PRODUCTION COSTS AND RETURNS OF ALTERNATIVE CROPS ON RICE LAND

AGRICULTURAL EXTENSION SERVICE

UNIVERSITY OF CALIFORNIA

COLUSA COUNTY

January 1972

Assumed price per cwt. of wheat, barley and sorghum is $2.20, and safflower, $4.50. Yield range is from 10 to 50 cwt. per acre.

Operation	hrs/Ac	Total Cost of Operation for Alternative Crops ($/Acre) Wheat or Barley	Safflower	Grain Sorghum
Stubble Disc	0.30	2.77	2.77	2.77
Landplane	0.30	2.60	2.60	2.60
Spring tooth	0.13	1.07	1.07	1.07
Disc	0.19	1.61	1.61	1.61
Preplant Herbicide		-	5.25	-
Fertilize				
Application Cost	0.14	0.98	0.98	0.98
Nitrogen @ 7¢/lb.		5.60 (80 N)	5.60 (80 N)	11.20 (160 N)
Planting				
Plant (drill)	0.24	1.42	1.42	1.42
Seed		4.25 (100 lbs/Ac)	4.00 (25 lbs/Ac)	4.50 (15 lbs/Ac)
Irrigate				
Water @ $2.50/Ac.ft.		1.25 (0.5 Ac.ft.)	-	7.50 (3 Ac.ft.)
Labor and Transportation		2.10 (1 hr/Ac)	-	4.87 (2.5 hr/Ac)
Weed Control (Post emergence Contract)		2.75	-	2.75
Insect Control (Contract)		-	2.00	5.00
Total Cultural Costs	1.30	26.40	27.30	46.27

	Yield	Wheat or Barley	Safflower	Grain Sorghum
Rent @ 25% (range 20-40%) $/Acre	10 cwt	-	$ 11.25	-
	20 cwt	-	22.50	-
	30 cwt	$ 16.50	33.75	$ 16.50
	40 cwt	22.00	-	22.00
	50 cwt	27.50	-	27.50
Harvest Cost $/Acre Combine & Haul Combine - @ $7.00/Acre plus 10¢/cwt over 1000# Haul - @ 10¢/cwt	10 cwt	-	8.00	-
	20 cwt	-	10.00	-
	30 cwt	12.00	12.00	12.00
	40 cwt	14.00	-	14.00
	50 cwt	16.00	-	16.00
Miscellaneous Expense @ 5% of Total Cultural, harvest and rent expenses	10 cwt	-	2.32	-
	20 cwt	-	2.99	-
	30 cwt	2.75	3.65	3.74
	40 cwt	3.12	-	4.11
	50 cwt	3.50	-	4.49
Total Cash Costs $/Acre	10 cwt	-	48.87	-
	20 cwt	-	62.79	-
	30 cwt	57.65	76.70	78.51
	40 cwt	65.52	-	86.38
	50 cwt	73.40	-	94.26
Interest & Depreciation		14.86	14.86	14.86
Total Cost Per Acre	10 cwt	-	63.73	-
	20 cwt	-	77.65	-
	30 cwt	72.51	91.56	93.37
	40 cwt	80.38	-	101.24
	50 cwt	88.26	-	109.12
Cost to Produce $/cwt	10 cwt	-	6.37	-
	20 cwt	-	3.88	-
	30 cwt	2.42	3.05	3.11
	40 cwt	2.01	-	2.53
	50 cwt	1.77	-	2.18
Gross Return $/Acre Wheat, Barley, and Grain Sorghum @ $2.20/cwt. Safflower @ $4.50/cwt.	10 cwt	-	45.00	-
	20 cwt	-	90.00	-
	30 cwt	66.00	135.00	66.00
	40 cwt	88.00	-	88.00
	50 cwt	110.00	-	110.00
Net Return $/Acre	10 cwt	-	-18.73	-
	20 cwt	-	+12.35	-
	30 cwt	- 6.51	+43.44	-27.37
	40 cwt	+ 7.62	-	-13.24
	50 cwt	+21.74	-	+ 0.88

Investment for Alternate Crops

County: Colusa - Date: January 1972 - Based on 300 cares of wheat, barley, safflower or grain sorghum on a 700 acre farm.

Item	Cost	Annual Use (acres)	Cost Per Acre	Life (yrs.)	Depreciation	@ 7% Interest	Cash Costs Per Hour			Hrs/Ac
							Fuel	Repairs	Total	
Crawler, Diesel 90 hp	31,000	700	44.26	15	2.95	1.55	.88	3.10	3.98	
Wheel Tractor 40 hp	8,100	700	11.57	10	1.16	.40	.68	.82	1.50	
Stubble Disc 12'	6,140	700	8.77	10	0.88	.31		2.76	2.76	.30
Offset Disc 18'	4,200	700	6.00	10	0.60	.21		1.95	1.95	.19
Landplane 12'	7,350	700	10.50	15	0.70	.37		2.20	2.20	.26
Drill 14'	2,400	300	8.00	10	0.80	.28		1.90	1.90	.24
Harrow 20'	1,000	700	1.43	10	0.14	.05		0.40	0.40	.20
Float 16'	600	550	1.10	10	0.11	.04		0.05	0.05	.14
Springtooth 28'	2,300	350	6.57	10	0.66	.23		1.75	1.75	.13
Truck 2 Ton	6,800	700	9.71	10	0.97	.34	.75	1.25	2.00	
Pickup 3/4 Ton	5,100	700	7.29	5	1.46	.25	.50	1.28	1.78	
Equipment Carrier	2,100	700	3.00	10	0.30	.10		.20	.20	
TOTAL	77,090		118.20		10.73	4.13				

Sample Costs to Produce Alternative Crops on Rice Land in Colusa is not intended to represent any specific farm or average for Colusa County. Sample Costs of Production are prepared to help growers analyze the crops best suited to their resources and help growers budget for cash operating expenses.

This cost study is based on a 700 acre field crop farm with 400 acres of rice and 300 acres of other crops such as wheat, barley, safflower or grain sorghum. Heavy clay soils suitable for rice production usually prevent economical production of other crops such as beans, tomatoes and alfalfa hay.

In determining equipment cost per acre the following calculations were used: a) The equipment cost per acre is an estimate of average cost for new equipment. b) The "per acre annual use cost" is calculated by dividing the estimated equipment cost by the average number of acres upon which the equipment was used each year. c) "Depreciation" is calculated by dividing the "per acre annual use cost" by the expected life of the equipment. d) "Interest on investment is calculated by multiplying 7% times 1/2 the equipment cost per acre.

Equipment operating expense is listed under fuel and repair. Included is the cost of fuel, maintenance, replacement parts, etc.

Labor cost is based on a $2.50 hourly rate for tractor drivers, and a $1.85 hourly rate for irrigators. Included in the hourly rate are cash wages, Social Security and workmen's compensation.

Miscellaneous overhead expense is based on 5% of the total cultural and harvest costs. These costs include office, bookkeeping, preparing road, general weed control, interest on crop loan, insurance and taxes on equipment and transportation costs during the growing season.

Rent for alternative crops may range from 20-40% of the gross depending on what the landlord and grower provide. Rent at 25% of the gross was used in this study with the grower paying all costs of production including water, fertilizer and pesticides.

Yields for various crops are given in a range to show economics at various production levels. Wheat, barley and grain sorghum are valued at $44 per ton and safflower at $90 per ton for this study. Grain drying is frequently necessary in the production of grain sorghum, but drying costs are not included in this study.

A management fee is not included since it is the last expense to be paid in operations similar to the one outlined in this cost study. Soil type, crop selection and management ability in each individual situation will determine whether the management fee is a profit or loss.

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