

**ORANGE PRODUCTION MANAGEMENT**  
 Cost Analysis Work Sheet - Southern San Joaquin Valley - 1985  
 Yield: 500 field boxes per acre

	Sample Costs		My Costs	
	Per Acre	Per Fld. Box	Per Acre	Per Fld. Box
<b>PRE-HARVEST CASH COSTS:</b>				
Irrigate: labor	\$ 33.			
water: 2½ ac. ft. @ \$40		100.		
Pest Control, including growth regulators, thrips, scale, mites, worms	169.			
Whitewash	39.			
*Growth regulators: ½ acreage @ \$60/acre	30.			
Prune, sucker, brush disposal (1/5 cost)	51.			
Fertilizer: Nitrogen, zinc, leaf analysis and application	56.			
Weed Control: soil sterilants	26.			
spot treatments	52.			
Drive row maintenance	10.			
Frost protection: (wind mach. + water)	155.			
Misc. labor, materials, power	40.			
Taxes	80.			
Repairs	25.			
Office & business costs	35.			
Interest on operating capital 11%	54.			
<b>TOTAL PRE-HARVEST CASH COSTS</b>	<b>\$ 955.</b>	<b>\$1.91</b>		
<b>DEPRECIATION:</b>				
Pump and well: \$200, 25 years	\$ 8.			
Irrigation system: \$650, 10 years	65.			
Wind machine: \$1,400, 15 years	93.			
Bldgs., other equip.: \$530, 12 years	44.			
Trees: \$7,700, 30 years	257.			
<b>TOTAL DEPRECIATION</b>	<b>\$ 467.</b>	<b>\$ .93</b>		
<b>INTEREST ON INVESTMENT AT 12%:</b>				
Pump and well: ½ cost \$100	\$ 12.			
Irrigation system: ½ cost \$325	39.			
Wind machine: ½ cost \$700	84.			
Bldgs., other equip.: ½ cost \$265	32.			
Trees: ½ cost \$3850	462.			
Land: \$4000	480.			
<b>TOTAL INTEREST ON INVESTMENT</b>	<b>\$1109.</b>	<b>\$2.22</b>		
<b>TOTAL COST OF PRODUCTION</b>	<b>\$2531.</b>	<b>\$5.06</b>		

Sample Costs at Varying Yields

Yield: field boxes/acre (50 lbs.)	300	400	500	600	700
On-tree cash costs	\$3.18	\$2.39	\$1.91	\$1.59	\$1.36
Total all costs of production (on-tree)	\$8.44	\$6.33	\$5.06	\$4.22	\$3.62

\*This applies to navels only.

## 1985 ORANGE PRODUCTION MANAGEMENT

This example of growing costs for navel oranges is calculated from the following assumptions. The farm is owner-operated, acreage of navel oranges and other fruit being large enough to warrant pickup, shop, tools, tractor, etc. It is located in a good citrus area. Frost hazard is moderate with 100 hours of frost protection required each winter. The cultural practices are for a grove with better-than-average yield of 500 boxes per acre. Capitalization values are \$4000 for land plus \$7700 tree development costs per acre.

Cultural costs itemized include labor at \$6.50 and \$7.50 per hour, including compensation and social security and fringe benefits. Wind machine operating costs at \$15/hr. including power, upkeep and repairs, and weed sprayer with tractor operating costs at \$9/hr. No provision is made for value of supervision or management.

The grove has a deep well with pump and is in an irrigation district receiving CVP water. Application is by low volume emitter system with adequate filtration.

The method of soil management is non-tillage, fall soil sterilant spray and three spot sprayings during the rest of the season.

The pest control problem includes worms, thrips, mites (partial), scale and brown rot. \*A growth regulator spray is applied to half the grove (late picks) but charged to entire acreage of oranges. \*(See note on other side of sheet.)

Frost protection is by wind machines and pumped irrigation water.

Nutrition program is nitrogen applied according to leaf analysis information. Zinc is applied in one of the pest control sprays.

Pruning (machine + hand) is done on a five-year cycle, prorated at 20% of the cost each year.

Depreciation and interest on capital assets used on the entire farm (buildings, pickup, weed sprayer, irrigation system and tractor). Wind machines over the citrus acreage. Interest at 12% on one-half cost, except land.

Picking of fruit is done by the packinghouse and charges deducted at that point. This example is for on-tree expenses. Harvesting costs per field box (1984-85) were \$18.25 per bin (16 field boxes) for all harvest operations.

The tree development costs represent the cultural expenses, cash overhead and investment charges for a five-year development time. The interest cost became substantial with this approach.

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NAVEL ORANGE GROVE DEVELOPMENT

Cost Analysis Work Sheet

Southern San Joaquin Valley - 1985

Based on a 40-acre planting on previously farmed land, re-ripped and leveled. Irrigation well supplies water for frost protection and supplements water from irrigation district. Tree spacing is 18' x 22' with 110 trees per acre. Non-tillage cultural practice is followed. Total labor cost to the grower is \$7.00 per hour for all labor. Orchard is owner-operated. Costs are on-tree value and do not include harvest costs.

	1st Year	2nd Year	3rd Year	4th Year	5th Year
Yield: 50# field boxes per acre				110	160
<b>Cultural and Overhead Costs:</b>					
Rip and level	\$ 450				
Survey	35				
Roads	40				
Trees: 110 @ \$6.50; 2 replants					
2nd year	715	\$ 13			
Plant, wrap, stake, including materials	110	4			
Irrigate: labor	28	28	\$ 35	\$ 42	\$ 50
Water: \$25 ac. ft. blend cost	25	25	38	38	50
Weed control: disc, chemical	100	75	75	75	75
Fertilizer	15	24	35	44	54
Pest control	50	50	100	140	160
Frost protection; water, wind					
4th year	25	25	25	66	66
Misc. tree care and suckering	28	28	28	32	32
County taxes	40	40	40	40	50
Repairs	30	30	30	30	30
Misc. labor, materials, field power	25	25	25	25	25
Business and office costs	69	15	17	21	24
Interest on operating capital 13%	116	25	29	36	40
Management	-	-	-	-	-
<b>CULTURAL AND OVERHEAD COSTS</b>	<b>\$1901</b>	<b>\$ 407</b>	<b>\$ 477</b>	<b>\$ 589</b>	<b>\$ 656</b>
<b>Depreciation:</b>					
Irrigation system, including pump & well, \$675, 20 yrs.	\$ 34	\$ 34	\$ 34	\$ 34	\$ 34
Tractor, \$3.00 per hr.	14	11	12	12	14
Bldgs., other equip, \$180, 12 yrs.	15	15	15	15	15
Wind machine installed for 4th yr., \$1280 cost, 15 yr. life	-	-	-	85	85
<b>TOTAL DEPRECIATION</b>	<b>\$ 63</b>	<b>\$ 60</b>	<b>\$ 61</b>	<b>\$ 146</b>	<b>\$ 148</b>
<b>Interest on Investment @ 11%:</b>					
Irrigation system: ½ cost \$338	\$ 37	\$ 37	\$ 37	\$ 37	\$ 37
Tractor: \$1.95 per hour	9	7	8	8	9
Bldgs., other equip.: ½ cost \$90	10	10	10	10	10
Wind machine: ½ cost \$640	-	-	-	70	70
Land: \$4000	440	440	440	440	440
Interest on accumulated costs	-	271	406	564	709
<b>TOTAL INTEREST ON INVESTMENT</b>	<b>\$ 496</b>	<b>\$ 765</b>	<b>\$ 901</b>	<b>\$1129</b>	<b>\$1275</b>
<b>TOTAL COST FOR THE YEAR</b>	<b>\$2460</b>	<b>\$1232</b>	<b>\$1439</b>	<b>\$1864</b>	<b>\$2079</b>
<b>CREDIT FOR FRUIT \$5 FIELD BOX</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$ 550</b>	<b>\$ 800</b>
<b>NET COST FOR THE YEAR</b>	<b>\$2460</b>	<b>\$1232</b>	<b>\$1439</b>	<b>\$1314</b>	<b>\$1279</b>
<b>ACCUMULATED NET COST</b>	<b>\$2460</b>	<b>\$3692</b>	<b>\$5131</b>	<b>\$6445</b>	<b>\$7724</b>

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