

1973

# ENGLISH WALNUT

## Orchard Production Costs in the Southern San Joaquin Valley

### **Cost Analysis Worksheet Showing Sample Costs**

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**Agricultural Extension      University of California**



**COST ANALYSIS WORKSHEET: English Walnut Production Costs for a Mature Orchard, 1973.**

	SAMPLE COSTS		YOUR COSTS	
	Per Acre	Per Cwt.	Per Acre	Per Cwt.
<b>PRE-HARVEST CASH COSTS</b>				
Pruning: 6 hours labor + machine @ 16.00	\$ 31.90	\$	\$	\$
Brush disposal: 4 hours labor + 1 tractor-hour	10.95			
Fertilizer: 150 pounds nitrogen @ 11¢/pound applied	16.50			
Spray application: contract one time, 300 gallons @ 2¢	6.00			
Spray material	9.00			
Tillage and harvest preparation: 7 hours labor + 7 tractor-hours	28.35			
Irrigation: 7 times, 6 hours labor	13.80			
Water: power 3½ acre-feet @ \$5.50/acre-foot + district tax @ \$6.00	25.25			
Misc. labor: 6 hours labor + 1 tractor-hour	15.55			
Misc. materials	16.00			
County taxes	32.00			
Repairs, except tractor	10.00			
Office and business costs	20.42			
<b>Total Pre-Harvest Cash Costs</b>	<b>\$ 235.72</b>	<b>\$ 9.43</b>	<b>\$</b>	<b>\$</b>
<b>HARVEST COSTS</b>				
Shake, pick, hull, dehydrate, and haul: @ \$100/ton	\$ 125.00	\$	\$	\$
<b>Total Harvest Costs</b>	<b>\$ 125.00</b>	<b>\$ 5.00</b>	<b>\$</b>	<b>\$</b>
<b>Total Cash Costs</b>	<b>\$ 360.72</b>	<b>\$ 14.43</b>	<b>\$</b>	<b>\$</b>
<b>DEPRECIATION</b>				
Irrigation system: \$252 cost, 12-year life	\$ 21.00	\$	\$	\$
Buildings and equipment: \$120 cost, 12-year life	10.00			
Tractor: 9 hours @ \$1.20	10.80			
Trees: \$2,400 cost, 40-year life	60.00			
<b>Total Depreciation</b>	<b>\$ 101.80</b>	<b>\$ 4.07</b>	<b>\$</b>	<b>\$</b>
<b>INTEREST ON INVESTMENT @ 7%</b>				
Irrigation system: ½ cost, \$126	\$ 8.82	\$	\$	\$
Buildings and equipment: ½ cost, \$60	4.20			
Tractor: 9 hours @ 70¢	6.30			
Trees: ½ cost, \$1,200	84.00			
Land: @ \$1,000/acre	70.00			
<b>Total Interest on Investment</b>	<b>\$ 173.32</b>	<b>\$ 6.93</b>	<b>\$</b>	<b>\$</b>
<b>TOTAL COST OF PRODUCTION</b>	<b>\$ 635.84</b>	<b>\$ 25.83</b>	<b>\$</b>	<b>\$</b>

SAMPLE COSTS PER CWT. AT VARYING YIELDS						
Yield (pounds/acre)	1,000	1,500	2,000	3,000	3,500	4,000
Cash costs/cwt.	\$ 28.57	\$ 20.71	\$ 16.78	\$ 12.86	\$ 11.73	\$ 10.89
<b>Total Costs/Cwt.</b>	<b>\$ 54.68</b>	<b>\$ 38.12</b>	<b>\$ 29.84</b>	<b>\$ 21.56</b>	<b>\$ 19.19</b>	<b>\$ 17.42</b>

Costs are for a 10-year-old orchard with 35 trees per acre and a yield of 2,500 pounds of dry nuts per acre. Based on labor @ \$2.30 and \$2.65 per hour; medium-wheel tractor per hour cash costs @ \$1.40; depreciation @ \$1.20; and interest @ \$ .70.

## ABOUT THIS SHEET

The costs to produce walnuts are not the same in all walnut-growing areas of the southern San Joaquin. Some of the variables include water, insect control, and type of soil management. However, there are certain basic practices common to all walnut operations. These practices should be followed if a grower is to maintain a healthy, productive orchard and a profitable crop. The costs given in this sheet are averages only.

**Irrigation and Fertilization.** Mature walnut trees require 38 to 42 acre-inches of water during the year. This is usually applied in seven to eight irrigations.

It is necessary to fertilize the trees every year to maintain production. In general, 100 to 150 pounds of actual nitrogen per acre are adequate for maintaining tree vigor and crop size.

**Pest Control.** It may be necessary to apply pesticide sprays to control codling moths, midsummer mites, and aphids. All orchard and drying facilities will help control the navel orange worm.

**Harvesting.** Early harvest, shaking, pick-up, and drying are essential for good walnut quality. Any delay in the harvest operation tends to lower nut quality and increase the possibility of insect infestation.

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