

SAMPLE COSTS TO PRODUCE VALENCIA ORANGES IN VENTURA COUNTY

The purpose of this cost data sheet is to provide growers with a guide to costs of production so they may better analyze the economics of their grove operation. Cost estimates are based on a Valencia orange grove in Ventura County with the following characteristics:

The grove is a forty-acre planting with tree spacing 22 x 22 or 90 trees per acre. It is owner-operated with additional labor hired at \$1.80 per hour (\$1.40 per hour direct cost and \$.40 other cost). Pruning and brush cutting, if any, is done by commercial crews on contract. Insect control is also done by commercial companies on contract. Irrigation is by furrows and the soil is non-tilled. Frost protection is provided by two 100 h.p. electric wind machines (5 h.p./acre) and 15 Return-stack orchard heaters per acre. Equipment and building includes a wheel tractor, pickup truck, fertilizer spreader, self-propelled weed sprayer and shed.

FERTILIZATION Valencias require fertilization to maintain maximum yields. Nitrogen per tree varies with tree age and soil type. Under most conditions, about two pounds of actual N per tree per year will maintain maximum yields of quality fruit. N is usually applied in February. (See INSECT CONTROL for nutrients applied in spray.)

IRRIGATION Adequate, but not excessive moisture should be available to the trees at all times. Orchards near the coast require less water than those in the interior area. Peak water use is during hot weather--June through September. Number of irrigations and amount of water varies with season and soil. Water duty averages about 3 acre-feet per year.

INSECT CONTROL Orchards should be kept commercially clean of serious pests at all times. Two spray treatments are generally required--spring, a non-oil spray for mites and aphids; fall, an oil spray for scale and mites. Red and black scale have been successfully controlled with natural enemies. If biological control is used, the fall spray may not be required.

PRUNING A light pruning is done every fifth year, prorated at 20 percent of the cost each year.

DISEASE CONTROL Diseases which affect the bark at ground level should be prevented or controlled as required. Painting tree trunks with Bordeaux paint helps prevent gummosis, a soil-borne fungus disease.

TREE REPLACEMENT This can be quite extensive if trees are on Sour Orange rootstock and are affected by the Tristeza virus (Quick Decline).

HARVESTING COST Prices paid for picking fruit vary widely. They depend upon tree size, fruit size and yield per tree. The average picking and hauling costs for all California oranges during the 1965-66 season as reported by the California Citrus League was \$.36 per packed equivalent carton of 37.5 pounds net or \$.48 per 50-pound field box.

YIELD Valencia orange yields per acre vary widely in the county, ranging from about 300 to 800 field boxes per acre. County average yield per acre as reported by the Agricultural Commissioner is as follows:

	1963-64	1964-65	1965-66
Bearing acres	15,687	16,146	14,679
Average field boxes (50 lb.)/acre	484	472	476

SAMPLE VALENCIA ORANGE PRODUCTION COSTS -- VENTURA COUNTY

<u>CULTURAL OPERATIONS</u>		<u>SAMPLE COSTS PER ACRE</u>
Fertilization:	Nitrogen application; zinc and/or manganese spray	\$ 30
Irrigation:	3 ac. ft. water @ \$18/ac. ft. Labor	54 38
Insect Control:	Spring & Fall spray; 2,4-D spray	90
Disease Control:	Gummosis & other	5
Rodent Control:		6
Weed Control:	Fall sterilant treatment & spot sprays	22
Pruning & Brush Chopping:	Every 5 yrs.--prorated	15
Frost Protection:	Wind machines & heaters	40
Tree Replacement:		21
Miscellaneous:		<u>15</u>
	Sub-total	\$ 336
<u>CASH OVERHEAD</u>		
Taxes		\$ 90
Maintenance & repair		24
General expense <u>1/</u>		<u>16</u>
	Sub-total	\$ 130
<b>TOTAL ON-TREE CASH COST</b>		<b>\$ 466</b>
<u>INVESTMENT OVERHEAD</u>		
Depreciation:	Trees, irrigation & frost protection systems, equip- ment & shed	\$ 140
<b>ON-TREE CASH COST + DEPRECIATION</b>		<b>\$ 606</b>
Interest on investment:	Including land	\$ 252
<b>TOTAL ON-TREE COSTS</b>		<b>\$ 858</b>

1/ Cost of management not included in this cost data sheet.