

COSTS TO PRODUCE AVOCADOS IN VENTURA COUNTY

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Let's be realistic. If you are a typical avocado grower, you are not in the business for your health but to make money. To determine how much, three factors need to be known; namely, yield, price, and costs. With these you can determine gross income and net income by:

$$\begin{aligned} \text{YIELD X PRICE} &= \text{GROSS INCOME} \\ \text{GROSS INCOME} - \text{COSTS} &= \text{NET INCOME} \end{aligned}$$

Gross income is determined by the amount of fruit multiplied by the price per pound. Gross income minus costs equals net income. The net income or profit can be increased by increasing the gross or reducing the expenses. For this reason alone every grower should be aware of the typical costs to produce avocados for the area where he is located. Sample cost data sheets serve as a guide to compare your costs with what is typical. By comparing costs it may be possible to see where your costs are out of line either by individual items or totally. Where costs are in excess of the norm, your net return can be increased by reducing these costs. Let's review typical costs for producing avocados in Ventura County.

First, it must be assumed that the cost of producing avocados will vary with the grower, the orchard, and the area. This study was developed through the cooperative efforts of growers, custom operators, marketing representatives, and University of California Agricultural Extension economist, and farm advisors. The total operating costs for producing avocados in Ventura County were \$1,128 per acre per year.

The costs presented here are based on a typical mature Hass avocado orchard planted 18 by 22 feet or 110 trees per acre, with a permanent, plastic irrigation system, no frost protection, and nontillage. Labor was charged at \$2.25 per hour plus 15 percent fringe benefits for a total of \$2.58 per hour (rounded to \$2.50).

The operating cost figure includes fertilization, irrigation, pest control, weed control, pruning, orchard thinning, miscellaneous cultural operations, taxes, maintenance and operation of equipment, management fee, general expense, depreciation, and interest on investment. Depreciation is a reasonable charge for wear and tear of depreciable property. Yearly rate was determined by dividing cost (less salvage value) by years of useful life. Items depreciated include trees (after five years), pickup truck, equipment, and shed.

Fertilization with nitrogen totals \$21 per acre. One hundred and eighty pounds of chemical nitrogen per acre (1½ pounds per tree) at approximately \$0.11 per pound amounts to \$16. Labor for application is \$5, giving a total material and labor costs of

\$21 per acre.

Zinc may be needed. If required, it is usually applied by air at a cost of \$9 plus \$4 for materials or a total of \$13 per acre. A leaf analysis is included at \$1 per acre.

Irrigation is the most costly of all cultural operations totaling \$75. Water use averages 2½ acre-feet per acre at \$18 per acre foot, for a cost of \$45. Labor required to irrigate approximately 12 times costs \$30, figuring one hour for irrigation at \$2.50 per hour.

Other cultural costs include: pest control at \$16 per acre — the cost for controlling rodents, snails, and ants. Weed control at \$25 per acre using one application of herbicide and spot spraying with oil twice during the summer. Pruning costs \$10 per acre and consists of removing dead wood and pruning tree skirts to permit better distribution of water. Orchard thinning is done when trees start to crowd. This is usually by the 10th year. Thinning costs are prorated over the 10-year period at \$52 per year. Miscellaneous cultural operations such as propping, erosion control, supplies and tools, \$36 per acre. In summary, the total cultural costs are as follows:

| | |
|-------------------------|-------|
| Materials and Equipment | \$121 |
| Labor | \$127 |
| Total | \$248 |

Overhead operating costs include: taxes at \$95 per acre, maintenance and repair \$30, general expense (insurance, office supplies, telephone, dues) at \$36, and a management charge of \$36 per acre. The total cash overhead costs are \$197 per acre. The management charge is added because many growers are now using custom grove managers to oversee the operation and make the necessary management decisions.

The total cash operating costs, including both cultural and cash overhead, come to a total cash pre-harvest cost of \$445. The non-cash costs including depreciation at \$298 per acre and interest on investment of \$385, adds \$743 to the pre-harvest cost of \$445, giving a grand total of pre-harvest cost of \$1,128 per acre.

Growers who do not wish to charge interest on investment or depreciation as a cost against the orchard may subtract either figure from the total pre-harvest cash costs.

Interest on investment is charged at the rate of 6% on an assumed land value of \$3,000 per acre plus half life value on trees, equipment, and buildings.

Harvest costs vary from 1½ to 3½¢ per pound, depending on tree size, size of crop, terrain, etc. A 4½% assessment is made on the value of the crop at roadside after harvesting. This money is used for industry advertising and promotion.

Yield per acre varies by varieties, location, cultural practices, type of tree, and climatic conditions. Average good commercial yields per acre in Ventura County range from 8,000 to 10,000 pounds for Hass. A yield of 27,000 pounds were recorded from one 12-year-old orchard but the production like that is the exception rather than the rule. The following year the same orchard produced 2,600 pounds. The two-year average was 15,200 pounds per acre.

The accompanying table shows the breakdown of costs for producing an acre of avocados in Ventura County.

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SAMPLE COSTS TO PRODUCE AVOCADOS

Ventura County — 1970

| CULTURAL OPERATIONS | COSTS PER ACRE | | |
|--|----------------|------------------------------|-------|
| | Labor | Materials and Equipment | Total |
| Fertilizer | | | |
| Nitrogen, broadcast — 2 times | \$ 5 | Actual N — 165 lbs./acre | \$ 16 |
| Micronutrient and Leaf analysis | 9 | Zinc nutritional spray | 4 |
| Irrigation — 12 times | 30 | Water — 2½ ac ft/acre @ \$18 | 45 |
| Pest control — snails and rodents | 5 | Bait, traps, or poison | 11 |
| Weed control | | | |
| Herbicides | 3 | Herbicides | 3 |
| Spot oil treatment — 2 times | 5 | Weed oil | 14 |
| Pruning — skirt, dead wood, disposal | 8 | Chain saw | 2 |
| Orchard Thinning — prorated over 10 years | 32 | Chain saw, brush disposal | 20 |
| Miscellaneous — repairs, erosion, propping, etc. | 30 | Supplies and tools | 6 |
| | \$127 | | \$121 |
| | | | \$248 |

INVESTMENT SCHEDULE

| Item | Expected Life | Investment per Acre | Depreciation per Acre |
|--------------------------|---------------|---------------------|-----------------------|
| Trees | 20 years | \$4,038 | \$202 |
| Irrigation system | 10 years | 650 | 65 |
| Pickup | 8 years | 120 | 15 |
| Buildings | 20 years | 60 | 3 |
| Weed sprayer, hand tools | 10 years | 130 | 13 |
| TOTAL | | \$4,998 | \$298 |

Interest on Investment charged at the rate of 7% on an assessed land value of \$3,000 per acre plus the half life value on trees, equipment, and buildings.

OVERHEAD COSTS

| | |
|-----------------------------|---------|
| Taxes | \$ 95 |
| Maintenance and Repairs | 30 |
| General Expenses | 36 |
| Management charge | 36 |
| Total Cash Overhead Costs | \$ 197 |
| TOTAL PREHARVEST CASH COSTS | \$ 445 |
| Depreciation | \$ 298 |
| TOTAL CASH AND DEPRECIATION | \$ 743 |
| Interest on Investment | 385 |
| TOTAL PREHARVEST COSTS | \$1,128 |

BASIS

Sample Costs in this report are based on a typical mature ten-acre commercial owner-operated orchard of Hass avocados planted 18x22 feet or 110 trees per acre. Permanent plastic irrigation system, no frost protection, and nontilled.

Wage Rate: \$2.25 per hour plus 15% fringe benefits - \$2.58 per hour (rounded to \$2.50).

Pruning consists of removing skirt limbs to allow for distribution of water from sprinklers and removal of broken branches, dead wood, suckers, and wild growth.

Orchard Thinning of temporary trees is required as trees become crowded. The first thinning at 8 to 12 years of age — usually removes half the trees. Additional thinning may be required 4 to 6 years later. Cost of tree removal (\$520/acre) is prorated over 10 years for an annual charge of \$52/acre.

Harvest Costs vary from 1½ to 3c per pound depending on tree size, yield per tree,

terrain, etc.

Marketing is through cooperatives or independent packinghouses. An assessment of 4.5 to 5 percent of the value of the crop at roadside is made for industry advertising and sales promotions.

Yields and Returns — Ventura County

| <i>Year</i> | <i>Acreage</i> | | <i>Ave. Yield Lbs./Acre</i> | <i>Gross* c/Lb.</i> | <i>Total Value</i> |
|-------------|----------------|----------------|---------------------------------|-------------------------|------------------------|
| | <i>Total</i> | <i>Bearing</i> | | | |
| 1970 | 3,638 | 3,070 | 5,000 | NA | \$5,056,000 |
| 1969 | 3,867 | 2,947 | 7,150 | 15.0 | 2,159,000 |
| 1968 | 3,372 | 2,785 | 8,350 | 23.0 | 3,883,000 |
| 1967 | 3,201 | 2,613 | 8,130 | 10.1 | 1,707,000 |
| 1966 | 3,248 | 2,661 | 9,420 | 13.1 | 2,430,000 |
| 1965 | 2,707 | 2,359 | 3,832 | 26.0 | 1,931,300 |

**California Industry Averages*