

UNIVERSITY OF CALIFORNIA AGRICULTURAL EXTENSION SERVICE

Rice
Cost Analysis Work Sheetby
Richard M. Hoover - E. A. Yeary
Farm Advisors

Rice is one of the most highly mechanized crops produced in Fresno County. In land preparations for planting heavy machinery is used and the crop is direct combined. Seeding, fertilization, insect and weed control are done by aircraft.

Rice is well adapted to the heavier soils and those with impervious subsoil. An abundant supply (7-9 acre feet) of inexpensive water is required to produce this crop profitably.

In Fresno County rice is planted in late April and May, or early June following a barley crop. The seed, 150-170 lbs/A., is soaked in water, treated with a fungicide and broadcast seeded in flooded fields with aircraft. The three varieties commonly planted in this area are Caloro, Calrose, and 1600, also called Colusa. 1600 is used in late planted fields and following barley.

80 to 90 lbs. of nitrogen are generally used per acre. 60 lbs. are applied prior to flooding the field, and 20 to 30 lbs./A. forty to forty-five days after planting. Unlike other crops rice should be fertilized with an ammonium form of nitrogen. Phosphorus may be needed in some areas.

The need for insect and disease control, other than seed treatment, varies from year to year, from farm to farm, and often it is not required.

Broadleaved weeds and grasses are a serious problem in many rice fields. Severe legal restrictions on the use of 2,4-D herbicides in Fresno County prevent the control of broadleaved weeds infesting many fields. Therefore, neither weed control nor insect control were included as cost items in this work sheet.

Draining the water off the rice field at the correct time is very important. The soil type and drainage facilities determine when the field should be drained. It should be scheduled so that by the time the rice is ready to harvest, the soil will be dry enough to support the combine.

Costs of production and crop yield vary from farm to farm; therefore, the actual cost to produce rice on any one farm may differ from the one here presented. Land values, taxes, water and labor costs vary from one area of the county to another. This sample cost analysis work sheet is useful when planning a cropping program to estimate needed cash to make production cost comparisons.

Yields per acre and the cost of water greatly influence the total cost to produce rice. Two tables were prepared which show costs of production at varying water costs and yields per acre.

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Farm & Home Advisors Office
1720 S. Maple Ave.,
Fresno, California

RICE PRODUCTION
Cost Analysis Work Sheet

Richard M. Hoover E. A. Yeary
Farm Advisors

Sample costs to produce rice in Fresno County. Based on a yield of 4500 lbs. of paddy rice per acre. Man labor at \$1.30 per hour total and equipment operator \$1.60. 80 h.p. crawler tractor per hour cash costs \$3.80, depreciation \$1.80, and interest \$1.00.

	<u>Sample Costs</u>		<u>My Costs</u>	
	<u>Per Acre</u>	<u>Per Cwt.</u>	<u>Per Acre</u>	<u>Per Cwt.</u>
PRE-HARVEST CASH COSTS				
Plow 1 X: 2/3 hr. man & tractor	3.60			
Disc & harrow 2 X: total 2/3 hr. man & tractor	3.60			
Landplane 3 X: total 1 hr. man & tractor	5.40			
Survey: contract	1.00			
Border: 12 ac. per hr. 2 tractors required				
1/6 hr. man & tractor	.90			
Grade next to borders, disc & float as needed				
1/3 hr. man & tractor	1.80			
Tie ends, ditching, outside border 1/6 hr.				
man & tractor	.90			
Set boxes: 4 ac. per box; \$1.50/box	.38			
Mark field: total cost using light tractor	1.00			
Plant: seed; 170 lbs. @ \$6.00 cwt.	10.20			
plant by aircraft; 1¢/lb.	1.70			
Fertilization: pre-plant 60 lbs. N from				
134 lbs. of Urea	6.60			
20 lbs. N from 100 lbs. ammonium sulphate	2.20			
application by aircraft 1¢/lb.	2.34			
Irrigation water: \$18 for the season	18.00			
Drainage and maintenance labor 3½ hrs.	4.55			
County taxes	10.75			
Office, operating capital, misc.	7.40			
Repairs to equipment except tractor	4.00			
Total Pre-Harvest Cash Costs	86.32	1.92		
HARVESTING COSTS				
Combine and bank out: 50¢ cwt. wet basis;				
10% heavier than paddy rice,				
4950 lbs. @ 50¢ cwt.	24.75			
Haul: \$1.80 ton wet basis + 3% tax	4.59			
Drying: includes "in" and "out" charges				
29.5¢ cwt. wet basis	14.60			
Total Harvesting Costs	43.94	.98		
TOTAL CASH COSTS	130.26	2.90		
DEPRECIATION				
Tractor: 3 hrs. @ \$1.80	5.40			
Tillage machinery \$26.00 cost 10 yr. life	2.60			
Boxes: \$7.00 cost 6 yr. life 4 ac./box	.29			
Total Depreciation	8.29	.18		
INTEREST ON INVESTMENT AT 6%				
Tractor: 3 hrs. @ \$1.00	3.00			
Tillage machinery: ½ cost \$13.00	.78			
Boxes: ½ cost \$3.50, 4 ac./box	.05			
Land: \$700	42.00			
Total Interest on Investment	45.83	1.02		
TOTAL COST OF PRODUCTION	184.38	4.10		

Rice - 2.

Sample Costs at Varying Yields: Water Cost \$18.00 for the season

Yield: Lbs. Paddy Rice Per Acre	3500	4000	4500	5000
Total Cost Per Acre	174.62	179.50	184.38	189.26
Total Cost Per Cwt. Paddy Rice	4.99	4.49	4.10	3.79

Sample Costs of Production of 4500 Lbs. Paddy Rice Per Acre With Varying Water Costs

Water Costs Per Acre	\$15.00	\$18.00	\$21.00	\$25.00	\$29.00	\$33.00
Total Costs Per Acre	181.38	184.38	187.38	191.38	195.38	199.38
Total Cost Per Cwt. Paddy Rice	4.03	4.10	4.16	4.25	4.34	4.43