

Cooperative Extension Work in Agriculture and Home Economics
 United States Department of Agriculture and University of California Cooperating

WHAT DID IT COST TO GROW VALENCIA ORANGES IN ORANGE COUNTY, 1959?

(Based on yield of 325 field boxes, 54 lbs. net, per acre)

Cultural Operations	Sample Costs Per Acre	Per Field Box	Your Cost
Irrigation - Labor	\$ 21		
Pest Control - Spray (contract)	28		
Soil Management - Cultivation labor	13		
- *Non-tillage labor	11		
**Frost Protection - Service charges, etc.	4		
Pruning - Hedging (contract)	15		
Tree Care	4		
Replanting - Preparation & care	12		
Windbreak Care (contract)	8		
Rodent Control	3		
***Micronutrient Spray (contract)	10		
Total Labor	\$118	\$.36	
<u>Materials</u>			
Water, all charges	\$ 29		
Pest Control - Chemicals & spray oil	21		
Soil Management - Cultivation materials	8		
- *Non-tillage materials	11		
**Frost Protection - Standby & power	36		
New Trees (2 for 1)	14		
Fertilizer - Nitrogen, all sources	16		
- Micronutrients	9		
Total Materials	\$133	\$.41	
<u>Cash Overhead</u>			
General Expense, office, transportation	\$ 16		
Taxes - Land & trees	60		
Insurance	5		
Maintenance & repairs	12		
Total Cash Overhead	\$ 93	\$.29	
TOTAL CASH LABOR, MATERIALS & OVERHEAD COSTS	\$344	\$1.06	
<u>Depreciation</u> - Improvement & equipment	\$ 52		
- Trees	30		
<u>Interest</u> @ 5% on average value of \$4300/A	215		
TOTAL DEPRECIATION AND INTEREST	\$297	\$.91	
TOTAL CASH COSTS PLUS DEP. & INT.	\$641	\$1.97	

*Non-tillage costs are for comparison and are not included in totals.

**Frost protection based on electric wind machine operation.

***Charged to nutrition, includes applying spider material.

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Oranges

GROWING VALENCIAS IN ORANGE COUNTY

INTRODUCTION: For 1959 over 11,500,000 field boxes of Valencia oranges were harvested on nearly 36,000 acres. On-tree returns to the grower will average about \$1.95 per field box, or \$635 an acre. In this analysis the cost of growing Valencia oranges has been computed on the basis of a typical orchard receiving normal operations. Cultural practices include windbreak care and frost protection, as well as irrigation, pest control, fertilization, nutrient spray, hedging and replanting.

CHANGES IN CULTURAL OPERATIONS: Some new tools and techniques are available to citrus growers in the production of quality fruit. Several are reviewed.

Irrigation and soil management should be tailored to the needs of the trees. Proper timing of water applications can be improved with moisture measuring devices, such as tensiometers. The instruments provide the irrigator with detailed information about how the tree feels with respect to obtaining water from the soil. The soil should be handled in the manner designed to maintain its best structure. Where excessive traffic has been a problem, efforts should be made to keep it to a minimum. With some locations, non-tillage meets these requirements. Under special conditions of surface sealing or slopes with erosion hazards, cover cropping is desirable.

Pruning by hedging machines is proving a convenient and valuable method of revitalizing old citrus trees. The response from pruning all four sides is greatest and recovery is very rapid. The expense of brush removal can be kept to a minimum by a small amount of hand labor. If necessary, commercial chipping machines are available.

Replanting and replacement are important to maintaining high production. Under circumstances where losses from quick decline are excessive, block replanting should be considered. Intersetting is another method of maintaining production in the face of quick decline losses. During the 1959 season the loss to quick decline ran as high as 25% in individual orchards, 7-10% was a common loss. Replant trees with Troyer citrange rootstock and nucellar Valencia bud strains have proven their worth. Campbell, Olinda and Frost are recommended.

Fertilization with nitrogen and micronutrients is essential to long term tree vigor and production. The micronutrient sprays do best where a separate application is applied. This can also be combined with 2,4-D sizing sprays or spring pest control. The tree's need for nitrogen can be determined by leaf analysis. The production of quality fruit requires that the proper amount be applied, too much resulting in depressed fruit quality. The use of leaf analysis information is encouraged as a means to establishing a fertilizer program.

OVERHEAD COSTS: The citrus grower has in addition to cultural costs, a group of overhead charges, some of which are cash out of pocket costs and others essentially investment costs.

The cash overhead costs such as taxes and insurance of all kinds are variable depending on the nearness to the city limits. Interest on the investment is calculated on an average value of improvements and original cost of citrus acreage before urbanization.

3/60/1200

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