

1968 COSTS TO PRODUCE AVOCADOS IN SAN DIEGO COUNTY

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In San Diego County, the cost of producing avocados varies with the grower and the orchard. A recent study developed through the cooperative efforts of growers, a University of California farm management specialist, irrigation company representatives, marketing groups' personnel, and the University of California farm advisor showed that the total operating costs, which include the cultural, non-cash and overhead costs, were \$1,327 per acre to produce avocados.

The study was based on a typical commercial Fuerte avocado orchard, ten acres, 10- to 15-year-old trees, 100 trees per acre, and utilizing a permanent, plastic irrigation system. The operating cost figure includes irrigation, fertilization, weed control, pest control, pruning, orchard thinning, maintenance and operation of equipment, taxes, insurance, management fee, general expense, interest on investment, and depreciation. Investment per acre included the sprinkler system, trees, building and equipment, and pick-up truck. Depreciation per acre was on the sprinkler system, trees (after 5 years), pick-up truck and equipment and building.

Irrigation constitutes the largest single expense of the agricultural operation totaling \$265. Water use averages 3½ acre feet per acre for a cost of \$193. Labor required to irrigate approximately 36 times during the year cost \$72. Not only is irrigation the largest single expense, but the most important operation the grower must do in the orchard.

Fertilization with nitrogen totals \$26 per acre. Nitrogen material applied in the chemical form costs \$18. Approximately 150 pounds of actual nitrogen per acre is used. Labor for applying the material is \$8.00, giving a total for material and labor of \$26. Zinc may be needed from time to time. This applied to the leaves by aerial spraying or ground spraying, or applied on the ground. Zinc is applied once every five years to the soil. Soil application requires a larger dosage than a foliage spray in order to supply the tree with an adequate amount of this material. A large dosage therefore lasts for the period up to five years. The foliage spray will probably have to be done once every year or two. Phosphate and potassium may be applied periodically but not regularly like nitrogen.

Other operational costs are: weed control at \$15, using oil and moriuron or simazine on a spot-spraying basis and the use of a tractor-mower for mowing the weeds; pest control, totals \$11 per acre, which is the cost of controlling ants, gophers, snails, and rodents; pruning costs, \$35 per acre, which consists of removing dead wood and lifting the skirts of the trees to permit better water distribution, and orchard thinning, between the 10th and 15h year; and miscellaneous operations of repairs, supplies, erosion

control, etc., totaled \$40 per acre. Breakdown of the total cultural costs are as follows: materials and equipment \$236 and \$156 for labor, giving a total of \$392 per acre.

Harvest costs were not included in this year's study for a number of reasons. The main reason for not including them is that all orchards are different in production and in the ability to pick the trees from a physical standpoint. It is therefore difficult to put down a poundage figure that would be realistic. The charge for picking fruit ranges from \$.015 up to \$.03 per pound, depending on the volume of crop, the age of the trees, and the labor used.

Overhead costs include: maintenance and repair of \$20 per acre; taxes at \$90 an acre, general expenses (insurance, office supplies, telephones, and management fee) of \$39 an acre. The management charge of \$60 is placed in the study since many growers are now using grove managers, marketing organizations, and grove management service. Whenever a grower utilizes an orchard management service he is paying a few of so much a month per acre for supervision. This gives a total of \$209 an acre cash overhead cost. The total operating cost (cultural and overhead costs) comes to a total cash pre-harvest cost of \$601 per acre. The non-cash cost, including depreciation at \$371 an acre and interest on investment of \$355, adds \$726 to the pre-harvest cost, giving a total pre-harvest cost of \$1,327. For growers who do not want to charge interest on investment as a cost against the orchard, they may subtract the \$355 from the \$1,327 which will give a pre-harvest cost of \$972 per acre.

Significant variations that occur in yield per acre are due to different varieties, orchard location, cultural practices, type of tree, and climatic conditions. An average good commercial yield per acre for Fuertes should range from 6,000 pounds to 10,000 pounds, and for Hass, 7,000 pounds to 12,000 pounds.

The accompanying table shows the breakdown of costs which should be given consideration in figuring the cost of producing an acre of avocados.

SAMPLE COSTS TO PRODUCE AVOCADOS
San Diego County (a)

CULTURAL OPERATIONS		<i>Labor</i>	
		<i>Cost</i>	
Fertilizer — 2 times(b)		\$	8
Irrigation — 36 times			72
Pest control — ants, gophers, snails			6
Weed control — spot spraying and mowing			10
Pruning (skirt, deadwood) and orchard thinning(c)			30
Miscellaneous — repairs, erosion control			30
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Total Cultural Costs		\$	156
COSTS PER ACRE			
<i>Labor</i>	<i>Materials and Equipment</i>		<i>Total</i>
<i>Cost</i>	<i>Item</i>	<i>Cost</i>	<i>Cost/Acre</i>
\$ 8	Actual N — 150 lbs./acre	\$ 18	\$ 26
72	Water — 3½ acre feet/acre	193	265
6	Baits, poisons & predators	5	11
10	Oil	5	15
30	Chain saw and brush disposal	5	35
30	Supplies and tools	10	40
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\$ 156		\$ 236	\$ 392

OVERHEAD COSTS	
Taxes	\$ 90
Maintenance & repairs	20
General expenses	39
Management charge	60
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Total Cash Overhead Costs	\$ 209
TOTAL PREHARVEST CASH COSTS	\$ 601
Depreciation(d)	371
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TOTAL CASH AND DEPRECIATION	\$ 972
Interest on Investment(e)	355
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TOTAL PREHARVEST COSTS(f)	\$ 1,327

FOOTNOTES

(a) Sample costs in this report are based on a typical commercial 10 acre avocado orchard. Fuerte variety, ten- to twelve-year-old trees, 100 trees per acre, and permanent plastic irrigation system. Costs will vary from orchard to orchard and from district to district. The purpose of these sample costs is to serve as a guide for cost estimation.

(b) Zinc may be needed. This may be applied to leaves by aerial or ground spraying; or applied on the ground. Phosphate and potassium may be applied periodically, but not regularly like nitrogen.

(c) Tree removal between 10-15 years.

(d) <i>Investment</i>	<i>Investment Per Acre</i>	<i>Depreciation Per Acre</i>
Trees (20 years)	\$ 4,702	\$ 235
Irrigation systems (10 years)	650	65
Pickup (5 years)	125	25
Equipment & Building (Years vary with item)	360	46
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	\$ 5,837	\$ 371

(e) Interest on investment charged at rate of 6% of assumed land value of \$3,000 per acre plus half life value of trees, equipment, and building.

(f) Harvest costs, assessments, and yield.

Harvest costs vary from 1½ to 3 cents per pound depending on tree size, size of crop, terrain, etc. A 5% assessment is made on the value of crop at roadside after harvesting. This money is used for industry advertising and sales promotion. Yield per acre varies by different varieties, locations, cultural practices, type of tree and climatic conditions from year to year. Average good commercial yields per acre should range from 6,000 pounds to 10,000 for Fuerte and 7,000 and 12,000 for Hass.