

COST TO DEVELOP AN AVOCADO ORCHARD IN SAN DIEGO COUNTY—1974

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Continuing interest in the planting of new avocado orchards in San Diego County has necessitated the updating of development costs and the procedure to follow in developing an avocado orchard. In this article the authors present 1974 sample costs to develop a 10-acre orchard in San Diego County. The Fuerte variety, planted 20 by 20 feet (or 100 trees per acre) on a relatively frost-free hillside site, has been used. For a Hass planting, a 15 foot by 20 foot distance could be used. With all plantings, a permanent plastic irrigation system is installed with a riser to each tree.

The study shows figures for the first through the fifth years. Included are labor and field power necessary, materials, cash overhead, fruit credits, and allocation of monies for land, trees, irrigation system, building, and equipment.

(1) The labor and field power includes land preparation, orchard layout, planting (holes and protectors), irrigation, fertilization, weed control (hoe and spray), mulching (wood chips), tree care and pruning, pest control (gophers, rabbits, squirrels, etc.), and miscellaneous (propping, erosion control). The first year's cost is \$703. The big item in this first year is the land preparation, consisting of subsoiling to a depth of two to three feet, disking, land movement where necessary, and floating of the land. In the second and third years land preparation and orchard layout expenditures were not needed so the totals were \$254 and \$204 an acre respectively. The fourth year, \$198 an acre was the cost, and the fifth year, \$212 an acre. The total labor and power for the years is \$1,571 per acre.

(2) Total materials cost for the first year is \$691 and includes trees at \$4.75 per tree, water, mulching materials, fertilizer, pest control, baits, poison and traps, tree wraps, weed oil, and miscellaneous parts and supplies. The largest item, of course, is the purchase of tree.

In the second year, the materials total \$200 per acre, the third year, \$211 per acre; the fourth year, \$240 per acre, and the fifth year, \$310 per acre, for a total of \$1,652 per acre.

(3) The total cash cultural cost, including labor, field power and materials for the first year was \$1,394; for the second year, \$454; for the third year, \$415; for the fourth year, \$438, and for the fifth year, \$522, a total of \$3,223.

(4) The cash overhead includes general expense items (postage, telephone, insurance, magazines, etc.), management charge (a fee paid to a grove manager supervising the

development of a grove for a grower), taxes, and maintenance and repair. The total overhead cash cost for the first year is \$272; second year, \$196, third, \$193; fourth, \$235; and fifth, \$272.

(5) The pre-harvest cash cost per acre the first year totals \$1,666; the second year, \$650; the third year, \$608; the fourth year, \$673; and the fifth year, \$794. (6) For the Fuerte variety, there should be some fruit credit obtained in the fourth and fifth years, and in some rare cases, the third year. For the Hass variety, fruit credits may be obtained the second and third year. Fruit credit varies, depending upon tree yields and market prices. Harvesting costs are between 2 ½ c to 4 ½ c per pound. Marketing order assessment for advertising, promotion, and production research of the avocado is 4.9% of crop value at roadside. The net cash costs (7) which include labor and field power, materials and cash overhead, total \$1,666 the first year; \$650 the second; \$608 the third year; \$473 the fourth year; and \$394 for the fifth year.

Interest on investment for the first year equals 8% of first-year total preharvest 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). Interest on investment the first year is \$517; second year, \$571; third year, \$669; fourth year, \$771; and fifth year, \$871.

Total non-cash costs (8) are: first year, \$675; second year, \$729; third year, \$827; fourth year, \$929; and fifth year, \$1,029. Depreciation is \$158 per year per acre. The accumulated total net cash costs (11) total \$1,666 the first year; \$2,316 the second; \$2,924 for the third year; \$3,597 for the fourth year; and \$4,391 for the fifth year.

(12) The total investment value at the end of the first year is \$7,143; the second year, \$8,364; \$9,641 at the end of the third year; \$10,885 at the end of the fourth year, and at the end of the fifth year, a total of \$12,150.

The following cost study table is a breakdown of costs by item and by year.

TABLE 1. 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.
<i>Labor and Field Power</i>					
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
<i>Materials</i>					
Trees (100 trees/acre at \$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
<i>Cash Overhead</i>					
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
<i>Investment Costs</i>					
Depreciation	\$ 158	\$ 158	\$ 158	\$ 158	\$ 158
Interest on investment at 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 at \$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	828	670
(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.