drained soils are most suited for efficient walnut production. Orchards are successfully produced on a variety of soils from the heavier loam to the lighter sandy loam soil where there is sufficient depth and good drainage for good root development. Walnuts require a number of irrigations per season depending upon the type of soil. Thirty-six acre inches of water is ample for successful production for average conditions. With a program of efficient orchard management under those conditions, successful production can be maintained.

Market Outlook -- The outlook for walnut production is such that present planted acreage will take care of market needs. The bearing acreage in the state is 108,304 acres, while the nonbearing acreage is 19,195. In 1949 the largest tonnage of walnuts in California history was produced. It was a fairly normal crop year causing the industry to divert large tonnages of walnuts into channels other than for human consumption to get rid of the surplus crop. Therefore, unless an ideal piece of soil well suited to walnuts is chosen for planting or replacement of an old orchard, new walnut plantings are not advised at present.

Yield -- The yield varies according to varieties, management, and soils. The average yield of walnuts in full bearing in Stanislaus County is approximately 1500 pounds per acre. Varieties such as Payne will produce larger yields at an early age. Yields of 2 tons per acre have been reported, but these are exceptions. A good yield would be a ton of merchantable nuts per acre.

How Large an Acreage? -- At least 30 acres in bearing walnuts of good varieties on suitable soil are necessary for a minimum economic unit. Smaller acreages are dependent for additional income from other sources.

Planting Recommendations -- On the better soils walnuts should not be planted closer than 48 to 50 feet. Sixty-foot plantings are recommended, particularly for such varieties as Eureka and Franquettes. On less productive soils at least 48 foot spacing is recommended. The Payne variety can be planted at closer distances than other varieties. Varieties that are recommended for Stanislaus County are Payne, Hartley, Eureka, Treat Franquette, and other Franquettes that are proven producers. The Mayette variety is not recommended because of its low production.

Cost of Producing Walnuts -- The average investment in a bearing walnut orchard other than the cost of the land is approximately \$550 per acre. This includes cost of bringing the trees into full production, value of equipment, and buildings, and interest on the investment together with depreciation of trees and equipment. The average cost of producing walnuts in Stanislaus County at present is approximately \$16.00 per cwt. on a 1500 pound production. Heavier yields will produce walnuts at a less cost. For further details on walnut production, see the local Agricultural Extension Service.

What Will it Cost to Produce Walnuts in Stanislaus County
 Based on a yield of 1500 pounds per acre?
 Man labor at \$.85; tractor at \$1.50 and truck at \$1.50 per hr.

	<u>Sample Costs</u>		<u>My Costs</u>	
	<u>Per</u>	<u>Per</u>	<u>Per</u>	<u>Per</u>
	<u>Acres</u>	<u>Cwt.</u>	<u>Acres</u>	<u>Cwt.</u>
<u>LABOR COSTS:</u>				
Pruning and brush disposal - 7 man and 1 truck hr.		7.45		
Cover crop and fertilize - 3 man and 2 truck hrs.		5.55		
Pest and disease control: spray, dust, etc.		8.00		
Cultivation and irrigation prep. - 6 man and 6 tractor hrs.	14.10			
Irrigation - 5 man hrs.		4.25		
Miscellaneous labor - 2 man, 1 tractor and 1 truck hr.		4.70		
Total pre-harvest labor		44.05	2.93	
Knock, pick and haul out		50.50	3.37	
Hulling and drying		9.75	.65	
Deliver @ \$.10 per cwt.		1.50	.10	
Total harvest labor		61.75	4.12	
Total labor cost		105.80	7.05	
<u>MATERIAL COSTS:</u>				
Irrigation water - tax or power cost		3.20		
Cover crop seed and fertilizer		16.00		
Pest and disease control		10.00		
Miscellaneous		2.50		
Total material cost		31.70	2.11	
<u>CASH OVERHEAD COSTS:</u>				
General expense		6.88		
County taxes		9.00		
Repairs (except tractors and trucks)		5.00		
Insurance and other cash costs		3.50		
Total cash overhead		24.38	1.63	
Total cash costs		161.88	10.79	
<u>DEPRECIATION:</u>				
Trees - (\$550 cost - 40 yrs. productive life)		13.75		
Buildings, irrigation facilities and equipment, including harvesting, hulling and drying		15.00		
Total depreciation		28.75	1.92	
<u>INTEREST ON INVESTMENT @ 5%:</u>				
Trees - (Av. value \$275)		13.75		
Bldgs., irrig. facilities and equipment, including harvest, hull and dry (Av. value \$135)		6.75		
Land at \$400		20.00		
Total interest on investment		40.50	2.70	
<u>TOTAL COST OF PRODUCTION</u>		231.13	15.41	

SUMMARY OF COSTS, INCOME AND EARNINGS PER HUNDREDWEIGHT AND PER ACRE FOR ORCHARDS
IN STANISLAUS COUNTY 1950 WALNUT COST STUDY 1/

Record Number	Yield, lbs. per acre	Av. price received per cwt.		Total cost per cwt.	Management Income per cwt.	Total Income per acre	Total cost per acre	Management Income per A.
		Merch- antable	All Nuts					
4	3104	\$22.52	\$21.75	\$ 7.89	\$13.86	\$675.00	\$244.87	\$430.13
5	3386	21.49	19.97	8.30	11.67	676.19	281.07	395.12
7	2713	22.72	19.56	7.24	12.32	530.61	196.50	334.11
2	2498	21.63	19.57	8.71	10.86	488.90	217.48	271.42
13	2572	21.62	19.67	9.28	10.39	505.90	238.68	267.22
1	2122	22.64	21.26	8.75	12.51	451.23	185.72	265.51
14	1936	21.86	20.42	9.04	11.38	395.40	175.02	220.38
18	1776	22.35	20.85	8.47	12.38	370.31	150.41	219.90
25*	2039	21.33	19.82	10.06	9.76	404.30	205.17	199.13
33	2067	24.33	22.91	13.30	9.61	473.59	274.91	198.68
24	2036	22.49	20.47	10.88	9.59	416.77	221.57	195.20
9	2294	21.66	20.42	12.79	7.63	468.43	293.34	175.09
23	2239	21.48	18.77	11.14	7.63	420.52	249.62	170.90
31*	1797	22.82	21.04	12.40	8.64	378.26	222.92	155.34
15	1898	22.09	20.14	12.12	8.02	382.19	230.06	152.13
22	1602	23.28	22.02	12.73	9.29	352.81	204.01	148.80
28	2008	21.49	20.19	13.16	7.03	405.35	264.22	141.13
16	1806	21.30	18.97	11.24	7.73	342.71	203.07	139.64
11	1603	20.57	18.79	11.83	6.96	301.34	189.62	111.72
26	1283	21.35	19.83	11.49	8.34	254.46	147.45	107.01
32	1509	22.30	20.11	13.73	6.38	303.40	207.08	96.32
29	1432	22.50	20.69	14.93	5.76	296.45	213.88	82.57
6	1585	22.14	20.33	16.69	3.64	322.09	264.42	57.67
10	1015	23.03	21.92	19.40	2.52	222.59	197.03	25.56
17	529	23.56	22.24	17.76	4.48	117.67	93.98	23.69
19	1282	22.76	21.07	23.13	-2.06	270.09	296.40	-26.31
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1950*								
Average	1860	22.24	20.49	11.70	8.79	381.11	217.65	163.46
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1931-35								
Average	1150	11.93	10.80	7.54	3.26	124.20	86.69	37.51

1/ Supplement to Stanislaus County 1950 Walnut Cost Study report issued December, 1950.

* Yield and cost per hundredweight adjusted since first report.

The above table presents returns and earnings data which were not available at the time the original report was issued. Records in this table are arranged downwards in order of decreasing management income per acre. Management income is income above total costs of production.

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