

TABLE 1. Basic cost information for Grant and Catron Counties, 2002.

Item		
Labor Wage Rate:		
Equipment operators	\$/hour	\$6.45
General & Irrigators	\$/hour	\$5.90
Purchased Inputs:		
Seed:		
Alfalfa	\$/pound	\$2.90
Wheat	\$/pound	\$0.16
Pasture	\$/pound	\$2.50
Canal Water (Maintenance)	\$/acre	\$10.00
Baling Wire	\$/lb	\$0.37
Energy:		
Butane	\$/MCF	\$0.80
Diesel fuel	\$/gallon	\$1.05
Gasoline	\$/gallon	\$1.00
Electricity	cents/KwHr	5.99
Natural Gas	\$/MCF	\$3.28
Employee Liability Insurance	\$/ \$1,000 wages	\$20.00
Employee Benefits	percent/wages	18.00%
Labor Downtime	percent	25.00%
Financial Rates:		
Operating Capital Interest Rate	percent	8.00%
Land Interest Rate	percent	7.50%
Equipment Interest Rate	percent	8.00%
Real Interest Rate	percent	4.00%
Land Taxes	\$390.00 /acre (full value)	\$2.02
Personal Property Tax Rate - NR	\$/ \$1,000 (Assessed Value)	\$15.52
- R		\$15.60
Supervision Factor	\$/labor hour	\$0.50
Management Rate	percent	7.00%

BUDGET AREA..... GRANT AND CATRON COUNTIES, 2002.
 FARM SIZE..... 40 ACRES
 IRRIGATION TYPE..... FLOOD
 NUMBER OF CROPS..... 3

ACREAGE SUMMARY:	WATER USE		
	LAND USE (ACRES)	AC. IN. PER ACRE	TOTAL AC. IN.
ALFALFA ESTABLISHMENT *	4	18	72
ALFALFA	25	60	1,500
PASTURE ESTABLISHMENT *	2	18	36
PERMANENT PASTURE	10	32	320
SMALL GRAINS PASTURE	0	24	0
ROADS, HOMESTEAD	5		
TOTAL	40		1,928
ACRE FEET PER ACRE OF WATER RIGHTS			4.02

* DOUBLE-CROPPED

Table 1a. Overhead cost information for Grant and Catron Counties, 2002.

ITEM		CROP ENTERPRISE	LIVESTOCK ENTERPRISE	TOTAL
Electricity (Domestic & Shop)	\$75.00 per month	\$900	\$90.00	\$990
Telephone	\$60.00 per month	\$720	\$72.00	\$792
Accounting & Legal		\$340		\$340
Misc. Supplies & Hand Tools		\$595		\$595
Pickup and Auto	Crop Ent. Livestock Ent.			
miles	7,000 3,500 @	\$0.345 per mile	\$2,415 \$1,207.50	\$3,623
Insurance				
- general liability (non-employee)		\$5	\$0.00	\$5
- fire/theft		\$250	\$0.00	\$250
Property Taxes				
- non-planted land		\$10	\$0.00	\$10
- other than land & machinery		\$195		\$195
Building repairs and maintenance		\$350	\$35.00	\$385
Dues, fees, publications		\$195	\$9.75	\$205
Farmstead Equipment		\$155	\$15.50	\$171
Irrigation Well Depreciation and Taxes		\$1,579		
	Total	\$6,130	\$1,430	\$7,560
	Total per planted acre	\$175.15		

TABLE 2. Pumping costs and data for irrigation wells, Grant and Catron Counties, 2002.

INPUT DATA

DEPTH CHARACTERISTICS:

STATIC.....	40
DRAW DOWN.....	10
TOTAL HEAD.....	50
CASING.....	70

GALLONS PER MINUTE (GPM).....	1000
WORK HORSEPOWER.....	13

EFFICIENCY FACTOR:

ELECTRICITY.....	0.540
NATURAL GAS.....	0.154
LP GAS.....	0.154
DIESEL.....	0.160

FUEL COST PER UNIT:

ELECTRICITY.....	5.99	CENTS/KwHr
NATURAL GAS.....	\$3.28	\$/MCF
LP GAS.....	\$0.80	\$/GAL
DIESEL.....	\$1.05	\$/GAL

FUEL PUMPING COSTS:

ELECTRIC WELL:

COST PER HOUR.....	\$1.08
COST PER ACRE INCH.....	\$0.49

NATURAL GAS WELL:

COST PER HOUR.....	\$0.78
COST PER ACRE INCH.....	\$0.35

BUTANE WELL:

COST PER HOUR.....	\$1.85
COST PER ACRE INCH.....	\$0.84

DIESEL WELL:

COST PER HOUR.....	\$1.51
COST PER ACRE INCH.....	\$0.69

TABLE 3. Equipment summary for a 60 acre farm with above average management, Grant and Catron Counties, 2002.

EQUIPMENT ITEM & SIZE	ANNUAL HOURS OF USE		VARIABLE COSTS					FIXED COSTS		
	HOURS	NUMBER	TOTAL VALUE	FUEL AND LUBRICANT	REPAIR	FUEL,LUBE PER HR	REPAIR PER HR	DEPRECIATION	TAXES	TOTAL PER HOUR
TRACTOR 65 HP	81	1	\$2,400	\$394	\$31.22	\$4.86	\$0.39	\$138	\$14	\$1.87
PICKUP 3/4 TON *	50	1	\$11,000	\$315	\$110.00	\$6.30	\$2.20	\$2,200	\$57	\$45.14
CORRUGATER	3	1	\$250		\$0.03		\$0.01	\$33	\$1	\$10.69
BALER, PTO 2-WIRE	27	1	\$1,500		\$12.15		\$0.45	\$150	\$8	\$5.84
LAND PLANE 8 FT.	4	1	\$1,000		\$0.17		\$0.04	\$133	\$5	\$32.06
DISC 8 FT	4	1	\$700		\$3.23		\$0.87	\$93	\$4	\$26.06
PLOW (MOLDBOARD) 2-16 IN	8	1	\$250		\$1.97		\$0.25	\$33	\$1	\$4.41
DRILL 8 FT.	2	1	\$1,000		\$1.18		\$0.48	\$200	\$5	\$83.40
SWATHER, PTO 10 FT.	28	1	\$5,000		\$14.00		\$0.50	\$500	\$26	\$18.78
MOWER 7 FT SICKLE BAR	5	1	\$1,300		\$1.64		\$0.36	\$130	\$7	\$30.38
BUTANE WELL	0	1	\$11,400		\$0.00			\$1,520	\$59	
			\$35,800	\$709	\$176			\$5,131	\$187	

Table 4a. Livestock Production Parameters

NUMBER OF COWS	50
COWS PER BULL	20
NUMBER OF HORSES	2
REPLACEMENT RATE (%)	10.00%
CALF DEATH LOSS (%)	2.00%
YEARLING DEATH LOSS (%)	0.00%
COW DEATH LOSS (%)	1.00%
BULL DEATH LOSS (%)	0.00%
CALF CROP (%)	92.00%
PRODUCTIVE LIFE OF BULLS (YEARS)	5
PERCENT SOLD AS YEARLINGS:	
HEIFERS	0.00%
STEERS	0.00%

Table 4b. Forage Sources for Livestock

	ACRES	AUMS/ ACRE	AUMS PROVIDED
ALFALFA	25.00	1.00	25.00
PERMANENT PASTURE	10.00	12.00	120.00
FOREST			297.50
BALED HAY (TONS)		115.70	289.25
TOTAL	35.00		731.75

Table 4c. STOCK COUNT CHART

CALVES WERE BORN IN: MARCH

SEASON	BULLS 1.4	REPLACEMENT		YEARLING		STEERS	HEIFER	HORSES 1.25	TOTAL
		COWS 1.0	HEIFERS 0.7	STEERS 0.7	HEIFERS 0.7	CALVES 0.5	CALVES 0.5		AUMs REQUIRED
JANUARY	3	50				0	5	2	59
FEBRUARY	3	50				0	5	2	59
MARCH	3	50	5					2	60
APRIL	3	50	5					2	60
MAY	3	50	5					2	60
JUNE	3	50	5					2	60
JULY	3	50	5					2	60
AUGUST	3	50	5					2	60
SEPTEMBER	3	50	5					2	60
OCTOBER	3	50				25	25	2	81
NOVEMBER	3	50				0	5	2	59
DECEMBER	3	50				0	5	2	59
									732

Table 4d. FORAGE BALANCE CHART

	TOTAL AUMs REQUIRED		FOREST	PASTURE	TOTAL AUMs SUPPLIED		HAY
	ALFALFA						
JANUARY	59	6	0	0	6	52	
FEBRUARY	59	6	0	0	6	52	
MARCH	60	0	0	20	20	40	
APRIL	60	0	0	30	30	30	
MAY	60	0	30	30	60	0	
JUNE	60	0	60	0	60	0	
JULY	60	0	60	0	60	0	
AUGUST	60	0	60	0	60	0	
SEPTEMBER	60	0	60	0	60	0	
OCTOBER	81	0	30	20	50	31	
NOVEMBER	59	6	0	10	16	42	
DECEMBER	59	6	0	10	16	42	
Total AUMs	732	25	298	120	443	289	

TABLE 5. Alfalfa establishment, flood-irrigated, budgeted per acre costs and returns for a 60 acre farm with above average management, Grant and Catron Counties, 2002.
Planting dates: August 15 - September 15

ITEM	PRICE	QUANTITY	PURCHASED INPUTS					TOTAL
<u>PURCHASED INPUTS</u>								
SEED	\$2.90	30 LBS						\$87.00
CANAL WATER		18 AC. IN.						\$87.00
SUBTOTAL								\$87.00
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
PLOW (MOLDBOARD)	65 HP	1.31 HR		\$8.45	\$6.37	\$0.83	\$8.22	\$23.87
DISC (2X)	65 HP	0.62 HR		\$4.00	\$3.01	\$0.78	\$17.32	\$25.11
LAND PLANE (2X)	65 HP	0.72 HR		\$4.64	\$3.50	\$0.31	\$24.43	\$32.88
CORRUGATE	65 HP	0.54 HR		\$3.48	\$2.63	\$0.21	\$6.78	\$13.10
DRILL	65 HP	0.41 HR		\$2.64	\$1.99	\$0.35	\$34.96	\$39.96
IRRIGATE (3X)		2.25 HR		\$13.28				\$13.28
SUBTOTAL		5.85 HR		\$36.50	\$17.50	\$2.48	\$91.72	\$148.20
<u>OVERHEAD EXPENSES</u>								
DOWNTIME		0.90 HR		\$5.81				\$5.81
EMPLOYEE BENEFITS				\$6.57				\$6.57
INSURANCE			\$0.73					\$0.73
SUPERVISION AND MANAGEMENT				\$19.39				\$19.39
SUBTOTAL		0.90 HR	\$0.73	\$31.76				\$32.49
TOTAL OPERATING EXPENSES		6.75 HR	\$87.73	\$68.26	\$17.50	\$2.48	\$91.72	\$267.69

TABLE 6. Alfalfa hay, flood-irrigated, budgeted per acre costs and returns for a 60 acre farm with above average management, Grant and Catron Counties, 2002.
Harvesting dates: June 15 - September 15

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
HAY	\$118.00	5.00	TONS (STACKED)					\$590.00
GRAZING	\$10.00	1.00	AUM					\$10.00
TOTAL								\$600.00
PURCHASED INPUTS								
	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
WIRE ESTABLISHMENT: Principal	\$0.37	43 LBS	\$15.92					\$15.92
: Interest		6 YEARS					\$44.62	\$44.62
CANAL WATER		60 AC. IN.	\$10.00				\$8.74	\$8.74
SUBTOTAL								\$79.27
PREHARVEST OPERATIONS								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
IRRIGATE (8X)		6.00 HR		\$35.40				\$35.40
SUBTOTAL								\$35.40
HARVEST OPERATIONS								
SWATHER, PTO (4X)	65 HP	1.12 HR		\$7.22	\$5.45	\$0.99	\$23.13	\$36.79
BALER, PTO (4X)	65 HP	1.08 HR		\$6.97	\$5.25	\$0.90	\$8.33	\$21.45
LOAD (4X)	3/4 TON	2.00 HR		\$12.90	\$12.60	\$4.40	\$90.28	\$120.18
SUBTOTAL								\$178.42
OVERHEAD EXPENSES								
DOWNTIME		1.05 HR		\$6.77				\$6.77
EMPLOYEE BENEFITS				\$11.25				\$11.25
INSURANCE				\$1.25				\$1.25
LAND TAXES							\$2.02	\$2.02
SUPERVISION AND MANAGEMENT				\$47.10				\$47.10
OTHER EXPENSES				\$175.15				\$175.15
SUBTOTAL								\$243.54
TOTAL OPERATING EXPENSES								\$536.63
NET OPERATING PROFIT								\$63.37
INTEREST ON OPERATING CAPITAL	(\$15.43	@	8.00%				\$1.23
INTEREST ON EQUIPMENT INVESTMENT								\$61.97
RETURN TO LAND AND RISK								\$0.17

BUDGET SUMMARY

GROSS RETURN		\$600.00	
VARIABLE OPERATING EXPENSES	\$231.91		
RETURN OVER VARIABLE EXPENSES		\$368.09	(GROSS MARGIN)
FIXED EXPENSES	\$177.11		
NET FARM INCOME		\$190.98	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$127.61		
NET OPERATING PROFIT		\$63.37	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$63.20		
RETURN TO LAND AND RISK		\$0.17	

TABLE 7. Permanent pasture establishment, flood-irrigated, budgeted per acre costs and returns for a 60 acre farm with above average management, Grant and Catron Counties, 2002.
Planting dates: August 15 - September 15

ITEM	PRICE	QUANTITY	PURCHASED INPUTS					TOTAL
<u>PURCHASED INPUTS</u>								
SEED	\$2.50	20 LBS						\$50.00
CANAL WATER		18 AC. IN.						
SUBTOTAL					\$50.00			\$50.00
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
PLOW (MOLDBOARD)	65 HP	1.31 HR		\$8.45	\$6.37	\$0.83	\$8.22	\$23.87
DISC (2X)	65 HP	0.62 HR		\$4.00	\$3.01	\$0.78	\$17.32	\$25.11
LAND PLANE (2X)	65 HP	0.72 HR		\$4.64	\$3.50	\$0.31	\$24.43	\$32.88
CORRUGATE	65 HP	0.54 HR		\$3.48	\$2.63	\$0.21	\$6.78	\$13.10
DRILL	65 HP	0.41 HR		\$2.64	\$1.99	\$0.35	\$34.96	\$39.96
IRRIGATE (3X)		2.25 HR		\$13.28				\$13.28
SUBTOTAL		5.85 HR		\$36.50	\$17.50	\$2.48	\$91.72	\$148.20
<u>OVERHEAD EXPENSES</u>								
DOWNTIME		0.90 HR		\$5.81				\$5.81
EMPLOYEE BENEFITS				\$6.57				\$6.57
INSURANCE			\$0.73					\$0.73
SUPERVISION AND MANAGEMENT				\$16.80				\$16.80
SUBTOTAL		0.90 HR	\$0.73	\$29.17				\$29.90
<u>TOTAL OPERATING EXPENSES</u>		6.75 HR	\$50.73	\$65.67	\$17.50	\$2.48	\$91.72	\$228.10

TABLE 8. Permanent pasture, flood-irrigated, budgeted per acre costs and returns for a 60 acre farm with above average management, Grant and Catron Counties, 2002.
Harvesting dates: March 1 - September 30

ITEM	PRICE	YIELD						TOTAL	
GROSS RETURNS									
PASTURE	\$12.00	12.00	AUMS					\$144.00	
TOTAL								\$144.00	
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS			FIXED COST	TOTAL		
ESTABLISHMENT: Principal		15	YEARS				\$15.21	\$15.21	
: Interest							\$6.84	\$6.84	
CANAL WATER		32	AC. IN.	\$10.00				\$10.00	
SUBTOTAL				\$10.00				\$22.05	\$32.05
PREHARVEST OPERATIONS									
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
MOWER	65 HP	0.45	HR	\$2.90	\$2.19	\$0.34	\$14.51	\$19.94	
IRRIGATE (8X)		5.25	HR	\$30.98				\$30.98	
SUBTOTAL				\$33.88	\$2.19	\$0.34	\$14.51	\$50.92	
OVERHEAD EXPENSES									
DOWNTIME		0.11	HR	\$0.73				\$0.73	
EMPLOYEE BENEFITS				\$6.10				\$6.10	
INSURANCE				\$0.68				\$0.68	
LAND TAXES							\$2.02	\$2.02	
SUPERVISION AND MANAGEMENT				\$12.71				\$12.71	
OTHER EXPENSES				\$175.15				\$175.15	
				0.11	HR		\$2.02	\$197.38	
TOTAL OPERATING EXPENSES		5.81	HR	\$185.83	\$53.41	\$2.19	\$0.34	\$38.58	
NET OPERATING PROFIT								(\$136.34)	
INTEREST ON OPERATING CAPITAL	(\$5.63	@	8.00%				\$0.45	
INTEREST ON EQUIPMENT INVESTMENT								\$11.62	
RETURN TO LAND AND RISK								(\$148.41)	

BUDGET SUMMARY

GROSS RETURN		\$144.00	
VARIABLE OPERATING EXPENSES	\$188.36		
RETURN OVER VARIABLE EXPENSES		(\$44.36)	(GROSS MARGIN)
FIXED EXPENSES	\$38.58		
NET FARM INCOME		(\$82.94)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$53.41		
NET OPERATING PROFIT		(\$136.34)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$12.07		
RETURN TO LAND AND RISK		(\$148.41)	

TABLE 9. Summary of per acre costs and returns, 60 acre part-time farm with above average management, Grant and Catron Counties, 2002.

	ALFALFA ESTABLISHMENT	ALFALFA HAY -----FLOOD-----	PERMANENT PASTURE EST.	PERMANENT PASTURE
		TONS		AUMS
PRIMARY YIELD		5.00		12.00
PRIMARY PRICE		118.00		12.00
GOVERNMENT PAYMENTS		0.00		0.00
SECOND INCOME		10.00		0.00
GROSS RETURN		\$600.00		\$144.00
CASH OPERATING EXPENSES				
SEED	\$87.00		\$50.00	
FERTILIZER				
CHEMICALS				
CROP INSURANCE				
OTHER PURCHASED INPUTS		\$15.92		
CANAL WATER		\$10.00		\$10.00
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$17.50	\$23.30	\$17.50	\$2.19
FUEL-IRRIGATION				
REPAIRS	\$2.48	\$6.29	\$2.48	\$0.34
CUSTOM CHARGES				
LAND TAXES		\$2.02		\$2.02
OTHER EXPENSES	\$0.73	\$176.40	\$0.73	\$175.83
TOTAL CASH EXPENSES	\$107.72	\$233.93	\$70.72	\$190.37
RETURN OVER CASH EXPENSES	(\$107.72)	\$366.07	(\$70.72)	(\$46.37)
FIXED EXPENSES	\$91.72	\$175.09	\$91.72	\$36.56
TOTAL EXPENSES	\$199.43	\$409.02	\$162.43	\$226.94
NET FARM INCOME	(\$199.43)	\$190.98	(\$162.43)	(\$82.94)
LABOR AND MANAGEMENT COSTS	\$68.26	\$127.61	\$65.67	\$53.41
NET OPERATING PROFIT	(\$267.69)	\$63.37	(\$228.10)	(\$136.34)
CAPITAL COSTS				
INTEREST ON OPERATING CAPITAL		\$1.23		\$0.45
INTEREST ON EQUIPMENT INVESTMENT		\$61.97		\$11.62
TOTAL CAPITAL COSTS	\$0.00	\$63.20	\$0.00	\$12.07
RETURN TO LAND AND RISK	(\$267.69)	\$0.17	(\$228.10)	(\$148.41)

TABLE 10. Whole farm summary, Grant and Catron Counties, 2002.

GROSS RETURNS		
ALFALFA HAY	25 ACRES	
CROP		\$14,750
GRAZING		\$250
PASTURE	10 ACRES	
GRAZING		\$1,440
WHEAT PASTURE	0 ACRES	
GRAZING		\$0
LIVESTOCK		\$54,319
GROSS RETURN		\$70,759
CASH OPERATING EXPENSES		
FORAGE		\$2,092
LIVESTOCK		\$15,243
SEED		\$448
FERTILIZER		\$0
CHEMICALS		\$0
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$398
CANAL WATER		\$350
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$709
FUEL-IRRIGATION		\$0
REPAIRS		\$176
CUSTOM CHARGES		\$0
LAND TAXES		\$71
OTHER EXPENSES		\$6,173
TOTAL CASH EXPENSES		\$25,659
RETURN OVER CASH EXPENSES		\$45,100
FIXED EXPENSES		\$4,026
TOTAL EXPENSES		\$29,684
NET FARM INCOME		\$41,075
LABOR AND MANAGEMENT COSTS		\$4,129
NET OPERATING PROFIT		\$36,946
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$35
INTEREST ON EQUIPMENT INVESTMENT		\$1,665
TOTAL CAPITAL COSTS		\$1,701
RETURN TO LAND AND RISK		\$35,245

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$1,000 /ACRE	\$32,845	38.57%
\$2,000 /ACRE	\$30,445	23.71%
\$3,000 /ACRE	\$28,045	17.12%
\$4,000 /ACRE	\$25,645	13.40%
\$5,000 /ACRE	\$23,245	11.00%

* RETURN TO LAND AND RISK MINUS (INTEREST RATE TIMES LAND VALUE TIMES ACREAGE)

** NET OPERATING PROFIT DIVIDED BY (MACHINERY AND EQUIPMENT VALUE PLUS LAND VALUE)