

COOPERATIVE EXTENSION UNIVERSITY OF CALIFORNIA

COUNTY OF FRESNO
FARM AND HOME ADVISORS OFFICE

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COSTS FOR ESTABLISHING AND PRODUCING PECANS SOUTHERN SAN JOAQUIN VALLEY - 1985

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1. Yield:

Economic bearing is assumed to commence in the 4th year from planting.

<u>YIELD</u>	<u>YEAR</u>			
	4	5	6	Mature
Lbs/Acre	80	300	800	1000

2. Labor Costs:

Are based on an hourly rate of \$7.50 for skilled labor and \$5.75 for field labor. Included are cash wages, workman's compensation insurance, social security, and other benefits that the employer might pay.

3. Acreage:

The cost study is based on a 60 acre orchard 3 acres of which consists of roads and burn areas.

4. Spacing:

The trees in this orchard are spaced 28' by 28' which is 55 trees per acre.

5. Varieties:

It is assumed that 25% of the orchard consists of at least one pollinator variety. Pollinator varieties do not normally have special cultural requirements although they usually mature later than the main variety.

6. Irrigation system:

A pipeline irrigation system is used to deliver irrigation district water.

YEAR	ACRE FEET/YEAR
1	1
2	1
3	1.5
4	2
5	3
6	3
7	3
8+	3.5

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7. Fertilizer-Nitrogen:

The rate of nitrogen applied is as follows:

<u>YEAR</u>	<u>LBS/ACRE</u>
1	6
2	12
3	27
4	54
5	54
6	100
7	100
8	100

Zinc is required and applied as a foliar spray 4 times per year.

8. Pesticide Application:

Pesticide is required three times per year to control aphids at an application cost of \$14 per acre per application. In some situations, zinc can be combined with these sprays.

9. Pruning:

<u>YEAR</u>	<u>HRS/ACRE</u>
1	0.5
2	1
3	2
4	3
5*	3*
6	4
7	4
8+	4

* A tower is rented from years 5 on.

10. Brush removal: Brush is removed by hand in the establishment years.

11. Harvest Cost:

The first two bearing years are hand-picked with the picker receiving half the crop. Following years are mechanically harvested on a cost per ton basis, one ton minimum charge.

12. Interest:

An interest rate of 13% was assumed. Operating capital is assumed to be borrowed for 6 months of each establishment and producing year. Interest is also charged on accumulated cash costs in establishment years to reflect interest charged on a long-term establishment loan. Interest is also charged on investment capital to account for the income foregone by keeping money tied up in capital equipment.

13. Overhead Costs:

County taxes represent a set fee while office and business costs are estimated at about 8% of the total cultural costs. They include such costs as preparing roadways, general weed

control, office, bookkeeping, etc.

14. Fuel and Repair:

Included are the cost of fuel, maintenance, replacement parts, tires, etc.

15. Investment Cost:

In allocating the cost of owning equipment per acre, the following calculations were made: (a) "Original Cost" of equipment is the estimated new cost and includes 6% sale tax. (b) "Cost Per Acre" is the new cost divided by the number of acres the equipment will be used on. (c) "Depreciation" is based on the "Per Acre Cost" divided by the expected life of the equipment. (d) "Interest" on investment is figured on one-half of the new cost per acre multiplied by 13%. (e) The investment cost per acre is calculated as 60% of the cost of all new equipment to reflect a mix of new and used equipment.

16. Land is valued at \$6,000 per acre.

Pecan Orchard Establishment Costs
Southern San Joaquin Valley - 1985
Cost Analysis Work Sheet

Skilled Labor \$ 7.50
Field Labor \$ 5.75

Costs Per Acre

YEAR	1st	2nd	3rd	4th	5th	6th	7th
YIELD: lbs./acre in-shell	---	---	---	80	300	800	1000

CULTURAL COSTS:

Land Preparation: subsoil contract	160						
Disk and Float: 4 hours labor and tractor	76						
Trees: 55 @ \$10.50 (+2 2nd Yr. and 1 3rd Yr.)	578	21	11				
Survey and Plant: 55 @ \$1.00 2nd and 3rd Yrs. \$3.	55	6	3				
Prune and Train (skilled hand labor)	4	8	15	23	83	110	110
Brush Disposal	5	9	19	28	28	28	28
Tillage and Irrigation Preparation: 7hrs. yrs. 1-3							
1 hr. yrs. 4+	127	127	127	18	18	18	18
Put up borders				30			
Mow middles				41	41	41	41
Spray: weed control				27	27	27	27
Irrigation: 4hrs. labor 1st 3 yrs. 1 hr. 4+ yrs.	23	23	23	6	6	6	6
Water: \$14 ac. ft. plus \$6 acre district tax	20	20	27	34	48	48	48
Fertilizer: Nitrogen \$.33/Lb .5 nr. labor and tractor	2	4	9	18	18	39	39
Spray: Nutrition (zinc) 4X Materials		9	18	18	23	23	23
Application		14	28	28	56	56	56
Spray: pest control materials Custom application		11	21	21	42	42	42
Misc. labor and power, Inr. labor and tractor	15	15	15	15	15	15	15
TOTAL CULTURAL COSTS	1071	287	349	341	454	502	502

HARVESTING COSTS:

Catching Frame \$75/acre				75	75	75	
Shake \$120/ton, 1 ton minimum							120
Poll nuts, \$20/acre							20
Hull and Dry \$120/ton				3	13	34	43
TOTAL HARVESTING COSTS				78	88	109	183

YEAR	1st	2nd	3rd	4th	5th	6th	7th
OVERHEAD COSTS:							
County taxes	60	60	60	60	60	120	120
Office and Business Costs	86	23	28	27	36	40	40
TOTAL OVERHEAD COSTS	146	83	88	87	96	160	160
TOTAL CASH COSTS	1216	370	437	507	638	771	845
ACCUMULATED CASH COSTS	1216	1586	2024	2531	3168	3939	4784
DEPRECIATION:							
Building, equipment, and irrigation system	77	77	77	77	77	77	77
INTEREST ON INVESTMENT @ 13%:							
Building, equipment, and irrigation system	63	63	63	63	63	63	63
Land \$6000	780	780	780	780	780	780	780
Interest in accum. cash cost	158	206	263	329	412	512	622
TOTAL INTEREST ON INVESTMENT	1001	1049	1106	1172	1255	1355	1465
TOTAL COST FOR THE YEAR	2294	1496	1620	1686	1969	2203	2387
CREDIT FOR PRODUCTION							
.95/LB. in-shell				76	285	760	950
NET COST FOR THE YEAR	2294	1496	1620	1610	1684	1443	1437
ACCUMULATED NET COST	2294	3791	5411	7021	8706	10149	11585

SAMPLE COSTS TO PRODUCE PECANS
Southern San Joaquin Valley - 1985

Labor rate \$ 7.50 /hr. skilled labor
5.75 /hr. field labor
Yield: 2000 pounds of dry nuts per acre

Cash and Labor Costs per Acre

Operation	Labor Hours per Acre	Labor	Fuel & Repairs	Materials		Total Cost	Your Cost
				Kind and Quantity	Cost		
Cultural costs:							
Pruning	4	30.00		Tower Rental \$20/hr.	80.00	110.00	
Brush Disposai	2	11.50	5.50			17.00	
Fertilizer				100 lbs. N @ .33/lb.	33.00	33.00	
				Custom application	6.00	6.00	
Zinc Nutrition 4X				Materials	23.00	23.00	
				Custom Application	56.00	56.00	
Spray: Pest Control 3X				Materials	42.00	42.00	
				Custom application	42.00	42.00	
Tillage and irrig. prep.	1	5.75	12.00	(See Establishment)		17.75	
Irrigation	1	5.75		3.5 ac. ft. @ \$14.00/ ac. ft. + \$6.00 tax	55.00	60.75	
Spray: weed control				Materials & Applic.		26.00	
Mow 5X	2.5	18.75	22.50			41.25	
Misc.	1	7.50	7.00			14.50	
Interest on operating capital @ 13%						63.71	
TOTAL CULTURAL COSTS	11.5	79.25	47.00		337.00	553.76	
Harvest costs:							
Shake				Custom \$120/ton	120.00	120.00	
Poll nuts				\$20/acre	20.00	20.00	
Hull and Dry				\$85/ton	85.00	85.00	
TOTAL HARVEST COSTS						225.00	
Cash overhead:							
Office and business costs						62.30	
County Taxes						120.00	
TOTAL CASH OVERHEAD COSTS						182.30	
TOTAL CASH COSTS						961.06	
TOTAL CASH COST PER TON						961.06	
Investment							
	Per Acre			Annual Cost			
				Depreciation	Interest @ 13%		
Equipment & buildings	971.00			76.77	63.12	139.89	
Trees 40 yr. depreciation	11585.00			289.63	753.03	1042.65	
Land	6000.00				780.00	780.00	
TOTAL INVESTMENT COSTS	18556.00			366.40	1596.15	1962.54	
TOTAL COSTS PER ACRE						2923.60	
Cost per ton @ 2000 lbs. yield						2923.60	

Cost of Producing Pecans at Varying Yields

	POUNDS PER ACRE					
	500	1000	1500	2000	2500	3000
Cultural costs	553.76	553.76	553.76	553.76	553.76	553.76
Harvest cost	161.25	182.50	203.75	225.00	276.25	327.50
Cash overhead	177.20	178.90	180.60	182.30	186.40	190.50
Total cash cost	892.21	915.16	938.11	961.06	1016.41	1071.76
Investment cost	1962.54	1962.54	1962.54	1962.54	1962.54	1962.54
Total cost	2854.75	2877.70	2900.65	2923.60	2978.95	3034.30

Income Above Cash Costs at Varying Yields & Prices

CENTS PER POUND	POUNDS PER ACRE					
	500	1000	1500	2000	2500	3000
80	-492.21	-115.16	261.89	638.94	983.59	1328.24
85	-467.21	-65.16	336.89	738.94	1108.59	1478.24
90	-442.21	-15.16	411.89	838.94	1233.59	1628.24
95	-417.21	34.84	486.89	938.94	1358.59	1778.24
100	-392.21	84.84	561.89	1038.94	1483.59	1928.24
105	-367.21	134.84	636.89	1138.94	1608.59	2078.24
110	-342.21	184.84	711.89	1238.94	1733.59	2228.24
115	-317.21	234.84	786.89	1338.94	1858.59	2378.24
120	-292.21	284.84	861.89	1438.94	1983.59	2528.24

Income Above Total Costs at Varying Yields & Prices

CENTS PER POUND	POUNDS PER ACRE					
	500	1000	1500	2000	2500	3000
80	-2454.75	-2077.70	-1700.65	-1323.60	-978.95	-634.30
85	-2429.75	-2027.70	-1625.65	-1223.60	-853.95	-484.30
90	-2404.75	-1977.70	-1550.65	-1123.60	-728.95	-334.30
95	-2379.75	-1927.70	-1475.65	-1023.60	-603.95	-184.30
100	-2354.75	-1877.70	-1400.65	-923.60	-478.95	-34.30
105	-2329.75	-1827.70	-1325.65	-823.60	-353.95	115.70
110	-2304.75	-1777.70	-1250.65	-723.60	-228.95	265.70
115	-2279.75	-1727.70	-1175.65	-623.60	-103.95	415.70
120	-2254.75	-1677.70	-1100.65	-523.60	21.05	565.70

PECAN ORCHARD
Southern San Joaquin Valley - 1965

EQUIPMENT AND BUILDING LIST

ITEM	ORIGINAL COST	ANNUAL USE (ACRES)	COST PER ACRE	LIFE (YEARS)	OVERHEAD		COST PER HOUR
					DEPREC- IATION	INTEREST AT 13%	
Tractors:							
55 HP wheel diesel	30000	60	500.00	10	50.00	32.50	7.00
Disk, tandem 14'	7500	60	125.00	10	12.50	8.13	3.60
Float	2000	60	33.33	10	3.33	2.17	.96
Mower	4000	60	66.67	10	6.67	4.33	2.00
Brush Rake	1000	60	16.67	15	1.11	1.08	1.00
Weed Sprayer SP	9000	60	150.00	10	15.00	9.75	11.30
Brush Shredder	7600	60	126.67	10	12.67	8.23	4.00
Pipeline Irrigation System	24000	60	400.00	20	20.00	26.00	
Buildings	12000	60	200.00	30	6.67	13.00	
TOTAL COST	97100		1618.33		127.94	105.19	
60% OF NEW COSTS	58260		971.00		76.77	63.12	