

COST & RETURNS SUMMARY FOR RICE

COSTS TO PRODUCE RICE IN A ROTATION SYSTEM WITH ROW CROPS 1980
SUTTER-YUBA-SACRAMENTO-PLACER COUNTIES BY J. WILLIAMS, FARM ADVISOR
YIELD: 72 CWT DRY (10% MOISTURE)

	UNIT	PRICE OR COST/UNIT	QUANTITY	VALUE OR COST PER ACRE	YOUR COST
1. GROSS RECEIPTS FROM PRODUCTION:					
RICE	CWT.	11.960	72.000	861.12	
TOTAL RECEIPTS:				861.12	
2. VARIABLE COSTS:					
PREHARVEST:					
AQUA FERT & RIG	LBS.	0.200	90.000	18.00	*
STARTER FERT. 18-46-0	LBS.	0.160	100.000	16.00	*
CUS AIR FERT APP	APLC	3.000	1.000	3.00	
LEVEES, BOXS	ACRE	2.330	1.000	2.33	
SEED-TREAT-SOAK	CWT.	15.700	1.500	23.55	
CUSTOM HAUL-SEED	CWT.	0.288	1.950	0.56	
CUSTOM AIR SEED	CWT.	2.870	1.950	5.60	
INSECT-PARATHION	ACRE	3.600	0.400	1.44	*
INSECTICIDE APP	APLC	2.470	1.000	2.47	
HERBICIDE-GRASS	ACRE	17.600	1.000	17.60	*
HERBICIDE APP	APLC	2.540	1.000	2.54	
BROAD LEAF HERB	LBS.	3.380	1.000	3.38	*
HERBICIDE APP	APLC	3.200	1.000	3.20	
TOPDRESS-NITRO.	LBS.	0.300	25.000	7.50	*
CUSTOM AIR APPL.	APLC	2.500	1.000	2.50	
ROVE EQUIPMENT	ACRE	0.980	0.400	0.39	
TRACTOR (FUEL-LUBE-REPAIRS)	ACRE			24.70	
EQUIPMENT (FUEL-LUBE-REPAIRS)	ACRE			10.28	
BUILDINGS (FUEL-LUBE-REPAIRS)	ACRE			0.02	
MACHINERY LABOR	HOUR	7.470	2.616	19.54	
IRRIGATION LABOR	HOUR	6.500	0.750	4.88	
INTEREST ON OPERATING CAP.	DOL.	0.14000	91.900	12.55	
TOTAL PREHARVEST COSTS:				182.02	
PREHARVEST COST PER CWT.				2.5280	
HARVEST:					
ROVE EQUIPMENT	ACRE	0.980	0.600	0.59	
CUSTOM HAUL-RICE	CWT.	0.209	84.160	17.56	*
CUSTOM DRYING	CWT.	0.525	84.160	44.18	*
DRAIN,POST HARV	ACRE	3.000	1.000	3.00	
EQUIPMENT (FUEL-LUBE-REPAIRS)	ACRE			23.12	
MACHINERY LABOR	HOUR	7.470	1.327	9.92	
TOTAL HARVEST COSTS:				98.36	
HARVEST COST PER CWT.				1.3661	
TOTAL VARIABLE COSTS:				280.38	
VARIABLE COST PER CWT.				3.8942	
3. INCOME ABOVE VARIABLE COSTS:					
INCOME PER CWT.				580.74	
4. OVERHEAD:					
PERSONAL PROPERTY TAXES:				8.58	
SHARE RENT: 40% gross receipts less costs				294.18	
TOTAL OVERHEAD:				302.76	
OVERHEAD COST PER CWT.				4.2050	
TOTAL CASH COSTS:					
TOTAL CASH COST PER CWT.				583.14	
5. INCOME ABOVE ALL CASH COSTS:					
INCOME PER CWT.				277.98	
6. OWNERSHIP COSTS:					
DEPRECIATION:					
MACHINERY & EQUIPMENT	ACRE			51.78	
BUILDINGS	ACRE			0.69	
TOTAL DEPRECIATION:				52.47	
CAPITAL & INTEREST:					
MACHINERY & EQUIPMENT		0.14000	410.908	57.53	
BUILDINGS		0.10670	9.582	1.02	
TOTAL INTEREST CHARGE:				58.55	
TOTAL FIXED COSTS:				111.02	
FIXED COST PER CWT.				1.5420	
7. TOTAL OF ABOVE COSTS:					
TOTAL COST PER CWT.				694.16	
8. NET RETURNS:					
NET RETURNS PER CWT.				166.96	
				2.3188	

* 40% of these costs are paid by the landowner. This is reflected in the share rent below.

Historical File - 1980

BASED ON 500 ACRES OF RICE ON A 700 ACRE FARM
 FLOOD IRRIGATION

DATE PRINTED: 12/14/81

HARVEST MONTH: 10

UPDATED 12/14/81
 BUDGET RECORD NUMBER 146

FUEL USE SUMMARY FOR BUDGET RECORD NUMBER 146
 COSTS TO PRODUCE RICE IN A ROTATION SYSTEM WITH ROW CROPS 1980
 SUTTER-YUBA-SACRAMENTO-PLACER COUNTIES BY J. WILLIAMS, FARM ADVISOR
 YIELD: 72 CWT DRY (10% MOISTURE)

FUEL USED IN GALLONS PER HOUR

TRACTOR 4WD 175H	9.800
CRAWLER 125HP	7.000
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 3/4 T	0.073	
COMBINE-RICE #1*	3.479	
COMBINE-RICE #2*	3.479	
BANK OUT WAGON*	0.016	
TRACTOR 4WD 175H		3.651
CRAWLER 125HP		1.146
TRACTOR 4WD 175H		1.961
CRAWLER 125HP		3.651
PICKUP 3/4 T		0.179

FUEL ALLOCATED TO OPERATIONS FOR THE BUDGET UNIT

	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	FUEL TYPE
PLOW RB HYD 6-16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.651	0.000	3.651	DIESEL
DISC OFFSET HDY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.438	0.000	3.438	DIESEL
3 WH PLANE 15X35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.921	0.000	3.921	DIESEL
CRAWLER 125HP	0.000	0.000	0.000	1.960	0.000	0.000	0.000	0.000	0.000	0.000	0.140	0.000	2.100	DIESEL
RICE CHECKER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.183	0.000	0.183	DIESEL
COMBINE-RICE #2*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.739	0.000	0.000	1.739	DIESEL
COMBINE-RICE #1*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.739	0.000	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	1.347	0.000	0.000	1.347	GAS
PICKUP 3/4 T	0.218	0.218	0.218	0.218	0.218	0.218	0.218	0.218	0.218	0.218	0.218	0.218	2.618	GAS
INPL CARRIER	0.000	0.000	0.000	0.072	0.000	0.000	0.000	0.000	0.000	0.108	0.000	0.000	0.179	GAS
TOTALS	0.218	0.218	0.218	2.250	0.218	0.218	0.218	0.218	0.218	5.151	11.550	0.218	20.915	

GALLONS FUEL BY TYPE

4.14 GAS
 0.00 LP
 16.77 DIESEL
 0.00 M. GAS
 0.00 KWRS

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

BASED ON 500 ACRES OF RICE ON A 700 ACRE FARM
 FLOOD IRRIGATION

UPDATED 12/14/81

DATE PRINTED: 12/14/81

MACHINERY OPERATIONS SUMMARY BUDGET RECORD NUMBER 146
 COSTS TO PRODUCE RICE IN A ROTATION SYSTEM WITH ROW CROPS 1980
 SUTTER-YUBA-SACRAMENTO-PLACER COUNTIES BY J. WILLIAMS, FARM ADVISOR
 YIELD: 72 CWT DRY (10% MOISTURE)

OPERATION	ITER NO.	DATE	TINES OVER	LABOR HOUR S	MACHINE HOURS	FUEL, OIL, LUB., REP. PER ACRE	FIXED COSTS PER ACRE
PLOW RB HYD 6-16	8,101	NOV	1.00	0.410	0.339	7.82	10.85
DISC OFFSET HDY	11, 63	NOV	3.00	0.540	0.446	9.85	14.33
3 WH PLANE 15X35	8, 84	NOV	2.00	0.440	0.364	7.58	7.49
CRAWLER 125HP	11	NOV	0.02	0.024	0.020	0.26	0.31
RICE CHECKER	11,137	NOV	0.05	0.029	0.024	0.37	0.59
PICKUP 3/4 T	15	NOV	3.00	0.065	0.055	0.39	0.10
PICKUP 3/4 T	15	DEC	3.00	0.065	0.055	0.39	0.10
PICKUP 3/4 T	15	JAN	3.00	0.065	0.055	0.39	0.10
PICKUP 3/4 T	15	FEB	3.00	0.065	0.055	0.39	0.10
PICKUP 3/4 T	15	MAR	3.00	0.065	0.055	0.39	0.10
CRAWLER 125HP	11	APR	0.28	0.336	0.280	3.65	4.31
PICKUP 3/4 T	15	APR	3.00	0.065	0.055	0.39	0.10
INPL CARRIER	15,150	APR	0.60	0.020	0.016	0.14	0.08
PICKUP 3/4 T	15	MAY	3.00	0.065	0.055	0.39	0.10
PICKUP 3/4 T	15	JUNE	3.00	0.065	0.055	0.39	0.10
PICKUP 3/4 T	15	JULY	3.00	0.065	0.055	0.39	0.10
PICKUP 3/4 T	15	AUG	3.00	0.065	0.055	0.39	0.10
PICKUP 3/4 T	15	SEPT	3.00	0.065	0.055	0.39	0.10
COMBINE-RICE #2*	30	OCT	0.50	0.462	0.385	9.57	27.12
COMBINE-RICE #1*	29	OCT	0.50	0.462	0.385	9.57	27.12
BANK OUT WAGON*	31	OCT	84.16	0.404	0.337	3.99	23.91
PICKUP 3/4 T	15	OCT	3.00	0.065	0.055	0.39	0.10
INPL CARRIER	15,150	OCT	0.60	0.030	0.024	0.21	0.13
TOTALS				3.74	3.274	57.73	117.43

BASED ON 500 ACRES OF RICE ON A 700 ACRE FARM
 FLOOD IRRIGATION

UPDATED 12/14/81

UC Cooperative Extension

DATE PRINTED: 12/14/81

STORED DATA PAGE (NO CALCULATIONS) FOR RICE

BUDGET RECORD NUMBER 146

COSTS TO PRODUCE RICE IN A ROTATION SYSTEM WITH ROW CROPS 1980
SUTTER-YUBA-SACRAMENTO-PLACER COUNTIES BY J. WILLIAMS, FARM ADVISOR
YIELD: 72 CWT DRY (10% MOISTURE)

COSTS AND RETURNS WILL BE DIVIDED BY 72.0 CWT. TO OBTAIN PER CWT. COSTS

Table with columns: LINE PRODUCTION, 1-18 (MONTHS), PRICE, SHARE RENT, UNIT CODE, ITEM CODE, TYPE, XXXX. Rows include 1 RICE, OPERATING INPUTS (4 MOVE EQUIPMENT, 5 AQUA FERT & RIG, etc.), and MACHINERY REQUIREMENTS (26 PLOW MB HYD 6-16, 27 DISC OFFSET HDTY, etc.).

Table with columns: MACHINERY REQUIREMENTS, IMPLEMENTS = TIMES OVER, TRUCKS = # MILES/ACRE, TRACTORS = HRS/ACRE, # CREW LABOR, POWER UNIT CODE, MACH TYPE, HARV CODE. Rows include 26 PLOW MB HYD 6-16, 27 DISC OFFSET HDTY, 28 3 WH PLANE 15X35, etc.

Table with columns: EQUIPMENT REQUIREMENTS, NUMBER UNITS, PROPORT OF COST, XXX EQUIP CODE, TYPE, XXXX. Rows include 52 TOOLS-SHOP EQUIP COLUMNS --->, LAND REQUIREMENTS (2 CHARGE METHOD, 3 NUMBER OF ACRES, etc.).

71 ENTERPRISE 2-24 REGION/COUNTY 34 UNASSIGNED 0000 MACH COMP 3 IRIG SYST 1 UNASSIGNED 0 EQUIP SET 1 HARVEST MONTH 10
BASED ON 500 ACRES OF RICE ON A 700 ACRE FARM FLOOD IRRIGATION
MACHINERY COMPLEMENT 3
EQUIPMENT COMPLEMENT 1
UPDATED 12/14/81

Table with columns: LINE CHANGE, GENERAL NAME CHANGE, MACHNRY NAME CHANGE. Rows include 206 STARTER FERT., 393 EQUIP.-LEVEE, 124 SEED-TREAT-SOAK, 244 INSECT-PARATHION, 208 TOPDRESS-NITRO, etc.

Table with columns: RM CL, VALUE, RM CL, VALUE, RM CL, VALUE, RM CL, VALUE, RM CL, VALUE, RM CL, VALUE. Rows include MACH COMP CHGS--> 8. 3.75000, 0.00000, 8.13.75000, 0.00000, 86. 2. 12.00000, 30. 3.*****, 30. 9. 250.00000, etc.

DATE PRINTED: 12/14/81

CASH FLOW & INVESTMENT SUMMARY FOR RICE

BUDGET RECORD NUMBER 146

COSTS TO PRODUCE RICE IN A ROTATION SYSTEM WITH ROW CROPS 1980
 SUTTER-YUBA-SACRAMENTO-PLACER COUNTIES BY J. WILLIAMS, FARM ADVISOR
 YIELD: 72 CWT DRY (10% MOISTURE)

MONTHLY SUMMARY OF RECEIPTS AND EXPENSES

CATEGORY	UNIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
TOTAL RECEIPTS	\$/AC										861.12			861.12
OPERATING EXPENSES														
ROVE EQUIPMENT	\$/AC										0.59			0.59
AQUA FERT & RIG	\$/AC				18.00									18.00
STARTER FERT.	\$/AC				16.00									16.00
CUS AIR FERT APP	\$/AC				3.00									3.00
LEVEES, BOXS	\$/AC				2.33									2.33
SEED-TREAT-SOAK	\$/AC					23.55								23.55
CUSTOM HAUL-SEED	\$/AC					0.56								0.56
CUSTOM AIR SEED	\$/AC					5.60								5.60
INSECT-PARATHION	\$/AC					1.44								1.44
INSECTICIDE APP	\$/AC					2.47								2.47
HERBICIDE-GRASS	\$/AC					17.60								17.60
HERBICIDE APP	\$/AC					2.54								2.54
BROAD LEAF HERB	\$/AC					3.38								3.38
HERBICIDE APP	\$/AC					3.20								3.20
TOPDRESS-NITRO.	\$/AC							7.50						7.50
CUSTOM AIR APPL.	\$/AC							2.50						2.50
CUSTOM HAUL-RICE	\$/AC										17.56			17.56
CUSTOM DRYING	\$/AC										44.18			44.18
ROVE EQUIPMENT	\$/AC											0.29		0.29
DRAIN, POST HARV	\$/AC										3.00			3.00
MACHINE LABOR COST	\$/AC	0.49	0.49	0.49	3.17	0.49	0.49	0.49	0.49	0.49	10.62	11.27	0.49	29.46
INTEREST ON OPER. CAP.	\$/AC	0.09	0.08	0.07	3.19	3.20	0.44	0.44	0.07	0.03		4.83	0.10	12.55
TRACTOR COST	\$/AC				4.02							20.68		24.70
EQUIPMENT COST	\$/AC	0.39	0.39	0.39	0.52	0.39	0.39	0.39	0.39	0.39	23.70	5.63	0.39	33.40
BLDG OPER. COST	\$/AC													0.02
IRRIG. LABOR COST	\$/AC					0.98	0.98	0.98	0.98	0.98				4.88
TOTAL EXPENSES	\$/AC	0.98	0.97	0.96	50.32	60.22	10.28	13.71	3.34	2.59	99.65	42.70	0.99	280.38

MONTHLY IRRIGATION AND LABOR REQUIREMENTS

	HR/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MACHINE LABOR	HR/AC	0.07	0.07	0.07	0.42	0.07	0.07	0.07	0.07	0.07	1.42	1.51	0.07	3.94
IRRIGATION LABOR	HR/AC					0.15	0.15	0.15	0.15	0.15				0.75
IRRIG. WATER APPLIED	ACIN					24.00	24.00	24.00	24.00	12.00				108.00

MACHINERY FIXED AND VARIABLE COSTS PER ACRE

MACHINE	CODE	SIZE	PURCHASE PRICE	YEARS OWNED	ANN HOURS USED	FIXED COST PER ACRE			VARIABLE COST PER ACRE				HRS PER ACRE	
						DEPR.	INTER.	TAX \$INS	TOTAL	FUEL	LUBE	REPAIRS		TOTAL
TRACTOR 4WD 175H	8	175.0	75000.	10.	1000.	4.08	5.25	0.72	10.06	7.27	1.09	5.29	13.65	0.773
CRAWLER 125HP	11	125.0	92500.	15.	900.	4.67	7.28	1.09	13.04	5.69	0.85	4.50	11.05	0.847
PICKUP 3/4 T	15	0.8	10200.	5.	1350.	0.71	0.49	0.07	1.26	3.34	0.50	1.19	5.03	0.695
COMBINE-RICE #1*	29	16.0	100000.	10.	250.	12.17	13.03	1.92	27.12	1.67	0.25	7.65	9.57	0.385
COMBINE-RICE #2*	30	16.0	100000.	10.	250.	12.17	13.03	1.92	27.12	1.67	0.25	7.65	9.57	0.385
BANK OUT WAGON*	31	250.0	30000.	10.	75.	11.24	10.98	1.68	23.91	1.62	0.24	2.13	3.99	0.337
DISC OFFSET HDTY	63	21.0	11160.	15.	110.	2.73	3.47	0.57	6.77	0.00	0.07	3.38	3.45	0.446
3 WH PLANE 15X35	84	16.0	9480.	9.	280.	1.09	1.03	0.15	2.28	0.00	0.01	0.50	0.51	0.364
PLOW MB HYD 6-16	101	8.0	9000.	10.	90.	2.79	2.79	0.42	6.00	0.00	0.02	1.22	1.24	0.339
RICE CHECKER	137	10.0	5200.	15.	100.	0.07	0.09	0.02	0.18	0.00	0.00	0.03	0.03	0.024
TRAIL CARRIER	150	5.0	4200.	15.	200.	0.05	0.07	0.01	0.13	0.00	0.00	0.02	0.02	0.041
TOOLS-SHOP EQUIP	4		7371.	15.		0.69	1.02	0.00	1.71	0.00		0.02	0.02	
MACHINERY & EQUIPMENT			908.			52.47	58.55	8.58	119.60	21.25	3.29	33.56	58.11	

INVESTMENT & COSTS PER ACRE
 TOTAL INVESTMENT 454111.

BASED ON 500 ACRES OF RICE ON A 700 ACRE FARM
 FLOOD IRRIGATION

DATE PRINTED: 12/14/81

UPDATED 12/14/81

Rice production 1980
 Sutter-Yuba-Sacramento-Placer Counties
 Rotation and Nonrotation

Additional notes and assumptions:

1. Land Preparation:

Rice field levees are built by the following steps: The field is surveyed and contours are marked; both sides of the contour are plowed; a rice checker or ridger is pulled along the contour to crowd the soil together; and finally, a crawler with a dozer blade is used to even out the "cut out" area to narrow the effective width of the levee.

The differences in seedbed preparation or tillage operations between the two budget exist because somewhat different practices are typically employed for rotation vs. nonrotation cropping patterns; also, land which is rotated into row crops is generally more easily plowed.

Budget # 133 nonrotation		Budget # 146 rotation	
chisel plow	Dec 1 time	plow moldboard hdy.	Nov 1 time
disc offset hdy.	Apr 3 times	disc offset hdy.	Nov 3 times
3 WH plane 16x35	Apr 2 times	3 WH plane 16x35	Nov 2 times
rice checker	Apr 5% field cov.	rice checker	Nov 5% field cov.
Crawler	Apr .3 hrs/acre	Crawler	Nov .02 hrs/acre
(this includes .14 hrs/ac for dozer operation; .02 hrs/ac for second crawler used with rice checker; and .14 hrs/ac for fertilizer rig)		(hrs for second crawler used with rice checker)	
		Crawler	Apr .28 hrs/acre
		(this includes .14 hrs/acre for dozer operation; .14 hrs/acre for fertilizer rig.)	

2. Some specific differences between the two budgets:

- Since rotation soils are generally not as "tight" or as highly clay as are nonrotation soils, there is more percolation of water and more water is applied to the field -- 9 vs. 7 acre feet.
- The share rent for the rotation land, which is 40% gross receipts as opposed to 25% gross receipts for the nonrotation land, represents a higher payment for generally higher quality land. Note that the net rent actually received by the landowner is after deducting his share of expenses for the rotation land budget: 40% of the fertilizer, herbicide and insecticide materials, hauling and drying costs and 100% district water costs are paid by the landowner. For nonrotation landowner does not participate in crop.
- The higher levels of some operation inputs for the nonrotation budget reflect actual differences to be encountered in the necessary amounts of fertilizer, insect control and weed control due to differences in the biotic environment between rotation and nonrotation (continuous rice culture).

3. Aqua fertilizer is aqueous nitrogen. Rotation 90 lbs/acre - nonrotation 125 lbs/acre. Price includes applicator rig rental. An additional cost for crawler is included in the machinery to pull the applicator rig (.14 hrs/ac). Starter fertilizer is 100 lbs of 18-46-0 (N-P-K). The third discing is also for the purpose of working the fertilizer into the soil after custom air application. Topdress nitrogen fertilizer is 125 lbs of ammonium sulfate, which is 21% N by weight (25 lbs N applied). Custom application.

4. Parathion for insect/shrimp control:

Nonrotation 60% of acreage covered
 Rotation 40% of acreage covered

Herbicide for watergrass control:

Nonrotation 100% of acreage covered
 Rotation 100% of acreage covered

5. For both budgets the landowner is assumed to bear 100% of the fixed and variable costs of irrigation system maintenance.

6. Harvest:

Two rice combines and a bankout wagon (capacity of 250 cwt/hr) are used.

Yields:

Rotation 72.0 cwt dry (14% moisture) 84.16 cwt wet (23% moisture)
 Nonrotation 62.9 cwt dry (14% moisture) 73.52 cwt wet (23% moisture)

Note: Although dry weight is reported at 14%, a 10% moisture table is actually used when determining dry weight. This is due to the fact that there is additional shrinkage in storage (average of about 4%) and the grower is paid on the 10% moisture weight. If the after storage weight is greater than 10% moisture then the overage is returned to the grower.

Budget Record #133 and #146

7. Drain, post harvest includes the cost of opening the levees and draining the fields, as well as the costs of open-field burning of the rice straw and stubble after harvest.
8. Pickup costs are based on 18,000 total miles covered for the 500 acres of rice, or 3 miles/acre/month from January through December.
9. Interest: In this budget it is assumed that grower receives money for his crop and pays back his loan in October after harvest. Interest costs would be much higher if payment were delayed until later months.