

AVOCADO ORCHARD DEVELOPMENT 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 presented as "standard" costs, but are intended as guidelines. Individual orchards may vary considerably from these figures in their cost and return experience.

Orchards on steep slopes with inadequate roadways and drives for fruit hauling and grove work will cost more to operate. The type of irrigation system selected may have lower initial costs, but higher labor requirements and maintenance costs result in higher irrigation costs as the orchard matures. Poor or untimely farming and management practices commonly cause costs to be higher than necessary.

Weed control is an operation that can be costly if treatments are delayed or poorly done. ~~If weed control has been neglected, or weed control adjacent to the planted area is included,~~ costs will be much higher. Elimination of a weed problem is more costly than maintenance of a normal weed control program. Delayed weed control is often the cause of costs being higher than expected.

Sample costs in this study are on the basis of the following: A 10-acre avocado orchard, spring planted on relatively frost-free hillsides; permanent plastic conventional sprinkler irrigation system, PVC pipe, a riser to each tree with spitter head (costs for the new drip irrigation system varies from \$400 to \$1,000 per acre depending upon the make of system, the number of emitters per acre, size of pipe, cost of fertilizer tank and filter, etc.); varieties commonly planted are: Fuerte (20' x 20' = 108 trees/acre); Hass (15' x 20' = 145 trees/acre); Zutano (15' x 15' = 190 trees/acre); Bacon (15' x 15' = 190 trees/acre); and Reed (15' x 20' = 145 trees/acre). Study costs are for 100 trees/acre.

Water costs will vary depending upon the source, district assessments, etc. Range is from \$50-\$80/acre ft. and \$90-\$100/acre ft. if pumping charge is added. Trees are not assessed for taxes until the fourth or fifth year. There will be variations in tax charges, depending on the area where an orchard is located. Fruit credit varies depending on variety planted, tree yields, and market prices. (Harvest cost is 2-1/2¢ to 4-1/2¢ lb., marketing order assessment, 4.9% of crop value at roadside.)

INVESTMENT

Capital outlay is estimated to be \$4,960 per acre based on an assumed land cost of \$3,500 per acre and \$1,460 per acre for the irrigation system and building and equipment. Permanent plastic irrigation system with spitter heads is installed the first year. At the end of the fourth year, the spitter heads are converted to revolving sprinklers at an additional cost. To simplify calculations in the table, the initial capital outlay of \$1,460 per acre includes a charge for the complete irrigation system.

Interest on investment for the first year equals 8% of first-year total cash cost per acre (5), plus 8% of land value and undepreciated balance of irrigation system, equipment and building. Interest for remaining years equals 8% of prior-year total investment value (12). Investment in trees at end of year equals accumulated total net costs (11) of prior years. Investment value for items is original cost of \$1,460 less accumulated depreciation.

(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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**SAMPLE COSTS TO DEVELOP AN AVOCADO ORCHARD
IN SAN DIEGO COUNTY
1974**

	DOLLARS PER ACRE				
	1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
Labor and Field Power					
Land preparation (variable)	\$ 250	\$ -	\$ -	\$ -	\$ -
Orchard layout	50	-	-	-	-
Plant (dig, plant, mulch & wrap)	140	7	4	-	-
Irrigation (sprinkler)	100	100	80	80	80
Fertilization	8	12	15	18	18
Weed control (hoe, oil & herbicide)	70	65	40	25	14
Pest control	40	30	25	25	25
Tree care & pruning	15	15	15	20	40
Miscellaneous (propping, erosion control, cover crop)	30	25	25	30	35
(1) Total Labor and Power	\$ 703	\$ 254	\$ 204	\$ 198	\$ 212
Materials					
Trees (100 trees/acre @ \$4.75)	\$ 475	\$ 25	\$ -	\$ -	\$ -
Mulch	40	20	10	-	-
Tree protectors	20	-	-	-	-
Water	85	85	125	175	230
Fertilizer	6	10	16	20	35
Weed oil & herbicides	40	35	35	20	20
Pest Control	15	15	15	15	15
Miscellaneous (supplies)	10	10	10	10	10
(2) Total Materials	\$ 691	\$ 200	\$ 211	\$ 240	\$ 310
(3) Total Cash Cultural	\$1,394	\$ 454	\$ 415	\$ 438	\$ 522
Cash Overhead					
General expense	\$ 112	\$ 36	\$ 33	\$ 35	\$ 42
Management charge, variable (\$5/acre/month)	60	60	60	60	60
Taxes	60	60	60	100	130
Maintenance & repair	40	40	40	40	40
(4) Total Cash Overhead	\$ 272	\$ 196	\$ 193	\$ 235	\$ 272
(5) Total Preharvest Cash Costs	\$1,666	\$ 650	\$ 608	\$ 673	\$ 794
(6) Less Fruit Credits				200	400
(7) Net Cash Costs	\$1,666	\$ 650	\$ 608	\$ 473	\$ 394
Investment Costs					
Depreciation	\$ 158	\$ 158	\$ 158	\$ 158	\$ 158
Interest on investment @ 8%	517	571	669	771	871
(8) Total Non-Cash Costs	\$ 675	\$ 729	\$ 827	\$ 929	\$1,029
(9) Total Net All Costs	\$2,341	\$1,379	\$1,435	\$1,402	\$1,423
(10) Accumulated Total Net Costs	\$2,341	\$3,720	\$5,155	\$6,557	\$7,980
(11) Accumulated Net Cash Costs	\$1,666	\$2,316	\$2,924	\$3,597	\$4,391
INVESTMENT VALUE AT END OF YEAR					
Land @ \$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500
Trees	2,341	3,720	5,155	6,557	7,980
Irrigation sprinkler system \$900; Equipment & buildings 560	\$1,460	1,302	1,144	986	828
(12) Total Investment Value	\$7,143	\$8,364	\$9,641	\$10,885	\$12,150

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