

U.C. Cooperative Extension
 Table 1. SAMPLE COSTS TO ESTABLISH ALMOND ORCHARD
 Strip Weed Control - Native Cover in Centers
 Southern San Joaquin Valley - 1989

Costs are for an 80 acre block planted 22' X 22', with 90 trees/acre.
 The orchard is furrow irrigated the first two years and then flood irrigated.

Skilled labor: \$8.00 per hour
 Field labor: \$6.00 per hour
 Interest rate: 12.0%

YEAR	Costs per Acre				
	1st	2nd	3rd	4th	5th
YIELD (Pounds/acre)			250	500	1,000
Planting costs					
Land preparation: subsoil & level - contract	160				
Disk and Float: 3 hours - labor and tractor	56				
Fumigate	112				
Trees: 90 @ \$3.75 (+2 2nd Yr. and 1 3rd Yr.)	338	8	4		
Survey and Plant: 90 @ \$1.50	135	3	2		
TOTAL PLANTING COSTS	\$801	\$11	\$5		
Cultural costs:					
Prune and train (skilled hand labor)		\$20	\$34		
Prune and train (unskilled hand labor)				\$34	\$34
Brush disposal		10	14	16	20
Extra field labor		3	6	6	12
Disc 3X - 3 acres per hour	19	19			
Mow middles - 3 acres per hour			18	24	24
Contact strip weed control	8	8	8	8	8
Pre-emergence strip control	26	26	19	19	19
Furrow out 6X - 3 acres/hr.	34	34			
Put up borders for flood	14				
Irrigation labor	12	12	12	6	6
Water @ \$20/ac. ft. + \$6/ac. district tax	36	36	76	106	120
Fertilizer - labor and material	10	18	33	52	66
Pest control sprays	25	80	108	144	144
Dormant shaking			54	54	54
Pollination - \$25 per hive			25	50	50
Miscellaneous labor and power - 1 hour	16	16	16	16	16
Pick-up truck costs	28	28	28	28	28.125
TOTAL CULTURAL COSTS	\$228	\$310	\$450	\$563	\$601
Harvesting Costs:					
Hand knock, rollout tarps			104		
Shake, sweep, pickup - custom @ 125/acre				125	125
Hull - \$0.03 /lb in shell (50% gross weight)			15	30	60
Haul - \$8 per gross ton, \$8 per acre minimum			8	8	15
Rake nuts, \$4/acre			4	4	4
TOTAL HARVEST COSTS			\$131	\$167	\$204

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Table 1. continued

YEAR	Costs per Acre				
	1st	2nd	3rd	4th	5th
Overhead Costs:					
Office and business costs	75	75	75	75	75
County Taxes (Land @ \$6000/acre)	64	64	64	133	146
Insurance	3	3	3	3	3
TOTAL OVERHEAD COSTS	\$142	\$142	\$142	\$211	\$224
TOTAL CASH COSTS	\$1,171	\$462	\$729	\$941	\$1,029
ACCUMULATED CASH COSTS	\$1,171	\$1,633	\$2,362	\$3,303	\$4,332
Depreciation:					
Buildings, equipment and irrigation system	76	76	76	76	76
TOTAL DEPRECIATION	\$76	\$76	\$76	\$76	\$76
Interest on Investment at 12%					
Buildings, equipment and irrigation system	49	49	49	49	49
Land \$6000/acre	720	720	720	720	720
Interest on accumulated cash costs	141	196	283	396	520
TOTAL INTEREST ON INVESTMENT	\$910	\$965	\$1,052	\$1,165	\$1,289
TOTAL COST FOR THE YEAR	\$2,156	\$1,503	\$1,857	\$2,183	\$2,394
CREDIT FROM HARVEST @ \$1.10/POUND			\$275	\$550	\$1,100
NET COST FOR THE YEAR	\$2,156	\$1,503	\$1,582	\$1,633	\$1,294
TOTAL ACCUMULATED NET COST	\$2,156	\$3,660	\$5,242	\$6,875	\$8,169

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Table 2. continued.

Investment	Per production Acre	----- Annual Cost -----		
		Depreciation	Interest @ 12%	
Land (bare)	\$6,000		\$720	\$720
Equipment & buildings	812	\$76	49	125
Trees (30 yr. depreciation)	8,169	272	490	762
TOTAL INVESTMENT COSTS	\$ 14,981	\$348	\$1,259	\$1,607
TOTAL COSTS PER ACRE				\$2,708
TOTAL COST/LB:	1500 lbs/acre yield			\$1.81

Table 3.

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EQUIPMENT AND BUILDING LIST FOR ALMOND ORCHARD
Southern San Joaquin Valley - 1989

Interest Rate: 12%

Fuel Cost per Gallon \$.80
\$.86

ITEM #	DESCRIPTION	NEW COST	ANNUAL USE (ACRES)	COST PER ACRE	LIFE (HRS)	YEARS TO TRADE	----OVERHEAD*----	DEPREC- INTEREST*	TAR*	--- HOURLY COSTS ---	FUEL*	REPAIRS*	TOTAL
Tractors:													
1	70 HP wheel diesel	\$35,000	80	\$438	12,000	10	\$43.75	\$26.25	120%	\$2.95	\$3.50	\$6.45	
2	Flail Mower, 10'	4,000	80	50	2,000	10	5.00	3.00	120		2.40	2.40	
3	Disc, tandem 10'	2,900	80	36	2,500	10	3.63	2.18	120		1.39	1.39	
4	Brush rake	1,000	80	13	2,500	15	.83	.75	100		.40	.40	
5	Brush shredder	7,600	80	95	2,500	10	9.50	5.70	120		3.65	3.65	
6	Low profile trailer	1,400	80	18	2,500	10	1.75	1.05	120		.67	.67	
7	Ridger	600	80	8	2,500	15	.50	.45	120		.29	.29	
8	Tool Bar	100	80	1	2,500	15	.08	.08	120		.05	.05	
9	Speed sprayer, PTO	12,000	80	150	2,000	10	15.00	9.00	120		7.20	7.20	
10	Weed sprayer	1,650	80	21	2,000	10	2.06	1.24	120		.99	.99	
11	Pump and well	10,000	80	125	27,000	20	6.25	7.50	10		.04	.04	
12	3-Wheel Motorcycle	1,500	80	19	2,000	7	2.68	1.13					
13	Pick-up, 1/2 ton	14,000	80	175	2,000	7	25.00	10.50					
14	Miscellaneous shop tools	4,500	80	56		10	5.63	3.38					
15	Buildings	12,000	80	150		30	5.00	9.00					
TOTAL COST		\$108,250		\$1,353			\$127	\$81					
60% OF NEW COSTS*		\$64,950		\$812			\$76	\$49					

* DEFINITIONS:

YEARS TO TRADE-----	The projected life of the machine in years adjusted for excessive annual use.
OVERHEAD -----	Per acre per year.
DEPRECIATION -----	"COST PER ACRE" divided by "YEARS TO TRADE"
INTEREST-----	("COST PER ACRE" X "INTEREST RATE") divided by 2 = average interest cost per acre per year.
TAR-----	Total accumulated repairs. The total cost of repairs during the machine's life expressed as a percent of "NEW COST". Calculated from equations based on equipment type and annual use.
HOURLY COST OF FUEL-----	Diesel fuel, oil and lube costs per hour = HP x cost of diesel fuel/gal X 0.0667. Gasoline fuel, oil and lube costs per hour = HP x cost of gasoline/gal X 0.0889.
HOURLY COST OF REPAIRS--	("NEW COST" X "TAR") divided by ("LIFE IN HOURS").
60% OF NEW COSTS -----	Used to reflect a mix of new and used equipment.

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 Table 4. MONTHLY SUMMARY OF PER ACRE CASH COSTS TO PRODUCE ALMONDS
 Production Year: October - September
 Southern San Joaquin Valley - 1989

Operation	Oct	Nov	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Dec	TOTAL
Pruning			60.0										\$60
Brush Disposal			22.7										23
Field Labor			12.0										12
Strip weed control								7.9					8
Pre-emerg. strip cntl	19.0												19
Irrigation (7 X 6")					17.1	17.1	17.1	34.3	17.1		17.1		120
Labor					.9	.9	.9	1.7	.9		.9		6
Fertilize (200# N)						47.5			28.5				76
Pest Control-4 sprays			43.2	37.4					31.7	31.7			144
Pollination - 2 hives				50.0									50
Mow middles 4X					5.9		5.9		5.9	5.9			24
Dormant shaking			54.0										54
Miscellaneous	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	16
Pick-up truck costs	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	28
Interest on operating capital @ 11%	.2	.3	2.2	3.2	3.5	4.2	4.5	5.0	6.0	8.8			38
TOTAL CULTURAL COSTS	\$23	\$4	\$198	\$94	\$31	\$73	\$32	\$53	\$94	\$50	\$22	\$4	\$677
Harvest Costs (1.75 tns/A):													
Shake, sweep, pickup										125.0			125
Hull - \$0.03/lb										90.0			90
Haul - \$8/gross ton										21.8			22
Rake nuts, \$4/acre										4.0			4
TOTAL HARVEST COSTS										\$241			\$241
Cash overhead:													
Office and business	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	75
County Taxes		52.5				52.5							105
Equipment Insurance			3.2										3
TOTAL CASH OVERHEAD	\$6	\$59	\$9	\$6	\$6	\$59	\$6	\$6	\$6	\$6	\$6	\$6	\$183
TOTAL CASH COSTS	\$29	\$63	\$207	\$100	\$37	\$132	\$38	\$59	\$100	\$297	\$28	\$10	\$1,100

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Table 5. COST TO PRODUCE ALMONDS AT VARYING PRICES AND YIELDS

	YIELD (Pounds/acre)							
	500	1000	1500	2000	2500	3000	3500	4000
Cultural Costs	677	677	677	677	677	677	677	677
Harvest Costs	167	204	241	278	315	353	390	427
Cash Overhead	183	183	183	183	183	183	183	183
Cash cost/acre	1,027	1,063	1,100	1,138	1,175	1,212	1,250	1,287
Cash cost/ton	4,107	2,126	1,467	1,138	940	808	714	643
Investment cost	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607
TOTAL COST/ACRE	2,634	2,670	2,708	2,745	2,782	2,819	2,857	2,894
TOTAL COST/TON	10,535	5,341	3,610	2,745	2,226	1,880	1,632	1,447

Table 6. PER ACRE INCOME ABOVE CASH COSTS AT VARYING PRICES AND YIELDS

Dollars per meat Pound	YIELD (Pounds/acre)							
	500	1000	1500	2000	2500	3000	3500	4000
.80	-627	-263	100	462	825	1,188	1,550	1,913
.90	-577	-163	250	662	1,075	1,488	1,900	2,313
1.00	-527	-63	400	862	1,325	1,788	2,250	2,713
1.10	-477	37	550	1,062	1,575	2,088	2,600	3,113
1.20	-427	137	700	1,262	1,825	2,388	2,950	3,513
1.30	-377	237	850	1,462	2,075	2,688	3,300	3,913
1.40	-327	337	1,000	1,662	2,325	2,988	3,650	4,313

Table 7. PER ACRE INCOME ABOVE TOTAL COSTS AT VARYING PRICES AND YIELDS

Dollars per meat Pound	YIELD (Pounds/acre)							
	500	1000	1500	2000	2500	3000	3500	4000
.80	-2,234	-1,870	-1,508	-1,145	-782	-419	-57	306
.90	-2,184	-1,770	-1,358	-945	-532	-119	293	706
1.00	-2,134	-1,670	-1,208	-745	-282	181	643	1,106
1.10	-2,084	-1,570	-1,058	-545	-32	481	993	1,506
1.20	-2,034	-1,470	-908	-345	218	781	1,343	1,906
1.30	-1,984	-1,370	-758	-145	468	1,081	1,693	2,306
1.40	-1,934	-1,270	-608	55	718	1,381	2,043	2,706