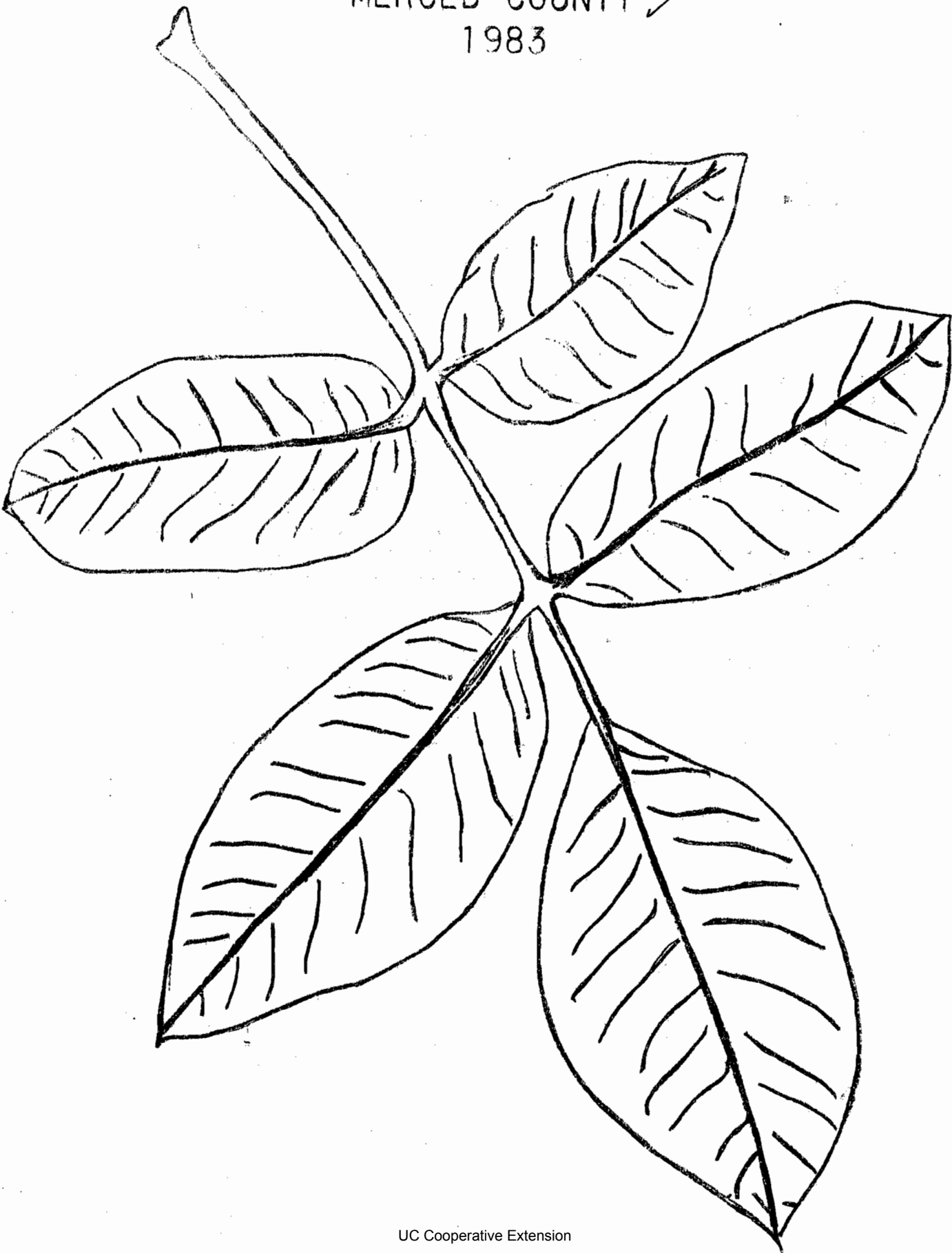


WALNUT PRODUCTION COSTS
MERCED COUNTY ✓
1983



INTRODUCTION

This cost study is designed to provide walnut orchardists or prospective growers the estimated costs to establish a new orchard and costs to produce walnuts in a mature orchard. This study is based on actual cash costs in better-than-average orchards with top management. The costs may be somewhat above average, and the production estimates are definitely above average.

This study assumes that the operation has excellent soil, good water, new equipment and top management. Used equipment is often purchased for orchard use. This will reduce capital investment, depreciation and interest, but will likely increase repair costs, operating costs and down time.

In this cost study, harvest costs are based on current custom harvest charges. Therefore, interest and depreciation charges for harvesting, hulling and dehydrating are not included in the production cost studies. Most typical operations in this area will use existing hullers on the farm or deliver nuts to custom hullers for processing.

The most dramatic increase in costs is the result of current high interest rates. This is especially true in establishing an orchard where there are interest charges on accumulated costs during the nonbearing years. The high interest rate also adds dramatically to production costs if land, trees, buildings and equipment are valued at current rates, as they must be in a cost study.

You, as a grower or prospective grower, should compare your actual cash costs, depreciation and interest costs to these projected costs.

Lonnie C. Hendricks
Farm Advisor
Merced County

Edward A. Yeary
Farm Advisor-Statewide
Kearney Hort. Field Station

ENGLISH WALNUT ORCHARD ESTABLISHMENT COSTS
 Cost Analysis Work Sheet
 Northern San Joaquin Valley - 1983

Costs are for an orchard planted 28' x 28' with 55 trees per acre. Labor costs to the grower are \$6.50 per hour for equipment operator and \$5.75 per hour for field labor. 80 hp wheel tractor per hour cash costs \$12.80, depreciation \$3.25 and interest \$2.28, cultural practices include tillage of the orchard floor in two directions

	Costs Per Acre					
	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year
YIELD: lbs. per acre in-shell					500	1000
PRE-HARVEST COSTS:						
Land preparation:						
Sub-soil - contract	\$ 160.					
Disc and float: 4 hrs. labor and tractor	77.					
Trees: 55 at \$9	495.					
2, 2nd year, 1 3rd year		\$ 18.	\$ 9.			
Survey and plant: 55 @ \$1. 2nd & 3rd yrs, \$3/tree	55.		6.	3.		
Prune, train & stake	50.	23.	35.	\$ 45.	\$ 55.	\$ 70.
Stakes: 58 @ \$1.25	72.	5.				
Brush disposal				16.	19.	22.
Tillage & irrigation prep.: 3 3/4 hrs. labor & tractor	72.	72.	72.	72.	72.	72.
Irrigation labor: 4 hrs. 1st 2 yrs., 6 hrs. starting 3rd yr.	23.	23.	35.	35.	35.	35.
Water: \$5 ac. ft.	8.	10.	20.	20.	20.	20.
Fertilizer: nitrogen 33¢/lb. application 1/2 hr. labor tractor	5.	5.	8.	16.	33.	66.
Spray materials			15.	15.	30.	87.
Spray application			14.	14.	14.	42.
Misc. labor and power: 6 hrs. labor, 3 hrs. tractor	75.	75.	75.	75.	75.	75.
Misc. materials	20.	20.	20.	20.	20.	20.
Supervision	35.	35.	35.	35.	35.	35.
County taxes	50.	50.	50.	50.	50.	110.
Repairs, except tractor	20.	20.	20.	20.	20.	20.
Intermediate loan interest	67.	20.	23.	24.	27.	38.
Office and business costs	78.	18.	27.	28.	31.	43.
TOTAL PRE-HARVEST COSTS	\$1372.	\$ 410.	\$ 471.	\$ 495.	\$ 546.	\$ 765.
HARVEST COSTS:						
Harvest preparation: 1 1/2 hrs. labor and tractor					\$ 29.	\$ 29.
Shake, pick, haul: \$110/acre					110.	110.
Hull and dry: \$85/ton					21.	42.
TOTAL HARVEST COSTS					\$ 160.	\$ 181.
TOTAL CASH COSTS	\$1372.	\$ 410.	\$ 471.	\$ 495.	\$ 706.	\$ 946.
DEPRECIATION:						
Irrig. system, \$280, 20 yrs.	\$ 14.	\$ 14.	\$ 14.	\$ 14.	\$ 14.	\$ 14.
Bldg. & equip., \$1800	180.	180.	180.	180.	180.	180.
Tractor: \$3.25/hr.	45.	32.	32.	32.	32.	32.
TOTAL DEPRECIATION	\$ 239.	\$ 226.	\$ 226.	\$ 226.	\$ 226.	\$ 226.

ENGLISH WALNUT PRODUCTION COSTS
 Cost Analysis Work Sheet
Orchard Floor Cultivated
 Northern San Joaquin Valley - 1983

Costs are for a mature orchard with 55 trees per acre, yielding 3500 lbs. of dry nuts per acre. Labor costs per hour to the grower are \$6.50 for equipment operator and \$5.75 for field labor. 80 h.p. wheel tractor per hour cash costs \$12.80, depreciation \$3.25, and interest \$2.28. The orchard floor is cultivated in two directions.

	Sample Costs		My Costs	
	Per Acre	Per Cwt.	Per Acre	Per Cwt.
PRE-HARVEST CASH COSTS:				
Pruning: 4 hrs. per acre labor & machine	\$ 100.			
Brush disposal: 3½ hrs. labor, ½ hr. tractor	27.			
Fertilizer: 200 lbs. N at 33¢	66.			
Application: custom	10.			
Spray: materials	121.			
Application: 4x, 1600 gal. at 4¢	64.			
Tillage and irrigation: preparation 3 ¾ hrs. labor and tractor	72.			
Irrigate 7x: labor 6 hrs.	35.			
Water: 4 ac. ft. at \$5	20.			
Misc. labor and field power: 6 hrs. labor, 3 hrs. tractor	75.			
Misc. materials	22.			
Supervision	35.			
County taxes	110.			
Repair, except tractor	20.			
Operating loan at 12.5%	67.			
Office and business costs	68.			
TOTAL PRE-HARVEST CASH COSTS	\$ 912.	\$26.06		
HARVEST COSTS:				
Harvest preparation: 1½ hrs. labor & tractor	\$ 29.			
Shake, pick, haul: \$110 per acre, one stake harvest	110.			
Hull and dry: \$85 per ton	149.			
TOTAL HARVEST COSTS	\$ 288.	\$ 8.23		
TOTAL CASH COSTS	\$1,200.	\$34.29		
DEPRECIATION:				
Irrigation system, \$280, 20 yrs.	\$ 14.			
Buildings and equipment, \$1800, 10 yrs.	180.			
Tractor: 8 ¾ hrs. at \$3.25	28.			
Trees: \$12,246 cost, 40 yrs.	306.			
TOTAL DEPRECIATION	\$ 528.	\$15.08		
INTEREST ON INVESTMENT AT 11%:				
Irrigation system: ½ cost \$140	\$ 15.			
Buildings and equipment: ½ cost \$900	99.			
Tractor: 8 ¾ hrs. at \$2.28	20.			
Trees: ½ cost \$6,123	673.			
Land: \$5,000	550.			
TOTAL INTEREST ON INVESTMENT	\$1,357.	\$38.77		
TOTAL COST OF PRODUCTION	\$3,085.	\$88.14		

English Walnut Production Costs - 1983

Orchard Floor Cultivated

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Sample Costs at Varying Yields

Yield: lbs. per acre	2000	2500	3000	3500	4000	4500	5000
Cash costs per cwt.	\$ 57	\$ 46	\$ 39	\$ 34	\$ 31	\$ 28	\$ 25
Total costs per cwt.	\$151	\$122	\$102	\$ 88	\$ 78	\$ 69	\$ 63

Prepared by:

Lonnie Hendricks, Farm Advisor, Merced County

Kathleen Kelley, Farm Advisor, Stanislaus County

Wallace Schreader, Farm Advisor, San Joaquin County

Edward Yeary, Area Farm Management Specialist, Parlier

ENGLISH WALNUT PRODUCTION COSTS

Cost Analysis Work Sheet

Orchard Floor Strip Sprayed and Tilled or Mowed One Direction
Northern San Joaquin Valley - 1983

Costs are for a mature orchard with 55 trees per acre, yielding 3500 lbs. of dry nuts per acre. Labor costs per hour to the grower are \$6.50 for equipment operator and \$5.75 for field labor. 80 hp - wheel tractor per hour cash costs \$12.80, depreciation \$3.25 and interest \$2.28. The orchard floor is strip sprayed and tilled in one direction.

	Sample Costs		My Costs	
	Per Acre	Per Cwt.	Per Acre	Per Cwt.
PRE-HARVEST CASH COSTS:				
Pruning: 4 hrs. per acre labor and machine	\$ 100.			
Brush disposal: 3½ hrs. labor, ½ hr. tractor		27.		
Fertilizer: 200 lbs. N at 33¢ Application - custom		66.		
Spray: materials		121.		
Application - 4X 1600 gal. at 4¢		64.		
Tillage and irrigation preparation 1½ hrs. labor and tractor		29.		
Herbicides: material		14.		
Application - 2X custom		10.		
Irrigate: 7X labor 6 hrs.		35.		
Water: 4 ac. ft. at \$5		20.		
Misc. labor and field power; 6 hrs. labor, 3 hrs. tractor		75.		
Misc. materials		22.		
Supervision		35.		
County taxes		110.		
Repairs, except tractor		18.		
Operating loan at 12.5%		65.		
Office and business costs		67.		
TOTAL PRE-HARVEST CASH COSTS	\$ 888.	\$25.37		
HARVEST COSTS:				
Harvest preparation: 1½ hrs. labor and tractor	\$ 29.			
Shake, pick, haul \$110 per acre; one shake harvest		110.		
Hull and dry: \$85 per ton		149.		
TOTAL HARVEST COSTS	\$ 288.	\$ 8.23		
TOTAL CASH COSTS	\$1176.	\$33.60		
DEPRECIATION:				
Irrigation system: \$280, 20 years	\$ 14.			
Buildings and equipment: \$1800, 10 years	180.			
Tractor: 6½ hrs. at \$3.25	21.			
Trees: cost \$12246, 40 years	306.			
TOTAL DEPRECIATION	\$ 521.	\$14.89		
INTEREST ON INVESTMENT AT 11%:				
Irrigation system: ½ cost \$140	\$ 15.			
Buildings and equipment: ½ cost \$900	99.			
Tractor: 6½ hrs. at \$2.28	15.			
Trees: ½ cost \$6123	673.			
Land: \$5000	550.			
TOTAL INTEREST ON INVESTMENT	\$1352.	\$38.63		
TOTAL COST OF PRODUCTION	\$3049.	\$87.12		

Sample Costs at Varying Yields

Yield: lbs. per acre	2000	2500	3000	3500	4000	4500	5000
Cash costs per cwt.	\$ 56	\$ 45	\$ 39	\$ 34	\$ 30	\$ 27	\$ 25
Total costs per cwt.	\$149	\$120	\$101	\$ 87	\$ 77	\$ 69	\$ 62

Prepared by:

Lonnie Hendricks, Farm Advisor, Merced County
Kathleen Kelley, Farm Advisor, Stanislaus County
Wallace Schreader, Farm Advisor, San Joaquin County
Edward Yeary, Area Farm Management Specialist, Parlier

ENGLISH WALNUT PRODUCTION COSTS - 1983

Monthly Cash Costs

OPERATION	TOTAL	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
Cultural Costs													
Pruning	\$ 100			\$ 50	\$ 50								
Brush disposal	27			10	17								
Fertilize	76					\$ 50				\$ 26			
Spray: 4X	185					47	\$ 46			46	\$ 46		
Cultivate & harvest preparation	58						8	\$ 7	\$ 7	7	29		
Irrigate: 7X	55						11	11	11	11	11		
Weed control	24		\$ 10			10		4					
Supervision	35	\$ 2	3	3	3	3	3	3	3	3	3	\$ 3	\$ 3
Off., operating cap.	132	11	11	11	11	11	11	11	11	11	11	11	11
Taxes	110		55				55						
Repairs	18		9									9	
Miscellaneous	97	6	8	8	8	6	6	6	6	6	7	15	15
Harvest Costs													
	259											130	129
TOTAL CASH COSTS													
	1,176	19	96	82	89	127	140	42	38	110	107	168	158
ACCUMULATED CASH COSTS													
		19	115	197	286	413	553	595	633	743	850	1,018	1,176