

# AVOCADO PRODUCTION COSTS

## DESCRIPTION

The cost figures given in this sample study are based on assumed conditions. The typical practices are listed, with sample costs given for labor, materials, and equipment required. These are not "standard" costs, but are intended as guidelines. Individual orchards may vary considerably from these figures in their costs and returns.

Sample costs in this report are based on a typical commercial 10-acre avocado orchard. Fuerte variety, 10- to 12-year old trees, 100 trees per acre, planted on a hillside and with a permanent plastic sprinkler irrigation system. Costs will vary from orchard to orchard and from district to district. Costs will not vary too much when other varieties such as Hass, Zutano, Bacon and Reed are planted. Hass trees require up to twice as much nitrogen as Fuertes, Zutano, Bacon and Reed. Zinc may be needed. It may be applied to leaves from a ground spray rig, airplane or helicopter, and by soil application. Phosphate and potassium may be applied periodically, but not regularly as nitrogen. The fertilizer costs in this study include leaf analysis once a year.

Harvest costs vary from 2-1/2¢ to 4-1/2¢ per pound depending on tree size, size of crop, terrain, etc. A 4.9% assessment is made on the value of crop at roadside. This money is used for industry advertising, sales promotion, and production research. Yield per acre varies by different varieties, locations, cultural practices, type of tree and climatic conditions from year to year. Good commercial yields per acre for Fuerte and Bacon should range from 6,000 to 10,000 pounds; Hass and Zutano, 7,000 to 12,000 pounds.

## INVESTMENT OVERHEAD PER ACRE

Depreciation and interest on investment are included as overhead costs of investment. An annual charge for interest on investment is calculated on the money invested in land, buildings, and equipment. The charge is at a rate of 8% on assumed land value of \$3,500 per acre plus half life value on trees, equipment and buildings.

The total economic cost of producing avocados includes a charge for interest since the value of your capital should not be ignored in measuring orchard income, and for comparison with alternate use of resources. For management analysis, non-cash costs including interest and owner's labor should be included, even though they are not included as business expenses in accounting practice.

Depreciation and interest per acre are calculated from the following investment schedule:

<u>Item</u>	<u>Expected life</u>	<u>Investment per acre</u>	<u>Depreciation per acre</u>
Trees (100/acre)	20 years	\$7,980	\$399
Irrigation system	10 years	900	90
Pickup	5 years	150	30
Buildings	20 years	60	3
Weed sprayer, mower, hand tools	10 years	350	35
<b>Total Investment Schedule</b>		<b>\$9,440</b>	<b>\$557</b>

(over)

Cooperative Extension Work in Agriculture and Home Economics, U. S. Department of Agriculture, University of California, and County of San Diego cooperating

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## YIELDS AND RETURNS

Yield varies considerably among orchards, and from year to year. Commercial production may range from 3,000 to 12,000 pounds per acre. Excellent orchards under favorable conditions produce more. The following chart illustrates variability in gross on-tree returns due to yield and price changes for all varieties.

*On-Tree Price Cents/lb.	<u>Yield Per Acre</u> Pounds/Acre						
	3,000	5,000	6,000	7,000	8,000	10,000	12,000
\$0.10	\$ 300	\$ 500	\$ 600	\$ 700	\$ 800	\$1,000	\$1,200
0.15	450	750	900	1,050	1,200	1,500	1,800
0.20	600	1,000	1,200	1,400	1,600	2,000	2,400
0.25	750	1,250	1,500	1,750	2,000	2,500	3,000
0.30	900	1,500	1,800	2,100	2,400	3,000	3,600
0.35	1,050	1,750	2,100	2,450	2,800	3,500	4,200
0.40	1,200	2,000	2,400	2,800	3,200	4,000	4,800

\*Deduct cost of harvesting—2-1/2¢ to 4-1/2¢ lb.

### COST ANALYSIS

<u>Cultural Operations</u>	<u>Labor cost</u>	<u>Materials and equipment cost</u>	<u>Total cost per acre</u>
Fertilizer—2 times (Actual N-150 lbs/acre)	\$ 18	\$ 45	\$ 63
Irrigation—36 times (Water- 3-1/2 acre ft. per acre @ \$85)	110	298	408
Pest control—ants, gophers, snails, (baits, poisons & predators)	9	12	21
Weed control—spot spraying & mowing (oil)	14	20	34
Pruning (skirt, deadwood) and orchard thinning (tree removal 10-15th year @ \$10/tree) (Chain saw & brush disposal)	50	14	64
Misc. —tree care, erosion control supplies, tree stakes (supplies & tools)	<u>42</u>	<u>18</u>	<u>60</u>
<b>Total cultural costs</b>	<b>\$243</b>	<b>\$397</b>	<b>\$ 650</b>
<u>Overhead Costs</u>			
Taxes			130
Maintenance and repairs			40
General expenses			60
Management charge, variable (\$5/acre/month)			<u>60</u>
<b>Total Cash Overhead Costs</b>			<b>\$ 290</b>
<b>Total Preharvest Cash Costs</b>			<b>\$ 940</b>
<u>Investment Overhead</u>			
Depreciation			<u>557</u>
<b>Total Cash Costs Plus Depreciation</b>			<b>\$1,497</b>
Interest on investment			<u>658</u>
<b>TOTAL PREHARVEST COSTS</b>			<b>\$2,155</b>

NOTE: We acknowledge the fine cooperation and assistance of the growers and farm managers who participated in accumulation of cost data.

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