

SAMPLE COSTS TO PRODUCE VALENCIA ORANGES
IN ORANGE COUNTY - 1970

<u>CULTURAL OPERATIONS:</u>		<u>SAMPLE COSTS</u> <u>PER ACRE</u>
Irrigation:	2.5 ac. ft. water @ \$28/ac. ft. Labor -- 9 hr/ac/yr	\$70 22
Pest and Disease Control:	Annual fall oil spray Mite treatment on alternate years <i>Eib</i> Disease and rodent control	44 14 12
Fertilization:	165 lbs. Nitrogen/yr @ \$0.15/lb.; \$2.50/application Leaf analysis \$1/ac.; Micronutrient \$4/yr. <i>M</i>	27 5
Weed Control:	One sterilant & oil spray \$19; two spot treatments of oil @ \$5/treatment	29
Pruning and Brush Control:	Every five years - prorated	18
Frost Protection:	Gasoline wind machine operation and service	17
Miscellaneous:	Replanting, tree care, etc.	18
	Sub-total	<u>\$276</u>
<u>CASH OVERHEAD:</u>		
Taxes		\$165
Maintenance & repair (except tractor & wind machines)		25
General Expense (office, phone, production credit, etc.)		32
	Sub-total	<u>\$222</u>
<hr/> <u>TOTAL PRE-HARVEST CASH COSTS</u>		<u>\$498</u>
<u>INVESTMENT OVERHEAD:</u>		
Depreciation:	Trees, wind machines, irrigation system, equipment and buildings	\$207
Interest on Investment:	For all capital assets, based on 7% of $\frac{1}{2}$ cost. Excludes the land value	125
	Sub-total	<u>\$332</u>
<hr/> <u>TOTAL PRE-HARVEST COSTS</u>		<u>\$830</u>

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The purpose of this cost data summary is to provide current and prospective growers with a guide for production costs so they may better analyze the economics of grove operation. Cost estimates are based on a typical Valencia orange grove in Orange County that exemplifies an efficient commercial operation in that area.

It is a fifty-acre planting of twelve-year-old trees that are spaced 18 X 22 feet for 110 trees per acre. It is owner-operated with additional labor hired at \$2.40 per hour, including compensation and social security.

The farm is in the southeast area of the county. Equipment on hand includes a wheel tractor, pickup truck, fertilizer spreader, weed sprayer, oil tank, and miscellaneous hand tools. There is a work shop and a shed for the wheel equipment.

Irrigation - The grove received MWD water at the cost of \$28/acre foot. Distribution is by a 10-day dragline sprinkler system that applies an average of 2.5 acre feet of water per year. Number of irrigations average six each year.

Pest & Disease Control - This operation is based on the concept of integrated biological control where the chemicals used are selected for effective control of the pests but are relatively non-toxic to beneficial insects. An annual fall oil spray is the major pest control treatment. A spring treatment for red mite is necessary on the average of every other year. Pests are contained the rest of the time by the beneficial insects. Treatments are applied by contract with a commercial pest control operator.

Disease control consists mainly of keeping the bud union clear of soil and debris that could cause brown rot gummosis. Rodents such as gophers require constant attention.

Fertilization - Leaf analysis helps determine the amount and type of fertilizer needed. Nitrogen is generally applied at the rate of 1.5 pounds elemental per tree, per year. Micronutrients, if needed, are applied every other year with the spring mite treatment.

Weed Control - The land is gently sloping and is well adapted to non-cultivation. A soil sterilant is applied in the fall and is followed by two spot treatments of weed oil.

Pruning and Brush Disposal - Dead wooding and light pruning is done every five years and is prorated at 20% of the cost each year.

Frost Protection - Depends completely on the use of five 75 hp. gasoline wind machines. Major expense is servicing of the machines. Orange County generally experiences mild winters. Additional frost protection is not economical except to protect isolated "cold spots."

Overhead Costs - In addition to cultural costs, the citrus grower has overhead charges that must be considered. Taxes, general expense, depreciation, and interest on investment are the major ones. Because of the high degree of variability in Orange County, land values were not considered in the interest on investment figure. This overhead cost must be considered for individual farm evaluation, however, in order to determine the true economics of the operation.