

# Walnut Costs of Production

YOLO COUNTY - 1963

AN ENTERPRISE STUDY OF  
SAMPLE COSTS TO  
PRODUCE WALNUTS IN  
YOLO COUNTY

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## INTRODUCTION

Walnut acreage in Yolo County is increasing. This trend will perhaps continue. Due to the high degree of mechanization of this crop, the overhead cost is high. This is often overlooked by growers who are thinking about going into the walnut business. Walnut production, like any farming enterprise, is a business. The economic aspect of this business is just as important as the production aspects in determining whether the grower will make a profit.

This report presents information on growing walnuts in Yolo County. Cost will vary with individual orchards. Therefore, the information presented in this study should be considered as sample walnut costs that are representative for Yolo County. Growers should use this data for comparison with their individual operation.

The basic information for this study was gathered from a committee of walnut growers. This information was supplemented by grower interviews and University personnel. We are indebted to these people for their assistance.

### Basis for Costs

#### Operating Unit:

For purposes of this study, the size of the walnut operation is 80 acres. All equipment and overhead charges are made to the 80 acre orchard. If additional land is farmed, the overhead cost per acre would be less.

#### Equipment Cost:

Equipment costs are broken down into cash and overhead costs. Cash costs include fuel and repairs while overhead costs include interest on investment and depreciation. Interest is at the rate of 6 per cent per year on one half the original cost. Depreciation is based on the expected life of the equipment using the straight line schedule. It is recognized that the value placed on some equipment is higher than the price paid by the individual grower because of rising costs. However, the current value must be considered in order that the equipment can be replaced when it wears out or becomes obsolete.

### Yield:

The average yield was placed at 2000 pounds of walnuts per acre. This yield allows for loss from blight, frost and sunburn during certain years.

### Labor Charges:

The hourly charge for general labor is \$1.50. Included in this rate are overhead costs such as workmen's compensation insurance, social security and recruitment. Labor for knocker and pickup machine operators was charged at \$2.00 per hour. This labor charge was made regardless of whether it was hired or the grower did the work himself. If the grower did the work himself, he would have a credit of wages to himself in addition to his income. Management is not charged to the operation but comes out of income.

### Taxes:

Taxes are based on land values of \$1000 per acre and trees at \$1000 per acre. Personal property such as buildings and equipment is included in the taxes. Taxes were charged at \$26.00 per acre.

### Water:

Water costs are based on furrow or contour irrigation with a lift of 75 feet. Cost per acre foot is \$3.16. This does not include interest or depreciation on the well. Three acre feet are applied per acre.

### Miscellaneous Charges:

Minor items are charged to miscellaneous, including tree replacement, weed control, hoeing, transportation, telephone, etc. It is impractical to itemize these in detail.

Sample Walnut Production Costs  
80 Acres - Yield 2000 lbs.

Operation	Hrs./Acre	Labor	Cash & Labor Costs Per Acre		
			Fuel & Repairs	Materials	Total
<b>Cultural</b>					
Prune	9.0	\$13.50			\$13.50
Brush removal	2.0	3.00	\$4.60		7.60
Spray 2X - 2 men (1 air @\$6)	1.2	1.80	3.30	\$26.00	31.10
Fertilize - 150# nitrogen	.4	.60	1.00	18.00	19.60
Disk 4X	2.0	3.00	4.60		7.60
Furrow 2X	.5	.75	1.15		1.90
Irrigate 3X (3 acre feet)	5.0	7.50	1.00	9.39	17.89
Landplane 4X	1.0	1.50	2.40		3.90
Cover crop			Seed applied - 4.00		4.00
Springtooth	.1	.15	.22		.37
Miscellaneous	2.0	3.00	2.30	3.02	8.32
Taxes				26.00	26.00
<b>Total Cultural</b>	<b>23.2</b>	<b>\$34.80</b>	<b>\$20.57</b>	<b>\$86.41</b>	<b>\$141.78</b>
<b>Harvest</b>					
Shake @ \$2.00	1.5	\$3.00	\$2.25		\$5.25
Rake	.5	.75	.38		1.13
Pickup @ \$2.00	1.25	2.50	2.50		5.00
Haul to shed	1.25	1.88	1.50		3.38
Hull & dry @ 1¼¢ lb.-labor		25.00	15.63		40.63
Haul to market	1.0	1.50	2.00		3.50
<b>Total Harvest</b>	<b>5.5</b>	<b>\$34.63</b>	<b>\$24.26</b>		<b>\$58.87</b>
<b>Total Cultural and Labor Cost</b>		<b>\$69.43</b>	<b>\$44.83</b>	<b>\$86.41</b>	<b>\$200.67</b>
<b>Cost per lb. @ 2000 lb. yield</b>					<b>10.3¢</b>

Overhead Cost

Investment	Per Acre	Depreciation	Interest @ 6%	
Land	\$1000.00		\$60.00	
Trees	1000.00	\$25.00	30.00	
Irrigation system	209.00	10.57	6.28	
Cultural equipment	500.00	40.06	15.04	
Harvest equipment	375.00	33.67	11.25	
Hulling equip. & shed	113.00	3.75	3.38	
<b>Total</b>	<b>\$3197.00</b>	<b>\$113.05</b>	<b>\$125.95</b>	<b>\$239.00</b>
<b>Total Cost Per Acre</b>				<b>\$439.67</b>
<b>Cost per lb. @ 2000 lb. yield</b>				<b>22.0¢</b>

Walnut Investment Costs  
80 Acre Orchard

Equipment	Orig. Cost		Life Yrs.	Deprec./ Acre	Int. @6% Per Acre	Total Cost Per Acre
	Total	Per Acre				
<b>Cultural</b>						
Crawler tractor 40 HP	\$12,000	\$150.00	15	\$10.00	\$4.50	\$14.50
Wheel tractor 30 HP	3,000	37.50	15	2.50	1.13	3.63
Pruning equipment	1,000	12.50	10	1.25	.38	1.63
Speed sprayer 500 gal.	7,000	87.50	10	8.75	2.63	11.38
Buckrake 8'	800	10.00	10	1.00	.30	1.30
Nurse tank 1000 gal.	250	3.13	10	.31	.09	.40
Truck 2 ton	5,000	62.50	12	5.21	1.88	7.09
Disk 10½'	1,500	18.75	10	1.88	.56	2.44
Toolbar and shovels	1,000	12.50	10	1.25	.38	1.63
Landplane 12'	2,500	31.25	20	1.56	.94	2.50
Springtooth	700	8.75	10	.88	.26	1.14
Ditcher	2,000	25.00	15	1.67	.75	2.42
Shop tools	800	10.00	15	.67	.30	.97
Pickup ½ ton	2,500	31.25	10	3.13	.94	4.07
<b>Total Cultural</b>	<b>\$40,050</b>	<b>\$500.63</b>		<b>\$40.06</b>	<b>\$15.04</b>	<b>\$55.10</b>
<b>Harvest</b>						
Hulling & drying equip.	\$14,000	\$175.00	15	\$11.67	\$5.25	\$16.92
Rake	2,000	25.00	5	5.00	.75	5.75
Pickup machine	8,000	100.00	10	10.00	3.00	13.00
Shaker	4,800	60.00	10	6.00	1.80	7.80
Carts - 3	1,200	15.00	15	1.00	.45	1.45
<b>Total Harvest</b>	<b>\$30,000</b>	<b>\$375.00</b>		<b>\$33.67</b>	<b>\$11.25</b>	<b>\$44.92</b>
<b>Irrigation</b>						
Well 12"	\$5,000	\$62.50	20	\$3.13	\$1.88	\$5.01
Pump 40 HP	4,500	56.25	20	2.81	1.69	4.50
Distribution system - pipe	7,000	87.50	20	4.38	2.63	7.01
Siphons	200	2.50	10	.25	.08	.33
<b>Total Irrigation</b>	<b>\$16,700</b>	<b>\$208.75</b>		<b>\$10.57</b>	<b>\$6.28</b>	<b>\$16.85</b>
<b>Buildings</b>						
Hulling shed	\$6,000	\$75.00	30	\$2.50	\$2.25	\$4.75
Shop & machine shed	3,000	37.50	30	1.25	1.13	2.38
<b>Total Buildings</b>	<b>\$9,000</b>	<b>\$112.50</b>		<b>\$3.75</b>	<b>\$3.38</b>	<b>\$7.13</b>

Hourly Equipment Charge  
Fuel & Repairs

Equipment	Cost/Hr.	Equipment	Cost/Hr.
Crawler tractor	\$2.00	Furrower	\$ .30
Wheel tractor	1.10	Landplane	.40
Buckrake	.30	Springtooth	.20
Speed sprayer	3.50	Shaker	1.50
Disk	.30	Rake	.75
Truck	2.00	Pickup machine	2.00