

RI-VS-63

RICE IN FRESNO COUNTY  
COST ANALYSIS WORK SHEETS

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by  
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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. Seedling, 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 Cloro, 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. Phosphorous 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.

This cost analysis work sheet is based on a yield of 4500 lbs. of paddy rice per acre. Man labor @ \$1.05 per hour and equipment operator \$1.30. Power source is a heavy crawler tractor used 2,000 hrs. per year. In the preparation of this cost analysis work sheet, we assumed that good management practices were followed.

	Sample Costs		My Cost	
	per acre	per cwt	per acre	per cwt
<b>PRE-HARVEST CASH AND LABOR COSTS</b>				
Plow 1 time - 1½ ac/hr - ¾ hr. man & tractor	\$ 2.78			
Disc & harrow - 2 X @ 3 ac/hr/time - 2/3 hr. man & tractor	2.47			
Land plane - 3 times @ 3 ac/hr - 1 hr. man & tractor	3.70			
Survey - contract	.90			
Border - 12 ac/hr - 2 tractors required. 1/6 hr. man & tractor	.62			
Grade furrow - back 3 ac/hr - 1/3 hr. man & tractor	1.24			
Includes necessary discing & floating after grading operation.				
Tie ends, ditching & outside border - 1/6 hr/ac man & tractor	.62			
Set boxes - 4 ac/box, \$1.50/box	.38			
Mark field - total costs using light tractor	1.00			
Seed - 170 lbs/ac @ \$6.00 cwt	10.20			
Fly on seed - 1¢ per lb.	1.70			
Fertilization - 60 lbs. N from 134 lbs. Urea-preplant	6.37			
20 lbs. N from ammonium sulfate top-dressed	2.00			
Fly on fertilizer 1¢ per lb.	2.34			
Irrigation water - \$18 for season	18.00			
Drainage & maintenance labor	3.75			
County taxes	6.00			
Operating capital, office & misc. expenses	3.50			
<b>Total Pre-Harvest Cash and Labor Costs</b>	<b>67.57</b>	<b>1.50</b>		
<b>HARVESTING COSTS:</b>				
Combine & bank out 45¢ cwt wet basis or 10% heavier than paddy rice, 4950 lbs. @ 45¢ cwt.	22.28			
Haul @ \$1.80 ton wet basis	4.45			
Drying includes "in" and "out" charges, wet basis @ 29.5¢ cwt	14.60			
<b>Total Harvesting and Drying Costs</b>	<b>41.33</b>	<b>.92</b>		
<b>TOTAL CASH AND LABOR COSTS</b>	<b>108.90</b>	<b>2.42</b>		
<b>DEPRECIATION</b>				
Tractor - 3 1/12 hrs. @ \$1.50	4.63			
Tillage machinery	1.90			
Boxes - \$7 cost 6 yr. life 4 ac/box	.29			
<b>Total Depreciation</b>	<b>6.82</b>	<b>.15</b>		
<b>INTEREST ON INVESTMENT AT 6%</b>				
Tractor	1.63			
Tillage machinery	.65			
Boxes - \$7 cost 4 ac/box	.05			
Land @ \$475/ac	\$ 28.50			
<b>Total Interest on Investment</b>	<b>\$ 30.83</b>	<b>.69</b>		
<b>TOTAL COST OF PRODUCTION</b>	<b>\$146.55</b>	<b>3.26</b>		

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

	\$ 15.00	\$ 18.00	\$ 22.00	\$ 26.00	\$ 29.00	\$ 32.00
Water Costs Per Acre	\$ 15.00	\$ 18.00	\$ 22.00	\$ 26.00	\$ 29.00	\$ 32.00
Total Costs Per Acre	143.55	146.55	150.55	154.55	157.55	160.55
Costs Per 100 Lb. Sack	3.19	3.26	3.35	3.43	3.50	3.57

Costs of Production at Varying Yields with Water Costing \$18 Per Acre for the Season

Yield - Lbs. Paddy Rice Per Acre	3500	4000	4500	5000
Total Costs Per Acre	\$137.38	\$141.96	\$146.55	\$151.15
Total Costs Per 100 Lb. Sack	3.93	3.55	3.26	3.02