

**SAMPLE  
COST  
OF  
PRODUCTION  
1987  
woodland area**

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

## ACKNOWLEDGEMENTS

This Sample Cost of Production Study, Woodland Area - 1987, 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 wish to thank the many people from industries (equipment, chemical, energy, financial, etc.) for their help in providing information on costs of equipment, money and materials.

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

Prepared by University of California  
Cooperative Extension  
Yolo County, California

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## INTRODUCTION

This 1987 study is a revision of "Sample Cost of Production, 1985, Woodland Area". The basic study is identical to that of 1985. Items revised or updated are: fuel, water, chemical and fertilizer costs, crop share rents and allocation of overhead costs between crops.

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, sunflowers, 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
<hr/>	
Total	2,900

### Alternate Crop

Sunflowers	600
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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 true costs for their own farming operations.

### EQUIPMENT:

Tractors and implements used in this farming operation are listed on pages 32 and 33. Equipment costs are divided into cash and non-cash costs.

Cash costs include: Fuel and oil, repairs, insurance, taxes and production and equipment loan interest.

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 1.2% of the assessed value. For this cost study, assessed value is 55% of original cost.

Original cost x 55% x .012 = 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 x 55% x 0.5% = insurance cost.

#### INTEREST ON INVESTMENT IN EQUIPMENT

Interest on equipment investment is charged at 12.0% simple annual interest. The study uses average cost of equipment (over it's life) to calculate interest on investment in equipment.

Original Cost x 12.0% = interest on equipment

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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 operator's 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.

#### DEPRECIATION

Straight line depreciation is used on both equipment and buildings. (Original cost divided by years of life)

### EQUIPMENT REPAIRS

Repair costs are taken from University of California publication "Farm Machinery Costs", leaflet 2263 (revised May, 1981). Costs are adjusted to 1985 prices. Average repair costs for machinery life are used. When available and appropriate, local grower repair costs are used.

### 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	\$ .45 + \$.045 = \$ .50/gallon
Unleaded gasoline	\$ .89 + \$.09 = \$ .98/gallon

Example: 144 drawbar HP diesel tracklayer:

$$144 \times 75\% \text{ max. pull} = 108 \text{ HP} \times \frac{0.075 \text{ gal.}}{\text{hr.} \times \text{HP}} = 8.1 \text{ gal.} \times \$0.50 = \$4.05/\text{hr.}$$

Example: 150 HP diesel wheel engine (PTO):

$$150 \times 86\% \times 75\% \times 0.065 = 6.29 \text{ gal/hr.} \times \$0.50 = \$3.14/\text{hr.}$$

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 - \$9.99/acre foot.

Well water, pumped - \$20.16/acre foot (power & standby charge)

The average cost is \$15.08 per acre foot on 1/2 canal and 1/2 well usage.

Power cost for pumped water is based on a 450 ft. well, a 125 ft. lift, and a 75 HP turbine operating at 65% efficiency.

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

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

\$20.16	power (including demand charges)
1.42	taxes, insurance, and repairs
7.37	interest and depreciation (20 year life)
-----	
\$28.95	per acre foot.

These costs are 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 in the shop.

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%	
990	- taxes: original cost x 55% x 1.20%	
413	- insurance: original cost x 55% x 0.5%	
1,500	- repairs and maintenance: 1% of original cost	
-----		(\$5.69 fixed cost, interest & depreciation)
\$19,403/2,900 acres	= \$6.69/acre	(\$1.00 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, AUGUST 1986)

LABOR COSTS:

The 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.

<u>Type of Labor</u>	<u>Wages &amp; Benefits</u>	<u>Total Cost Per Hour</u>
General labor	3.75 + 1.28	\$5.03
Type A tractor driver (precision work)	5.25 + 1.79	7.04
Type B tractor driver (general tractor skills)	4.75 + 1.62	6.37
Irrigators	4.15 + 1.41	5.56
Tomato harvester operator	5.25 + 1.79	7.04
Benefits: Social Security )		
Workman's Compensation )		
Holidays )		
Unemployment Insurance )	Total package estimated at 34% of cash wages	
Health Insurance )		
Bonuses )		
Pensions )		



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:

The miscellaneous equipment, miscellaneous labor and supplies, trucks and pickups are used by the overall farm operation. Cost 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 \$77.00	x 400	= \$215,600	\$215,600/1,692,325 = 13%
Wheat	55 cwt.	x \$ 3.75	x 900	= \$185,625	\$185,625/1,692,325 = 11%
Corn	90 cwt.	x \$ 3.55	x 600	= \$191,700	\$191,700/1,692,325 = 11%
Sugar Beets	22 tons	x \$34.00	x 300	= \$224,400	\$224,400/1,692,325 = 13%
Tomatoes	25 tons	x \$50.00	x 700	= \$875,000	\$875,000/1,692,325 = 52%
TOTAL:				\$1,692,325	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 and tax reports  
Office supplies, telephone, postage et.  
Liability insurance  
Attorney's fees and association fees, etc.

B. Miscellaneous Equipment:

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

C. Pickups and truck:

(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 costs may not be cash costs unless a professional manager is hired. Returns for management generally are figured at 5% of gross income or 5% x \$1,692,000 = \$84,616 for this enterprise. This cost is not included in the study.

SHARE RENT LEASING PRACTICES, WOODLAND AREA - REVISED 8/15/1986

Leasing practices and rental rates for agricultural property are continually being adjusted due to changing production and marketing economics, land values, technological advances, and relative bargaining positions of the landlord and tenant. Crop share rents shown here approximate going rates for the area. Individual share leases are negotiated between the landowner and tenant and may vary depending on soil classification, water cost and availability, and crop economics. Within the past two years share rents have been changing for the first time since these cost studies were initiated in 1958. Share rents to the landowner are decreasing because of depressed crop prices and increasing costs of growing and marketing. Rental charges are listed as a percent of gross income to the landowner.

Crop	<u>Percent Share to Landowner</u>			Production Costs Shared by Landowner
	Low	Current Range*	High (Older Leases)	
ALFALFA	15	16 - 22	25	
BARLEY	20	20 - 30	33	Fertilizers and Chemicals
BEANS (single crop)	15	15 - 20	20	
CORN (single crop)	15	16 - 20	25	Drying Costs
MILO (single crop)	15	15	15	Drying Costs
RICE	15	20 - 25	33	Fertilizer, Chemicals, Drying Costs
SAFFLOWER	16	20 - 25	33	
SUNFLOWERS (seed)	15	17.5 - 20	20	
SUNFLOWERS (oil)	20	20	20	
SUGAR BEETS	10 - 13	15 - 17	20	
TOMATOES	13	14 - 16	17	
WHEAT (irrigated)	20	25 - 30	33	
WHEAT (dryland)	20	25	30	Fertilizers and Chemicals

\*Current range within which most share rents are being negotiated.

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	
<b>COSTS TO ESTABLISH:</b>						
<b>SEED BED PREPARATION:</b>						
DISC 1X	.13	.83	1.52	.90	-	3.24
CHISEL 2X	.80	5.10	13.26	2.43	-	20.79
TRIPLANE 2X	.33	2.10	3.85	1.20	-	7.15
PULL CHECKS 1X (BG)	.25	1.59	1.46	.47	-	3.52
SHAPE CHECKS 2X (RENTED SHAPER)	.10	.64	.82	1.00	-	2.46
PULL & CLOSE DITCH	.10	.64	1.17	.24	-	2.04
PRE IRRIGATE 8" WATER (1/2 SURFACE + 1/2 PUMP)	1.25	6.95			10.05	17.00
INCORPORATE HERBICIDE DISC 2X	.44	2.80	5.13	3.03	-	10.97
TRIPLANE MIDDLES 1X	.17	1.08	1.98	.62	-	3.68
HARROW & ROLL 1X	.08	.51	.93	.21	-	1.65
PLANT BRILLION (PLANTER RENTED)	.25	1.59	1.46	.50	-	3.55
SEED 20# PER ACRE @ \$2.10/LB.	-	-	-	-	42.00	42.00
SPRINKLE UP 1/2 ac. @ \$63.16/acre	1.56	8.67	-	17.86	5.04	31.58
<b>WEED CONTROL</b>						
PREPLANT HERBICIDE	-	-	-	-	16.00	16.00
2,4-DB POST EMERGENCE	-	-	-	-	7.88	7.88
AIRCRAFT (POST EMERGE)	-	-	-	-	5.50	5.50
MISC. EQUIPMENT USE	-	.58	.66	.47	-	1.71
MOVE EQUIP., SETUP & SERVICE 10% OF LABOR COST	-	1.75	-	-	-	1.75
PICKUP & TRUCK USE	-	-	-	2.61	-	2.61
<b>TOTAL</b>		<u>34.83</u>	<u>32.24</u>	<u>31.55</u>	<u>86.47</u>	<u>185.10</u>
<b>SUPERVISORS SALARIES, ACCOUNTING OFFICE EXPENSE</b>						
					26.86	26.86
<b>EQUIP. LOAN INTEREST COST</b>						
					4.79	4.79
<b>TOTAL CASH COSTS TO ESTABLISH:</b>						<u>216.74</u>

## ALFALEFA CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
<u>COSTS TO DESTROY:</u>						
STUBBLE DISC BORDERS 1X	.06	.38	.70	.57	-	1.65
PLOW 1X	.40	2.55	3.27	1.61	-	7.43
MOVE EQUIP., SET UP & SERVICE @ 10% OF LABOR COSTS	-	.29	-	-	-	.29
<u>CASH COSTS TO DESTROY:</u>	-	<u>3.22</u>	<u>3.97</u>	<u>2.18</u>	-	<u>9.38</u>
<u>TOTAL CASH COSTS TO ESTABLISH &amp; DESTROY:</u>					\$	226.12
<u>INVESTMENT COSTS:</u>						
INTEREST & DEPRECIATION (tractors & implts.)	-	-	-	-	18.69	18.69
<u>TOTAL ALL COSTS TO ESTABLISH &amp; DESTROY: (per acre)</u>					\$	244.81

ALFALFA HAY (4 YEAR LIFE)  
 400 ACRES ON A 2,900 ACRE FARM  
 LEASE BASIS - 25% OF GROSS SALES TO LANDLORD  
 YIELD 7 TONS

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
<b>CASH GROWING COSTS:</b>						
IRRIGATE 8X @ \$5.56/HR.	5.00	27.80	-	-	-	27.80
WATER (CASH COST 4 AC.FT.) (1/2 PUMP @ \$20.16/AC.FT.) (1/2 SURFACE @ \$9.98/AC.FT.)	-	-	-	-	60.32	60.32
DITCH (OPEN & CLOSE) 2X	.10	.64	1.17	.48	-	2.29
INSECT CONTROL 2.5X						
MATERIALS	-	-	-	-	15.84	15.84
AIRPLANE	-	-	-	-	13.75	13.75
WINTER WEED CONTROL						
MATERIALS	-	-	-	-	26.06	26.06
GROUND APPLICATION (CUSTOM)	-	-	-	-	5.50	5.50
MISC. EQUIPMENT USE	-	.58	.66	.47	-	1.71
PICKUP & TRUCK USE	-	-	-	2.61	-	2.61
MOVE EQUIP., SET UP & SERVICE @ 10% OF LABOR COSTS	-	.12	-	-	-	.12
<b>TOTAL GROWING COSTS:</b>		<u>29.14</u>	<u>1.82</u>	<u>3.57</u>	<u>121.47</u>	<u>156.00</u>
SUPERVISORS SALARIES, ACCOUNTING, OFFICE EXPENSE	-	-	-	-	26.86	26.86
BUILDINGS (TAXES, INS., REPAIRS)	-	-	-	-	1.00	1.00
PRODUCTION LOAN INTEREST COST	-	-	-	-	10.88	10.88
EQUIPMENT LOAN INTEREST COST	-	-	-	-	4.79	4.79
<b>TOTAL PRE HARVEST CASH COSTS:</b>						<u>199.54</u>
HARVEST COSTS: (CONTRACT @ \$25/TON X 7 TONS/ACRE)					175.00	175.00
LAND OWNER SHARE-20% x 7 TONS @ \$77/TON					107.80	107.80
<b>TOTAL CASH COSTS PER YEAR:</b>					\$	<u>482.34</u>

INVESTMENT COSTS:

BUILDINGS (interest & depreciation)	5.69
TRACTORS & IMPLEMENTS (interest & depreciation)	18.69
STAND ESTABLISHMENT @ \$244.15 (depreciation over 4 years)	61.20
(interest on investment)	7.34
<b>TOTAL ALL COSTS PER ACRE:</b>	<b>\$ 575.27</b>

**COSTS PER TON:** \$ 82.18

COST PER TON AT VARIOUS YIELDS AND VARIOUS SHARE RENTS

<u>YIELD</u>	<u>SHARE RENT</u>	<u>COST/TON</u>
5 TONS	25%	\$ 102.74
	20%	\$ 98.89
	15%	\$ 95.04
6 TONS	25%	\$ 93.00
	20%	\$ 89.15
	15%	\$ 82.30
7 TONS	25%	\$ 86.03
	20%	\$ 82.18
	15%	\$ 78.33
8 TONS	25%	\$ 80.81
	20%	\$ 76.96
	15%	\$ 73.11
9 TONS	25%	\$ 76.75
	20%	\$ 72.90
	15%	\$ 69.05

MANAGEMENT FEE @ 5% OF GROSS INCOME: \_\_\_\_\_ \$ 26.95  
(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 (LANDLORD PAYS 20% OF DRYING COSTS)  
 YIELD - 9,000 LBS/ACRE

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
<u>SEED BED PREPARATION:</u>						
<u>FALL:</u>						
PLOW (1/2 ACRES)	.20	1.27	1.64	.81	-	3.72
SUBSOIL & ROLL (1/2 ACRES)	.20	1.27	3.32	.94	-	5.53
TRIPLANE 2X	.34	2.17	3.97	1.23	-	7.37
LIST UP BEDS (1/4 ACRES)	.07	.41	.44	.09	-	.94
HERBICIDE (1/4 ACRES)	-	-	-	-	2.88	2.88
AIRPLANE (1/4 ACRES)	-	-	-	-	1.38	1.38
 <u>SPRING:</u>						
SPRINGTOOTH 2X (3/4 ACRES)	.12	.76	1.40	.58	-	2.75
LIST UP BEDS (3/4 ACRES)	.20	1.24	1.31	.26	-	2.81
INCORPORATE HERBICIDE (1/4 ACRES)	.05	.32	.29	.13	-	.74
HERBICIDE (1/4 ACRES)	-	-	-	-	5.45	5.45
ROLLING CULTIVATOR (ALL ACRES)	.20	1.27	1.17	.52	-	2.96
MOVE EQUIP., SET & SERVICE @ 10% OF LABOR COSTS	-	.87	-	-	-	.87
<u>TOTAL SEEDBED PREPARATION COSTS:</u>		<u>9.60</u>	<u>13.53</u>	<u>4.57</u>	<u>9.70</u>	<u>37.39</u>
 <u>PLANTING:</u>						
PLANT	.33	2.32	1.89	1.68	-	5.88
SEED 18 LBS. @ \$1.25/LB.	-	-	-	-	22.50	22.50
STARTER FERTILIZER @ 15 GALS/ACRE (@ \$1.41/GAL. + \$1.90 ZINC)	-	-	-	-	23.05	23.05
MOVE EQUIPMENT SET UP & SERVICE @20% OF LABOR COSTS	-	.46	-	-	-	.46
<u>TOTAL PLANTING COSTS:</u>		<u>2.79</u>	<u>1.89</u>	<u>1.68</u>	<u>45.55</u>	<u>51.90</u>



## CORN CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
<b>GROWING COSTS:</b>						
BREAK CRUST (10% ACRES)	.02	.13	.12	.05	-	.30
CUIWORM CONTROL (20% ACRES)						
MATERIAL	-	-	-	-	4.50	4.50
AIRPLANE	-	-	-	-	1.10	1.10
ROLLING CULTIVATOR	.17	1.08	.99	.72	-	2.79
FURROW & SIDE DRESS	.29	1.85	1.95	.50	-	4.30
200 LBS. N @ 24c/LB.	-	-	-	-	48.00	48.00
DITCH & CLOSE 2X	.10	.70	1.17	.24	-	2.11
IRRIGATE 6X @ 1.25 HRS./ACRE	7.50	41.70	-	-	-	41.70
WATER 1.5 AC.FT. @ \$9.99/FT.	-	-	-	-	14.99	14.99
1.5 AC.FT. WELL @ \$20.16	-	-	-	-	30.24	30.24
HERBICIDE - GROUND RIG(1/2 ACRES)	.08	.51	.47	.05	-	1.03
2,4-D AMINE @ 8 OZ. (1/2 ACRES)	-	-	-	-	.69	.69
MITICIDE - CUSTOM	-	-	-	-	5.50	5.50
MATERIAL	-	-	-	-	14.97	14.97
MOVE EQUIP., SET UP & SERVICE @ 15% OF LABOR COST	-	6.90	-	-	-	6.90
<b>TOTAL GROWING COSTS:</b>		<u>52.87</u>	<u>4.69</u>	<u>1.57</u>	<u>119.98</u>	<u>179.11</u>
<b>MISCELLANEOUS COSTS:</b>						
SUPERVISORS SALARIES, ACCOUNTING, OFFICE EXPENSE	-	-	-	-	21.46	21.46
PRODUCTION LOAN INTEREST COST	-	-	-	-	21.06	21.06
PICKUP AND TRUCK USE	-	-	-	-	2.09	2.09
MISC. EQUIPMENT USE	-	.47	.52	.38	-	1.37
EQUIPMENT LOAN INTEREST COST	-	-	-	-	10.59	10.59
BUILDING (TAXES, INS., REPAIRS)	-	-	-	-	1.00	1.00
<b>TOTAL MISCELLANEOUS COSTS:</b>		<u>.47</u>	<u>.52</u>	<u>.38</u>	<u>56.20</u>	<u>57.57</u>
<b>TOTAL PRE-HARVEST CASH COSTS:</b>						<u>325.97</u>

## CORN CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
<b>HARVEST COSTS:</b>						
COMBINE	.22	1.55	5.12	2.00	-	8.66
BANKOUT WAGON	.22	1.40	1.29	.26	-	2.95
CHOP STUBBLE	.25	1.59	1.68	1.03	-	4.30
DRYING (1/4 CORN @ \$4.40/TON)	-	-	-	-	4.95	4.95
<b>TOTAL HARVEST COSTS:</b>		4.54	8.09	3.29	4.95	20.87
<b>POST HARVEST COSTS:</b>						
STUBBLE DISC	.22	1.40	3.65	2.07	-	7.12
<b>CASH CULTURAL AND HARVEST COSTS:</b>						353.96
SHARE RENT (20% OF GROSS, LESS 20% OF DRYING AND DOCKAGE)		-		-	61.63	61.63
DOCKAGE, TENNANTS SHARE(2% OF 90 CWT.)		-		-	5.11	5.11
<b>TOTAL CASH COSTS:</b>						420.70
<b>INVESTMENT COSTS:</b>						
BUILDINGS (INTEREST & DEPRECIATION)		-		-	5.69	5.69
TRACTORS & IMPLT. ( INT. & DEPREE.)		-		-	28.63	28.63
<b>TOTAL INVESTMENT COSTS:</b>					34.32	34.32
<b>TOTAL ALL COSTS PER ACRE:</b>						455.02
<b>COST PER CWT.</b>		-		-		5.06

(MANAGEMENT FEE @ 5% OF GROSS INCOME - 90 CWT. @ \$3.55/CWT.) ---- (\$ 15.98)  
 (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	6.47	6.30	6.30
9,000 lbs	5.26	5.06	4.91
11,000 lbs	4.48	4.31	4.13

(Cost in \$ per hundred weight)

NOTE: The estimated crop price of \$3.55/cwt. is the projected free market price and does not include government support estimated at an additional \$1.86 per cwt. Government crop support payments are subject to a \$50,000 limit per farm.

SUGAR BEETS (22 TONS/ACRE - 15% SUGAR)  
 300 ACRES FOLLOWING WHEAT  
 FALL & SPRING PLANTING/FALL HARVEST

	HOURS/ ACRE	COSTS PER ACRE				TOTAL
		LABOR	TRACTOR	IMPLT.	MATERIAL	
<u>FALL GROUND PREPARATION:</u>						
BALE STRAW(CUSTOM - NO CHARGE)						
V DITCH, OPEN & CLOSE	.05	.35	.58	.24	-	1.18
PRE-IRRIGATE	1.25	6.95	-	-	-	6.95
WATER	-	-	-	-	11.31	11.31
MISC(SHOVELS & DAMS)	-	-	-	-	.30	.30
DISC 2X	.26	1.66	3.03	1.79	-	6.48
TRIPLANE 2X	.34	2.17	3.97	1.23	-	7.37
LIST	.25	1.76	1.68	.34	-	3.78
MOVE EQUIP. SET UP & SERVICE @ 10% OF LABOR COSTS	-	.59	-	-	-	.59
<u>TOTAL GROUND PREP. COSTS:</u>		<u>13.48</u>	<u>9.26</u>	<u>3.60</u>	<u>11.61</u>	<u>37.95</u>
<u>PLANTING</u>						
FALL (150 ACRES)						
INCORP. HERB. LX	.17	1.20	1.14	.63	19.79	22.76
APPLY FERT. & PLANT	.17	1.20	.99	.86	-	3.05
SEED 2 LBS.	-	-	-	-	10.00	10.00
STARTER FERT, 10 GALS.	-	-	-	-	9.35	9.35
SPRING (150 ACRES)						
WINTER WEED CONTROL 2X AIR	-	-	-	-	16.44	16.44
LILLISTON 2X	.20	1.41	1.17	.52	-	3.10
PLANT WITHOUT FERTILIZER	.17	1.20	.99	.86	-	3.05
SEED 2 LBS.	-	-	-	-	10.00	10.00
WEED CONTROL, BAND SPRAY	-	-	-	-	15.59	15.59
RECULTIVATE (30 ACRES)	.03	.21	.20	.04	-	.45
REPLANT (30 ACRES)	.03	.21	.18	.14	-	.53
SEED	-	-	-	-	2.00	2.00
MOVE EQUIP. SET UP & SERVICE @ 20% OF LABOR COSTS	-	1.08	-	-	-	1.08
<u>TOTAL PLANTING COSTS:</u>		<u>6.50</u>	<u>4.68</u>	<u>3.06</u>	<u>83.17</u>	<u>97.41</u>

SUGAR BEETS CONT.	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
<u>GROWING:</u>						
CULTIVATE	.33	2.32	2.22	.44	-	4.98
CUTWORM BAIT (1/3 AC.)					3.77	3.77
FLAT ROLL	.12	.76	.70	.14	-	1.61
THIN (ELECTRONIC)	.33	2.32	1.93	2.44	-	6.69
HOE					50.00	50.00
FERTILIZE 90 LBS. N @ 24c/lb.	.33	2.32	2.22	.57	21.60	26.71
LAYBY HERBICIDE	.25	1.76	1.46	.75	9.79	13.76
ROLLING CULTIVATOR	.20	1.41	1.17	.52	-	3.10
V DITCH, OPEN & CLOSE 3X	.15	1.06	1.75	.72	-	3.53
IRRIGATE 7X	8.75	48.65	-	-	-	48.65
WATER	-	-	-	-	60.32	60.32
MISC. (SHOVELS, DAMS)	-	-	-	-	2.00	2.00
<u>INSECT &amp; DISEASE CONTROL</u>						
AIRPLANE 3X	-	-	-	-	16.50	16.50
WORMS 1X	-	-	-	-	18.32	18.32
MILDEW 2X, SULFUR	-	-	-	-	10.40	10.40
MOVE EQUIP. SET UP & SERVICE @ 15% OF LABOR COSTS(-HOE, IRRIG.)	-	1.79	-	-	-	1.79
<u>GROWING COSTS:</u>		<u>62.40</u>	<u>11.45</u>	<u>5.59</u>	<u>192.70</u>	<u>272.14</u>
<u>MISCELLANEOUS COSTS:</u>						
PICKUP & TRUCK USE	-	-	-	-	4.45	4.45
SUPERVISORS' SALARIES, ACCOUNTING OFFICE EXPENSE	-	-	-	-	45.74	45.74
BUILDING (TAXES, INS., REPAIRS)	-	-	-	-	1.00	1.00
MISC. EQUIP. USE	-	.99	1.12	.81	-	2.92
PRODUCTION LOAN INTEREST COST	-	-	-	-	27.11	27.11
EQUIPMENT LOAN INTEREST COST	-	-	-	-	7.31	7.31
<u>MISCELLANEOUS COSTS:</u>		<u>.99</u>	<u>1.12</u>	<u>.81</u>	<u>85.61</u>	<u>88.53</u>
<u>TOTAL PRE-HARVEST CASH COSTS:</u>					\$	<u>496.03</u>

SUGAR BEETS CONT.		TOTALS
HARVEST COSTS: (CUSTOM)(top & dig, \$2/ton; haul, \$2.75/ton)		104.50
PRODUCTION & HARVEST CASH COSTS:	\$	<u>600.53</u>
LANDOWNER SHARE (16% X 22 TONS @ \$34/TON)		119.68
TOTAL CASH COSTS:	\$	<u>720.21</u>
INVESTMENT COSTS:		
BUILDING (interest & depreciation)		5.69
TRACTORS & IMPLTS. (int. & deprec.)		26.48
TOTAL INVESTMENT COSTS:		32.17
TOTAL ALL COSTS/ACRE:	\$	<u>752.38</u>
COST PER TON @ 22 TONS/ACRE:	\$	34.20

COST SUMMARY:			
	CASH	NON-CASH	TOTAL
COST PER ACRE (22 ton yield, 15% sugar)			
GROWING	496.03	32.17	528.20
HARVEST	104.50	-	104.50
LANDOWNER	119.68	-	119.68
TOTAL:	\$ <u>720.21</u>	<u>32.17</u>	<u>752.38</u>

MANAGEMENT FEE: (5% of gross income, 22 tons x \$34/ton) \$ 37.40  
 (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	40.89	39.53	38.17
22 TONS	35.56	34.20	32.84
26 TONS	31.87	30.51	29.15

TOMATOES (25 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				TOTAL
		LABOR	TRACTOR	IMPLT.	MATERIAL	
<b>SEED BED PREPARATION:</b>						
<b>FALL WORK:</b>						
PLOW 1/2 ACRES @ .4 HR/ACRE	.20	1.27	1.64	.81	-	3.72
LASERPLANE 10% ACRES @ \$120/AC.	-	-	-	-	12.00	12.00
SUBSOIL 1/2 AC. 2X AFTER WHEAT	.40	2.55	6.63	1.89	-	11.07
SUBSOIL 1/2 AC. 1X AFTER CORN	.20	1.27	3.32	.94	-	5.53
TRIPLANE 2X	.34	2.17	3.97	1.23	-	7.37
DISC 1X	.13	.83	1.52	.90	-	3.24
LIST (ALL FALL BEDDED)						
WITHOUT NEMATICIDE (3/4 AC.)	.19	1.34	1.28	.25	-	2.87
W/NEMATICIDE (1/4 ACRES)	.09	.63	.60	.16	28.13	29.52
FLAT ROLL TO SHAPE	.12	.76	.70	.14	-	1.61
POWER INCORP. TO SHAPE (1/3 AC.)	.25	1.76	2.05	.83	-	4.64
FALL APPLIED HERBICIDE (1/2 AC.)	.06	.42	.35	.06	12.24	13.08
GENERAL HERBICIDE, GROUND RIG	.16	1.13	1.40	.17	21.88	24.58
<b>SPRING WORK:</b>						
CULTIVATE (2/3 AC.) 1X	.09	.63	.60	.12	-	1.36
RE-CULTIVATE (1/3 AC.) 1X	.05	.35	.34	.07	-	.76
MOVE EQUIP. SET UP & SERVICE @ 10% OF LABOR COSTS	-	1.51	-	-	-	1.51
<b>TOTAL LAND PREPARATION COSTS:</b>		<u>16.63</u>	<u>24.39</u>	<u>7.57</u>	<u>74.25</u>	<u>122.84</u>

## TOMATOES CONT.

## CASH COSTS PER ACRE

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
<b>PLANTING:</b>						
PLANT 2 ROWS (2 PEOPLE)						
LIGHTWEIGHT TRACKLAYER 20%	.07	.84	.61	.36	-	1.82
WHEEL TRACTOR 80%	.26	3.14	1.49	1.34	-	5.96
SEED 2/3 HYBRID @ 1/2 LB.	-	-	-	-	61.67	61.67
1/3 O.P. @ 1 LB.	-	-	-	-	6.67	6.67
STARTER FERT. 18 GALS./AC.	-	-	-	-	26.92	26.92
HERB., SURFACE SPRAY 40% AREA	.12	.84	.70	.13	21.55	23.22
CRUST BREAKER FOR GERMINATION	.40	2.82	2.34	.54	-	5.69
REPLANT (SEED ONLY) 10% AC.	.03	.36	.17	.15	6.67	7.36
MOVE EQUIP., SET UP & SERVICE 20% OF LABOR COSTS	-	1.60	-	-	-	1.60
<b>TOTAL PLANTING COSTS:</b>		<u>9.61</u>	<u>5.31</u>	<u>2.52</u>	<u>123.48</u>	<u>140.91</u>
<b>GROWING:</b>						
SPRINKLE IRRIG. STAND ESTAB.						
1/6 AC. NATURAL RAINFALL	-	-	-	-	-	-
1/6 AC. EARLY: 1X (33 HRS.)	.36	2.00	-	.79	.21	3.00
1/3 AC. MID-SEASON: 2.5X (163 hr.)	1.80	10.01	-	3.93	1.05	14.99
1/3 AC. LATE: 3X (196 hrs.)	2.16	12.01	-	4.72	1.26	17.99
CULTIVATE	.25	1.76	1.68	.34	-	3.78
THIN (ELECTRONIC) 1/3 AC.	.11	.77	.64	.81	-	2.23
HOE (HAND WEED)	-	-	-	-	70.00	70.00
FERT. 125 LB. @ 24c	.33	2.32	2.22	.57	30.00	35.11
V DITCH, OPEN & CLOSE 3X	.15	1.06	1.75	.72	-	3.53
IRRIGATE 7X @ 1.25 HR./AC.	8.75	48.65	-	-	-	48.65
WATER 4 AC. FT.	-	-	-	-	60.32	60.32
MISC. EQUIP. (SHOVELS, DAMS)	-	-	-	-	2.00	2.00
LAYBY HERBICIDE	.40	2.82	3.27	1.49	5.81	13.39
CULTIVATE	.29	2.04	1.95	.39	-	4.38
CULTIVATE WITH HI-CROP	.33	2.32	1.89	.44	-	4.65
VINE TRAINER 1/2 AC.	.20	1.41	1.14	.23	-	2.78
MOVE EQUIP., SETUP & SERVICE @ 15% OF LABOR COSTS	-	2.18	-	-	-	2.18
<b>TOTAL GROWING COSTS:</b>		<u>89.35</u>	<u>14.54</u>	<u>14.44</u>	<u>170.64</u>	<u>288.97</u>



## TOMATOES CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				TOTAL
		LABOR	TRACTOR	IMPLT.	MATERIAL	
<u>GROWING - INSECT CONTROL:</u>						
AIRPLANE APPLICATION 3.5X @ \$5.50	-	-	-	-	19.25	19.25
FLEA BEETLE 1/4 AC.	-	-	-	-	1.48	1.48
CUTWORMS, BAIT 1/4 AC.	-	-	-	-	5.60	5.60
WORM CONTROL 2X	-	-	-	-	29.87	29.87
SULFUR DUST 35 LBS.	-	-	-	-	4.55	4.55
MOLD CONTROL WITH INSECTICIDE 1/3ac. 2X + MILDEW 1/2X	-	-	-	-	16.25	16.25
ETHEPHON 1/5 AC.	.03	.21	.17	.03	7.25	7.66
WHITWASH 1/5 AC. CUSTOM	-	-	-	-	6.40	6.40
MOVE EQUIP. SET UP & SERVICE 15% OF LABOR COSTS	-	.03	-	-	-	.03
<u>TOTAL - INSECT CONTROL COSTS:</u>		.24	.17	.03	90.65	91.10
<u>MISCELLANEOUS:</u>						
PICKUP & TRUCK USE	-	-	-	-	4.96	4.96
SUPERVISORS SALARIES, ACCOUNTING, OFFICE EXPENSE	-	-	-	-	50.96	50.96
MISC. EQUIP. USE	-	1.11	1.24	.90	-	3.25
BUILDING (TAXES, INS., REPAIRS)	-	-	-	-	.67	.67
PRODUCTION LOAN INTEREST COST	-	-	-	-	31.10	31.10
EQUIPMENT LOAN INTEREST COST	-	-	-	-	14.32	14.32
CROP INSURANCE, ALL ACRES	-	-	-	-	60.00	60.00
<u>TOTAL - MISCELLANEOUS COSTS:</u>		1.11	1.24	.90	162.01	165.26
<u>TOTAL, PRE-HARVEST CASH COSTS:</u>					\$	809.08

## TOMATOES CONT.

## CASH COSTS PER ACRE

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
<b>HARVEST EXPENSE:</b>						
NEW MACHINE 3/4 AC. (7 AC./SHIFT) (TWO 10 HR. SHIFTS)	1.07	-	31.10	-	-	31.10
OLD MACHINE 1/4 AC. (7 AC./SHIFT) (ONE 10 HR. SHIFT, PART SEASON)	.36	-	17.96	-	-	17.96
DRIVER, HARVESTER	1.43	10.07	-	-	-	10.07
6 SORTERS	8.58	43.16	-	-	-	43.16
4 DOLLIES (5TH WHEELS)	2.50	-	-	.80	-	.80
(2)TRACTOR & DRIVER 3/4 AC.	2.14	13.63	14.38	-	-	28.01
(1)TRACTOR & DRIVER 1/4 AC.	.36	2.29	2.94	-	-	5.24
AVENUE OPENER 7% OF ACRES (TRACTOR & DRIVER)	.10	.70	.82	.35	-	1.87
LIGHTING SYSTEM	.54	-	-	2.03	-	2.03
MISC.EQUIP.\$40/DAY X 18 AC./DAY	-	-	-	-	2.22	2.22
MISC. SUPPLIES \$25/DAY	-	-	-	-	1.39	1.39
TOILET FACILITIES	-	-	-	-	.37	.37
INSPECTION FEES	-	-	-	-	5.75	5.75
MISC. (ASSN., CTRI, LF.HOP., 26c/TON)	-	-	-	-	6.50	6.50
REJECT LOADS 1% DIRECT HARV.COSTS	-	-	-	-	1.38	1.38
PICKUP & TRUCK USE	-	-	-	-	2.48	2.48
SUPERVISORS SALARIES, ACCOUNTING, OFFICE EXPENSE	-	-	-	-	25.48	25.48
BUILDING (TAXES, INS., REPAIRS)	-	-	-	-	.33	.33
MISC. EQUIP. USE (LOW BED, ETC)	-	.55	.62	.45	-	1.62
EQUIP. LOAN INTEREST COST	-	-	-	-	14.32	14.32
MOVE EQUIP., SET UP, SERVICE & CLEAN @ 15% OF LABOR (-SORTERS)	-	4.09	-	-	-	4.09
<b>TOTAL CASH HARVEST COSTS:</b>		<u>74.49</u>	<u>67.83</u>	<u>3.63</u>	<u>60.22</u>	<u>206.17</u>

TOTAL HARVEST COSTS	
CASH HARVEST COSTS	206.17
EQUIP. (INT. & DEPREC.)	90.32
<b>TOTAL:</b>	<b>\$ 296.49</b>

## TOMATOES CONT.

COSTS/ACRE

PRODUCTION AND HARVEST CASH COSTS:	1015.25
LANDOWNER SHARE (15% X \$50 X 25 TONS)	187.50
<b>TOTAL CASH COSTS:</b>	<b>\$ 1202.75</b>
<b>INVESTMENT:</b>	
BUILDINGS (interest & depreciation)	5.69
TRACTORS & IMPLTS. (int. & depreciation)	144.85
<b>TOTAL INVESTMENT COSTS:</b>	<b>150.54</b>
<b>GRAND TOTAL ALL COSTS PER ACRE:</b>	<b>\$ 1353.29</b>
<b>TOTAL COST/TON @ 25 TONS/AC.</b>	<b>\$ 54.13</b>

## SUMMARY

DOLLARS PER ACRE @ 25 TONS PER ACRE

	CASH	NON-CASH	TOTAL
GROWING	\$ 809.08	60.22	869.29
HARVEST	\$ 206.17	90.32	296.49
LANDOWNER	\$ 187.50		187.50
<b>TOTAL COST PER ACRE:</b>	<b>\$ 1202.75</b>	<b>150.54</b>	<b>1353.29</b>

COST/TON AT VARYING YIELDS &amp; SHARE RENTS

## SHARE RENTS

YIELDS	17%	15%	13%
20 tons	66.79	65.79	64.79
25 tons	55.13	54.13	53.13
30 tons	47.36	46.36	45.36

MANAGEMENT FEE @ 5% OF GROSS INCOME: \$ 62.50  
 (usual charge for management not included in this study)

WHEAT  
 900 ACRES FOLLOWING TOMATOES, CORN OR ALFALFA ON A 2,900 ACRE FARM  
 LEASE BASIS - 25% OF GROSS SALES TO LANDOWNER  
 YIELD - 5,500 LBS/ACRE

	HOURS/ ACRE	CASH COSTS PER ACRE				TOTAL
		LABOR	TRACTOR	IMPLT.	MATERIAL	
<u>SEED BED PREPARATION</u>						
DISC 2X	.26	1.66	3.03	1.79	-	6.48
FERTILIZE (1/2 ACRES)	.05	.32	.58	-	-	.90
RENT TAG A LONG @ \$3.00/ACRE	-	-	-	-	1.50	1.50
NITROGEN 80 LBS. N @ 24C/LB.	-	-	-	-	9.60	9.60
RIDGE FOR IRRIGATION (1/2 ACRES)	.03	.19	.20	.10	-	.49
LIST UP BEDS (1/2 ACRES)	.13	.83	.87	.17	-	1.88
HARROW & ROLL	.08	.51	.93	.41	-	1.86
MOVE EQUIP., SETUP & SERVICE @ 10% OF LABOR COSTS	-	.35	-	-	-	.35
<u>TOTAL SEED BED PREPARATION COSTS:</u>		<u>3.85</u>	<u>5.62</u>	<u>2.48</u>	<u>11.10</u>	<u>23.06</u>
<u>PLANTING</u>						
DRILL & FERTILIZE	.13	.83	.76	.93	-	2.52
SEED 100 LBS. @ \$8.00/CWT.	-	-	-	-	8.00	8.00
STARTER FERT. (16-20 @ 100 LBS.) @ \$11.05/CWT. (1/4 AC.)	-	-	-	-	2.76	2.76
MOVE EQUIPMENT., SETUP & SERVICE @ 20% OF LABOR COSTS	-	.17	-	-	-	.17
<u>TOTAL PLANTING COSTS:</u>		<u>.99</u>	<u>.76</u>	<u>.93</u>	<u>10.76</u>	<u>13.45</u>
<u>GROWING:</u>						
HERBICIDE - GROUND RIG 1/4 ACRES	.04	.25	.23	.03	-	.52
AIRPLANE - 1/2 ACRES	-	-	-	-	2.75	2.75
(2,4-D @ 10 OZ/AC. - 3/4 AC.)	-	-	-	-	1.18	1.18
FERTILIZE - TOPDRESS (1/2 ACRES)	-	-	-	-	6.20	6.20
(40 LBS. N @ 31c/LB.)	-	-	-	-	2.25	2.25
AIRPLANE	-	-	-	-	-	-

## WHEAT CONT.

## CASH COSTS PER ACRE

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
<u>GROWING CONT.</u>						
DITCH (OPEN & CLOSE)	.03	.16	.29	.06	-	.51
IRRIGATE (1/2 AC. @ 1.25 HR.AC.)	.63	3.48	-	-	-	3.48
WATER 1/4 ACRE FT. @ \$9.99	-	-	-	-	1.25	1.25
1/4 ACRE FT. WELL @ \$20.16	-	-	-	-	2.52	2.52
MOVE EQUIP., SETUP & SERVICE @ 15% OF LABOR COSTS	-	.02	-	-	-	.02
<b>TOTAL GROWING COSTS:</b>		<u>3.91</u>	<u>.53</u>	<u>.09</u>	<u>16.14</u>	<u>20.67</u>
<u>MISCELLANEOUS:</u>						
SUPERVISORS SALARIES, OFFICE EXPENSE	-	13.45	-	-	-	13.45
PRODUCTION LOAN INTEREST COST	-	-	-	-	5.95	5.95
PICKUP & TRUCK USE	-	-	1.31	-	-	1.31
MISC. EQUIPMENT USE	-	.29	.33	.24	-	.86
EQUIP. LOAN INTEREST COST	-	-	-	-	5.87	5.87
BUILDINGS (TAXES, INS., REPAIRS)	-	-	-	-	1.00	1.00
<b>TOTAL MISCELLANEOUS COSTS:</b>		<u>13.75</u>	<u>1.64</u>	<u>.24</u>	<u>12.82</u>	<u>28.44</u>
<u>HARVEST:</u>						
COMBINE	.23	1.62	5.35	-	-	6.97
BANKOUT WAGON	.23	1.47	.67	.28	-	2.41
<b>TOTAL HARVEST COSTS:</b>		<u>3.08</u>	<u>6.03</u>	<u>.28</u>	<u>-</u>	<u>9.39</u>
<u>POST HARVEST COSTS:</u>						
STUBBLE DISC	.22	1.40	3.65	2.07	-	7.12
<b>TOTAL CULTURAL AND HARVEST COSTS:</b>					\$	<u>102.12</u>
SHARE RENT (25% OF GROSS INC.) (55 CWT. @ \$3.75/CWT. X .25) (ASCS defic. payment not included)						51.56
<b>TOTAL CASH COSTS:</b>					\$	<u>153.69</u>

WHEAT CONT.

	TOTAL
<u>INVESTMENT:</u>	
BUILDINGS (INTEREST & DEPREC.)	5.69
TRACTORS & IMPLEMENTS (INT. & DEPRE.)	21.14
<u>TOTAL INVESTMENT COSTS:</u>	<u>26.83</u>
<u>TOTAL COSTS PER ACRE:</u>	<u>\$ 180.52</u>
<u>COST PER 100 WEIGHT:</u>	<u>\$ 3.28</u>

MANAGEMENT FEE: (5% of gross income - 55 cwt. @ \$3.75/cwt.) \$10.31  
 (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%
4,500 lbs	3.99	3.80	3.62
5,500 lbs	3.47	3.28	3.09
6,500 lbs	3.11	2.92	2.73

(Cost in \$ per hundred weight)

NOTE: The estimated crop price of \$3.75/cwt. is the projected free market price and does not include government support estimated at an additional \$3.50 per cwt. Government crop support payments are subject to a \$50,000 limit per farm.

SUNFLOWERS FOR OIL  
 600 ACRES FOLLOWING WHEAT, CORN, ALFALFA OR SUGAR BEETS ON A 2900 ACRE FARM  
 LEASE BASIS - 20% OF GROSS SALES TO LANDLORD  
 YIELD - 2,400 LBS/ACRE

	HOURS/ ACRE	CASH COSTS PER ACRE				TOTAL
		LABOR	TRACTOR	IMPLT.	MATERIAL	
<u>SEED BED PREPARATION:</u>						
<u>FALL:</u>						
PLOW (1/2 ACRES)	.20	1.27	1.64	.81	-	3.72
SUBSOIL & ROLL (1/2 ACRES)	.20	1.27	3.32	.94	-	5.53
TRIPLANE 2X	.34	2.17	3.97	1.23	-	7.37
LIST UP BEDS (1/2 ACRES)	.13	.83	.87	.17	-	1.88
 <u>SPRING:</u>						
SPRINGTOOTH 2X (1/2 ACRES)	.08	.51	.93	.39	-	1.83
LIST UP BEDS (1/2 ACRES)	.13	.83	.87	.17	-	1.88
INCORPORATE HERBICIDE	.20	1.27	1.17	.52	-	2.96
HERBICIDE	-	-	-	-	5.71	5.71
ROLLING CULTIVATOR	.20	1.27	1.17	.52	-	2.96
MOVE EQUIP., SET & SERVICE @ 10% OF LABOR COSTS	-	.94	-	-	-	.94
 <u>TOTAL SEEDBED PREPARATION COSTS:</u>		<u>55.60</u>	<u>13.94</u>	<u>4.76</u>	<u>5.71</u>	<u>34.78</u>
 <u>PLANTING:</u>						
PLANT SEED - 3.5 LBS. @ \$4.00/LB.	.33	2.32	1.89	1.68	-	5.88
	-	-	-	-	14.00	14.00
MOVE EQUIPMENT, SET UP & SERVICE @ 20% OF LABOR COSTS	-	.46	-	-	-	.46
 <u>TOTAL PLANTING COSTS:</u>		<u>2.79</u>	<u>1.89</u>	<u>1.68</u>	<u>14.00</u>	<u>20.35</u>

## SUNFLOWERS CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
<u>GROWING COSTS:</u>						
CUTWORM CONTROL (10% OF ACRES)						
MATERIAL	-	-	-	-	2.25	2.25
AIRPLANE	-	-	-	-	.55	.55
ROLLING CULTIVATOR	.17	1.08	.99	.72	-	2.79
FURROW & SIDE DRESS	.29	1.85	1.95	.50	-	4.30
100 LBS. N @ 24c/LB.	-	-	-	-	24.00	24.00
DITCH & CLOSE 2X	.10	.70	1.17	.24	-	2.11
IRRIGATE 4X @ 1.25 HRS./ACRE	5.00	27.80	-	-	-	27.80
WATER 1.0 AC.FT.@ \$9.99/FT.	-	-	-	-	9.99	9.99
1.0 AC.FT.@ \$20.16	-	-	-	-	20.16	20.16
HEADMOTH CONTROL 15% AC.						
AIRPLANE	-	-	-	-	.83	.83
MATERIAL	-	-	-	-	1.73	1.73
POLLINATION - BEES	-	-	-	-	2.67	2.67
MOVE EQUIP.,SET UP & SERVICE @ 15% OF LABOR COST	-	4.72	-	-	-	4.72
TOTAL GROWING COSTS:		36.15	4.11	1.46	62.18	103.90
<u>MISCELLANEOUS COSTS:</u>						
SUPERVISORS SALARIES, ACCOUNTING, OFFICE EXPENSE	-	-	-	-	21.46	21.46
PRODUCTION LOAN INTEREST COST	-	-	-	-	11.60	11.60
PICKUP AND TRUCK USE	-	-	-	-	2.09	2.09
MISC. EQUIPMENT USE	-	.47	.52	.38	-	1.37
EQUIPMENT LOAN INTEREST COST	-	-	-	-	9.87	9.87
BUILDING (TAXES, INS., REPAIRS)	-	-	-	-	1.00	1.00
MISCELLANEOUS CASH COSTS:		.47	.52	.38	46.02	47.39
PREHARVEST CASH COSTS:						206.42



## SUNFLOWERS CONT.

	HOURS/ ACRE	CASH COSTS PER ACRE				
		LABOR	TRACTOR	IMPLT.	MATERIAL	TOTAL
<u>HARVEST COSTS:</u>						
COMBINE	.31	2.18	7.21	1.25		10.65
BANKOUT WAGON	.31	1.97	1.81	.37	-	4.16
<u>TOTAL HARVEST COSTS:</u>		<u>4.16</u>	<u>9.03</u>	<u>1.62</u>	<u>.00</u>	<u>14.81</u>
<u>POST HARVEST COSTS:</u>						
STUBBLE DISC	.22	1.40	3.65	2.07	-	7.12
<u>TOTAL CULTURAL AND HARVEST COSTS:</u>						<u>228.35</u>
SHARE RENT 20% OF GROSS (2400 LBS. @ 12c/lb)					57.60	57.60
<u>TOTAL CASH COSTS:</u>						<u>285.95</u>
<u>INVESTMENT COSTS:</u>						
BUILDINGS (INTEREST & DEPRECIATION)		-		-	5.69	5.69
TRACTORS & IMPLT. ( INT. & DEPRE.)		-		-	37.45	37.45
<u>TOTAL INVESTMENT COSTS:</u>					<u>43.14</u>	<u>43.14</u>
<u>TOTAL ALL COSTS PER ACRE:</u>						<u>329.09</u>
<u>COST PER CWT.</u>		-		-		<u>13.71</u>

(Management fee @ 5% of gross income - 24 cwt. @ \$12/cwt.) \_\_\_\_\_ \$14.40  
 (usual charge for management, not included as a cost in this study)

SUNFLOWERS CONT:

COST PER CWT. AT VARYING YIELDS AND SHARE RENTALS

CROP YIELD	Crop Share Rental in Percent		
	25%	20%	15%
2,000 lbs	16.57	15.97	15.37
2,400 lbs	14.31	13.71	13.11
2,800 lbs	12.70	12.10	11.50

(Cost in \$ per hundred weight)

COSTS OF EQUIPMENT - YOLO CO  
(Annual & Hourly Co

EQUIPMENT	SIZE	TRACTOR USED	YEARS LIFE	ACRES/HOUR	ORIGINAL COST	DEPRECIATION	INTEREST COST
TRACTOR (USED) DRAWBAR HP	144 HP		15		47000	3133	2820
TRACKLAYER (NEW)	125 HP		15		114000	7600	6840
TRACKLAYER (NEW)	125 HP		15		114000	7600	6840
TRACKLAYER, LIGHTWEIGHT	50 HP		15		12000	800	720
WHEEL TRACTOR - (PTO HP.)	165 HP		10		63700	6370	3822
WHEEL TRACTOR	135 HP		10		54000	5400	3240
WHEEL TRACTOR	135 HP		10		54000	5400	3240
WHEEL (HIGH CLEARANCE)	110 HP		10		45700	4570	2742
WHEEL TRACTOR (USED)	90 HP		10		5000	500	300
WHEEL TRACTOR (USED)	90 HP		10		5000	500	300
SUBSOILER (3 SHANK X 24")	8'	T144	15	2.50	8000	533	480
TRIPLANE	16 X 40'	T125	15	6.00	20000	1333	1200
OFFSET DISC	26'	T125	15	8.00	18000	1200	1080
STUBBLE DISC	14'	T144	15	4.50	24000	1600	1440
SPRINGTOOTH	32'	T125	15	12.00	7800	520	468
SWEDE HARROW & CART	32'	T125	15	12.00	7600	507	456
RING ROLLER (AFTER HARROWS)	32'		15	12.00	5500	367	330
ROLLING CULTIVATORS (2)	16'	W90	15	5.00	3000	200	180
LARGE ROLLER (36" DIAMETER)	12'		15	2.50	7800	520	468
INCORPORATOR (2)	15'	W135-165	10	2.50	21000	2100	1260
CULTIVATOR SLEDS (6)	16'	W90-135	15	3.50	16200	1080	972
CORN-BEET PLANTERS(6)ON SLED		W90-135	15	3.00	6900	460	414
TOMATO PLANTERS (6) ON SLED		W90-135	15	3.00	6900	460	414
V DITCHER (USED)		T125	15	20.00	4800	320	288
GRAIN DRILL	20'	W90	15	8.00	11400	760	684
PLOW 2 WAY X 5-16 BOTTOMS	5-16	W165	15	2.50	10150	677	609
SPRAYER SYSTEM		W90	15		500	33	30
SADDLE TANKS (4 SETS)		W135	15		6800	453	408
GRAIN COMBINE 20' HEADER	20'		10	4.50	84300	8430	5058
CORN HEADER - 8 ROW	8 ROW	COMB.	10	5.00	21300	2130	1278
TOMATO HARVESTOR (NEW)			5	.70	140000	28000	8400
TOMATO HARVESTOR (USED)			5	.70	60000	12000	3600
TRUCKS - 2 TON FLATBED (2 USED)			10		16000	1600	960
PICKUPS 3/4 TON (2)			5		20000	4000	1200
PICKUPS, COMPACT (2)			5		15000	3000	900
LOWBED W/TRACTOR (USED)			15		15000	1000	900

COSTS OF EQUIPMENT CONT.

COSTS OF EQUIPMENT - YOLO CC  
(Annual & Hourly Cc

EQUIPMENT	SIZE	TRACTOR USED	YEARS LIFE	ACRES/HOUR	ORIGINAL COST	DEPRECIATION	INTEREST COST
IMPLEMENT CARRIER		3/4 TON	15		5000	333	300
ELECTRONIC THINNERS (2)		W90	10	3.00	10000	1000	600
B.G. SCRAPER	10'	W90	10	4.00	2500	250	150
DOLLIES (4) (FOR BULK TRAILERS)		W90	15		3400	227	204
VINE DIVERTER		W135	15		5000	333	300
BANKOUT WAGON		W90	15		7800	520	468
DITCH CLOSER		T125	15	20.00	5800	387	348
ANGLE BLADE		W135	15		2600	173	156
SMALL DISC	9'	T125	15		6500	433	390
VINE TRAINER		W135	15	4.00	2500	167	150
GENERATOR, LIGHTS (USED)			15	.00	4500	300	270
FLAT ROLLER	16'	W90	15	8.00	2500	167	150
ALLOWAY	16'	W135	10	6.00	6000	600	360
FLAIL CHOPPER 15'	15'	W135	10	4.00	8100	810	486
DISC RIDGER		W135	15	17.00	4500	300	270
FUEL WAGONS		3/4 TON	10		2800	280	168
CLOSED MIX SPRAY SYSTEM			10		2000	200	120

TOTAL ORIGINAL COST OF EQUIPMENT:

1153850

SPRINKLER EQUIPMENT:

1/4 MILE WHEEL MOVES, COMPLETE (6)			10	2.4 ac/	81000	8100	4860
1-1/2 MILES, 8" MAIN LINE			10	1/4 MI.	38016	3802	2281
800 GPM PUMP WITH DIESEL ENGINE			10	line/set	13000	1300	780
ADDITIONAL PIPE MOVERS (2 USED)			7		2000	286	120

IRRIGATION PUMPS & WELLS:

134016

(Not used in this cost study, listed only to show cost of pumping as compared to surface water

WELL, 450 DEPTH, 16" OD CASING (gravel pack)			20	1350 (gpm)	20800	1040	1248
75 HP PUMP, HOOKUP, WELL DEVELOPMENT			20		17400	870	1044

ESTIMATED HOURLY EQUI  
(adjusted for standard hours of use & based

EQUIPMENT	SIZE	YEARS LIFE	ACRES/ HOUR	ORIGINAL COST	REPAIRS/ HOUR	HOURS/ YEAR	FUEL GALS/HR
TRACTOR (USED) DRAWBAR HP	144 HP	15		47000	11.82	1200	8.10
TRACKLAYER (NEW)	125 HP	15		114000	7.03	1200	7.03
TRACKLAYER (NEW)	125 HP	15		114000	7.03	1200	7.03
TRACKLAYER, LIGHTWEIGHT	50 HP	15		12000	4.92	250	2.81
WHEEL TRACTOR - (PTO HP.)	165 HP	10		63700	4.21	1200	6.92
WHEEL TRACTOR	135 HP	10		54000	3.57	1200	5.66
WHEEL TRACTOR	135 HP	10		54000	3.57	1200	5.66
WHEEL (HIGH CLEARANCE)	110 HP	10		45700	3.01	1200	4.61
WHEEL TRACTOR (USED)	90 HP	10		5000	3.92	1200	3.77
WHEEL TRACTOR (USED)	90 HP	10		5000	3.92	1200	3.77
SUBSOILER (3 SHANK X 24")	8'	15	2.50	8000	2.92	500	
TRIPLANE	16 X 40'	15	6.00	20000	3.31	500	
OFFSET DISC	26'	15	8.00	18000	6.57	500	
STUBBLE DISC	14'	15	4.50	24000	8.76	500	
SPRINGTOOTH	32'	15	12.00	7800	3.56	500	
SWEDE HARROW & CART	32'	15	12.00	7600	1.40	500	
RING ROLLER (AFTER HARROWS)	32'	15	12.00	5500	2.25	500	
ROLLING CULTIVATOR	16'	15	5.00	1500	2.54	250	
LARGE ROLLER (36" DIAMETER)	12'	15	2.50	7800	1.56	500	
INCORPORATOR	15'	10	2.50	10500	2.94	250	
CULTIVATOR SLED	16'	15	3.50	2700	1.28	400	
CORN-BEET PLANTERS(6) ON SLED		15	3.00	6900	4.47	300	
TOMATO PLANTERS (6) ON SLED		15	3.00	6900	4.47	300	
V DITCHER (USED)		15	20.00	4800	2.44	300	
GRAIN DRILL	20'	15	8.00	11400	6.28	250	
PLOW 2 WAY X 5-16 BOTTOMS	5-16	15	2.50	10150	3.72	300	
SADDLE TANKS		15		1700	.36	500	
GRAIN COMBINE 20' HEADER	20'	10	4.50	84300	18.06	500	6.01
CORN HEADER - 8 ROW	8 ROW	10	5.00	21300	7.56	250	
ELECTRONIC THINNER		10	3.00	5000	6.86	250	
VINE DIVERTER		15		5000	2.86	100	
BANKOUT WAGON		15		7800	1.00	500	
DITCH CLOSER		15	20.00	5800	2.11	350	
VINE TRAINER		15	4.00	2500	1.00	150	
FLAT ROLLER	16'	15	8.00	2500	1.00	250	
ALLOWAY	16'	10	6.00	6000	3.65	250	
FLAIL CHOPPER 15'	15'	10	4.00	8100	3.60	250	