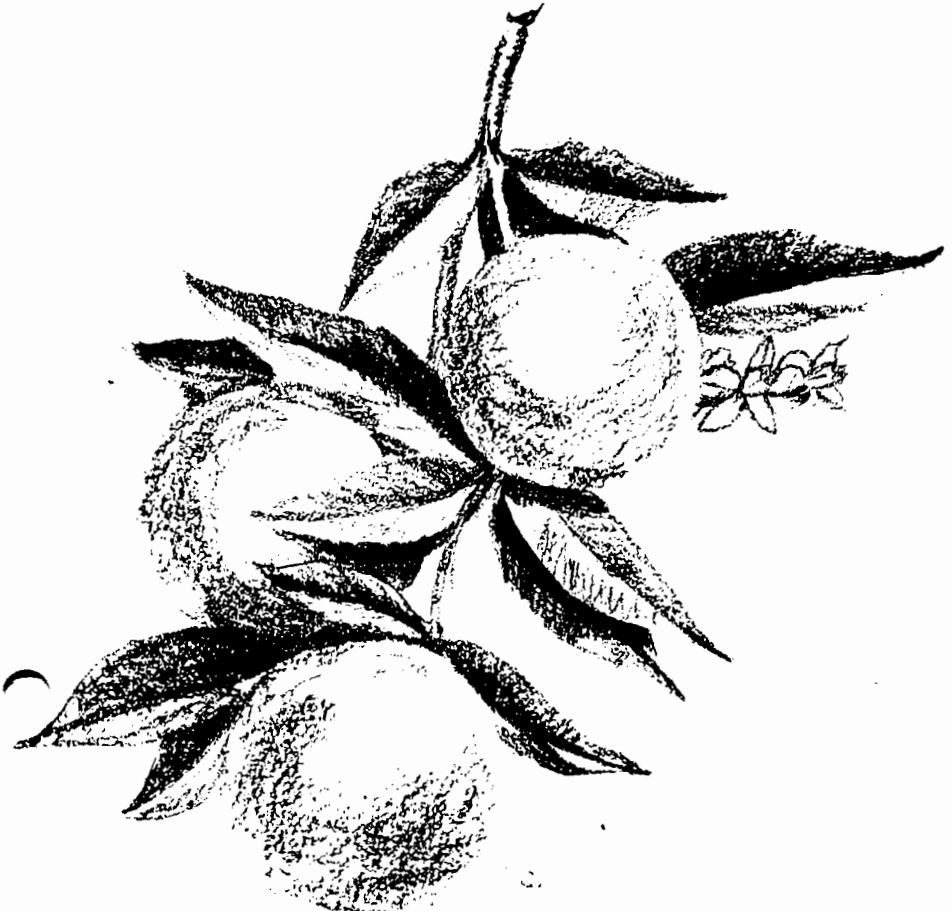


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**COST OF
PRODUCTION
VALENCIA
ORANGES
IN
ORANGE COUNTY**



COST OF PRODUCTION OF VALENCIA ORANGES IN ORANGE COUNTY

The purpose of this study is to provide growers with a guide to costs of production so they may better analyze the profitability of their orchard operation.

The figures developed in this report are sample cost estimates based on a typical Valencia orange orchard in Orange County. Characteristics of this orchard are as follows: Orchard is a mature interset orchard on level furrow irrigated land. Weed control is by chemicals. Windbreaks and wind machines are used for wind and frost protection. Equipment and buildings considered in this study includes a wheel tractor, pick-up truck, fertilizer spreader, weed sprayer and shed.



Table I SAMPLE PRODUCTION COSTS
FOR VALENCIA ORANGES

CULTURAL OPERATION	COST PER ACRE
FERTILIZATION.	\$30.00
IRRIGATION--LABOR.	30.00
--WATER.	62.00
PEST CONTROL--(CONTRACT).	75.00
OTHER PEST CONTROL.	9.00
WEED CONTROL.	34.00
PRUNING AND DISPOSAL.	-
FROST PROTECTION.	42.00
TREE REPLACEMENT.	10.00
MISCELLANEOUS.	25.00
	<u>SUB TOTAL \$317.00</u>
CASH OVERHEAD	
TAXES.	\$100.00
GENERAL EXPENSE AND MANAGEMENT.	55.50
MAINTENANCE AND REPAIR.	12.50
	<u>SUB TOTAL \$168.00</u>
TOTAL ON-TREE CASH COSTS	<u>\$485.00</u>
INVESTMENT OVERHEAD	
DEPRECIATION: EQUIPMENT, BUILDINGS AND TREES	\$87.00
INTEREST ON INVESTMENT	52.50
	<u>SUB TOTAL \$139.50</u>
TOTAL ON-TREE COSTS	<u>\$624.00</u>
TOTAL ON-TREE COSTS - LESS INTEREST	<u>\$572.00</u>

CULTURAL OPERATIONS

FERTILIZATION

Leaf analysis is used as a guide to the fertilizer needs of bearing citrus trees. Nitrogen is generally the principle element found lacking and is usually applied once a year in January or February at a rate compatible with leaf analysis findings.

Micronutrients (zinc and manganese) are usually added to the spring spray mix. The cost of application of these elements, therefore, is found under Pest Control Costs.

Occasionally other elements are found to be deficient in a mature orchard. This, however, is not common and for this reason the correction of these deficiencies are not considered in this study.

IRRIGATION

Orchards near the coast require less water than those located further inland. The number of irrigations required vary with the weather conditions and the soil. Water cost varies considerably according to the source (delivery district or deep wells). For the purpose of this study a cost of \$25.00 per acre foot is used. It should be remembered that the cost of water is variable and can range between \$10.00 and over \$50.00 per acre foot.

PEST AND DISEASE CONTROL

An orchard should be kept commercially free of serious pests at all times. Two treatments per year are usually required to accomplish this and are generally applied by a contract operator. These treatments consist of a non-oil spray in the spring for citrus red

mite and an oil spray in the fall for the control of scale insects and red mites. Gopher, ant, and snail expenses are included under other pest controls. Occasionally special treatments for thrips, aphids, and worms are needed. In this study, however, these treatments were not considered. The control of citrus diseases such as Gummosis, a soil-borne fungus disease, is considered under miscellaneous costs.

WEED CONTROL

It is preferable to grow citrus on soils kept free of weeds. This is accomplished by a fall or winter application of a pre-emergence chemical herbicide, such as monuron, diuron or simazine. This application is usually followed by one or two applications of weed oil during the summer months for spot control of weeds missed or resistant to the chemical used.

PRUNING AND DISPOSAL

Pruning is not a common practice in most county orchards. It is occasionally practiced when special needs arise. Pruning and disposal costs were not included in this study.

FROST PROTECTION

Frost protection for the most part is accomplished by wind machines in Orange County. It is, however, difficult to determine typical costs of frost protection because of the different frost protection requirements of different orchards. The frost protection costs indicated represent mainly a stand-by charge and a minimum use of wind machines. In actual practice frost protection costs will depend on orchard characteristics and the severity of frost conditions.

TREE REPLACEMENT

It was assumed the orchard considered in this report is an interset orchard and the tree replacement program for the replacement of losses caused by Tristeza has been completed. For this reason tree replacement costs are estimated at a minimum level of one tree per acre per year.

CASH OVERHEAD

TAXES

County taxes reported are for land, trees, farm buildings, and improvements. Rates shown are for predominantly agricultural areas.

GENERAL EXPENSE AND MANAGEMENT

General expense and management is a charge to cover costs of overhead such as items of travel, telephone, office, dues, assessments and insurance, etc. A management charge may be a cash cost to absentee owners or a non-cash cost to owner operators.

MAINTENANCE AND REPAIRS

Maintenance and repair charges are for repair and maintenance of equipment, buildings, roads, pipelines, etc.

INVESTMENT OVERHEAD

Investment overhead includes a depreciation charge for depreciable items and an interest charge for money invested in trees, equipment, and buildings. Land costs are not included because urbanization makes it extremely difficult to establish land values for agricultural purposes.

TABLE 2 **INVESTMENT SCHEDULE PER ACRE**

INVESTMENT ITEM	INVESTMENT PER ACRE	ANNUAL DEPRECIATION
TREES	\$1000	\$30
BUILDINGS & PIPELINES	300	12
EQUIPMENT & WIND MACHINES	450	45
TOTAL	\$1750	\$87

YIELD

Yields of Valencia oranges vary widely throughout the County, ranging from 100 to over 800 field boxes per acre. A good commercial operator should expect an average of 450 to 500 field boxes or more per acre. A field box weighs approximately 50 pounds.

PRICE

Prices received by growers for Valencia oranges vary greatly depending on the supply and demand conditions in the fresh and processed markets. The on-tree (pre-harvest) grower price for California Valencia oranges in recent years as reported by the U.S.D.A. is presented below.

ON-TREE PRICE PER 50 POUND FIELD BOX	1962	1963	1964	1965	1966
	2.03	2.21	2.52	1.67	1.15

TABLE 3 **ORANGE COUNTY VALENCIA STATISTICS**

YEAR	1963	1964	1965	1966
BEARING ACREAGE	20,833	18,875	15,679	15,357
NONBEARING ACREAGE	3,488	3,767	7,077	6,332
PRODUCTION TONS	216,663	153,831	144,499	132,992
VALUE (f.o.b)	\$25,566,200	\$21,302,000	\$16,103,400	\$13,319,000

* Orange County Agricultural Commissioner's Reports

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