

COST TO DEVELOP AN AVOCADO ORCHARD IN SAN DIEGO COUNTY

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The increased interest in the planting of new avocado orchards in San Diego County has brought a large number of requests for development costs and the procedure to follow in developing an avocado orchard. In this article the author will present sample costs which have been estimated on the basis of a new 10-acre planting 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 the Bacon variety, a 15 foot by 15 foot spacing can be used, and for a Hass planting, a 15 foot by 20 foot distance could be used. Under all plantings a permanent plastic irrigation system is installed with a riser to each tree.

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

The labor and field power includes the following: 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 (repairs, erosion control). The first year's total labor and power cost is \$380. The big item in this first year was the land preparation, consisting of subsoiling to a depth of two to three feet, disking, land movement where necessary, and finally, floating of the land. In the second year, land preparation and orchard layout were not needed expenditures so the total for the second year was \$104 an acre. In the third year, land preparation, orchard layout and planting of replacement trees were items eliminated, which gave a total of \$102 an acre. The fourth year, \$106 an acre was the cost, and the fifth year ended up at \$118 an acre. The total labor and power for the five years was \$810 per acre.

Total materials for the first year cost \$358, and included trees, at \$3.00 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, in the first year was the purchase of 100 trees.

In the second year, the materials cost \$64 an acre; and the third year, \$73 an acre; the fourth year, \$104 an acre; and the fifth year, \$133 an acre, for a total of \$732 per acre.

The total cash cultural costs, including labor, field power and materials for the first year, was \$738; for the second year, \$160; for the third year, \$175; for the fourth year, \$210; and for the fifth year, \$251, a total of \$1542.

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, depreciation, and interest on investment (interest on investment the first year equals 6% of the first year's total cost per acre excluding depreciation and interest, plus 6% of land value and undepreciated balance of the irrigation system, buildings and equipment. Interest for remaining years equals 6% of prior year total investment value). The total overhead cost for the first year is \$498; second year, \$515; third, \$551; fourth, 589; and fifth, \$648. The largest amount in this group of costs is the interest on investment. There are some who feel that this should not be charged against the orchard, and then there are others who feel that this should be included. The cost figure has been included and growers may or may not use it depending on their personal preference.

The total cost per acre (pre-harvest) the first year totaled \$1,236; the second year \$683; the third year \$726; the fourth year \$799; and the fifth year \$899. For the Fuerte variety, there should be some fruit credit obtained in the fourth and fifth year, and in some rare cases, the third year. For the Hass variety, fruit credits may be obtained the second and third year. The accumulated total cost which includes labor and power, material, overhead cost, comes to \$1,236 the first year; \$1,919 the second; \$2645 for the third year; \$3394 for the fourth year; and \$4193 for the fifth year.

Capital outlay is estimated to be \$3950 per acre, based on an assumed land cost of \$3,000 per acre, and \$950 per acre for the irrigation system, buildings 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 an additional cost of \$100 per acre.

The total investment value at the end of the first year (including labor and field power, materials, overhead cost, land at \$3000 per acre, trees, irrigation system, buildings and equipment at \$950) is \$5,091; for the second year, \$5,679; \$6,310 at the end of the third year; \$6,964 at the end of the fourth year, and at the end of the fifth year, a total of \$7,668.

The following is a breakdown of costs by item and by year:

**COST TO DEVELOP A TEN-ACRE FUERTE AVOCADO ORCHARD
IN SAN DIEGO COUNTY**

DOLLARS PER ACRE

Labor and Field Power	1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
Land Preparation	\$ 200	\$ —	\$ —	\$ —	\$ —
Orchard Layout	15	—	—	—	—
Planting (Holes, Protectors)	65	5	—	—	—
Irrigation (Labor)	50	50	50	60	65
Fertilization (Labor)	2	3	5	6	8
Weed Control (Hoe, Spray)	15	15	15	15	15
Mulching (Sawdust, Chips)	10	8	8	—	—
Tree Care and Prune	3	3	4	5	10
Pest Control (Rabbits, Gophers)	10	10	10	10	10
Miscellaneous (Repairs, Erosion)	10	10	10	10	10
(1) Total Labor and Power	\$ 380	\$ 104	\$ 102	\$ 106	\$ 118
Materials					
Trees at \$3.00	\$ 300	\$ 15	\$ —	\$ —	\$ —
Water	20	20	40	80	110
Mulch (Shavings)	15	10	10	—	—
Fertilizer	3	4	8	8	10
Pest Control (Baits, Poisons, Traps)	4	3	2	2	1
Tree Wraps	4	—	—	—	—
Weed Oil	10	10	10	10	8
Miscellaneous (Parts & Supplies)	2	2	3	4	4
(2) Total Materials	\$ 358	\$ 64	\$ 73	\$ 104	\$ 133
(3) Total Cash Cultural Costs	\$ 738	\$ 168	\$ 175	\$ 210	\$ 251
Cash Overhead					
General Expenses	\$ 15	\$ 15	\$ 15	\$ 15	\$ 15
Management Charge	60	60	60	60	60
Taxes	40	40	40	40	60
Depreciation	95	95	95	95	95
Interest on Investment	288	305	341	379	418
(4) Total Overhead Costs	\$ 498	\$ 515	\$ 551	\$ 589	\$ 648
(5) Total Cost Per Acre (Preharvest)	\$1,236	\$ 683	\$ 726	\$ 799	\$ 899
Less Fruit Credit				\$ 50	\$ 100
(6) Net Total Cost	\$1,236	\$ 683	\$ 726	\$ 749	\$ 799
(7) Accumulated Total Cost	\$1,236	\$1,919	\$2,645	\$3,394	\$4,193
INVESTMENT VALUE AT END OF YEAR					
Land at \$3,000/acre	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Trees	1,236	1,919	2,645	3,394	4,193
Irrigation System, Bldgs. & Equip. = \$950	855	760	665	570	475
(8) Total Investment Value — End of Year	\$5,091	\$5,679	\$6,310	\$6,964	\$7,668