

FR-AVO-Econ.
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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. This is especially true on extremely steep slopes. Estimates indicate costs could increase 35% on greater than 30° slopes.

Sample costs in this report are based on a typical commercial 10-acre avocado orchard; 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, from district to district, and from varieties planted. Hass trees require up to twice as much nitrogen as Fuertes, Zutano, Bacon, and Reed. Zinc is required by all varieties on an annual basis. It may be applied to leaves from a ground spray rig, airplane or helicopter, and by soil application. Phosphate and potassium are applied periodically, but not as regularly as nitrogen. The fertilizer costs in this study include leaf analysis once a year.

Harvest costs vary from 3 1/2¢ to 6¢ per pound depending on tree size, size of crop, terrain, etc. A 4.7% 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 average commercial yields per acre for Fuerte and Bacon should range from 6,000 to 10,000 pounds; Hass, Reed, and Zutano, 7,000 to 12,000 pounds. In some years, under favorable climatic conditions, some orchards have produced exceptionally high yields, up to 20,000 pounds to 30,000 pounds per acre.

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 9% on assumed land value of \$5,000 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.

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YIELDS AND RETURNS

Yield varies considerably among orchards, and from year to year. Commercial production may range from 5,000 to 15,000 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	15,000
\$0.15	\$ 450	\$ 750	\$ 900	\$1,050	\$1,200	\$ 1,500	\$ 2,250
0.20	600	1,000	1,200	1,400	1,600	2,000	3,000
0.25	750	1,250	1,500	1,750	2,000	2,500	3,750
0.30	900	1,500	1,800	2,100	2,400	3,000	4,500
0.35	1,050	1,750	2,100	2,450	2,800	3,500	5,250
0.40	1,200	2,000	2,400	2,800	3,200	4,000	6,000
0.50	1,500	2,500	3,000	3,500	4,000	5,000	7,500
0.60	1,800	3,000	3,600	4,200	4,800	6,000	9,000
0.70	2,100	3,500	4,200	4,900	5,600	7,000	10,500

*Deduct cost of harvesting--3 1/2 to 6¢/lb.

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>
Land \$5,000 (assumed value)		\$ 5,000	
Trees (100/acre)	20 years	12,767	\$638
Irrigation system	10 years	1,000	100
Pickup	5 years	150	30
Buildings	20 years	60	3
Weed sprayer, mower, hand tools	10 years	500	50
Total investment schedule		\$19,477	\$821

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/ac)	\$ 30	\$125	\$ 155
Irrigation - 40 times (water-3½ ac ft/ac @ \$125)	250	438	688
Pest control - ants, gophers, snails, rodents (baits, poisons, predators)	25	25	50
Weed control - spot spraying & mowing (oil)	30	35	65
Pruning (skirt, deadwood) and orchard thinning (tree removal 10-15th yr. @ \$15/tree) (Chain saw & brush disposal)	75	25	100
Misc. - tree care, erosion control supplies, tree stakes (supplies & tools)	50	35	85
Total cultural costs	\$460	\$683	\$1,143

Overhead Costs

Taxes	\$ 250
Maintenance & repairs	150
General expenses	100
Management charge, variable (\$7/acre/month)	<u>84</u>
Total cash overhead costs	<u>\$ 584</u>
Total pre-harvest cash costs	\$1,727

Investment Overhead

Depreciation	<u>\$ 821</u>
Total pre-harvest cash costs plus depreciation	\$2,538
Interest on investment	<u>\$1,101</u>
Total pre-harvest costs (inc. dep. and int. on invest.)	<u>\$3,649</u>
