

## **CAN YOU AFFORD TO GROW AVOCADOS?**

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We receive many questions on investments, particularly relating to avocados. Questions such as: how much can I pay per acre for an orchard?; what's a grove worth?; will it pay the taxes?; how many years will it take to pay out?; what is an avocado tree worth?; for how many years should I depreciate my trees?; and so on and on.

Let's look at the general economics of the avocado industry and particularly the situation in Santa Barbara County. These comments will suffer from "over generalization," Each grove is different and each grower has his own value system; this is especially true with avocados, as compared with other agricultural enterprises. I am really trying to illustrate a method of analysis for you and not a lot of detailed figures. If you wish the detailed figures, please consult a copy of our cost study on which these figures are based (1). But, if you approach your "avocado-business" following this method of analysis, you should be able to answer your own questions. And, those will be the best answers.

In our study based on 11 figures collected from typical growers, costs of developing an avocado orchard per acre if accumulated over the five year non-bearing period are \$1,430 for cash costs and \$3,750 for all costs, as shown in Table 1 (2). These figures provide the basis for capitalizing the avocado trees for depreciation purposes. The period of time usually used is 20, 25, or 33 years, depending on location and conditions.

By adding the irrigation system and other improvements, the total depreciable original investment is \$4,800. This generates an annual depreciation of \$310 per acre, as shown in Table II. The Interest on Investment has been calculated by using 6% on an assumed land value of \$3,000 per acre, plus the half life values of the trees and other improvements.

This article was adapted from a talk presented at the Avocado Institute held in Carpintería on January 17, 1969.

Typical annual production costs, as shown in Table II, run \$256 for cultural operations, \$170 for cash overhead, \$310 for depreciation, and a total of \$736 per acre, before harvest.

When these total costs before figuring investment returns are divided by the yields per acre, the figures generate the picture presented in Table III. The unit costs of production before harvest are clearly affected by yield and range from 24.5¢/lb. at 3,000 pound yield to 6.7¢ at 11,000 pounds.

Price and yield experiences in Santa Barbara County over the past 8 years are presented in Table IV (3). Price on-tree has varied from 10.0 to 24.5 with a weighted average of 15 cents per pound. Yields per bearing acre have ranged from 3,800 to 9,800 for an average of 6,700 pounds per acre.

Now, how to put this all together?; we use what is usually termed the profit formula:

$$\begin{aligned} & (\text{Yield} \times \text{Price}) - \text{Costs} = \text{Profit} \\ & \text{Profit} \div \text{Investment} = \text{Rate of Return} \end{aligned}$$

For the typical avocado acre in Santa Barbara the figures are:

$$\begin{aligned} & (6700 \text{ lbs.} \times 15\text{¢/lb.}) - \$736 = \$269 \\ & \$269 \div \$5400 = 5.0\% \end{aligned}$$

Thus, the typical rate of return is 5%. If we vary the inputs one at a time, the rate of return will come out so as to illustrate the use of this method of analysis.

Suppose your grove yields 10,000 pounds per acre instead of the average of 6,700, the rate of return jumps to 14%.

If the price rises to 200 per pound, the rate of return would be 11%.

When costs of production increase to \$900 per acre, the return rate drops to 1.9%. This illustrates that much of the profit might be eliminated if labor costs would increase 50% and taxes were to double.

And if your investment totaled \$7,000 per acre, instead of \$5400, your rate of return would be only 3.8%.

Thus, with a little pencil pushing, you can begin to bracket in on the answer to the question — can you afford to grow avocados?

**Table I — AVOCADO DEVELOPMENT COSTS**  
per Acre, by years and accumulated

	<i>1st</i>	<i>2nd</i>	<i>3rd</i>	<i>4th</i>	<i>5th</i>
Labor—land preparation	\$ 125	\$ 5	\$ 2	\$	\$
Labor—grove care	95	82	62	61	60
Trees—135 per acre	317	12	5		
Materials & supplies	73	51	56	79	95
Cash overhead	190	125	135	135	150
	\$ 800	\$ 275	\$ 260	\$ 275	\$ 305
Fruit Credits				+160	+325
Accumulated Cash	\$ 800	\$1,075	\$1,335	\$1,450	\$1,430
Deprec. & Int. on Inv.	400	415	450	510	545
Total Annual Costs	1,200	690	710	625	525
Accumulated Total	\$1,200	\$1,890	\$2,600	\$3,225	\$3,750

**Table II — AVOCADO PRODUCTION COSTS  
per Acre, Labor, Equipment, and Materials**

Fertilizer	\$ 43	Taxes	\$ 90
Irrigation	104	Maintenance & Repair	18
Pest Control	11	General, Office	26
Weed Control	23	Management	36
Pruning	35	Total Cash Overhead	\$170
Miscellaneous	38	Depreciation on \$4,800	310
Total Cultural	\$256		
Total Cash Costs and Depreciation			\$ 736
Interest on Investment 6% on \$5,400			324
Total Preharvest Costs			\$1,060

**Table III — AVOCADO COSTS PER POUND AND YIELDS**

	per Acre	cents per pound at yields—lbs./acre				
		3,000	5,000	7,000	9,000	11,000
Total Cash Costs	\$426	14.2	8.5	6.1	4.7	3.9
Depreciation	310	10.3	6.2	4.4	3.4	2.8
On-tree Cash & Deprec.	736	24.5	14.7	10.5	8.2	6.7

**Table IV — AVOCADO PRICES AND YIELDS  
Santa Barbara County**

	1961	1962	1963	1964	1965	1966	1967	1968
Yield-lbs./ acre	4,998	7,074	3,808	7,139	6,635	8,180	9,787	5,602
Price, on- tree-¢/lb.	19.0	11.0	11.7	12.0	24.5	12.0	10.0	21.2

(1) Goodall, G. E. & R. C. Rock. "Avocado Production Costs, Santa Barbara County, 1967," U.C. Agricultural Extension, Santa Barbara, Aug. 1968.

(2) Goodall, G. E. & R. C. Rock, "Sample Costs to Develop an Avocado Orchard in Santa Barbara County, 1968," U.C. Agricultural Extension, Santa Barbara County, Jul. 1968.

(3) Cummings, Walter, "Agricultural Crop Reports," Santa Barbara County, Agricultural Commissioner, 1961 to 1968.