

**SAMPLE
COST
OF
PRODUCTION
1989
woodland area**

U. C. COOPERATIVE EXTENSION
YOLO COUNTY
70 COTTONWOOD STREET
WOODLAND, CALIFORNIA 95695

ACKNOWLEDGEMENTS

This Sample Cost of Production Study, Woodland Area - 1989 - is developed in consultation with a group of Yolo County farmer Cooperators. Their advice and counsel on crops to be considered, acreages, equipment needs and usage, and production practices formed the foundation upon which the enterprise study was based. We are grateful to each of them for volunteering their time and knowledge for making the study as practical as possible.

We also thank the many people from agricultural industries (equipment, energy, financial, etc.) for their help in providing information on costs of materials, equipment, money and other inputs to the hypothetical farm.)

Gene Miyao - Tom Kearney - Carl Schoner
Farm Advisors - Yolo County

Prepared by University of California
Cooperative Extension
Yolo County, California

May, 1989

TABLE OF CONTENTS

TOPIC	PAGE
INTRODUCTION	1
EQUIPMENT (insurance, interest, depreciation)	2
EQUIPMENT (repairs, fuel costs)	3
WATER & BUILDING COSTS	4
LAND RENTS & LABOR COSTS	5
LABOR COSTS, LOAN INTEREST	6
GROSS FARM INCOME, MISCELLANEOUS COSTS	7
SHARE RENTALS	8
ALFALFA (cost to establish & destroy)	9
ALFALFA PRODUCTION COSTS	11
FIELD CORN PRODUCTION COSTS	13
SUGAR BEET PRODUCTION COSTS	17
TOMATO PRODUCTION COSTS	20
WHEAT PRODUCTION COSTS	25
SAFFLOWER PRODUCTION COSTS	28
EQUIPMENT (annual and hourly costs)	31
EQUIPMENT, SPRINKLER, PUMP & WELL COSTS	32

INTRODUCTION

This study is a revision of "Sample Cost of Production, 1987, Woodland Area". The basic study is identical to that of 1987. Items revised or updated are: labor, fuel, energy, water, equipment, chemical and fertilizer costs, crop share rents, equipment repair, interest and depreciation costs, and other overhead costs.

This study provides information on estimated costs of growing field and vegetable crops of major importance in Yolo County. Five field and vegetable crops commonly grown in the Woodland area were chosen for study. A sixth crop, safflower, has been added as a possible alternative for corn. For purposes of the study, a hypothetical farming operation was developed, based on the minimum acreage of each crop that might be considered an efficient unit for that crop, as part of the total enterprise.

Hypothetical Farming Enterprise

Crops	Acres
Alfalfa	400
Corn	600
Sugar Beets	300
Tomatoes	700
Wheat	900
Total	2,900

Alternate Crop

*do these as
enterprise
budgets*

Beans Dry	-
Safflower	- 600
Sunflower	-

The study is aimed at answering questions on production costs and potential returns using local production practices. Figures given represent estimates and not actual costs. Actual costs will vary from farm to farm because of differences in soil, size of operation, equipment used, crop rotations, wage rates, water costs, etc. Growers are urged to use their own data in arriving at actual costs for their own farming operations.

EQUIPMENT:

Tractors and implements used in this farming operation are listed on the last two pages of the booklet. Equipment costs are divided into cash and non-cash costs.

Cash costs include: fuel and oil, repairs, insurance, taxes, production and equipment loan interest charges. Non-cash costs include: Depreciation and interest on investment in equipment.

The equipment table includes: Original cost, hours of operation, cash, non-cash and total hourly charges for tractors and implements. Generally speaking, the more hours a piece of equipment is used, the lower will be its cost per hour of operation. Some farming operations (i.e. alfalfa harvesting) are done on a custom basis at prevailing custom rates in the Woodland area. A few pieces of rental equipment are utilized in the operation.

COUNTY EQUIPMENT TAX

The tax rate used is 1.1% of the assessed value. For this cost study, assessed value is 55% of original cost.

Original cost is $55\% \times .011 =$ tax on equipment.

(Note: In practice, county assessed value is more accurately determined by the use of tables.)

EQUIPMENT INSURANCE:

Insurance is charged at \$5.00 per \$1,000 of insured value. Insured value is estimated at 55% of original cost.

Original cost $\times 55\% \times \$5/1000 =$ insured cost

INTEREST AND DEPRECIATION ON EQUIPMENT INVESTMENT

Sixty five percent of new cost is utilized in determining interest and depreciation on equipment. This is a departure from our past crop studies. In previous studies the new cost of equipment was utilized for these calculations. The revised method is used because it is improbable that any farm would own all new farming equipment. 65% of new value may more accurately describe the normal situation. Interest is charged at 12%.

Original Cost $\times .65 \times 12\% =$ interest on investment **** Original Cost $\times .65 =$ Equipment Depreciation.

2

years of life

Interest charges are divided equally into cash and non-cash costs. Cash interest charges represent the operator's equipment loan costs; non-cash interest charges represent interest on the operators equity or investment in equipment. Cash interest charges appear as "Equipment Loan Interest Cost"; non-cash interest charges appear under "Investment Costs" together with depreciation.

EQUIPMENT REPAIRS

Repair costs are calculated with a computer spreadsheet template developed by James P. Du Bruille, U.C. Cooperative Extension, Staff Research Associate, based on American Society of Agricultural Engineers Equipment Repair Database, 1983.

FUEL COSTS

Fuel requirements are calculated from University of California Publication AXT 336, "Machinery Costs and Performance".

Type Tractor	Gallons Fuel Per Hour Per Drawbar Horsepower at 75% Maximum Rating
Diesel wheel engine	.065
Diesel tracklayer	.075

Flywheel HP x 86% = PTO HP (approximation)
PTO HP x 86% = drawbar HP

Fuel Price + 10% (for lube, oil & filters) = fuel costs

Diesel \$.55 + \$.055 = \$.605/gallon
Unleaded gasoline \$.89 + \$.09 = \$.98/gallon

Example: 120 drawbar HP diesel tracklayer:

120 x 75% max. pull = 90 HP x .075 gal. = 6.75 gal. x \$0.605 = \$4.08/hr.

Example: 165 HP diesel wheel engine (PTO)

165 x 86% x 75% x .065 = 6.92 gal/hr. x \$0.605 = \$4.19/hr.

Pickup and truck fuel requirements are taken from University of California leaflet 2263.

WATER COSTS:

Water costs for this 2,900 acre farm are computed on the basis of using 1/2 irrigation district water (canal delivery system) and 1/2 well water.

Irrigation district water - \$10.23/acre foot.

Well water, pumped - \$20.94/acre foot. (based on PG&E AG4B power rate, pumping 24 hours per day.)

The average cost is \$15.59 per acre foot for 1/2 canal and 1/2 well usage.

Power cost for pumped water is based on a 450 ft. well, a 125 foot lift, and a 75 HP turbine operating at 65% efficiency using the AG4B rate, pumping 24 hours/day.

In the study, no investment costs for wells and pumps are charged because all land is rented. (pumps and wells are a landowner cost).

Note: Total costs of pumping for an operator owning his own pumps and wells would be:

\$20.94	power (including demand charges)
1.57	taxes, insurance and repairs
8.54	interest and depreciation (20 year life)

\$31.05	per acre foot. (based on pumping 570 acre feet per year)

BUILDINGS

A \$150,000 investment in farm buildings is assumed for the study. The primary building is a fully equipped farm shop with storage for chemicals, fertilizer and seed. A used, \$5,000 forklift is included. Building costs are equally distributed over the 2,900 acres.

\$150,000 original cost:

\$ 7,500	- depreciation (20 year life)
9,000	- interest on average investment at 12%
908	- taxes: original cost x 55% x 1.10%
413	- insurance: original cost x 55% x \$5/\$1,000
1,500	- repairs and maintenance: 1% of original cost

\$19,321	/ 2,900 acres = (\$5.69 fixed cost/acre, interest and depreciation)
	= (\$0.97 cash cost, taxes, ins. maintenance & repairs)

LAND RENT:

All ground is leased. No charges are made for land taxes, investment costs of land, pumps and wells. Share rental charges are listed as percent of gross income.

(PLEASE SEE PAGE 8 FOR SHARE RENT LEASING PRACTICES, WOODLAND AREA, 1989)

LABOR COSTS:

Labor rates are estimated to be representative of the Woodland area. Actual labor rates vary from farm to farm. All labor costs, wages and benefits, are charged directly to operations.

Type of Labor -----	Wages & Benefits -----	Total Cost Per Hour -----
General labor	\$ 4.25 + 1.45	\$ 5.70
Type A tractor driver (precision work)	\$ 6.00 + 2.04	\$ 8.04
Type B tractor driver (general tractor skills)	\$ 5.25 + 1.79	\$ 7.04
Irrigators	\$ 4.50 + 1.53	\$ 6.03
Tomato harvester operator	\$ 6.00 + 2.04	\$ 8.04
Benefits: Social Security)		
Workman's Compensation)		
Holidays)		
Unemployment Insurance)	Total package estimated at 34% of cash wages.	
Health Insurance)		
Bonuses)		
Pensions)		
Overtime)		

PRODUCTION LOAN INTEREST COST:

All cash costs are funded by production loans. Production loans are reduced, during the year, as income is received from crop sales. It is assumed that income is received 30 days after crop harvest. Loan interest is charged at 12% simple annual interest. Loan interest calculations are made on an independent, crop by crop basis. Production loan costs would be less (for the overall enterprise) if the cash flow among crops had been integrated and if a beginning cash reserve had been used. On the other hand, production loan costs will be much higher for those operators who store crops for later sale or for those operators whose crop income payments are withheld for several months.

COMMON COSTS:

Miscellaneous equipment, miscellaneous labor and supplies, trucks and pickups are used by the overall farm operation. Costs for these items are allocated to specific crops on a percentage of gross income basis.

GROSS FARM INCOME

Crops	Yield	Price/ Unit	Acres	Gross Farm Income	% of Gross
Alfalfa	7 tons	x \$85.00	x 400	= \$ 238,800	\$ 238,800/2,127,962 = 11%
Wheat	55 cwt.	x \$ 6.00	x 900	= \$ 297,000	\$ 297,000/2,127,962 = 14%
Corn	90 cwt.	x \$ 5.25	x 600	= \$ 283,500	\$ 283,500/2,127,962 = 13%
Sugar Beets	22 tons	x \$35.07	x 300	= \$ 231,462	\$ 231,462/2,127,962 = 11%
Tomatoes	28 tons	x \$55.00	x 700	= \$1,078,000	\$1,078,000/2,127,962 = 51%
TOTAL				\$2,127,962	100%

Expenses that were distributed by this spread method (according to gross income) were:

A. Supervisory labor and office expenses:

3 foremen (salaries and benefits)
Bookkeeping, accounting & tax reports
Office supplies, telephone, postage, etc.
Liability insurance
Attorney's fees and association fees, etc.
Computer expense

B. Miscellaneous Equipment:

Low bed and tractor (used)
Equipment carrier
Small "cleanup disc"
Angle blade
Closed mixing spray system
Fuel wagons

C. Pickups and trucks:

(2) 2 ton trucks
(2) 3/4 ton pickups
(2) Economy size pickups

RETURN TO MANAGEMENT:

Return to management should be a consideration. However, management fees might not appear as cash costs unless a professional manager is hired. Returns for management generally are figured at 5% of gross income or $5\% \times \$2,127,962 = \$106,398$. This cost is not included in the study but is listed separately.

ALFALFA HAY (COST TO ESTABLISH AND DESTROY)
 100 acres/year - (following wheat)
 (Wheat straw baled or burned - One stubble discing charged to wheat)
 (50 acres sprinkled up in fall + 50 acres germinated by fall rains)

	HOURS/ ACRE	CASH COSTS PER ACRE				TOTAL
		LABOR	TRACTOR	IMPLT.	MATERIAL	
SEED BED PREPARATION:						
DISC 1X	.13	.92	1.92	1.71	-	4.55
CHISEL 2X	.80	5.63	14.37	4.10	-	24.10
TRIPLANE 2X	.33	2.32	4.88	1.65	-	8.85
PULL CHECKS 1X (BG)	.25	1.76	1.56	.41	-	3.73
SHAPE CHECKS 1X (RENTED SHAPER)	.05	.35	.74	1.00	-	2.09
PULL & CLOSE DITCH	.10	.70	1.48	.47	-	2.65
PRE IRRIGATE (8" WATER)	1.25	7.54	-	-	10.39	17.93
STARTER FERTILIZER (APPLIED)					20.06	20.06
INCORP. HERBICIDE (1/2 AC.) DISC 2X	.13	.92	1.92	1.71	-	4.55
DISC (1/2 ACRES)	.08	.56	1.18	1.05	-	2.80
TRIPLANE MIDDLES	.17	1.20	2.51	.85	-	4.56
PLANTING & ESTABLISHMENT						
PLANT BRILLION (PLANTER RENTED)	.25	1.76	1.56	4.50	-	7.82
SEED 20#/ACRE @ \$2.05/LB.	-	-	-	-	41.00	41.00
ROLL 1X	.08	.56	.50	.29	-	1.36
SPRINKLE UP (1/2 ACRES @ \$83.46/AC.)	1.56	9.41	-	27.09	5.24	41.73
WEED CONTROL						
PREPLANT HERBICIDE (1/2 ACRES)	-	-	-	-	9.72	9.72
POST PLANT HERBICIDES	-	-	-	-	26.63	26.63
AIRCRAFT 1.5X (POST EMERGE)	-	-	-	-	7.88	7.88
MISC. EQUIPMENT USE	-	1.27	1.08	3.05	-	5.39
MOVE EQUIP., SETUP & SERVICE 10% OF LABOR COSTS	-	1.80	-	-	-	1.80
PICKUP & TRUCK USE	-	-	-	4.13	-	4.13
TOTAL		36.69	33.68	85.71	120.90	243.30
SUPERVISORS SALARIES, ACCOUNTING OFFICE EXPENSE						
	-	-	-	-	30.48	30.48
EQUIPMENT LOAN INTEREST COST						
	-	-	-	-	3.65	3.65
TOTAL CASH COSTS TO ESTABLISH:						277.42

ALFALFA CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				TOTAL
		LABOR	TRACTOR	IMPLT.	MATERIAL	
COSTS TO DESTROY:						
STUBBLE DISC BORDERS 1X	.06	.42	1.08	.57	-	2.07
PLOW 1X	.40	2.82	4.85	2.35	-	10.01
MOVE EQUIP., SET UP & SERVICE @ 10% OF LABOR COSTS	-	.32	-	-	-	.32
CASH COSTS TO DESTROY:	-	<u>3.56</u>	<u>5.92</u>	<u>2.92</u>	-	<u>12.40</u>
TOTAL CASH COSTS TO ESTABLISH & DESTROY:					\$	<u>289.82</u>
INVESTMENT COSTS:						
INTEREST & DEPRECIATION (tractors & implts.)	-	-	-	-	14.18	14.18
TOTAL ALL COSTS TO ESTABLISH & DESTROY: (per acre)					\$	<u>304.01</u>

ALFALFA HAY (4 YEAR LIFE)
 400 ACRES ON A 2,900 ACRE FARM
 LEASE BASIS - 21% OF GROSS SALES TO LANDLORD
 YIELD 7 TONS

	HOURS/ ACRE	CASH COSTS PER ACRE				TOTAL
		LABOR	TRACTOR	IMPLT.	MATERIAL	
CASH GROWING COSTS:						
IRRIGATE 8X @ \$6.03/HR.	5.00	30.15	-	-	-	30.15
WATER (CASH COST 4 AC.FT.) (1/2 PUMP @ \$20.94/AC.FT.) (1/2 SURFACE @ \$10.23/AC.FT.)	-	-	-	-	62.34	62.34
DITCH (OPEN & CLOSE) 1X	.10	.70	1.48	.47	-	2.65
INSECT CONTROL 2.5X						
MATERIALS	-	-	-	-	24.48	24.48
AIRPLANE	-	-	-	-	13.13	13.13
WINTER & SUMMER WEED CONTROL						
MATERIALS (+ditch spray labor)	.05	.29	-	-	40.80	41.09
GROUND APPLICATION 2X (CUSTOM)	-	-	-	-	10.90	10.90
GOPHER CONTROL 1X	.13	.92	1.26	.14	2.35	4.66
MISC. EQUIPMENT USE	-	1.27	1.08	3.05	-	5.39
PICKUP & TRUCK USE	-	-	-	4.13	-	4.13
MOVE EQUIP., SET UP & SERVICE @10% OF LABOR COSTS	-	.32	-	-	-	.32
		<u>33.64</u>	<u>3.81</u>	<u>7.78</u>	<u>154.00</u>	<u>199.22</u>
TOTAL GROWING COSTS:						
SUPERVISORS SALARIES, ACCOUNTING, & OTHER OFFICE EXPENSE	-	-	-	-	30.48	30.48
BUILDINGS (TAXES, INS., REPAIRS)	-	-	-	-	.97	.97
PRODUCTION LOAN INTEREST COST	-	-	-	-	12.80	12.80
EQUIPMENT LOAN INTEREST COST	-	-	-	-	3.65	3.65
TOTAL PRE HARVEST CASH COSTS:						<u>247.12</u>
HARVEST COSTS: (CONTRACT @ \$25/TON X 7 TONS/ACRE)					175.00	175.00
LAND OWNER SHARE - 21% X 7 TONS @ \$85/TON					124.95	124.95
TOTAL CASH COSTS PER YEAR:					\$	<u>547.07</u>

INVESTMENT COSTS:	TOTAL
BUILDINGS (interest & depreciation)	5.69
TRACTORS & IMPLEMENTS (interest & depreciation)	14.18
STAND ESTABLISHMENT: ----- \$ 304.01 (depreciated over 4 years)	76.00
(interest on investment)	9.12
TOTAL INVESTMENT COSTS:	105.00
TOTAL ALL COSTS PER ACRE:	\$ 652.07

COSTS PER TON: \$ 93.15

COST PER TON AT VARIOUS YIELDS AND VARIOUS SHARE RENTS

YIELD	SHARE RENT	COST/TON
5 TONS	25%	116.67
	20%	112.42
	15%	108.17
6 TONS	25%	104.94
	20%	100.69
	15%	96.44
7 TONS	25%	96.55
	21%	93.15
	15%	88.05
8 TONS	25%	90.26
	20%	86.01
	15%	81.76
9 TONS	25%	85.37
	20%	81.12
	15%	76.87

MANAGEMENT FEE @ 5% OF GROSS INCOME: ----- \$ 29.75
(usual charge for management is not included in this study)

FIELD CORN
 600 ACRES FOLLOWING WHEAT, CORN, ALFALFA OR SUGAR BEETS ON A 2900 ACRE FARM
 LEASE BASIS - 20% OF GROSS SALES TO LANDLORD
 YIELD - 9,000 LBS/ACRE

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
SEED BED PREPARATION:						
FALL:						
PLOW (1/2 ACRES)	.20	1.61	2.42	1.18	-	5.21
SUBSOIL & ROLL (1/2 ACRES)	.20	1.61	3.59	1.86	-	7.06
TRIPLANE 2X	.34	2.73	5.02	1.70	-	9.46
LIST UP BEDS	.28	2.25	2.70	.65	-	5.61
HERBICIDE	-	-	-	-	11.13	11.13
AIRPLANE	-	-	-	-	5.25	5.25
SPRING:						
ROLLING CULTIVATOR	.20	1.61	1.24	1.80	-	4.66
MOVE EQUIP., SET UP & SERVICE @ 10% OF LABOR COSTS	-	.98	-	-	-	.98
TOTAL SEEDBED PREPARATION COSTS:	-	10.79	14.99	7.19	16.38	49.35
PLANTING:						
PLANT	.33	2.65	2.55	1.61	-	6.81
SEED 18 LBS. @ \$1.40/LB.	-	-	-	-	25.20	25.20
STARTER FERTILIZER @ 15 GALS/ACRE (@ \$1.73/GAL. + \$1.90 ZINC)	-	-	-	-	27.85	27.85
MOVE EQUIP., SET-UP, SERVICE-20% OF LABOR	-	.53	-	-	-	.53
TOTAL PLANTING COSTS:	-	3.18	2.55	1.61	53.05	60.40

CORN CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
GROWING COSTS:						
BREAK CRUST (10% ACRES)	.02	.16	.12	.18	-	.47
CUTWORM CONTROL (20% ACRES)						
GROUND APPLICATION	.03	.21	.19	-	-	.40
MATERIAL	-	-	-	-	1.26	1.26
ROLLING CULTIVATOR	.17	1.37	1.06	.80	-	3.22
FURROW & SIDE DRESS	.29	2.33	2.80	1.10	-	6.24
200 LBS. N @ 21c/LB.	-	-	-	-	42.00	42.00
DITCH & CLOSE 2X	.10	.70	1.48	.47	-	2.65
IRRIGATE 6X @ 1.25 HRS./ACRE	7.50	45.23	-	-	-	45.23
WATER 1.5 AC.FT.@ \$9.99/FT.	-	-	-	-	15.35	15.35
1.5 AC.FT. WELL @ \$20.16	-	-	-	-	31.41	31.41
HERBICIDE - GROUND RIG(1/2 ACRES)	.08	.64	.50	.10	-	1.24
2,4-D AMINE @ 8 OZ. (1/2 ACRES)	-	-	-	-	.69	.69
MITICIDE - GROUND APPLICATION	.16	1.13	1.24	.21	-	2.57
MATERIAL	-	-	-	-	15.25	15.25
MOVE EQUIP., SET UP & SERVICE @ 15% OF LABOR COST	-	7.77	-	-	-	7.77
TOTAL GROWING COSTS:		59.53	7.38	2.86	105.95	175.73
MISCELLANEOUS COSTS:						
SUPERVISORS SALARIES, ACCOUNTING, OFFICE EXPENSE	-	-	-	-	30.25	30.25
PRODUCTION LOAN INTEREST COST	-	-	-	-	19.23	19.23
PICKUP AND TRUCK USE	-	-	-	-	3.28	3.28
MISC. EQUIPMENT USE	-	1.01	.85	2.42	-	4.28
EQUIPMENT LOAN INTEREST COST	-	-	-	-	8.76	8.76
BUILDING (TAXES, INS., REPAIRS)	-	-	-	-	.97	.97
TOTAL MISCELLANEOUS COSTS:		1.01	.85	2.42	62.49	66.77
TOTAL PRE-HARVEST CASH COSTS:						352.24

CORN CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
HARVEST COSTS:						
COMBINE	.22	1.77	9.44	3.22	-	14.43
BANKOUT WAGON	.22	1.77	1.37	.94	-	4.08
CHOP STUBBLE	.25	2.01	2.42	1.00	-	5.43
TOTAL HARVEST COSTS:		5.55	13.23	5.17		23.94
POST HARVEST COSTS:						
STUBBLE DISC	.22	1.77	3.95	2.08	-	7.80
CASH CULTURAL AND HARVEST COSTS:						383.98
SHARE RENT (20% OF GROSS, LESS 20% OF DOCKAGE)		-		-	92.61	92.61
DOCKAGE, TENNANTS SHARE(2% OF 90 CWT.)		-		-	7.56	7.56
TOTAL CASH COSTS:						484.15
INVESTMENT COSTS:						
BUILDINGS (INTEREST & DEPRECIATION)		-		-	5.69	5.69
TRACTORS & IMPLT. (INT. & DEPRE.)		-		-	34.64	34.64
TOTAL INVESTMENT COSTS:					40.33	40.33
TOTAL ALL COSTS PER ACRE:						524.47
COST PER CWT.						5.83
(MANAGEMENT FEE @ 5% OF GROSS INCOME - 90 WT. @ \$5.25/WT.) - \$23.63						
(usual charge for management not included in this study)						

CORN CONT:

COST PER CWT. AT VARYING YIELDS AND SHARE RENTALS

CROP YIELD	Crop Share Rental in Percent		
	25%	20%	15%
7,000 lbs	7.43	7.17	6.92
9,000 lbs	6.08	5.83	5.58
11,000 lbs	5.22	4.97	4.72

(Cost in \$ per hundred weight)

NOTE: The estimated crop price of \$5.25/cwt. is the projected free market price and does not include government support. Government crop support payments are subject to a \$50,000 limit per farm.

SUGAR BEETS (22 TONS/ACRE - 14% SUGAR)
 300 ACRES FOLLOWING WHEAT
 SPRING PLANTING/FALL HARVEST

	HOURS/ ACRE	CASH COSTS PER ACRE				TOTAL
		LABOR	TRACTOR	IMPLT.	MATERIAL	
FALL GROUND PREPARATION:						
BALE STRAW (CUSTOM - NO CHARGE)					-	
STUBBLE DISC WITH ROLLER 1X	.22	1.55	3.95	2.99	-	8.49
SUBSOIL WITH ROLLER 1X	.40	2.82	7.18	3.71	-	13.71
TRIPLANE 2X	.34	2.39	5.02	1.70	-	9.12
LIST BEDS	.25	2.01	3.03	.58	-	5.62
WINTER WEED CONTROL 2X	.20	1.41	.80	.56	17.29	20.05
MOVE EQUIP. SET UP & SERVICE @ 10% OF LABOR COSTS	-	1.02	-	-	-	1.02
TOTAL GROUND PREP. COSTS:		<u>11.19</u>	<u>19.98</u>	<u>9.54</u>	<u>17.29</u>	<u>58.01</u>
PLANTING						
LILLISTON 2X	.20	1.41	1.24	1.80	-	4.46
HERBICIDE 1/3 AREA BANDED	.08	.56	.50	.22	37.14	38.42
INCORPORATE 2/3 AC.	.27	1.90	2.61	4.93	-	9.44
PLANT	.33	2.65	2.05	1.61	-	6.32
SEED 2 LBS./AC.	-	-	-	-	24.00	24.00
FERTILIZER 15 GALS.	-	-	-	-	27.85	27.85
RE CULTIVATE 10% AC.	.03	.21	.19	.07	-	.47
REPLANT 10% AC. (SEED ONLY)	.03	.24	.19	.10	2.40	2.93
MOVE EQUIP. SET UP & SERVICE @20% OF LABOR COSTS	-	1.40	-	-	-	1.40
TOTAL PLANTING COSTS:		<u>8.37</u>	<u>6.78</u>	<u>8.74</u>	<u>91.39</u>	<u>115.28</u>

1989 SUGAR BEETS CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
GROWING:						
CULTIVATE	.33	2.65	2.05	1.00	-	5.71
CUTWORM BAIT (1/3 AC.) GROUND					2.10	2.10
FLAT ROLL	.12	.84	.75	.15	-	1.74
THIN (ELECTRONIC)	.33	2.32	2.05	5.37	-	9.75
HOE	10.00	57.00			-	57.00
FERTILIZE 90 LBS. N @ 20c/LB.	.33	2.32	3.19	1.14	18.00	24.65
LAYBY HERBICIDE	.25	1.76	1.56	2.63	4.59	10.53
ROLLING CULTIVATOR	.20	1.41	1.24	1.80	-	4.46
V DITCH, OPEN & CLOSE 3X	.15	1.21	2.22	1.40	-	4.82
IRRIGATE 7X	8.75	52.76	-	-	-	52.76
WATER 3.5 AC. FT.	-	-	-	-	54.55	54.55
MISC. (SHOVELS, DAMS)	-	-	-	-	2.50	2.50
INSECT & DISEASE CONTROL						
AIRPLANE 5X @ \$5.50	-	-	-	-	27.50	27.50
APHID CONTROL 2X	-	-	-	-	34.05	34.05
MILDEW 2X, SULFUR	-	-	-	-	14.08	14.08
WORM CONTROL 1X	-	-	-	-	10.71	10.71
MOVE EQUIP. SET UP & SERVICE	-	1.88	-	-	-	1.88
@15% OF LABOR COST(-HOE, IRRIG.)						
TOTAL GROWING COSTS:		<u>124.16</u>	<u>13.06</u>	<u>13.49</u>	<u>168.08</u>	<u>318.78</u>
MISCELLANEOUS COSTS:						
PICKUP & TRUCK USE	-	-	-	-	5.35	5.35
SUPERVISORS' SALARIES, ACCOUNTING	-	-	-	-	49.40	49.40
OFFICE EXPENSE						
BUILDING (TAXES, INS., REPAIRS)	-	-	-	-	.97	.97
MISC. EQUIP. USE	-	1.64	1.40	3.95	-	6.99
PRODUCTION LOAN INTEREST COST	-	-	-	-	35.15	35.15
EQUIPMENT LOAN INTEREST COST	-	-	-	-	9.30	9.30
CROP INSURANCE, ALL ACRES	-	-	-	-	27.48	27.48
TOTAL MISCELLANEOUS COSTS:		<u>1.64</u>	<u>1.40</u>	<u>3.95</u>	<u>127.66</u>	<u>134.65</u>
TOTAL PRE-HARVEST CASH COSTS:					\$	626.72

1989 SUGAR BEETS CONT.

CUSTOM HARVEST COST: (DIG @ \$2.00/TON; HAUL @ \$1.50 + MILEAGE)
 HAULING ALLOWANCE: (MILEAGE)

TOTALS
 96.80
 -18.15

TOTAL HARVEST COSTS: 78.65
 LANDOWNER SHARE (16% X 22 TONS @ \$35/TON) \$ 123.20

TOTAL CASH COSTS: \$ 828.57

INVESTMENT COSTS: BUILDING (interest & depreciation) 5.69
 TRACTORS & IMPLTS. (int. & deprec.) 36.11

TOTAL INVESTMENT COSTS: \$ 41.80

TOTAL ALL COSTS/ACRE: \$ 870.37

COST PER TON @ 22 TONS/ACRE: \$ 39.56

COST SUMMARY:	CASH	NON-CASH	TOTAL
COST PER ACRE (22 Ton yield, 14% sugar)			
GROWING	626.72	41.80	668.52
HARVEST	78.65	-	78.65
LANDOWNER	123.20	-	123.20
TOTAL:	\$ 828.57	41.80	870.37

MANAGEMENT FEE: (5% of gross income, 22 tons x \$3/ton) ----- 38.50
 (usual charge for management, not included as a cost in this study)

COST PER TON AT VARYING YIELDS AND SHARE RENTALS

CROP YIELD	Crop Share Rental in Percent		
	20%	16%	12%
18 TONS	47.71	46.31	44.91
22 TONS	40.96	39.56	38.16
26 TONS	36.29	34.89	33.49

TOMATOES (28 TONS PER ACRE)
 700 ACRES IN ROTATION FOLLOWING WHEAT OR CORN (1/2 EACH)
 TWO HARVESTER OPERATION (BOTH ELECTRONIC)

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
SEED BED PREPARATION:						
FALL WORK:						
PLOW 1/2 ACRES @ .4 HR/ACRE	.20	1.61	2.42	1.18	-	5.21
LASERPLANE 10% ACRES @ \$120/AC.	-	-	-	-	12.00	12.00
SUBSOIL 1/2 AC. 2X AFTER WHEAT	.40	2.82	7.18	3.71	-	13.71
SUBSOIL 1/2 AC. 1X AFTER CORN	.20	1.41	3.59	1.86	-	6.86
DISC 2X WITH ROLLER	.26	1.83	3.84	4.38	-	10.05
TRIPLANE 2X	.34	2.39	5.02	1.70	-	9.12
LIST (ALL FALL BEDDED)						
WITHOUT NEMATICIDE (90% AC.)	.23	1.85	2.22	.53	-	4.61
W/NEMATICIDE (10% AC.)	.04	.32	.39	.15	12.63	13.49
FLAT ROLL TO SHAPE	.12	.84	.75	.15	-	1.74
FALL APPLIED HERBICIDE (1/4 AC.)	.03	.21	.19	.08	7.37	7.85
GENERAL HERBICIDE, GROUND 1.5X	.15	1.06	.60	.42	12.97	15.04
SPRING WORK:						
CULTIVATE	.13	.92	1.26	.61	-	2.78
RE-CULTIVATE (1/3 AC.) 1X	.05	.35	.48	.23	-	1.07
HERBICIDE PROGRAM						
20% AC. WITHOUT HERBICIDE	-	-	-	-	-	-
20% AC. SOIL CAP AT PLANTING	-	-	-	-	-	-
60% AC. INCORP. 50% OF BED TOP	.24	1.93	2.32	4.02	23.36	31.63
MOVE EQUIP. SET UP & SERVICE @ 10% OF LABOR COSTS	-	1.75	-	-	-	1.75
TOTAL LAND PREPARATION COSTS:		<u>19.29</u>	<u>30.26</u>	<u>19.04</u>	<u>68.33</u>	<u>136.92</u>

1989 TOMATOES CONT.

CASH COSTS PER ACRE

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
PLANTING:						

PLANT 2 ROWS (2 PEOPLE)						
LIGHTWEIGHT TRACKLAYER 20%	.07	.96	.28	.83	-	2.07
WHEEL TRACTOR 80%	.26	3.57	2.01	3.09	-	8.68
SEED 2/3 HYBRID @ 1/2 LB.	-	-	-	-	80.00	80.00
1/3 O.P. @ 1 LB.	-	-	-	-	8.33	8.33
STARTER FERT. 15 GAL./AC	-	-	-	-	27.85	27.85
REMOVE SOIL CAP 20% AC.	.07	.56	.28	.16	-	1.00
BREAK CRUST 40% AC.	.16	1.13	1.00	.37	-	2.49
REPLANT (SEED ONLY) 10% AC.	.03	.41	.19	.31	8.83	9.74
MOVE EQUIP., SET UP & SERVICE 20% OF LABOR COSTS	-	1.33	-	-	-	1.33
		-----	-----	-----	-----	-----
TOTAL PLANTING COSTS:		7.96	3.75	4.77	125.01	141.50

GROWING:						

SPRINKLE IRRIG. STAND ESTAB.						
1/6 AC. NATURAL RAINFALL	-	-	-	-	-	-
1/6 AC. EARLY: 1X (50 HRS.)	.32	1.93	-	1.45	.22	3.60
1/3 AC. MID-SEASON 2.4X(248 HR)	1.61	9.71	-	7.27	1.08	18.06
1/3 AC. LATE: FURROW 2X	.83	5.00	-	-	2.60	7.60
CULTIVATE	.40	3.22	3.86	.93	-	8.01
THIN (ELECTRONIC) 1/3 AC.	.11	.77	.68	1.79	-	3.25
HOE (HAND WEED)	14.00	79.80	-	-	-	79.80
FERT. 125 LBS. N @ 20c/lb.	.33	2.32	3.19	1.26	25.00	31.77
V DITCH, OPEN & CLOSE 3X	.15	1.21	2.22	1.40	-	4.82
IRRIGATE 7X @ 1.25 HR./AC.	8.75	52.76	-	-	-	52.76
WATER 3.5 AC. FT.	-	-	-	-	54.55	54.55
MISC. EQUIP. (SHOVELS, DAMS)	-	-	-	-	2.50	2.50
LAYBY HERBICIDE	.40	3.22	3.86	7.30	5.82	20.20
CULTIVATE	.29	2.04	2.80	.67	-	5.52
CULTIVATE WITH HI-CROP	.33	2.32	2.55	.77	-	5.64
VINE TRAINER 1/2 AC.	.20	1.41	1.54	.27	-	3.23
MOVE EQUIP., SETUP & SERVICE @ 15% OF LABOR COSTS		2.48	-	-	-	2.48
		-----	-----	-----	-----	-----
TOTAL GROWING COSTS:		168.19	20.71	23.11	91.76	303.78

		(21)				-----

1989 TOMATOES CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
GROWING - PEST CONTROL:						
FLKA BEETLE 25% AC. GROUND	.02	.14	.12	.06	.88	1.20
CUTWORM/BEETLE 50% AC. GROUND	.10	.70	.62	.07	3.16	4.56
AIRPLANE APPLICATION 2.5X @ \$5.50	-	-	-	-	13.75	13.75
WORM CONTROL 1X	-	-	-	-	19.26	19.26
MITES, SULFUR DUST 35 LBS. 1X	-	-	-	-	6.16	6.16
MOLD WITH INSECT APPLIC. 25% AC	-	-	-	-	1.82	1.82
MOLD CONTROL 25% AC.	-	-	-	-	1.82	1.82
MILDEW CONTROL 25% AC.	-	.00	-	-	3.63	3.63
ETHEPHON 20% AC. GROUND	.02	.14	.15	.06	6.56	6.91
WHITEWASH 10% AC. CUSTOM	-	-	-	-	3.20	3.20
MOVE EQUIP. SET UP & SERVICE 15% OF LABOR COSTS		.15	-	-	-	.15
TOTAL - PEST CONTROL COSTS:		<u>1.13</u>	<u>.90</u>	<u>.18</u>	<u>60.24</u>	<u>62.46</u>
MISCELLANEOUS:						
PICKUP & TRUCK USE	-	.00	.00	-	7.12	7.12
SUPERVISORS SALARIES, ACCOUNTING, OFFICE EXPENSE	-	-	-	-	65.74	65.74
MISC. EQUIP. USE	-	2.18	1.86	5.26	-	9.30
BUILDING (TAXES, INS., REPAIRS)	-	-	-	-	.65	.65
PRODUCTION LOAN INTEREST COST	-	-	-	-	31.67	31.67
EQUIPMENT LOAN INTEREST COST	-	-	-	-	8.50	8.50
CROP INSURANCE, ALL ACRES	-	-	-	-	68.25	68.25
TOTAL - MISCELLANEOUS COSTS:		<u>2.18</u>	<u>1.86</u>	<u>5.26</u>	<u>181.92</u>	<u>191.22</u>
TOTAL, PRE-HARVEST CASH COSTS:						<u>835.87</u>

1989 TOMATOES CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
HARVEST EXPENSE:						
NEW MACHINE 80% AC. (8 AC./SHIFT) (TWO 10 HR. SHIFTS)	1.00	-	55.64	-	-	55.64
OLD MACHINE 20% AC. (6.3 AC./SHIFT) (ONE 10 HR. SHIFT, PART SEASON)	.32	-	22.64	-	-	22.64
DRIVER, HARVESTER	1.32	10.61	-	-	-	10.61
6 SORTERS	7.92	45.14	-	-	-	45.14
4 DOLLIES (5TH WHEELS)	2.32	-	-	.64	-	.64
(2)TRACTOR & DRIVER 80% AC.	2.00	14.08	19.32	-	-	33.40
(1)TRACTOR & DRIVER 20% AC.	.32	2.25	3.88	-	-	6.13
AVENUE OPEWER 7% OF ACRES (TRACTOR & DRIVER)	.10	.80	.77	.49	-	2.07
LIGHTING SYSTEM	.50	-	-	2.98	-	2.98
MISC.EQUIP.\$50/DAY X 20 AC./DAY	-	-	-	-	2.50	2.50
MISC. SUPPLIES \$30/DAY	-	-	-	-	1.50	1.50
TOILET FACILITIES	-	-	-	-	.43	.43
INSPECTION FEES	-	-	-	-	3.25	3.25
MISC. (CTGA, CTRI, CDFA-LF, @25c/T)	-	-	-	-	7.00	7.00
REJECT LOADS 1% DIRECT HARV.COSTS	-	-	-	-	1.76	1.76
PICKUP & TRUCK USE	-	-	-	-	3.56	3.56
SUPERVISORS SALARIES, ACCOUNTING, OFFICE EXPENSE	-	-	-	-	32.87	32.87
BUILDING (TAXES, INS., REPAIRS)	-	-	-	-	.32	.32
MISC. EQUIP. USE (LOW BED, ETC)	-	1.09	.93	2.63	-	4.65
EQUIP. LOAN INTEREST COST	-	-	-	-	12.74	12.74
MOVE EQUIP., SET UP, SERVICE & CLEAN @ 15% OF LABOR (-SORTERS)	-	4.33	-	-	-	4.33
TOTAL CASH HARVEST COSTS:		<u>78.31</u>	<u>103.17</u>	<u>6.74</u>	<u>65.94</u>	<u>254.16</u>

TOTAL HARVEST COSTS	
CASH HARVEST COSTS	254.16
EQUIP. (INT. & DEPREC.)	68.61
TOTAL:	\$ 322.78

1989 TOMATOES COST.

COSTS/ACRE

PRODUCTION AND HARVEST CASH COSTS:	1090.03
LANDOWNER SHARE (15% X \$55 X 28 TONS)	231.00
TOTAL CASH COSTS:	\$ 1321.03
INVESTMENT:	
BUILDINGS (interest & depreciation)	5.69
TRACTORS & IMPLTS. (int. & depreciation)	108.67
TOTAL INVESTMENT COSTS:	114.36
GRAND TOTAL ALL COSTS PER ACRE:	\$ 1435.39
TOTAL COST/TON @ 28 TONS/AC.	\$ 51.26

SUMMARY

DOLLARS PER ACRE @ 28 TONS PER ACRE

		CASH	NON-CASH	TOTAL
GROWING	\$	835.87	45.74	881.61
HARVEST	\$	254.16	68.61	322.78
LANDOWNER	\$	231.00		231.00
TOTAL COST PER ACRE:	\$	1321.03	114.36	1435.39

COST/TON AT VARYING YIELDS & SHARE RENTS

SHARE RENTS

YIELDS	17%	15%	13%
20 tons	69.57	68.47	67.37
25 tons	57.53	56.43	55.33
30 tons	49.50	48.40	47.30

MANAGEMENT FEE @ 5% OF GROSS INCOME:

\$ 77.00

(usual charge for management not included in this study)

COSTS OF EQUIPMENT - YOLO CO
(Annual & Hourly Cost)

EQUIPMENT	TRACTOR USED	SIZE	LIFE YEARS	ACRES/HOUR	ORIGINAL COST	DEPRECIATION	INTEREST COST
TRACKLAYER (DRAWBAR HP)		190 HP	15		143100	6201	558
TRACKLAYER (DRAWBAR HP)		120 HP	15		106000	4593	413
TRACKLAYER		120 HP	15		106000	4593	413
TRACKLAYER, LIGHTWEIGHT		65 HP	15		20670	896	80
WHEEL TRACTOR (PTO)		165 HP	10		71020	4616	277
WHEEL TRACTOR		135 HP	10		58300	3790	227
WHEEL TRACTOR		135 HP	10		58300	3790	227
WHEEL (HIGH CLEARANCE)		110 HP	10		44520	2894	173
WHEEL TRACTOR		90 HP	10		36040	2343	140
WHEEL TRACTOR		90 HP	10		36040	2343	140
SUBSOILER - 8' - 3 SHANKS	T190	24"DEEP	15	2.50	10500	455	41
TRIPLANE	T120	16 X 40'	15	6.00	19080	827	74
OFFSET DISC	T120	26'	15	8.00	26500	1148	103
STUBBLE DISC	T190	14'	15	4.50	19080	827	74
SPRINGTOOTH	T120	32'	15	12.00	11500	498	44
SWEDE HARROW & CART	T120	32'	15	12.00	8000	347	31
RING ROLLER (AFTER HARROWS)		32'	15	12.00	5950	258	23
ROLLING CULTIVATORS (2)	W90	16'	15	5.00	10400	451	40
LARGE ROLLER (36" DIAMETER)		12'	15	2.50	8500	368	33
INCORPORATOR (2)	W135-165	15'	10	2.50	38160	2480	148
CULTIVATOR SLEDS (6)	W90-135	16'	15	3.50	16020	694	62
CORN-BEET PLANTERS(6) ON SLED	W90-135		15	3.00	3900	169	15
TOMATO PLANTERS (6) ON SLED	W90-135		15	3.00	11830	513	46
V DITCHER	T120		15	20.00	9000	390	35
GRAIN DRILL	W 90	20'	15	8.00	11236	487	43
PLOW 2 WAY X 5-16 BOTTOMS	W165		15	2.50	11554	501	45
SPRAYER SYSTEM	W90		15		1500	65	5
SADDLE TANKS (4 SETS)	W135		15		6800	295	26
GRAIN COMBINE 20' HEADER			10	4.50	117660	7648	458
CORN HEADER - 8 ROW	COMB.		10	5.00	25200	1638	98
TOMATO HARVESTOR (NEW)			5	.70	165360	21497	644
TOMATO HARVESTOR (USED)			5	.70	60000	7800	234
TRUCKS - 2 TON FLATBED (2)			10		48760	3169	190
PICKUPS 3/4 TON (2)			5		28408	3693	110
PICKUPS, COMPACT (2)			5		22260	2894	86
LOWBED W/TRACTOR (USED)			15		15000	1000	58

COSTS OF EQUIPMENT CONT.

COSTS OF EQUIPMENT - YOLO CO
(Annual & Hourly Co

EQUIPMENT	TRACTOR USED	SIZE	LIFE YEARS	ACRES/HOUR	ORIGINAL COST	DEPRECIATION	INTEREST	ANNUAL COST	HOURLY COST
IMPLEMENT CARRIER	3/4 T		15		8915	386			
ELECTRONIC THINNERS (2)	W 90		10	3.00	34000	2210	15		
B.G. SCRAPER (10')	W 90		10	4.00	2500	163			
BULK TRAILER DOLLIES (4)	W 90		15		4000	173			
VINE DIVERTER	W135		15		5000	217			
BANKOUT WAGON	W90		15		10050	436			
DITCH CLOSER	T120		15	20.00	9110	395			
ANGLE BLADE	W135		15		3300	143			
SMALL DISC	T120	9'	15		5750	249			
VINE TRAINER	W135		15	4.00	2500	108			
GENERATOR, LIGHTS (USED)			15		4500	195	1		
FLAT ROLLER	W 90	16'	15	8.00	2500	108			
ALLOWAY	W 135	16'	10	6.00	8450	549	3		
FLAIL CHOPPER 15'	W 135	15'	10	4.00	8650	562	3		
DISC RIDGER	W 135		15	17.00	1475	64			
FUEL WAGONS	3/4 TON		10		6000	390	2		
CLOSED MIX SPRAY SYSTEM	T-65		10		2000	130			
MECHANICAL GOPHER BAITER	W 135		10	7.50	1590	103			
BAIT APPLICATOR (insect)	W 90		7	15.00	1050	98			

TOTAL ORIGINAL EQUIPMENT COST:

1513488

IRRIGATION PUMPS & WELLS: (not used in this study, listed only to show comparative costs of pum

WELL, 450' DEPTH, 16" OD CASING (gravel pack)	20	2.4 ac/ 1/4 mi. line/set	24750	1238	14
75HP PUMP + HOOK UP+WELL DEVEL.	20		19500	975	11

SPRINKLER EQUIPMENT

1/4 MILE WHEEL MOVES (4)	10		58800	5880	35
1 1/2 MILE, 8" MAIN LINE	10		41800	4180	25
800 gpm PUMP WITH ENGINE	10		14500	1450	8
ADDITIONAL PIPE MOVERS (2) USED	7		2000	286	1

WHEAT (YIELD 5,500 LBS./ACRE)
900 ACRES FOLLOWING TOMATOES, CORN OR ALFALFA ON A 2,900 ACRE FARM
LEASE BASIS - 28% OF GROSS SALES TO LANDOWNER

	HOURS/ ACRE	CASH COSTS PER ACRE				TOTAL
		LABOR	TRACTOR	IMPLT.	MATERIAL	
SEED BED PREPARATION						
STUBBLE DISC (1/2 ACRES)	.11	.77	1.98	1.04	-	3.79
DISC 2X	.26	1.83	3.84	3.42	-	9.10
FERTILIZE	.10	.70	1.48	-	-	2.18
RENT TAG A LONG @ \$3.00/ACRE	-	-	-	-	3.00	3.00
NITROGEN 80 LBS. N @ 21C/LB.	-	-	-	-	16.80	16.80
RIDGE FOR IRRIGATION (1/2 ACRES)	.03	.21	.29	.05	-	.55
LIST UP BEDS (1/2 ACRES)	.13	1.05	1.26	.30	-	2.60
HARROW & ROLL	.08	.56	1.18	.69	-	2.44
MOVE EQUIP., SETUP & SERVICE @ 10% OF LABOR COSTS	-	.44	-	-	-	.44
TOTAL SEED BED PREPARATION COSTS:		<u>4.79</u>	<u>8.05</u>	<u>4.47</u>	<u>19.80</u>	<u>37.11</u>
PLANTING						
DRILL & FERTILIZE	.13	1.05	.81	1.36	-	3.21
SEED 100 LBS. @ \$10.00/CWT.	-	-	-	-	10.00	10.00
STARTER FERT. (16-20 @ 100 LBS.) @ \$11.53/CWT. (1/4 AC.)	-	-	-	-	2.88	2.88
MOVE EQUIPMENT., SETUP & SERVICE @ 20% OF LABOR COSTS	-	.21	-	-	-	.21
TOTAL PLANTING COSTS:		<u>1.25</u>	<u>.81</u>	<u>1.36</u>	<u>12.88</u>	<u>16.30</u>
GROWING:						
HERBICIDE - GROUND RIG 1/2 ACRES	.08	.56	.32	.10	-	.99
AIRPLANE - 1/4 ACRES	-	-	-	-	1.31	1.31
(2,4-D @ 10 OZ/AC. - 3/4 ACRES)	-	-	-	-	1.69	1.69
FERTILIZE - TOPDRESS 1/2 AC. 40# N	-	-	-	-	6.20	6.20
AIRPLANE	-	-	-	-	3.50	3.50

WHEAT CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL

GROWING CONT.						

DITCH (OPEN & CLOSE)	.03	.20	.37	.12	-	.69
IRRIGATE	1.25	7.54	-	-	-	7.54
WATER 1/4 ACRE FT. @ \$10.23	-	-	-	-	2.56	2.56
1/4 ACRE FT. WELL @ \$20.94	-	-	-	-	5.24	5.24
MOVE EQUIP., SETUP & SERVICE @ 15% OF LABOR COSTS	-	.03	-	-	-	.03
TOTAL GROWING COSTS:		<u>7.77</u>	<u>.37</u>	<u>.12</u>	<u>20.49</u>	<u>29.73</u>

MISCELLANEOUS:						

SUPERVISORS SALARIES, OFFICE EXPENSE	-	21.13	-	-	-	21.13
PRODUCTION LOAN INTEREST COST	-	-	-	-	7.23	7.23
PICKUP & TRUCK USE	-	-	-	2.29	-	2.29
MISC. EQUIPMENT USE	-	1.69	.60	.70	-	2.99
EQUIP. LOAN INTEREST COST	-	-	-	-	6.22	6.22
BUILDINGS (TAXES, INS., REPAIRS)	-	-	-	-	.97	.97
TOTAL MISCELLANEOUS COSTS:		<u>22.82</u>	<u>.60</u>	<u>2.99</u>	<u>14.43</u>	<u>40.83</u>

HARVEST:						

COMBINE	.23	1.85	9.87	-	-	11.72
BANKOUT WAGON	.23	1.62	.72	.99	-	3.32
TOTAL HARVEST COSTS:		<u>3.47</u>	<u>10.59</u>	<u>.99</u>		<u>15.04</u>

POST HARVEST COST (STUBBLE DISC)	.22	1.55	3.95	2.08	-	7.58
TOTAL CULTURAL AND HARVEST COSTS:					\$	<u>146.59</u>

SHARE RENT: (28% of gross) 55cwt. @\$6.00/cwt. x.28) (ASCS defic. payment not included)						92.40
TOTAL CASH COSTS:						<u>238.99</u>

WHEAT CONT.

	TOTAL
INVESTMENT:	
BUILDINGS (INTEREST & DEPREC.)	5.69
TRACTORS & IMPLEMENTS (INT. & DEPRE.)	23.13
TOTAL INVESTMENT COSTS:	<u>28.82</u>
TOTAL COSTS PER ACRE:	<u>\$ 267.81</u>
COST PER 100 WEIGHT:	<u>\$ 4.87</u>

MANAGEMENT FEE: (5% of gross income - 55 cwt. @ \$6.00/cwt.) ----- 16.50
 (usual charge for management, not included as a cost in this study)

COST PER CWT. AT VARYING YIELDS AND SHARE RENTALS

CROP YIELD	Crop Share Rental in Percent			
	35%	30%	25%	20%
4,500 lbs.	6.00	5.70	5.40	5.10
5,500 lbs.	5.29	4.99	4.69	4.39
6,500 lbs.	4.80	4.50	4.20	3.90

(Cost in \$ per hundred weight)

NOTE: The estimated crop price of \$6.00/cwt. is the projected free market price and does not include government support. Government crop support payments are subject to a \$50,000 limit per farm.

SAFFLOWER (YIELD 2,250 LBS./ACRE)
 300 ACRES FOLLOWING WING TOMATOES, CORN OR ALFALFA ON A 2,900 ACRE FARM
 LEASE BASIS - 25% OF GROSS SALES TO LANDOWNER

	HOURS/ ACRE	CASH COSTS PER ACRE				TOTAL
		LABOR	TRACTOR	IMPLT.	MATERIAL	
SEED BED PREPARATION						
STUBBLE DISC (1/2 ACRES)	.11	.77	1.98	1.04	-	3.79
DISC 2X	.26	1.83	3.84	3.42	-	9.10
FERTILIZE	.10	.70	1.48	-	-	2.18
RENT TAG A LONG @ \$3.00/ACRE	-	-	-	-	3.00	3.00
NITROGEN 100 LBS. N @ 21C/LB.	-	-	-	-	21.00	21.00
LIST UP BEDS	.26	2.09	2.51	.60	-	5.21
INCORPORATE HERBICIDE	.20	1.61	1.93	3.35	-	6.89
HERBICIDE	-	-	-	-	8.60	8.60
ROLLING CULTIVATOR	.20	1.41	1.24	1.80	-	4.46
MOVE EQUIP., SETUP & SERVICE @ 10% OF LABOR COSTS		.84	-	-	-	.84
TOTAL SEED BED PREPARATION COSTS:		9.26	12.98	10.23	32.60	65.07
PLANTING						
PLANT	.33	2.65	2.05	1.12	-	5.83
SEED 22 LBS. @ \$47/CWT.	-	-	-	-	10.34	10.34
MOVE EQUIPMENT., SETUP & SERVICE @ 20% OF LABOR COSTS	-	.53	-	-	-	.53
TOTAL PLANTING COSTS:		3.18	2.05	1.12	10.34	16.70

SAFFLOWER CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
GROWING:						
DITCH (OPEN & CLOSE)	.03	.18	.37	.12	-	.66
IRRIGATE 1.5 X	1.88	11.34	-	-	-	11.34
WATER 3/8 AC. FT. @ \$10.23/AC.FT.	-	-	-	-	3.84	3.84
3/8 AC. FT. (WELL) @20.94/AC.	-	-	-	-	7.85	7.85
MOVE EQUIP., SETUP & SERVICE @ 15% OF LABOR COSTS	-	.03	-	-	-	.03
TOTAL GROWING COSTS:		<u>11.54</u>	<u>.37</u>	<u>.12</u>	<u>11.69</u>	<u>23.71</u>
MISCELLANEOUS:						
SUPERVISORS SALARIES, OFFICE EXPENSE	-	21.13	-	-	-	21.13
PRODUCTION LOAN INTEREST COST	-	-	-	-	3.21	3.21
PICKUP & TRUCK USE	-	-	-	2.29	-	2.29
MISC. EQUIPMENT USE	-	1.69	.60	.70	-	2.99
EQUIP. LOAN INTEREST COST	-	-	-	-	6.22	6.22
BUILDINGS (TAXES, INS., REPAIRS)	-	-	-	-	.97	.97
TOTAL MISCELLANEOUS COSTS:		<u>22.82</u>	<u>.60</u>	<u>2.99</u>	<u>10.40</u>	<u>36.81</u>
HARVEST:						
COMBINE	.25	2.01	10.73	-	-	12.74
BANKOUT WAGON	.25	1.76	.78	1.07	-	3.61
TOTAL HARVEST COSTS:		<u>3.77</u>	<u>11.51</u>	<u>1.07</u>		<u>16.35</u>
POST HARVEST COSTS: (CHOP STUBBLE)	.25	1.76	2.42	1.00	-	5.18
(STUBBLE DISC)	.22	1.55	3.95	2.08	-	7.58
TOTAL CULTURAL AND HARVEST COSTS:						<u>171.40</u>
SHARE RENT (25% OF GROSS INCOME) (22.5 CWT. @ \$15/CWT. X .25%)						<u>84.38</u>
TOTAL CASH COSTS:						<u>255.77</u>

SAFFLOWER CONT.

					TOTAL
INVESTMENT:					
BUILDINGS (INTEREST & DEPREC.)	-	-	-	-	5.69
TRACTORS & IMPLEMENTS (INT. & DEPRE.)	-	-	-	-	23.13
TOTAL INVESTMENT COSTS:					<u>28.82</u>
TOTAL COSTS PER ACRE:					\$ <u>284.59</u>
COST PER 100 WEIGHT:					\$ 12.65

MANAGEMENT FEE: (5% of gross income = 22.5 cwt. @ \$15/cwt.) ----- \$16.86
 (usual charge for management, not included as a cost in this study)

COST PER CWT AT VARYING YIELDS AND SHARE RENTALS

CROP YIELD	Crop Share Rental in Percent		
	30%	25%	20%
1,500 lbs.	17.85	17.10	16.35
2,250 lbs.	13.40	12.65	11.90
3,000 lbs.	11.17	10.42	9.67

Cost in \$ per hundred weight)