

WALNUT

ORCHARD COSTS FROM PLANTING TO PICKING

UNIVERSITY OF CALIFORNIA
AGRICULTURAL EXTENSION SERVICE
TEHAMA COUNTY

ESTABLISHING A WALNUT ORCHARD IN TEHAMA COUNTY - 1956

This cost study was designed to give an idea of expected costs per acre involved in establishing a walnut orchard. The figures represent typical costs under assumed conditions. These conditions are as follows: 40 acres of level land, valued at \$500.00 an acre, 38 acres in trees planted at 60 foot centers with 12 trees to the acre.

Irrigation water is supplied by one of the local water districts at a cost of \$5.00 an acre a year.

A wheel tractor, 100 gallon spray rig and all other needed tilling and digging implements were computed at retail value the first year. The cost of a fertilizer spreader was added in the third year and a 400 gallon speed sprayer the seventh year.

Major variations from these per acre costs will occur with variation of size of planting, utilization of machinery already on hand and incidence of disease and insect pest infestation.

No effort was made to determine the relationship of an intercrop to these costs, however, the 60 foot centers were designed for such a combination enterprise.

The total cost per acre will remain about constant from the seventh year until self-sustaining, between the seventh to tenth year, depending on variety, vigor and other factors.

SAMPLE COSTS TO ESTABLISH WALNUT ORCHARD
First Year

Operation	Dates	Hours Per Acre	CASH AND LABOR COST			TOTAL COST		Cost Per Acre
			Labor	Equipment	Materials	Total	Per Acre	
Disc	Nov.	.5	.50	.50			1.00	
Layout	Jan.	1.0	1.00		Markers 12 @ 5¢	.60	1.60	
Dig Holes	Jan.-Feb.	.5	.50	.30			.80	
Plant & prune	Jan.-Feb.	1.5	1.50		Trees 12 @ 1.50	18.00	19.50	
Stake	Jan.-Feb.	1.5	1.50		Stakes 12 @ 50¢	6.00	7.50	
Watering	Jan.-Feb.	.5	.50	.50			1.00	
Disc 2 times	April	1.0	1.00	1.00			2.00	
Furrow 3 times	March-Aug.	.6	.60	.60			1.20	
Disc furrows twice	May-July	.5	.50	.50			1.00	
Irrigate 6 times	April-Aug.	3.0	3.00	.50	Water	5.00	8.50	
Fertilize	April	.3	.25		Nitrogen 5 lbs. @ 15¢	.75	1.00	
Hoe	May	2.0	2.00				2.00	
Spray 1 time	June-Sept.	.5	.50	.50	Miticide	.25	1.25	
Tie - 2 times		2.0	2.00				2.00	
Disc	October	.5	.50	.50			1.00	
Plant Cover crop	October	.2	.20	.15	Seed 30lbs. @ 12.5¢	3.75	4.10	
Harrow	October	.3	.30	.20			.50	
Taxes						8.00	8.00	
Misc.			2.00	.75		2.65	5.40	
Total			19.00	6.00		45.00	70.00	
Investment		Per Acre	Interest and Depreciation					
Land		\$500.	\$ 25.					
Bldgs.		130.	6.					
Irrigation		50.	3.					
Equipment		120.	16.					
Total		800.					50.00	

Total Cost Per Acre 120.00

SAMPLE COSTS TO ESTABLISH WALNUT ORCHARD
Second Year

Operation	Dates	Hours Per Acre	CASH AND LABOR COST			YOUR COST		Cost for —Acr.
			Labor	Equipment	Materials	Total	PerAcre	
Fertilize	Dec.-Feb.	1.0	1.00		Nitrogen 6 lbs. @ .15¢ .90	1.90		
Prune & train	March	1.0	1.00			1.00		
Hoe 2 times	Feb.&June	1.5	1.50			1.50		
Disc cover crop twice	April	1.0	1.00	1.00		2.00		
Furrow 3 times	March-July	.6	.60	.60		1.20		
Irrigate 6 times	March-Aug.	3.0	3.00	.50	Water 5.00	8.50		
Disc furrows 2 times	May-July	.5	.50	.50		1.00		
Spray 1 time	June-Sept.	.5	.50	.50	Miticide .50	1.50		
Retie & Smr. prune	May-Aug.	2.0	2.00			2.00		
Disc	October	.5	.50	.50		1.00		
Plant cover crop	October	.2	.20	.15	Seed 30 lbs. @ 12½¢ 3.75	4.10		
Harrow	October	.3	.30	.20		.50		
Taxes						8.00	8.00	
Misc.			3.90	3.05		2.85	9.80	
Total			16.00	7.00		21.00	44.00	
Investment		Per Acre	Interest and Depreciation					
	Land	\$500.		\$ 25.				
	Bldgs.	130.		6.				
	Irrigation	50.		3.				
	Equipment	120.		16.				
	Trees	120.		6.				
	Total	<u>920.</u>					56.00	
Total Cost Per Acre						100.00		

SAMPLE COSTS TO ESTABLISH WALNUT ORCHARD
Third Year

Operation	Dates	Hours Per Acre	CASH AND LABOR COST			YOUR COST		Cost For Acre's
			Labor	Equipment	Materials	Total	Per Acre	
Fertilize	Dec.-Feb.	.3	.25	.25	Nitrogen 6 lbs @ 15¢ .90	1.40		
Prune & train	March	2.0	2.00			2.00		
Hoe	June	1.0	1.00			1.00		
Disc cover crop twice	April	1.0	1.00	1.00		2.00		
Furrow 2 times	April & July	1.0	1.00	1.00		2.00		
Irrigate 5 times	May-Aug.	5.0	5.00	.50	Water 5.00	10.50		
Disc furrows twice	May-July	1.0	1.00	1.00		2.00		
Spray 1 time	June-Sept.	1.0	1.00	1.00	Miticide 1.00	3.00		
Summer Prune	May-Aug.	.5	.50			.50		
Bisc	October	.5	.50	.50		1.00		
Plant cover crop	October	.2	.20	.15	Seed 30 lbs. @ 12½¢ 3.75	4.10		
Harrow	October	.3	.30	.20		.50		
Taxes						8.00	8.00	
Misc.			1.25	2.40		1.35	5.00	
		Total	15.00	8.00		20.00	43.00	
Investment		Per Acre	Interest					
	Land	\$500.	\$ 25.					
	Bldgs.	130.	6.					
	Irrigation	50.	3.					
	Equipment	120.	16.					
	Trees	215.	11.					
	Total	<u>1,015.</u>			61.00			

Total Cost Per Acre 104.00

SAMPLE COSTS TO ESTABLISH WALNUT ORCHARD
Fourth Year

Operation	Dates	Hours Per Acre	CASH AND LABOR COST			YOUR COST		Cost For Acre
			Labor	Equipment	Materials	Total	PerAcre	
Fertilize	Dec.-Feb.	1.0	1.00		Nitrogen 12 lbs. @ 15¢ 1.80		2.80	
Prune & train	March	4.0	4.00				4.00	
Remove brush	March	.5	.50	.50			1.00	
Hoe	June	1.0	1.00				1.00	
Disc cover crop twice	April	1.0	1.00	1.00			2.00	
Furrow 2 times	April-July	1.0	1.00	1.00			2.00	
Disc furrows twice	May-July	1.0	1.00	1.00			2.00	
Irrigate 4 times	April-Aug.	4.0	4.00	.50	Water 5.00		9.50	
Spray 1 time	June-Sept.	1.0	1.00	1.00	Miticide 1.00		3.00	
Summer Prune	May-Aug.	.5	.50				.50	
Disc	October	.5	.50	.50			1.00	
Plant cover crop	October	.2	.20	.15	Seed 30# @ 12.5¢ 3.75		4.10	
Harrow	October	.3	.30	.20			.50	
Taxes						8.00	8.00	
Misc.			1.00	.15		.45	1.60	
Total			17.00	6.00		20.00	44.00	
Investment		Per Acre	Interest & Depreciation					
Land		\$500.	\$ 25.					
Bldgs.		130.	6.					
Irrigation		50.	3.					
Equipment		120.	16.					
Trees		319.	16.					
Total		<u>1,119.</u>			66.00			

Total Cost Per Acre 110.00

SAMPLE COSTS TO ESTABLISH WALNUT ORCHARD
Fifth Year

Operation	Dates	Hours Per Acre	CASH AND LABOR COST				YOUR COST		Cost For — Acr.
			Labor	Equipment	Materials		Total	PerAcre	
Fertilize	Dec.-Feb.	.3	.25	.25	Nitrogen 18# @ 15¢	2.70	3.20		
Prune & train	March	4.0	4.00				4.00		
Remove brush	March	1.0	1.00	1.00			2.00		
Disc cover crop twice	April	1.0	1.00	1.00			2.00		
Furrow 2 times	May-July	.8	.75	.75			1.50		
Irrigate 4 times	April-Aug.	4.0	4.00	.50	Water	5.00	9.50		
Disc Furrows	July	.5	.50	.50			1.00		
Spray	June-Sept.	.5	.50	.50	Miticide or Aphicide	2.00	3.00		
Summer Prune	May-Aug.	.5	.50				.50		
Disc	October	.5	.50	.50			1.00		
Plant cover crop		.2	.20	.15	Seed 30# @ 12.5¢	3.75	4.10		
Harrow		.3	.30	.20			.50		
Taxes						8.00	8.00		
Misc.			2.50	1.15		.65	4.30		
Total			16.00	6.50		22.00	48.00		
Investment		Per Acre	Interest & Depreciation						
Land		\$500.	\$ 25.						
Bldgs.		130.	6.						
Irrigation		50.	3.						
Equipment		120.	16.						
Trees		429.	22.						
Total		<u>1,229.</u>			72.00				

Total Cost Per Acre

120.00

SAMPLE COSTS TO ESTABLISH WALNUT ORCHARD
Sixth Year

Operation	Dates	Hours Per Acre	CASH AND LABOR COST			YOUR COST		Cost For Acr.
			Labor	Equipment	Materials	Total	Per Acre	
Prune & train	Feb.--March	5.0	5.00				5.00	
Remove brush	Feb.--March	1.0	1.00	1.00			2.00	
Fertilize	Dec.--Feb.	1.0	1.00		Nitrogen 24 lb. @ 15¢	3.60	4.60	
Disc cover crop twice	April	1.0	1.00	1.00			2.00	
Furrow 2 times	May & July	.8	.75	.75			1.50	
Irrigate 4 times	May-August	4.0	4.00	.50	Water	5.00	9.50	
Disc	July	.5	.50	.50			1.00	
Spray	June-Sept.	1.0	1.00	1.00	Miticide or Aphicide	3.00	5.00	
Summer Prune	May-Aug.	.5	.50				.50	
Disc	October	.5	.50	.50			1.00	
Plant cover crop	October	.2	.20	.15	Seed 30 lb. @ 12½¢	3.75	4.10	
Harrow	October	.3	.30	.20			.50	
Taxes						8.00	8.00	
Misc.			4.75	1.40		1.65	7.80	
Total			20.00	7.00		25.00	52.00	
Investment		Per Acre	Interest and Depreciation					
	Land	\$500.	\$ 25.					
	Bldgs.	130.	6.					
	Irrigation	50.	3.					
	Equipment	120.	16.					
	Trees	544.	28.					
	Total	<u>1,344.</u>			78.00			

Total Cost Per Acre

130.00

SAMPLE COSTS TO ESTABLISH A WALNUT ORCHARD
Seventh Year

Operation	Dates	Hours Per Acre	CASH AND LABOR COSTS			YOUR COST		Cost For Acre
			Labor	Equipment	Material	Total	Per Acre	
Prune & train	Feb.-March	6.0	6.00				6.00	
Remove brush	Feb.-March	1.0	1.00	1.00			2.00	
Fertilize	Dec.-Feb.	.3	.25	.25	Nitrogen 24 lbs. @ 15¢	3.60	4.10	
Disc cover crop twice	April	1.0	1.00	1.00			2.00	
Furrow 2 times		1.0	1.00	1.00			2.00	
Irrigate 3 times	April-Aug.	3.0	3.00	3.00	Water	5.00	11.00	
Disc furrows	July	.5	.50	.50			1.00	
Spray	June-Sept.	.7	.75	1.80	Miticide	4.00	6.50	
Disc	October	.5	.50	.50			1.00	
Plant cover crop	October	.2	.20	.15	Seed 30 lbs @ 12.5¢	3.75	4.10	
Harrow	October	.3	.30	.20			.50	
Taxes						8.00	8.00	
Misc.			2.50	.60		.65	3.75	
Total			17.00	10.00		25.00	52.00	
Investment		Per Acre	Interest & Depreciation					
	Land	\$500.		\$ 25.				
	Bldgs.	130.		6.				
	Irrigation	50.		3.				
	Equipment	220.		27.				
	Trees	674.		32.				
Total		<u>1,574.00</u>					93.00	
Total Cost Per Acre							145.00	