

# CITRUS ORCHARD DEVELOPMENT COSTS

## DESCRIPTION

The cost figures given in this sample are based on assumed conditions. The typical practices are listed, with sample costs given for the labor, materials, and equipment required. These are not presented as "standard" costs, but are intended as guidelines based upon growers' experience. Individual orchards may vary considerably from these figures in their cost and return experience. Particular items may vary from a grower's experience due to difference in conditions. Warm locations, for example, require no frost protection. Availability of adequate well water reduces the cost of irrigation water.

Orchards on steep slopes, with inadequate roadways and drives for fruit hauling and grove work, will cost considerably more to operate. Portable or drag-line irrigation systems may have lower initial costs, but higher labor requirements. Poor or untimely farming and management practices commonly cause costs to be higher than necessary and returns to be low.

Weed control is one operation that can be very 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 probably the most frequent cause of costs being higher than expected.

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This study is based on expected costs for planting citrus trees on hillside land in the north part of the county. It is a 20-acre planting, using newly cleared soil. Tree spacing is 10 x 20 feet. Production records are not available on long-term yield from this spacing compared to 20 x 20, or intermediate spacings such as 14 x 20, 16 x 20, or 18 x 20. The closer spacings provide more fruit earlier, and tree cost is greater. The wider spacings result in less crowding as trees mature. The 10 x 20 planting permits sprinkler spacing of 20 x 20 feet. Costs for the maximum tree density are listed, not as a recommended spacing for all orchards but to indicate the high range of cost of trees.

Sandy loam soil over decomposed granite is typical. Water obtained through the local water district is applied with a permanent sprinkler system, using revolving sprinklers placed at 20 x 20 feet. A wind machine and heaters sufficient to protect 10 acres of low ground are included. Other equipment includes a fuel tank, wheel tractor, weed sprayer, and mower.

## INVESTMENT

The total investment value is given at the end of each year for the five-year period. This includes the cost of the land, water meter, and the undepreciated balance for the sprinkler system. It also includes the total cost of the trees which consists of the accumulated net annual costs of their care. The cost has been reduced by credits for fruit sold.

Thus, the final figure of \$12,234 is the net cost per acre of the total orchard investment at the end of the fifth year, under the assumed conditions.

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	Dollars Per Acre				
	1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
<b>Cash, Labor and Power</b>					
Land preparation	\$ 200	\$	\$	\$	\$
Layout and plant	190				
Trees, maximum 200 @ \$4	800				
Irrigate	90	90	56	56	54
Water	85	85	116	166	200
Wrapping (labor, materials and mulch)	80				
Fertilize (labor and materials)	14	20	28	35	42
Weed control	95	85	60	60	60
Pest and disease control	65	70	75	100	110
Frost protection	--	--	--	55	55
Miscellaneous (tree care, suckering, cover crop)	30	30	30	30	30
County taxes	50	50	50	90	120
Maintenance and repair	15	20	25	30	35
General expense	40	30	30	30	40
Management charge	60	60	60	60	60
<b>Total Cash Costs</b>	<b>\$1,814</b>	<b>\$ 540</b>	<b>\$ 530</b>	<b>\$ 712</b>	<b>\$ 806</b>
Less Credit for fruit sold	--	--	--	(100)	(300)
<b>NET CASH COSTS</b>	<b>\$1,814</b>	<b>\$ 540</b>	<b>\$ 530</b>	<b>\$ 612</b>	<b>\$ 506</b>
<b>Investment Costs</b>					
Depreciation	97	97	97	128	128
Interest on investment @ 8%	497	544	632	725	869
<b>Total Non-Cash Costs</b>	<b>594</b>	<b>641</b>	<b>729</b>	<b>853</b>	<b>997</b>
<b>Total Net All Costs</b>	<b>\$2,408</b>	<b>\$1,181</b>	<b>\$1,259</b>	<b>\$ 1,465</b>	<b>\$ 1,503</b>
<b>Accumulated Total Net Cost</b>	<b>\$2,408</b>	<b>\$3,589</b>	<b>\$4,848</b>	<b>\$ 6,313</b>	<b>\$ 7,816</b>

**INVESTMENT VALUE AT END OF YEAR**

Land (Assumed value)	\$3,500	\$3,500	\$3,500	\$ 3,500	\$ 3,500
Trees	2,408	3,589	4,848	6,313	7,816
Irrigation system - \$750, equipment and buildings - \$250, frost protection (end of 3rd year)- \$465	903	806	709	1,046	918
<b>Total Investment Value</b>	<b>\$6,811</b>	<b>\$7,895</b>	<b>\$9,057</b>	<b>\$10,859</b>	<b>\$12,234</b>

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