

TABLE 1. Basic cost information for San Juan County, 2002.

Item		
<b>Labor Wage Rate:</b>		
Equipment operators	\$/hour	\$6.75
General & Irrigators	\$/hour	\$6.45
<b>Purchased Inputs:</b>		
<b>Fertilizer:</b>		
Phosphate (P205)	\$/pound	\$0.30
<b>Seed:</b>		
Alfalfa	\$/pound	\$2.90
Oats	\$/pound	\$0.23
<b>Wire</b>		
Canal Water	\$/acre foot	\$10.75
<b>Energy:</b>		
Diesel fuel	\$/gallon	\$1.05
Gasoline	\$/gallon	\$1.00
Electricity	cents/KwHr	8.45
LP Gas	\$/gallon	\$0.86
Natural Gas	\$/MCF	\$3.28
(service charge)	\$/month	\$10.00
Employee Liability Insurance	\$/ \$1,000 wages	\$20.00
Employee Benefits	percent/wages	18.00%
Labor Downtime	percent	25.00%
<b>Financial Rates:</b>		
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	\$253.00 /acre (full value)	\$2.07
Personal Property Tax Rate - NR	\$/ \$1,000 (Assessed Value)	\$24.60
- R		\$20.83
<b>Supervision Factors</b>		
Field Crop-Irrigation	\$/labor hour	\$1.00
Field Crop-Equipment & General	\$/labor hour	\$0.50
Management Rate	percent	7.00%

BUDGET AREA..... SAN JUAN COUNTY, 2002.  
 FARM SIZE..... 80 ACRES  
 IRRIGATION TYPE..... SPRINKLER  
 NUMBER OF CROPS... 1

ACREAGE SUMMARY:	LAND USE (ACRES)	WATER USE	
		AC.IN. PER AC.	TOTAL AC.IN.
ALFALFA ESTABLISHMENT	11	39	429
ALFALFA	69	46	3,174
TOTAL	80		3,603
ACRE FEET PER ACRE OF WATER RIGHTS			3.75

TABLE 1a. Overhead cost information for San Juan County, 2002.

ITEM			
Electricity (Domestic & Shop)		\$115.00 per month	\$1,380
Telephone		\$75.00 per month	\$900
Accounting & Legal			\$475
Misc. Supplies & Hand Tools			\$800
Pickup and Auto			
miles	10,300	@ \$0.345 per mile	\$3,554
<b>Insurance</b>			
- general liability (non-employee)			\$990
- fire/theft			\$645
<b>Property Taxes</b>			
- non-farm land			\$0
- other than land & machinery			\$310
Building repairs and maintenance			\$495
Dues, fees, publications			\$240
Farmstead Equipment			\$160
Total			\$9,948
Total per planted acre			\$144.18

Table 2. Pumping costs and data for irrigation, San Juan County, 2002.

INPUT DATA

DELIVERY PSI:		
BOOSTER PUMP.....	70	
GALLONS PER MINUTE (GPM).....	800	
WORK HORSEPOWER.....	33	
EFFICIENCY FACTOR:		
ELECTRICITY.....	0.540	
NATURAL GAS.....	0.154	
LP GAS.....	0.154	
DIESEL.....	0.160	
FUEL COST PER UNIT:		
ELECTRICITY.....	8.45	CENTS/KwHr
NATURAL GAS.....	\$3.28	\$/MCF
LP GAS.....	\$0.86	\$/GAL
DIESEL.....	\$1.05	\$/GAL

PUMPING COSTS

ELECTRIC WELL:	
COST PER HOUR.....	\$3.85
COST PER ACRE INCH.....	\$2.18
NATURAL GAS WELL:	
COST PER HOUR.....	\$1.97
COST PER ACRE INCH.....	\$1.12
LP GAS WELL:	
COST PER HOUR.....	\$5.08
COST PER ACRE INCH.....	\$2.88
DIESEL WELL:	
COST PER HOUR.....	\$3.88
COST PER ACRE INCH.....	\$2.20

TABLE 3. Equipment summary for an 80 acre sprinkler-irrigated farm, San Juan County, 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 40 HP	51	1	\$1,800	\$154	\$7	\$2.99	\$0.14	\$50	\$10	\$1.17
TRACTOR 96 HP	65	1	\$23,030	\$488	\$84	\$7.46	\$1.29	\$1,430	\$176	\$24.55
SWATHER 14 FT	35	1	\$5,100	\$137	\$61	\$3.93	\$1.74	\$1,450	\$119	\$44.98
BALER, PTO 2-WIRE	46	1	\$1,500		\$39		\$0.85	\$385	\$32	\$9.10
BALE WAGON, PTO	44	1	\$1,850		\$126		\$2.88	\$800	\$66	\$19.85
DISC 12 FT	4	1	\$2,250		\$10		\$2.79	\$180	\$18	\$53.06
PLOW 3-14 IN	7	1	\$3,350		\$25		\$3.35	\$268	\$27	\$40.09
DITCHER (DOUBLE MOLDBOARD)	8	1	\$1,250		\$0		\$0.05	\$100	\$10	\$13.78
HARROW 12 FT	2	1	\$300		\$0		\$0.01	\$24	\$2	\$12.66
DRILL 12 FT	2	1	\$2,200		\$2		\$1.06	\$220	\$18	\$103.05
FERT SPREADER DEALER FURNIS	4									
SIDEROLL SPRINKLER	2,038	2	\$5,000		\$96		\$0.05	\$667	\$41	\$0.35
NATURAL GAS BOOSTER PUMP	2,038	1	\$2,500	\$4,018	\$381	\$1.97	\$0.19	\$333	\$21	\$0.23
			\$50,130	\$4,797	\$831			\$5,907	\$540	

TABLE 4. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, 2002.

Planting dates: April 15 - June 1  
Harvesting dates: June 15 - July 1

ITEM	PRICE	YIELD						TOTAL	
<b>GROSS RETURNS</b>									
OAT HAY	\$110.00	2.25	TONS (STACKED)					\$247.50	
GRAZING	\$10.00	1	AUM					\$10.00	
<b>TOTAL</b>								<b>\$257.50</b>	
<b>PURCHASED INPUTS</b>									
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS					FIXED COST	TOTAL
ALFALFA SEED	\$2.90	20	LBS	\$58.00					\$58.00
OAT SEED	\$0.23	45	LBS	\$10.35					\$10.35
PHOSPHATE (P2O5)	\$0.30	45	LBS	\$13.50					\$13.50
WIRE	\$0.37	19	LBS	\$7.16					\$7.16
CANAL WATER		39	AC. IN.				\$34.94	\$34.94	
CANAL WATER (MAINTENANCE)		1	ACRE				\$8.00	\$8.00	
<b>SUBTOTAL</b>				<b>\$89.01</b>				<b>\$42.94</b>	<b>\$131.95</b>
<b>PREHARVEST OPERATIONS</b>									
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
PLOW	96 HP	0.67 HR		\$4.52	\$5.00	\$3.11	\$43.31	\$55.94	
DISC (2X)	96 HP	0.34 HR		\$2.30	\$2.54	\$1.39	\$26.39	\$32.61	
HARROW	96 HP	0.19 HR		\$1.28	\$1.42	\$0.25	\$7.07	\$10.02	
FERTILIZE	96 HP	0.05 HR		\$0.34	\$0.37	\$0.06	\$1.23	\$2.00	
DRILL	96 HP	0.21 HR		\$1.42	\$1.57	\$0.49	\$26.80	\$30.27	
DITCHER (2X)	40 HP	0.10 HR		\$0.68	\$0.30	\$0.02	\$1.50	\$2.49	
IRRIGATE (9X)		2.25 HR		\$14.51	\$43.49	\$5.16	\$12.79	\$75.95	
<b>SUBTOTAL</b>		<b>3.81 HR</b>		<b>\$25.04</b>	<b>\$54.68</b>	<b>\$10.48</b>	<b>\$119.08</b>	<b>\$209.28</b>	
<b>HARVEST OPERATIONS</b>									
SWATHER	14 FT	0.16 HR		\$1.08	\$0.63	\$0.28	\$7.20	\$9.18	
BALER	96 HP	0.21 HR		\$1.42	\$1.57	\$0.45	\$7.07	\$10.50	
BALE WAGON	96 HP	0.20 HR		\$1.35	\$1.49	\$0.83	\$8.88	\$12.56	
<b>SUBTOTAL</b>		<b>0.57 HR</b>		<b>\$3.85</b>	<b>\$3.69</b>	<b>\$1.56</b>	<b>\$23.15</b>	<b>\$32.24</b>	
<b>OVERHEAD EXPENSES</b>									
DOWNTIME		1.74 HR		\$11.71				\$11.71	
EMPLOYEE BENEFITS				\$5.20				\$5.20	
INSURANCE				\$0.58				\$0.58	
LAND TAXES							\$2.07	\$2.07	
SUPERVISION AND MANAGEMENT				\$27.20				\$27.20	
<b>SUBTOTAL</b>		<b>1.74 HR</b>		<b>\$0.58</b>	<b>\$44.11</b>			<b>\$2.07</b>	<b>\$46.77</b>
<b>TOTAL OPERATING EXPENSES</b>		<b>6.12 HR</b>		<b>\$89.59</b>	<b>\$73.00</b>	<b>\$58.37</b>	<b>\$12.04</b>	<b>\$187.24</b>	<b>\$420.24</b>
<b>NET OPERATING PROFIT</b>								<b>(\$162.74)</b>	
INTEREST ON OPERATING CAPITAL	(	\$61.23	@	8.00%				\$4.90	
INTEREST ON EQUIPMENT INVESTMENT								\$123.42	
<b>RETURN TO LAND AND RISK</b>								<b>(\$291.05)</b>	

TABLE 5. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, 2002.  
Harvesting dates: June 1 - October 15

ITEM	PRICE	YIELD						TOTAL	
<b>GROSS RETURNS</b>									
ALFALFA HAY	\$120.00	5.00	TONS (STACKED)					\$600.00	
GRAZING	\$10.00	2.00	AUM					\$20.00	
<b>TOTAL</b>								<b>\$620.00</b>	
<b>PURCHASED INPUTS</b>									
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS					FIXED COST	TOTAL
PHOSPHATE (P2O5)	\$0.30	40 LBS	\$12.00						\$12.00
INSECTICIDE (AERIAL)	\$18.75	1 ACRE	\$18.75						\$18.75
WIRE	\$0.37	43 LBS	\$15.97						\$15.97
LIVESTOCK FAC & EQUIP ESTABLISHMENT: Principal		6 YEARS						\$5.00	\$5.00
: Interest								\$48.51	\$48.51
								\$23.75	\$23.75
CANAL WATER		46 AC. IN.						\$41.21	\$41.21
CANAL WATER (MAINTENANCE)		1 ACRE						\$8.00	\$8.00
<b>SUBTOTAL</b>			<b>\$46.72</b>				<b>\$126.46</b>	<b>\$173.19</b>	
<b>PREHARVEST OPERATIONS</b>									
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
FERTILIZE	96 HP	0.05 HR		\$0.34	\$0.37	\$0.06	\$1.23	\$2.00	
DITCHER (2X)	40 HP	0.10 HR		\$0.68	\$0.30	\$0.02	\$1.50	\$2.49	
IRRIGATE (13X)		3.25 HR		\$20.96	\$51.30	\$6.09	\$15.08	\$93.43	
<b>SUBTOTAL</b>		<b>3.40 HR</b>		<b>\$21.98</b>	<b>\$51.97</b>	<b>\$6.17</b>	<b>\$17.81</b>	<b>\$97.92</b>	
<b>HARVEST OPERATIONS</b>									
SWATHER (3X)	14 FT	0.48 HR		\$3.24	\$1.89	\$0.84	\$21.59	\$27.55	
BALER (3X)	40 HP	0.63 HR		\$4.25	\$1.88	\$0.62	\$6.47	\$13.23	
BALE WAGON (3X)	96 HP	0.60 HR		\$4.05	\$4.48	\$2.50	\$26.64	\$37.67	
<b>SUBTOTAL</b>		<b>1.71 HR</b>		<b>\$11.54</b>	<b>\$8.25</b>	<b>\$3.96</b>	<b>\$54.70</b>	<b>\$78.45</b>	
<b>OVERHEAD EXPENSES</b>									
DOWNTIME		0.44 HR		\$2.97				\$2.97	
EMPLOYEE BENEFITS				\$6.03				\$6.03	
INSURANCE			\$0.67				\$0.67		
LAND TAXES							\$2.07		
SUPERVISION AND MANAGEMENT				\$47.53				\$47.53	
OTHER EXPENSES			\$144.18				\$144.18		
<b>SUBTOTAL</b>		<b>0.44 HR</b>		<b>\$144.85</b>	<b>\$56.53</b>		<b>\$2.07</b>	<b>\$203.45</b>	
<b>TOTAL OPERATING EXPENSES</b>		<b>5.55 HR</b>		<b>\$191.57</b>	<b>\$90.05</b>	<b>\$60.22</b>	<b>\$10.13</b>	<b>\$201.05</b>	
<b>NET OPERATING PROFIT</b>								<b>\$66.98</b>	
INTEREST ON OPERATING CAPITAL	(	\$38.91	@	8.00%				\$3.11	
INTEREST ON EQUIPMENT INVESTMENT								\$53.84	
<b>RETURN TO LAND AND RISK</b>								<b>\$10.03</b>	

**BUDGET SUMMARY**

GROSS RETURN		\$620.00	
VARIABLE OPERATING EXPENSES	\$261.92		
RETURN OVER VARIABLE EXPENSES		\$358.08	(GROSS MARGIN)
FIXED EXPENSES	\$201.05		
NET FARM INCOME		\$157.03	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$90.05		
NET OPERATING PROFIT		\$66.98	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$56.95		
RETURN TO LAND AND RISK		\$10.03	

TABLE 6. Summary of per acre costs and returns for an 80 acre farm, San Juan County, 2002.

	ALFALFA ESTABLISHMENT -----SPRINKLER-----	ALFALFA HAY
	TONS	TONS
PRIMARY YIELD	2.25	5.00
PRIMARY PRICE	110.00	120.00
GOVERNMENT PAYMENTS	0.00	0.00
SECOND INCOME	10.00	20.00
GROSS RETURN	\$257.50	\$620.00
CASH OPERATING EXPENSES		
SEED	\$68.35	
FERTILIZER	\$13.50	\$12.00
CHEMICALS		\$18.75
CROP INSURANCE		
OTHER PURCHASED INPUTS	\$7.16	\$15.97
CANAL WATER		
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$14.88	\$8.92
FUEL-IRRIGATION	\$43.49	\$51.30
REPAIRS	\$12.04	\$10.13
CUSTOM CHARGES		
LAND TAXES	\$2.07	\$2.07
OTHER EXPENSES	\$0.58	\$144.85
TOTAL CASH EXPENSES	\$162.07	\$263.99
RETURN OVER CASH EXPENSES	\$95.43	\$356.01
FIXED EXPENSES	\$185.16	\$198.97
TOTAL EXPENSES	\$347.24	\$462.97
NET FARM INCOME	(\$89.74)	\$157.03
LABOR AND MANAGEMENT COSTS	\$73.00	\$90.05
NET OPERATING PROFIT	(\$162.74)	\$66.98
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL	\$4.90	\$3.11
INTEREST ON EQUIPMENT INVESTMENT	\$123.42	\$53.84
TOTAL CAPITAL COSTS	\$128.31	\$56.95
RETURN TO LAND AND RISK	(\$291.05)	\$10.03

TABLE 7. Whole farm summary, San Juan County, 2002.

GROSS RETURNS		
OAT HAY	11 ACRES	
CROP		\$2,833
ALFALFA HAY	69 ACRES	
CROP		\$41,400
GRAZING		\$1,380
GROSS RETURN		\$45,613
CASH OPERATING EXPENSES		
SEED		\$752
FERTILIZER		\$977
CHEMICALS		\$1,294
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$1,181
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$779
FUEL-IRRIGATION		\$4,018
REPAIRS		\$831
CUSTOM CHARGES		\$0
LAND TAXES		\$166
OTHER EXPENSES		\$10,001
TOTAL CASH EXPENSES		\$19,998
RETURN OVER CASH EXPENSES		\$25,614
FIXED EXPENSES		\$12,419
TOTAL EXPENSES		\$32,417
NET FARM INCOME		\$13,195
LABOR AND MANAGEMENT COSTS		\$7,017
NET OPERATING PROFIT		\$6,179
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$269
INTEREST ON EQUIPMENT INVESTMENT		\$5,072
TOTAL CAPITAL COSTS		\$5,341
RETURN TO LAND AND RISK		\$838

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$1,000 /ACRE	(\$2,362)	4.75%
\$2,500 /ACRE	(\$7,162)	2.47%
\$4,000 /ACRE	(\$11,962)	1.67%
\$5,500 /ACRE	(\$16,762)	1.26%
\$7,000 /ACRE	(\$21,562)	1.01%
\$8,500 /ACRE	(\$26,362)	0.85%

\* 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)