

DEGLET NOOR DATES

COACHELLA VALLEY, RIVERSIDE COUNTY -- 1972

Sample Costs of Production

Based on an 80-acre garden (50 palms/acre); yield of 12,000 lbs. fruit/acre (11,000 lbs. marketable -- 7,000 lbs. Class I and 4,000 lbs. by-products fruit); operated by resident manager, 2 permanent workers, plus occasional part-time help; pay rate of \$1.85/hour, plus incentive; harvest, grading, packing and selling by the packinghouse. Tractor cash costs at \$1.25/hour. Flood irrigated with permanent levees, weed control by cultivation.

Operation	Hours/ Acre	Labor Cost	Equip- ment Cost	Materials		Total Per Acre Cost
				Kind	Cost	
Tillage 4 X	4	\$ 7	\$ 6			\$ 13
Brush Disposal (Burn)	20	37				37
Fertilize (contract)			1	Ammonium Nitrate 900#	\$ 31	32
Dethorn, Cut Bunches, prune @ 60¢/palm	10	30				30
Dust 5 X	10	19	18	Sulfur 3 X Malathion 2 X	6 15	58
Irrigate 20 X	17	31	13	Water 10 Acre-feet	34	78
Collect & Handle Pollen	8	15				15
Pollinate @ \$1.50/palm	30	75				75
Thin & Tie Down (80¢/palm)	25	40				40
Bag & Prune @ \$1.40/palm	32	70		Bags @ 4.5¢	38	108
Miscellaneous	10	19		Ladders, Small Tools	10	29
Supervision	10	50	13			63
TOTAL CULTURAL COST	176	\$393	\$51		\$134	\$578
Cash Overhead (office, accounting, insurance, etc. 30% of labor)						\$118
County Taxes						58
TOTAL PRE-HARVEST CASH COSTS						\$754
Pick, Mechanical @ 1¢/lb.	20					\$120
Haul @ \$3.50/gross ton						24
Grading, packaging, processing, selling by packinghouse @ 17¢/lb.						\$2040
TOTAL POST-HARVEST CASH COSTS						\$2184
		<u>Cost</u>	<u>Investment* per acre</u>	<u>Life</u>	<u>Depre- ciation</u>	<u>Interest @ 7%</u>
Land			\$1100			\$77
Irrigation System, Housing, Sheds			300	20 yr.	\$15	11
Palms			560	30 yr.	19	20
EQUIPMENT -						
Tractor		\$8400	\$105	10 yr.	\$10	
Disc		1350	17	10 yr.	2	
Duster		600	8	5 yr.	2	
2 Pickups 1/2 T		7000	88	5 yr.	18	
Equipment Total		\$17,350	\$218		\$32	8
Total Overhead			\$2178		\$66	\$116
TOTAL COST OF PRODUCTION						\$3120

*Real Estate Investment based on Riverside County Assessor's Appraised Value (Not replacement value).

DATE PALM TREE

DATE PRODUCTION

COACHELLA VALLEY - Riverside County

VARIETIES: The industry is based on the Deglet Noor variety. Khadrawy, Saigy, Zahidi, Halawy, Barhee and Medjool have been planted commercially. The Medjool, a large date when properly thinned, has received the most interest in recent plantings. For a discussion of varieties, see "Date Culture in the United States," U.S. Department of Agriculture Circular 728. (This circular is out of print but a copy may be seen at agricultural libraries.)

PLANTING: Date varieties are propagated by off-shoots or small palms which form at the base of the older palms. These are set in nursery rows to root and attain the proper size for setting out in the orchard. Planting distance is usually 30 feet by 30 feet.

IRRIGATION: Dates are very deep rooted and do well only when the root system is well supplied with water. Much irrigation is in level border checks with large borders which are filled to a sufficient depth to assure adequate irrigation. Annual water use is commonly 8 to 12-acre feet per acre.

FERTILIZERS: Use of manure is common, supplemented with commercial nitrogen. The exact fertilizer requirements of dates have not been determined. On most soils, yearly applications of about 6 pounds of actual nitrogen per tree will probably be adequate.

INSECTS: Mite damage to fruit is combatted with sulfur dusts. Larvae of beetles and moths which infest the fruit especially in wet years are controlled with malathion applications while the fruit is maturing. For further discussion of this subject see "Date Palm Insect and Mite Pests in the United States" by H. S. Elmer, obtainable at the farm advisors' office.

DISEASES: Occasional trees are lost to rapid decline. Fruit diseases are troublesome, especially in wet years. Dusting with fermate and covering the maturing fruit with paper bags are helpful in reducing damage. Root-knot nematode cause damage; the extent of which has not been measured. No practical cure or prevention has been worked out. For further discussion of this subject see "Diseases of the Date Palm" by J. B. Carpenter and L. J. Klotz, obtainable at the farm advisors' office.

WEEDS: Bermuda and nut grass are serious in the early years of the garden. Cultivation or sprays with weed oil or dalapon are used. Once the palms shade the ground, weeds are of less consequence. They are turned under occasionally when the ground is tilled to incorporate manure or refuse, or to reshape irrigation checks. Some gardens are sprayed regularly and not tilled, in which case the chopped prunings are left as a mulch.

THINNING: The current practice is to grow as heavy an average annual production as possible. This usually means leaving all good bunches the palm produces, and thinning each bunch to about 40 strands and shortening each strand to about 45 fruit per strand for the Deglet Noor variety. The Medjool is more heavily thinned to give the large size for which it is noted.

POLLINATION: The operator inserts a portion of the male blossom in each bunch as it appears, thins the flowers somewhat, ties the ends of the strands with a string and covers the inflorescence with a bag. Recent experiments with mechanical application of pollen from the ground appear promising. The purpose is to reduce the labor requirement during this crucial operation.

HARVESTING: Most Deglet Noor fruit is harvested by removing the entire mature cluster, lowering it to the ground and shaking the fruit with a mechanical shaker over a bin in which the fruit is transported to the packing house. Disadvantages include the necessity of delaying harvest until all the fruit on the cluster is ripe and the impossibility of any grading in the field. The advantage is reduced labor requirement when this equipment is used. Occasional gardens who have the help still pick by hand.