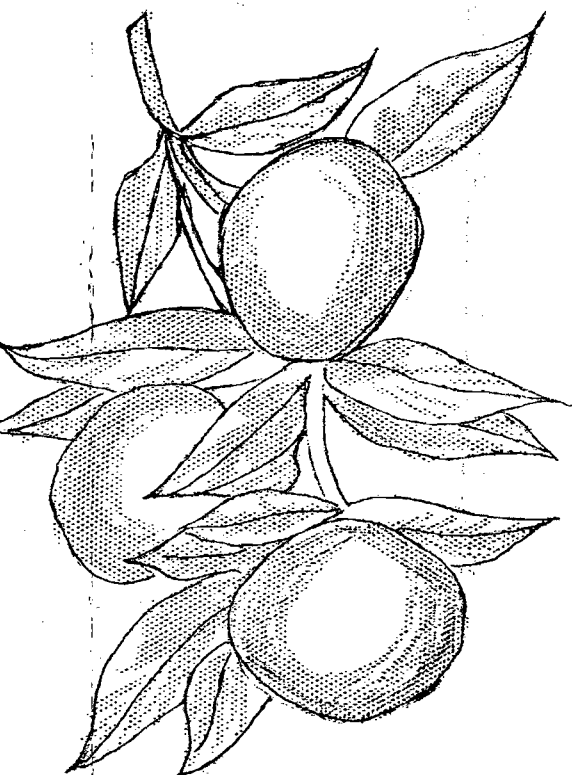


grapefruit
sample costs
and
production



Agricultural Extension
University of California
Imperial County
Court House, El Centro

Cost Data Sheet No. 22

SAMPLE COSTS TO PRODUCE MARSH GRAPEFRUIT

Imperial County - 1975

	<u>Dollars per acre</u>	
	<u>Sample cost</u>	<u>Your cost</u>
<u>Cultural Operation</u>		
Fertilizer 1X (contract)	\$ 60	_____
Irrigate 16X, 11 ac.ft. water @ \$3/ac.ft.	70	_____
Pest control 2X (contract)	30	_____
Disease control & inspection	10	_____
Cultivation 3X	30	_____
Pruning & disposal (contract) every 3 years, prorated	50	_____
Orchard maintenance, tree, pipeline, drainage, etc.	45	_____

Total cultural cost	\$ 295	_____
<u>Overhead Costs</u>		
General expense, office, phone, accounting, etc.	\$ 30	_____
Maintenance and repair, equipment	15	_____
Management charge or allowance	45	_____
Taxes, property	35	_____

Total overhead costs	\$ 125	_____

	\$ 420	_____
<u>Investment Costs</u>		
Depreciation - see schedule below	\$ 160	_____
Total preharvest cash cost & depreciation	\$ 580	_____
Interest on investment - 8% - see schedule below	208	_____

Total preharvest cost	\$ 788	_____

Investment Schedule

	Expected Life	<u>Dollars per Acre</u>		
		<u>Investment</u>	<u>Depreciation</u>	<u>Interest</u>
Land, assumed value	\$ --	\$ 1,000	\$ --	\$ 80
Trees, 76 trees/acre	25	2,500	100	100
Irrigation system	20	300	15	12
Equipment, tractor weed sprayer	15	200	13	8
Building & storage	25	50	2	2
Pickup truck	5	150	30	6
		_____	_____	_____
		\$ 4,200	\$ 160	\$ 208

Grapefruit, while not a major crop in Imperial County, has been grown for many years in the county. Total grapefruit acreage in 1974 was reported at 691 acres (433 acres bearing and 258 acres nonbearing) by the California Crop and Livestock Reporting Service. This compares to a total acreage of 592 acres reported in 1964 and 1,111

total acres in 1954. The area has some cost advantages compared to other competing areas--namely water cost and taxes. Tending to offset these advantages are problems of soil drainage, salinity, and frost and wind hazards. Local packing outlets are not available and fruit is hauled to other areas for packing.

These sample costs are based on an assessed Marsh Seedless Grapefruit orchard in full production using cultural methods typical of the area.

IRRIGATION

Practically all citrus orchards are flood- or furrow-irrigated. Irrigation runs are rather short, normally not exceeding 330 feet. About 400 acres of lemons established on sandy soil are under drip irrigation.

Rapid application of water is most efficient in the use of both labor and water. Normally, the water is kept in the orchard for 24 hours. The orchards are usually irrigated every 12 to 13 days in the summer months (1 1/2 to 2 inches per acre per irrigation) and every 20 to 21 days during the remainder of the year.

Colorado River water contains high amounts of salts and this may have an unfavorable effect upon plant growth. Flood irrigation helps to reduce soil salinity. Drains are installed to maintain the water table at least five feet deep. Irrigation is withheld during blooming.

FERTILIZATION

About 2 pounds of urea per tree are applied (1/2 pound in October-November and 1 1/2 pounds in February). In addition, about 20 tons per acre steer manure are applied once every three years in November. The manure is spread over the orchard, lightly disced, and then the orchard is flooded.

WEED CONTROL

Eptam[®] (applied in the irrigation water), weed oil, and paraquat are sometimes used to control weeds in young orchards. On weedy ground, tillage seems most economical and safe for the trees. In older orchards the ground is well-shaded and weeds are not too troublesome. Mowing is another method of controlling weeds. From April to November, mowing is done every 5 to 6 weeks. No Mowing is needed during the winter months.

PEST & DISEASE CONTROL

Sulfur is applied at pea-fruit size by plane to control thrips and mites. Cygon[®] is also applied against thrips at petal fall; Malathion against scale. Phytophthora root and collar root is a minor problem. Preventive measures, including proper irrigation, are most effective against it. Gophers are a problem and are either trapped or poisoned.

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