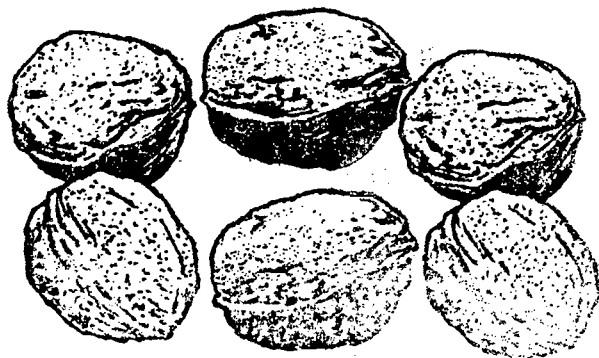


COSTS TO PRODUCE A

WALNUT ORCHARD

In San Joaquin County - 1980



**UNIVERSITY OF CALIFORNIA
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SAMPLE COSTS TO PRODUCE A WALNUT ORCHARD
IN SAN JOAQUIN COUNTY - 1980

Based on an 80-acre orchard yielding 4,000 pounds per acre. Labor was computed at \$5.40 per hour for skilled and \$4.20 for unskilled, including Social Security, Workmen's Compensation Insurance, and fringe benefits. Culture is sprinkler irrigated and non-tilled.

| Operation | Cash and Labor Costs | | | Total Cost per Acre |
|--------------------------------------------|----------------------|----------------|---------------------------|------------------------|
| | Labor | Equipment | Materials Cost | |
| Cultural Costs | | | | |
| Prune | \$48.60 | \$32.00 | | \$ 80.60 |
| Fertilize, contract | | | 150# Nitrogen @ \$.30/# | \$45.00 |
| Spray, contract | | | Fungicides & insecticides | 93.00 |
| Irrigate | 2.40 | | Water @ \$20.00/acre ft. | 60.00 |
| Spray weeds | 2.70 | 1.85 | Herbicide | 20.00 |
| Chop weeds | 10.80 | 10.40 | | |
| Miscellaneous | 6.50 | 6.75 | | 10.00 |
| TOTAL CULTURAL COSTS | \$71.00 | \$69.00 | | \$210.00 |
| Harvest Costs | | | | |
| Custom harvest @ \$60/ton | \$120.00 | | | \$ 120.00 |
| Custom hull & dry @ \$70/ton | 140.00 | | | 140.00 |
| TOTAL HARVEST COSTS | \$268.00 | | | \$ 268.00 |
| Overhead Costs | | | | |
| Taxes | | | | \$ 75.00 |
| Interest @ 12% of one-half the investment | | | | 1,435.39 |
| Depreciation | | | | 498.54 |
| Management, 5% of gross | | | | 80.00 |
| Misc. office & business costs | | | | 150.14 |
| TOTAL OVERHEAD COSTS | | | | \$2,088.55 |
| TOTAL COST PER ACRE | | | | \$2,698.55 |
| COST PER POUND AT 4,000-POUND YIELD | | | | 67.5¢ |

SAMPLE COSTS TO PRODUCE A WALNUT ORCHARD IN SAN JOAQUIN COUNTY - 1980

This cost study points out two vital factors. One factor is the absolute necessity to maximize yield per acre. This cost study, corrected for harvest costs at 3 tons per acre, results in a total cost per pound of 49.3 cents.

A second, factor vital to success is taking advantage of returns to scale. This model cost is predicated on 80 acres, a size below the minimum 200 acres that most economists consider an economic unit. There would be some reduction in cost of harvest, hulling and drying if all equipment was grower-owned, but not appreciable. There would also be some minor savings by spreading the total equipment costs over more acres; but again, the savings would not be appreciable.

The major costs are those of a non-cash fixed cost (interest and depreciation on the value of land and trees), and these would not be reduced by returns to scale advantages of increased acreage.

CAPITAL INVESTMENT AND FIXED COSTS PER ACRE

| Inventory | Capital Investment | Investment per Acre | Expected Life (yrs) | Fixed Costs per Acre | | |
|--------------------------------|--------------------|---------------------|---------------------|----------------------|--------------|-----------|
| | | | | Interest @ 12% | Depreciation | Total |
| Land, 80 acres | \$440,000.00 | \$ 5,500.00 | -- | \$660.00 | -- | \$ 660.00 |
| Trees | 880,000.00 | 11,000.00 | 30 | 660.00 | \$366.66 | 1,026.66 |
| Irrigation system | 96,000.00 | 1,200.00 | 20 | 72.00 | 60.00 | 132.00 |
| Shed and shop | 24,000.00 | 300.00 | 30 | 18.00 | 10.00 | 28.00 |
| Equipment | | | | | | |
| (1) 40 hp diesel wheel tractor | 9,840.00 | 123.00 | 10 | 7.38 | 12.30 | 19.68 |
| Buck Rake | 1,800.00 | 22.50 | 10 | .68 | 2.25 | 2.93 |
| Pickup truck 3/4 ton | 9,000.00 | 112.50 | 5 | 6.75 | 22.50 | 29.25 |
| Pruning tower & tools | 7,500.00 | 93.75 | 5 | 5.63 | 18.75 | 24.38 |
| Chopper, 10 ft. | 5,000.00 | 62.50 | 10 | 3.75 | 6.25 | 10.00 |
| Weed sprayer | 2,500.00 | 31.25 | 15 | 1.88 | 2.08 | 3.96 |

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