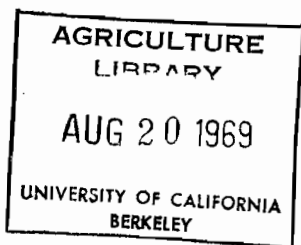


A V O C A D O
P R O D U C T I O N
C O S T S
SANTA BARBARA COUNTY
1967

- . . . Sample Costs to Produce Avocados
- . . . Typical Production Operations
- . . . Harvesting Costs
- . . . Costs Per Pound and Yields



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AVOCADOS IN SANTA BARBARA COUNTY

Avocados are grown increasingly in the south coastal portion of Santa Barbara County. Acreage and production are increasing in spite of the avocado root rot disease and expanding urbanization. The practices and figures presented herein are developed from records shared by cooperating growers using practices typical of the area.

The sample costs to produce avocados shown on pages 4 and 5 are based on the following assumed characteristics: Hass variety; 16' x 20' planting, 135 trees per acre; 10-15 years of age; permanent, plastic pipe, under-tree sprinkler system; non-tillage; no frost protection; 20-acre size; owner operated with additional labor at about \$2 per hour; harvesting by packing house crew; average yield 10,000 pounds per acre (250) field boxes.

Acreage and production statistics for Santa Barbara County are compiled annually by Walter Cummings, Agricultural Commissioner. Selected figures from these Agricultural Crop Reports show:

Year	Acreage		Average Yield lbs/acre	Gross Farm Price ¢/pound	Total Value
	Planted	Bearing			
1961	1,683	1,389	5,000	20.7	\$1,439,000
1962	1,974	1,329	7,000	12.0	1,128,000
1963	2,127	1,502	3,800	13.4	766,000
1964	2,213	1,622	7,140	13.1	1,517,000
1965	2,281	1,679	6,640	26.0	2,896,000
1966	2,296	1,670	8,200	13.3	1,810,000
1967	2,524	1,877	9,800	11.0	2,024,000

GEG:RCR:hjs

August 1968 -500cc

December 1968-200cc

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CULTURAL OPERATIONS

Fertilization - Nitrogen

Annual application of chemical nitrogen fertilizers are made by most growers. Amounts range from 100 to 400 pounds of elemental nitrogen per acre, with an average of 225 pounds. The amount varies depending on variety, soil, and productivity. Leaf analysis is recommended as a guide. Annual applications can be made in February or can be split into broadcasting in February and July. Phosphate and potash are not recommended. Cost range: \$15-55.

Fertilization - Zinc Foliage Spray

Many groves need the micro-nutrient zinc. The best generally applicable way to apply zinc is annually as a foliage spray, usually in June, either by aircraft or ground rigs. In some soils, particularly the more shallow acid ones, zinc materials can be injected into the soil for longer range correction of this deficiency. Cost range: \$0-20

Irrigation

The most critical operation in successful avocado grove management is irrigation. Practices vary and are greatly dependent on individual orchard conditions of soil, water source, tree size, and location. Irrigations range from 1-1/2 to 3-acre inches each at intervals from 10 to 40 days during the summer, for a total of 12 to 32-acre inches per acre per year. Satisfactory sprinkler application systems include: permanent plastic pipe under tree, plastic hose drag line, portable aluminum pipe, and permanent iron pipe overhead. The principal source of water is from the Cachuma dam and it is furnished under pressure by the water districts at a minimum cost of \$40 per acre foot. Tensiometers can be used to guide the scheduling of irrigations so as to minimize tip burn of the leaves. Cost range: \$40-220

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SAMPLE COSTS TO PRODUCE AVOCADOS
Santa Barbara County 1967

COSTS PER ACRE

CULTURAL OPERATIONS: Labor - Items

	<u>Labor Costs</u>	<u>Materials & Equipment Items</u>	<u>Cost</u>	<u>Total Cost / Acre</u>
Fertilizer-nitrogen, broadcast	\$ 4	Actual N - 225 lbs./ acre	\$ 28	\$ 32
Fertilizer-zinc foliage spray	7	Zinc nutritional spray	6	13
Irrigation - 12 times	6	Water - 2 acre feet /acre	80	104
Pest control - ants, gophers, rodents	6	Baits, poisons	5	11
Weed control - spot weed spraying	12	Chemicals, weed oil	11	23
Pruning (skirt, deadwood) and orchard thinning	30	Chain saw and disposal	5	35
Miscellaneous - propping, erosion, etc.	<u>32</u>	Supplies and tools	<u>6</u>	<u>38</u>
Total Cultural Costs	\$ 115		\$ 141	\$ 256

INVESTMENT SCHEDULE

	<u>Expected Life</u>	<u>Investment per acre</u>	<u>Depreciation per acre</u>
Trees, 135 per acre	20 yrs.	\$ 3,750	\$ 188
Irrigation System	10 "	650	65
Pick-up Truck	5 "	125	25
Buildings & Equipment	varies	<u>275</u>	<u>32</u>
Total		\$ 4,800	\$ 310

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

OVERHEAD COSTS

Taxes	\$ 90
Maintenance & repairs	18
General Expenses, office	26
Management charge	36
Total Cash Overhead Costs	<u>\$ 170</u>
TOTAL PREHARVEST CASH COSTS	\$ 426
Depreciation	<u>310</u>
TOTAL CASH AND DEPRECIATION	<u>\$ 736</u>
Interest on Investment	<u>324</u>
TOTAL PREHARVEST COSTS	<u>\$ 1,060</u>

Pest Control

Chemical control of insect pests is not recommended due to favorable natural parasites and predators. Occasionally, greenhouse thrips and avocado brown mites cause some damage. Ant control is helpful in maintaining biological control. Control of rats, squirrels, and gophers is necessary. Cost range: \$0-25

Weed Control

The use of the herbicides, monuron or simazine, at 2 pounds per acre, is recommended for annual weed control. Weed oils are used to control perennial weeds and spot spray annuals. Cost range: \$10-50

Pruning and Orchard Thinning

Maintenance-type pruning to remove skirt limbs, dead and broken limbs, and the convenience trimming for irrigation and picking drives is mostly a labor item for odd times in the year. Cost range: \$5-15

As the trees become crowded, alternate temporary trees should be cut back and finally removed to allow the permanent trees ample room to maintain a full skirt of leaves. The first thinning usually removes half of the trees on the diagonal at 10 to 15 years of age. A second thinning of alternate rows usually takes place at 18 to 22 years. The heavy cost of tree removal (up to \$150 per acre) plus the annual cutting of competing limbs have been averaged to \$25 per acre.

HARVESTING COSTS

About half the groves are harvested by picking crews operated by the packing houses and half by the owners or their employees. The costs vary from 1 to 3¢ per pound, depending on tree size, crop size, variety, terrain, etc. Rates of pick average 2-1/2 field boxes per hour and range up to 10 boxes.

Yields per acre vary widely with variety, location, climatic conditions, previous crop size, cultural practices, etc. The county average is now about 7,000 pounds per acre. Good commercial orchards of the Hass variety range from 6,000 to 16,000 pounds, with 10,000 pounds assumed for this cost study.

A State Marketing Order mandatory assessment of 5% is made on the value of the crop at roadside after harvesting. This money is used for industry advertising and sales promotion by the California Avocado Advisory Board. This 5% would be deducted from the prices shown on Page 2, when calculating profit margins.

COSTS PER POUND AND YIELDS

