



CASH FLOW & INVESTMENT SUMMARY FOR RICE

BUDGET RECORD NUMBER 100

RICE PRODUCTION COSTS AND RETURNS 1980  
 BUTTE COUNTY BY CARL WICK & JAN KASTLER, FARM ADVISORS - P. THOMAS, SRA  
 SHARE RENT BASIS

CATEGORY	UNIT	MONTHLY SUMMARY OF RECEIPTS AND EXPENSES												TOTAL	
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
TOTAL RECEIPTS	\$/AC												877.50		877.50
OPERATING EXPENSES															
PREPL FERT & APP	\$/AC				59.32										59.32
RICE, SEED	\$/AC				21.87										21.87
CONTRACT PLANT	\$/AC				4.39										4.39
HAUL SEED	\$/AC				0.35										0.35
ZINC & APPL	\$/AC				3.72										3.72
WEEVIL CONTROL	\$/AC				4.80										4.80
LEAFM./SHRMP CTL	\$/AC					1.87									1.87
BARNYGRS CONTRL	\$/AC					14.26									14.26
TOPDRESS & APPL	\$/AC						6.58								6.58
BROADLEAF CONTRL	\$/AC							4.23							4.23
MOVE CRAWLER	\$/AC				0.64						0.64				1.28
IRRIG DIST WATER	\$/AC				1.43	2.42	2.42	2.42	2.42	2.42	2.42				13.52
CONTRACT HAULING	\$/AC											10.80			10.80
CONTRACT DRYING	\$/AC											38.16			38.16
MOVE COMBINES	\$/AC											1.60			1.60
POST HARVEST	\$/AC												1.50		1.50
MACHINE LABOR COST	\$/AC				12.38	0.94	0.94	0.94	0.94	0.94	1.85	10.08	0.73		28.81
INTEREST ON OPER. CAP.	\$/AC				9.74	1.24	0.56	0.34	0.13	0.13	0.10		0.36		12.46
TRACTOR COST	\$/AC				25.26						1.40		0.43		27.10
EQUIPMENT COST	\$/AC				8.17	0.74	0.74	0.74	0.74	0.74	24.50	0.11			36.48
BLDG OPER. COST	\$/AC				0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14		1.09
IRRIG LABOR COST	\$/AC				0.75	0.75	0.75	0.75	0.75	0.75	0.75				4.50
TOTAL EXPENSES	\$/AC	0.00	0.00	0.00	153.50	23.22	13.00	10.43	5.99	8.91	85.28	3.26	0.00		298.69

MONTHLY IRRIGATION AND LABOR REQUIREMENTS															
MACHINE LABOR	HR/AC				1.72	0.13	0.13	0.13	0.13	0.13	0.26	1.40	0.10		4.00
IRRIGATION LABOR	HR/AC				0.13	0.13	0.13	0.13	0.13	0.13	0.13				0.75
IRRIG. WATER APPLIED	ACIN				9.00	15.00	15.00	15.00	15.00	15.00	15.00				84.00

MACHINE	CODE	SIZE	PURCHASE PRICE	YEARS OWNED	ANW HOURS USED	FIXED COST PER ACRE			VARIABLE COST PER ACRE				HRS PER ACRE	
						DEPR.	INTER.	TAX	TOTAL	FUEL	LUBE	REPAIRS		TOTAL
TRACTOR 40 HP	2	40.0	11400.	12.	1000.	0.09	0.07	0.02	0.18	0.26	0.04	0.13	0.43	0.092
TRACT 4WD 200HP	9	200.0	82000.	10.	1000.	8.76	6.13	1.97	16.87	11.49	1.72	8.00	21.22	1.069
CRAWLER 125HP	11	125.0	96100.	10.	900.	4.76	3.33	1.07	9.16	2.99	0.45	2.01	5.45	0.446
PICKUP 1/2 T	14	0.8	9300.	3.	1350.	0.97	0.20	0.07	1.24	2.03	0.36	0.54	2.87	0.423
PICKUP 3/4 T	15	0.8	9300.	3.	1350.	0.88	0.18	0.06	1.12	1.83	0.27	0.49	2.59	0.382
COMBINE-RICE #1	29	16.0	95000.	10.	200.	18.28	12.79	4.11	35.18	1.67	0.25	6.64	8.56	0.385
COMBINE-RICE #2	30	16.0	95000.	10.	200.	18.28	12.79	4.11	35.18	1.67	0.25	6.64	8.56	0.385
BANK OUT WAGON*	31	250.0	47700.	10.	300.	4.58	3.21	1.03	8.81	1.38	0.21	5.04	6.63	0.288
CHISEL PLOW	43	16.0	4400.	10.	100.	0.70	0.49	0.16	1.35	0.00	0.01	0.38	0.38	0.160
DISC OFFSET HDTY	63	21.0	12720.	10.	200.	2.01	1.41	0.43	3.88	0.00	0.06	2.90	2.96	0.317
DISK STUBBLE	67	14.0	18020.	10.	200.	3.02	2.11	0.68	5.81	0.00	0.06	3.25	3.31	0.335
SPIKE HARROW	74	20.0	4300.	10.	100.	0.69	0.48	0.16	1.33	0.00	0.01	0.30	0.30	0.160
TRIPLANE 15X35	84	15.0	9500.	10.	80.	1.84	1.29	0.41	3.55	0.00	0.00	0.14	0.14	0.155
4 WH PLANE 14X60	86	14.0	18000.	10.	20.	3.74	2.62	0.84	7.20	0.00	0.00	0.04	0.04	0.042
SPRAYER	93	15.0	2040.	14.	100.	0.07	0.07	0.02	0.17	0.00	0.00	0.03	0.03	0.050
MOWER SICKLE	125	7.0	1650.	10.	20.	0.28	0.20	0.06	0.54	0.00	0.00	0.07	0.08	0.034
SURFACE IRR SYS*	128	2.0	0.	10.	5000.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.000
DOZER BLADE	146	8.0	2400.	10.	100.	0.50	0.35	0.11	0.96	0.00	0.00	0.01	0.01	0.208
INPL CARRIER	150	5.0	4200.	15.	200.	0.06	0.06	0.02	0.14	0.00	0.00	0.02	0.02	0.041
FARM SHOP	2		50000.	30.		3.33	5.34	1.00	9.67	1.00		0.05	1.05	
TOOLS-SHOP EQUIP	4		9000.	10.		1.80	0.96	0.18	2.94	0.00		0.04	0.04	
MACHINERY & EQUIPMENT			1164.			74.64	54.10	16.55	145.28	24.33	3.64	36.69	64.67	

INVESTMENT & COSTS PER ACRE  
 TOTAL INVESTMENT 582030.  
 BASED ON 500 ACRES OF RICE ON 600 ACRE DIVERSIFIED FARM  
 STUDY REPRESENTS TYPICAL NORTHERN CALIFORNIA RICE OPERATION  
 YIELD: 65 CWT/ACRE DRY (14% MOISTURE)  
 DATE PRINTED: 07/16/81

UPDATED 07/16/81

FUEL USE SUMMARY FOR BUDGET RECORD NUMBER 100  
 RICE PRODUCTION COSTS AND RETURNS 1980  
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FUEL USED IN GALLONS PER HOUR

TRACTOR 40 HP	2.400
TRACT 4WD 200HP	11.200
CRAWLER 125HP	7.000
PICKUP 1/2 T	4.000
PICKUP 3/4 T	4.000
COMBINE-RICE #1	4.520
COMBINE-RICE #2	4.520
BANK OUT WAGON*	4.000

FUEL ALLOCATED TO OPERATIONS IN GALLONS PER ACRE COVERED

MACHINE	GALLONS	POWER UNIT
PICKUP 1/2 T	0.073	
PICKUP 3/4 T	0.073	
COMBINE-RICE #1	3.479	
COMBINE-RICE #2	3.479	
BANK OUT WAGON*	0.016	
CHISEL PLOW	1.967	TRACT 4WD 200HP
DISK STUBBLE	4.125	TRACT 4WD 200HP
DISC OFFSET HDTY	1.952	TRACT 4WD 200HP
4 WH PLANE 14X60	1.601	CRAWLER 125HP
TRIPLANE 15X35	1.494	CRAWLER 125HP
IMPL CARRIER	0.179	PICKUP 1/2 T
SPIKE HARROW	1.975	TRACT 4WD 200HP
DOZER BLADE	8.021	CRAWLER 125HP
MOWER SICKLE	0.893	TRACTOR 40 HP
SPRAYER	1.314	TRACTOR 40 HP

FUEL ALLOCATED TO OPERATIONS FOR THE BUDGET UNIT

	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	FUEL TYPE
CHISEL PLOW	0.000	0.000	0.000	1.967	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.967	DIESEL
DISK STUBBLE	0.000	0.000	0.000	4.125	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.125	DIESEL
DISC OFFSET HDTY	0.000	0.000	0.000	3.903	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.903	DIESEL
4 WH PLANE 14X60	0.000	0.000	0.000	0.320	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.320	DIESEL
TRIPLANE 15X35	0.000	0.000	0.000	1.195	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.195	DIESEL
IMPL CARRIER	0.000	0.000	0.000	0.179	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.179	GAS
SPIKE HARROW	0.000	0.000	0.000	1.975	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.975	DIESEL
DOZER BLADE	0.000	0.000	0.000	0.802	0.000	0.000	0.000	0.000	0.802	0.000	0.000	0.000	1.604	DIESEL
PICKUP 1/2 T	0.000	0.000	0.000	0.218	0.218	0.218	0.218	0.218	0.218	0.218	0.000	0.000	1.527	GAS
PICKUP 3/4 T	0.000	0.000	0.000	0.218	0.218	0.218	0.218	0.218	0.218	0.218	0.000	0.000	1.527	GAS
COMBINE-RICE #1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.739	0.000	1.739	DIESEL
COMBINE-RICE #2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.739	0.000	1.739	DIESEL
BANK OUT WAGON*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.152	0.000	0.000	1.152	GAS
MOWER SICKLE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.089	0.000	0.089	GAS
SPRAYER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.131	0.000	0.131	GAS
TOTALS	0.000	0.000	0.000	14.903	0.436	0.436	0.436	0.436	1.238	5.067	0.221	0.000	23.174	

GALLONS FUEL BY TYPE

4.61 GAS  
 0.00 LP  
 18.57 DIESEL  
 0.00 N. GAS  
 0.00 KWRS

FUEL TYPES  
 1=GAS  
 2=L.P.  
 3=DIESEL  
 4=N. GAS  
 5=ELEC.

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UC Cooperative Extension

MACHINERY OPERATIONS SUMMARY  
 RICE PRODUCTION COSTS AND RETURNS 1980  
 BUTTE COUNTY BY CARL WICK & JAN KASTLER, FARM ADVISORS - P. THOMAS, SRA  
 SHARE RENT BASIS

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OPERATION	ITER NO.	DATE	TIMES OVER	LABOR HOUR S	MACHINE HOURS	FUEL,OIL, LUB.,REP. PER ACRE	FIXED COSTS PER ACRE
ROWER SICKLE	2,125	NOV	0.10	0.041	0.034	0.25	0.61
SPRAYER	2, 93	NOV	0.10	0.060	0.050	0.29	0.28
CHISEL PLOW	9, 43	APR	1.00	0.193	0.160	3.87	4.12
DISK STUBBLE	9, 67	APR	1.00	0.405	0.335	10.62	11.62
DISC OFFSET HDTY	9, 63	APR	2.00	0.393	0.317	9.87	9.38
4 WH PLANE 14X60	11, 86	APR	0.20	0.050	0.042	0.60	8.14
TRIPLANE 15X35	11, 84	APR	0.80	0.188	0.155	2.23	7.06
IMPL CARRIER	14,150	APR	1.00	0.049	0.041	0.32	0.27
SPIKE HARROW	9, 74	APR	1.00	0.194	0.160	3.80	4.11
DOZER BLADE	11,146	APR	0.10	0.126	0.104	1.40	2.84
PICKUP 1/2 T	14	APR	3.00	0.065	0.055	0.37	0.16
PICKUP 3/4 T	15	APR	3.00	0.065	0.055	0.37	0.16
PICKUP 1/2 T	14	MAY	3.00	0.065	0.055	0.37	0.16
PICKUP 3/4 T	15	MAY	3.00	0.065	0.055	0.37	0.16
PICKUP 1/2 T	14	JUNE	3.00	0.065	0.055	0.37	0.16
PICKUP 3/4 T	15	JUNE	3.00	0.065	0.055	0.37	0.16
PICKUP 1/2 T	14	JULY	3.00	0.065	0.055	0.37	0.16
PICKUP 3/4 T	15	JULY	3.00	0.065	0.055	0.37	0.16
PICKUP 1/2 T	14	AUG	3.00	0.065	0.055	0.37	0.16
PICKUP 3/4 T	15	AUG	3.00	0.065	0.055	0.37	0.16
DOZER BLADE	11,146	SEPT	0.10	0.126	0.104	1.40	2.84
PICKUP 1/2 T	14	SEPT	3.00	0.065	0.055	0.37	0.16
PICKUP 3/4 T	15	SEPT	3.00	0.065	0.055	0.37	0.16
PICKUP 1/2 T	14	OCT	3.00	0.065	0.055	0.37	0.16
PICKUP 3/4 T	15	OCT	3.00	0.065	0.055	0.37	0.16
COMBINE-RICE #1	29	OCT	0.50	0.462	0.385	8.56	35.18
COMBINE-RICE #2	30	OCT	0.50	0.462	0.385	8.56	35.18
BANK OUT WAGON*	31	OCT	72.00	0.246	0.288	6.63	8.81

TOTALS 4.00; 3.322 63.61 132.69

BASED ON 500 ACRES OF RICE ON 600 ACRE DIVERSIFIED FARM  
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## Topdress in June:

Materials - 150 lbs Ammonium Sulfate (30 lbs N)  
 30 lbs N/acre @ \$.283/lb = \$8.49/acre  
 Application - contract aerial  
 1.5 cwt material@1.65/cwt = 2.47/acre  
 Total materials and application = \$10.96/acre  
 Assuming 60% of total acreage treated (materials and application) \$6.58/acre

## 6. Pest control:

## Insects:

## Rice water weevil control in March

Materials - furadan, granular 10 lb/ac @ \$.53/lb = \$5.30/acre

Application - contract, aerial 2.70/acre

Total materials and application \$8.00/acre

Assuming 60% of total acreage treated (materials and application) \$4.80/ac

## Rice leaf miner and/or tadpole shrimp control in May

Materials - parathion .1 pint/acre @ \$2.70/pint = \$ .27/acre

Application - contract, aerial 1.60/acre

Total materials and application \$1.87/acre

Assuming total acreage treated

## Weeds:

## Barnyard grass control in May

Materials - ordram 40 lbs/acre @ \$.321/lb = \$12.84/acre

Application - contract, aerial 3.00/acre

Total materials and application \$15.84/acre

Assuming 90% of total acreage treated (materials and application) \$14.26/acre

## Broadleaf weeds control in July

Materials - MCPA 14 oz/acre @ \$.12/oz = \$ 1.68/acre

Application - contract, aerial 3.30/acre

Total materials and application \$ 4.98/acre

Assuming 85% of total acreage treated (materials and application) \$4.23/acre

## 7. Levees:

Close in April

Drain and open levees in September before harvest

Maintain - 125 hp draw bar crawler used w/ dozer blade

Assuming 10% of field covered

## 8. Irrigation:

Flood irrigation system fixed and variable costs paid by landowner

No pump

Field is flooded just before seeding

Irrigation is continuous in order to maintain water levels - the fields are checked daily--Labor hours/month/acre = .125

## Water applied:

April 9 ac.in. total

May 15 ac.in. total

June 15 ac.in. total

July 15 ac.in. total

Aug 15 ac.in. total

Sept 15 ac.in. total

84 ac.in. total

Irrigation district water cost: \$.161/ac.in.

## Rice production costs and returns 1980

Butte County by Carl Wick & Jan Kastler, Farm Advisors - P. Thomas, SRA  
Share Rent Basis

Based on 500 acres of rice on 600 acre diversified farm  
Study represents typical Northern California Rice Operation  
Yield: 65 cwt per acre dry (14% moisture)

Additional Notes and Assumptions:

1. The costs of production figures, amounts of materials used and yields shown in this study are not intended to reflect averages or recommendations but are based on a hypothetical 500 acre rice operation. Two varieties of rice grown - one early & one late. 100 acres grain also grown. Assuming established levees and that landowner provides boxes.

2. Land preparation in April:

Chisel, 16' pulled by 4WD 200hp tractor - 1 pass over field  
Stubble disc, 14' pulled by 4WD 200hp tractor - 1 pass over field  
Offset disc, 21' pulled by 4WD 200hp tractor - 2 passes over field  
Triplane, 15'x35' pulled by 125hp drawbar crawler  
Every 4 to 5 years a 4-wheel plane, 14x60' would be used instead of the triplane. Costs of the two implements reflect this usage.

Implement carrier pulled by pickup used to move implements

3. Move crawler:

Contract - 4 moves  
Cost for 500 acres 4 moves @ \$160/move = \$640  
Cost per acre - \$1.28  
(2 times April, 2 times Sept.)  
2 fields

4. Plant in April:

Seed - certified	1.35 cwt/ac	@	\$14.50/cwt	=	\$19.58/ac
Treated -contract	1.35 cwt/ac	@	1.00/cwt	=	1.35/ac
Soaked -contract	1.35 cwt/ac	@	.70/cwt	=	.95/ac
Total seed cost			\$16.20/cwt	=	\$21.88/ac
Planting - contract, aerial applied	1.35 cwt/ac	@	\$3.25/cwt	=	\$4.39/ac
Haul seed to airstrip (pickup and labor)				=	.35/ac
Total planting costs					\$4.74/ac

5. Fertilizer:

Preplant in April:

Materials - 400 lbs Ammonium Sulfate (84 lbs N)  
250 lbs 16-20-0 (40 lbs N + 50 lbs P<sub>2</sub>O<sub>5</sub>)  
124 lbs N/acre @ \$.283/lb = \$35.09/acre  
50 lbs P<sub>2</sub>O<sub>5</sub>/acre @ .27 /lb = 13.50/acre

Application - contract, aerial

6.5 cwt materials @ \$1.65/cwt = 10.73/acre

Total materials and application \$59.32/acre

Incorporate Spike tooth harrow, 20' pulled by 4WD 200 hp tractor -  
1 pass over field

Zinc in April:

Materials - Zinc \$6.80/acre

Application - contract, aerial 2.50/acre

Total materials and application \$9.30/acre

Assuming 40% of total acreage treated (Materials & Application) \$3.72/acre

9. **Equipment:**  
 Farm Shop \$50,000  
 3000 square feet  
 Tools and Shop equipment \$9000
10. **Pickups:**  
 Costs are based on 1500 miles/month for 500 acre or 3 miles/acre/month  
 Months: April - November
11. **Harvest in October:**  
 Costs based on 72 cwt/acre (22% moisture) harvested  
 2 combines, 16' used - each covering 1/2 of total acreage  
 Move Combines:  
 Contract - 4 moves  
 Cost for 500 acres - 4 moves @ \$200/move = \$800  
 Cost per acre - \$1.60  
 Bank out wagon, 160 cwt  
 Cost based on bankout capacity of 400 cwt/hour  
 Hauling - contract 72 cwt/ac @ \$.15/cwt = \$10.80/acre  
 Drying - contract 72 cwt/ac @ \$.53/cwt = \$38.16/acre  
 Yield: 65 cwt, dry, 14% moisture  
 Price: \$13.50/cwt, dry  
 Share rent: 25% of gross receipts
12. **Post harvest management in November:**  
 Mower sickle, 7' pulled by 40hp tractor - used on levees only, assuming  
 10% of field covered  
 Clean around boxes and burning  
 2 flagmen and 1 burner needed and pickup used  
 Labor: 1/2 hour/acre @ \$6.00/hr = \$1.50/acre  
 Sprayer used for burning safety
13. **Misc office, insurance:**  
 3% of total variable costs
14. **Labor rates include benefits:**  
 Machinery \$5.00/hr In many instances the owner/operator  
 Irrigators \$5.50/hr does all irrigation duties.
15. **Machinery costs calculated by computer:**  
 For implements, the width, speed, field efficiency and number of  
 passes through the field are all used in determining the number of hours  
 necessary to complete an operation. Tractor hours are then calculated by  
 taking into consideration all implements pulled.  
 Per hour cost of depreciation, interest, taxes, insurance, repairs,  
 fuel, and lube are calculated by the computer using purchase price,  
 annual hours of usage, years of life, etc. and this rate is multiplied by  
 the total hours of usage for each machine.