

*Cost of prod. studies  
= lemons =*

**Information for Ventura County**

June 1968

Sample Lemon Production Costs  
(Based on 1967 Costs)

<u>CULTURAL OPERATIONS</u>		<u>SAMPLE COSTS PER ACRE</u>
Fertilization:	Nitrogen application; zinc and/or manganese spray	\$ 33
Irrigation:	2 ac. ft. water @ \$18/ac. ft. Labor	36 32
Insect Control:	Spring spray Fall spray	32 40
Disease Control:	Brown Rot Gummosis & other	14 5
Rodent Control:		5
Weed Control:	Fall sterilant treatment & spot sprays	22
Pruning & Brush Chopping:		102
Frost Protection:	Wind machines & heaters	53
Tree Replacement:		14
Miscellaneous:		<u>15</u>
	Sub-total	\$ 403
<u>CASH OVERHEAD</u>		
Taxes:		\$ 90
Maintenance & Repair:	Buildings, pickup, tractor & irrigation	24
General Expense <u>1/</u> :		<u>20</u>
	Sub-total	\$ 134
<u>TOTAL ON-TREE CASH COST</u>		<u>\$ 537</u>
<u>INVESTMENT OVERHEAD</u>		
Depreciation:	Trees, irrigation & frost protect- tion systems, equipment & shed	\$ 140
<u>ON-TREE CASH COST + DEPRECIATION</u>		<u>\$ 677</u>
Interest on Investment:	Including land	\$ 252
<u>TOTAL ON-TREE COST</u>		<u>\$ 929</u>

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

## SAMPLE COSTS TO PRODUCE LEMONS 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 lemon grove in Ventura County with the following characteristics.

The grove is a 40-acre planting with tree spacing 22 x 22 or 90 trees per acre. It is owner-operated with additional labor hired at a total cost of \$1.80 per hour (\$1.40 per hour direct cost and \$.40 other costs). Pruning, brush cutting, and insect and disease control are done by commercial companies on contract. Irrigation is by furrows and the soil is nontilled. 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 gasoline tractor, pickup truck, fertilizer spreader, self-propelled weed sprayer, and shed.

FERTILIZATION Lemons require adequate fertilization to maintain maximum yields of quality fruit. Nitrogen is usually applied at the rate of one pound of actual N per tree per application. Three applications (February, June, and September) per year are typical.

IRRIGATION Adequate but not excessive moisture should be available to trees at all times. Groves in coastal zones require less water than interior. Peak water use is during hot weather--June through September. Number of irrigations and amount of water varies with season and soil. Water requirement is about two acre-feet per year applied in six irrigations of four acre-inches each.

INSECT CONTROL Grove should be kept clean of serious insect pests at all times. Two treatments are generally necessary--spring, a non-oil spray for mites; fall, an oil spray for scale and mites. Micronutrients (zinc and manganese) are usually added to one or both sprays. Urea, for nitrogen, may also be added. Pest control operations are usually done on contract.

PRUNING Lemons require moderate pruning each year to maintain good vegetative growth capable of setting and producing quality fruit. Most groves are topped each year--this is often done mechanically. Many growers alternate topping with a hand pruning every other year to open up the inside of the tree and remove deadwood and suckers. Pruning costs include windrowing prunings and subsequent mechanical chopping or shredding.

DISEASE CONTROL A skirt spray of Bordeaux prior to the rainy season prevents serious loss of fruit from Brown Rot fungus. Painting the tree trunks with Bordeaux helps prevent Gummosis.

HARVESTING COST Cost of picking and hauling fruit from grove to packinghouse varies widely, depending on the tree size, fruit size, yield of trees, and distance to the packinghouse. The average picking and hauling cost for California lemons during the 1965-66 season as reported by the California Citrus League was \$.55 per packed equivalent carton of 38 pounds net or \$.72 per 50-pound field box.

YIELD Lemon yields per acre vary widely in the county, ranging from about 400 to 1,200 field boxes per acre. County average yield per acre reported by the Agricultural Commissioner is as follows:

	1963-64	1964-65	1965-66	1966-67
Bearing acres	22,895	21,876	20,770	21,245
Average field boxes/acre	504	735	604	680