

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 results 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 \$300-\$750 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¢ to 3½¢/lb.; marketing order assessment, 4.9% of crop value at roadside.)

INVESTMENT -- Capital outlay is estimated to be \$4,135 per acre based on an assumed land cost of \$3,000 per acre and \$1,135 per acre for the irrigation system and building and equipment. The initial cost of the permanent plastic irrigation system with spitter heads is estimated at \$550 per acre installed. At the end of the fourth year, the spitter heads are converted to revolving sprinklers at an additional cost of approximately \$100 per acre. To simplify calculations in the table, the initial capital outlay of \$1,135 per acre includes a charge for the complete irrigation system.

Interest on investment for the first year equals 7% of first-year total cash cost per acre (5), plus 7% of land value and undepreciated balance of irrigation system, equipment, and building. Interest for remaining years equals 7% 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 \$1,135 less accumulated depreciation.

SAMPLE COSTS TO DEVELOP AN AVOCADO ORCHARD
IN SAN DIEGO COUNTY
1972

	DOLLARS PER ACRE				
	1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
Labor and Field Power					
Land preparation (rip, disk, float)	\$ 200	\$ -	\$ -	\$ -	\$ -
Orchard layout	20	-	-	-	-
Plant (dig, plant, mulch & wrap)	90	5	3	-	-
Irrigation (sprinkler)	80	80	80	80	80
Fertilization	2	3	3	7	7
Weed control (hoe, oil & herbicide)	35	25	20	15	15
Pest control	10	10	10	10	10
Tree care & pruning	5	5	5	5	10
Misc. (propping, erosion control, cover crop)	15	15	15	15	25
(1) Total Labor and Power	\$ 457	\$ 143	\$ 136	\$ 132	\$ 147
Materials					
Trees (100 trees/acre @ \$3.75 + tax)	\$ 400	\$ 20	\$ -	\$ -	\$ -
Mulch	20	10	5	-	-
Tree protectors	10	-	-	-	-
Water	50	60	100	150	180
Fertilizer	3	5	8	10	15
Weed oil & herbicides	20	15	15	12	10
Pest control	4	4	5	5	5
Misc. (supplies)	10	10	10	10	10
(2) Total Materials	\$ 517	\$ 124	\$ 143	\$ 187	\$ 220
(3) Total Cash Cultural	\$ 974	\$ 267	\$ 279	\$ 319	\$ 367
Cash Overhead					
General expense	\$ 78	\$ 21	\$ 22	\$ 26	\$ 29
Management charge, Variable (\$5/acre/mo.)	60	60	60	60	60
Taxes	50	50	50	75	100
Maintenance & repair	20	20	20	20	20
(4) Total Cash Overhead	\$ 208	\$ 151	\$ 152	\$ 181	\$ 209
(5) Total Pre-Harvest Cash Costs	\$1,182	\$ 418	\$ 431	\$ 500	\$ 576
(6) Less Fruit Credits				100	250
(7) Net Cash Costs	\$1,182	\$ 418	\$ 431	\$ 400	\$ 326
Investment Costs					
Depreciation	\$ 124	\$ 124	\$ 124	\$ 124	\$ 124
Interest on investment	364	398	455	517	581
(8) Total Non-Cash Costs	\$ 488	\$ 522	\$ 579	\$ 641	\$ 705
(9) Total Net All Costs	\$1,670	\$ 940	\$1,010	\$1,041	\$1,031
(10) Accumulated Total Net Costs	\$1,670	\$2,610	\$3,620	\$4,661	\$5,692
(11) Accumulated Net Cash Costs	\$1,182	\$1,600	\$2,031	\$2,431	\$2,757
INVESTMENT VALUE AT END OF YEAR					
Land @ \$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Trees	1,670	2,610	3,620	4,661	5,692
Irrigation Sprinkler system (\$650)					
Equipment & buildings (485) = \$1,135	1,011	887	763	639	515
(12) Total Investment Value	\$5,681	\$6,497	\$7,383	\$8,300	\$9,207

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