

TABLE 1. Acreage Summary, San Juan County,  
Projected 2004.

BUDGET AREA.....	SAN JUAN COUNTY, 2002.		
FARM SIZE.....	80 ACRES		
IRRIGATION TYPE.....	SPRINKLER		
NUMBER OF CROPS...	1		
	WATER USE		
ACREAGE SUMMARY:	LAND USE (ACRES)	AC.IN. PER AC.	TOTAL AC.IN.
ALFALFA ESTABLISHMENT	11.00	39	429
ALFALFA	69.00	46	3,174
TOTAL	80.00		3,603
ACRE FEET PER ACRE OF WATER RIGHTS			3.75

TABLE 2. Basic cost information for San Juan County,  
Projected 2004.

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	\$0.29
<b>Seed:</b>			
Alfalfa		\$/pound	\$2.80
Oats		\$/pound	\$0.30
Wire		\$/pound	\$0.38
Canal Water		\$/acre foot	\$18.25
<b>Energy:</b>			
Diesel fuel		\$/gallon	\$1.50
Gasoline		\$/gallon	\$1.45
Electricity		cents/KwHr	8.87
LP Gas		\$/gallon	\$1.21
Natural Gas		\$/MCF	\$7.22
(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	6.50%
Land Interest Rate		percent	6.00%
Equipment Interest Rate		percent	6.50%
Real Interest Rate		percent	4.00%
Land Taxes		\$253.00 /acre (full value)	\$2.23
Personal Property Tax Rate	- NR	\$/ \$1,000 (Assessed Value)	\$26.41
	- R		\$22.37
<b>Supervision Factors</b>			
Field Crop-Irrigation		\$/labor hour	\$1.00
Field Crop-Equipment & General		\$/labor hour	\$0.50
Management Rate		percent	7.00%

TABLE 3. Overhead cost information for San Juan County,  
Projected 2004.

Item			
Electricity (Domestic & Shop)		\$125.00 per month	\$1,500
Telephone		\$85.00 per month	\$1,020
Accounting & Legal			\$505
Misc. Supplies & Hand Tools			\$850
Pickup and Auto			
miles	10,300	@ \$0.365 per mile	\$3,760
<b>Insurance</b>			
- general liability (non-employee)			\$1,050
- fire/theft			\$585
<b>Property Taxes</b>			
- non-farm land			\$0
- other than land & machinery			\$330
Building repairs and maintenance			\$525
Dues, fees, publications			\$255
Farmstead Equipment			\$170
Total			\$10,550
Total per planted acre			\$152.89

Table 4. Pumping costs and data for irrigation, San Juan County, Projected 2004.

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	8.87 CENTS/KwHr
NATURAL GAS	\$7.22 \$/MCF
LP GAS	\$1.21 \$/GAL
DIESEL	\$1.50 \$/GAL
PUMPING COSTS	
ELECTRIC WELL:	
COST PER HOUR	\$4.03
COST PER ACRE INCH	\$2.28
NATURAL GAS WELL:	
COST PER HOUR	\$4.30
COST PER ACRE INCH	\$2.43
LP GAS WELL:	
COST PER HOUR	\$7.14
COST PER ACRE INCH	\$4.04
DIESEL WELL:	
COST PER HOUR	\$5.53
COST PER ACRE INCH	\$3.13

TABLE 5. Equipment summary for an 80 acre sprinkler-irrigated farm, San Juan County Projected 2004.

EQUIPMENT		ANNUAL HOURS OF USE	NUMBER	TOTAL VALUE	VARIABLE COSTS				FIXED COSTS		
ITEM & SIZE	FUEL, OIL, LUBRICANT				REPAIR	FUEL, OIL PER HR	REPAIR PER HR	DEPRECIATION	TAXES	TOTAL PER HR	
TRACTOR	40 HP	51	1	\$1,600	\$223	\$7	\$4.34	\$0.14	\$50	\$11	\$1.19
TRACTOR	95 HP	65	1	\$19,045	\$697	\$84	\$10.66	\$1.29	\$1,430	\$189	\$24.75
SWATHER	14 FT	35	1	\$3,900	\$196	\$61	\$5.62	\$1.74	\$1,450	\$128	\$45.23
BALER, PTO	2 WIRE	46	1	\$1,600		\$39		\$0.85	\$385	\$34	\$9.15
BALE WAGON, PTO		44	1	\$1,500		\$126		\$2.88	\$800	\$70	\$19.96
DISC	12 FT	4	1	\$2,250		\$10		\$2.79	\$180	\$20	\$53.43
PLOW	3-14 IN	7	1	\$3,350		\$25		\$3.35	\$268	\$29	\$40.37
DITCHER (DOUBLE MOLDBOARD)		8	1	\$1,250		\$0		\$0.05	\$100	\$11	\$13.88
HARROW	12 FT	2	1	\$300		\$0		\$0.01	\$24	\$3	\$12.75
DRILL	12 FT	2	1	\$2,200		\$2		\$1.06	\$220	\$19	\$103.62
FERT SPREADER	DEALER FURNISHED	4									
SIDEROLL SPRINKLER		2,038	2	\$5,000		\$96		\$0.05	\$667	\$44	\$0.35
NATURAL GAS BOOSTER PUMP		2,038	1	\$2,500	\$8,771	\$381	\$4.30	\$0.19	\$333	\$22	\$0.23
				\$44,495	\$9,887	\$831			\$5,907	\$580	

TABLE 6. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, Projected 2004.  
 Planting dates: April 15 - June 1  
 Harvesting dates: June 15 - July 1

ITEM	PRICE	YIELD						TOTAL	
<b>GROSS RETURNS</b>									
OAT HAY	\$120.00	2.25 TONS (STACKED)						\$270.00	
GRAZING	\$10.00	1.00 AUM						\$10.00	
<b>TOTAL</b>								<b>\$280.00</b>	
<b>PURCHASED INPUTS</b>									
	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL	
ALFALFA SEED	\$2.80	20 LBS	\$56.00					\$56.00	
OAT SEED	\$0.30	45 LBS	\$13.50					\$13.50	
PHOSPHATE (P2O5)	\$0.29	45 LBS	\$13.05					\$13.05	
WIRE	\$0.38	19 LBS	\$7.38					\$7.38	
CANAL WATER		39 AC. IN.					\$59.31	\$59.31	
CANAL WATER (MAINTENANCE)		1 ACRE					\$8.00	\$8.00	
<b>SUBTOTAL</b>			<b>\$89.93</b>				<b>\$67.31</b>	<b>\$157.24</b>	
<b>PREHARVEST OPERATIONS</b>									
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
PLOW	96 HP	0.67 HR		\$4.52	\$7.14	\$3.11	\$43.63	\$58.40	
DISC (2X)	96 HP	0.34 HR		\$2.30	\$3.62	\$1.39	\$26.58	\$33.89	
HARROW	96 HP	0.19 HR		\$1.28	\$2.03	\$0.25	\$7.12	\$10.68	
FERTILIZE	96 HP	0.05 HR		\$0.34	\$0.53	\$0.06	\$1.24	\$2.17	
DRILL	96 HP	0.21 HR		\$1.42	\$2.24	\$0.49	\$26.96	\$31.11	
DITCHER (2X)	40 HP	0.10 HR		\$0.68	\$0.43	\$0.02	\$1.51	\$2.63	
IRRIGATE (9X)		2.25 HR		\$14.51	\$94.93	\$5.16	\$12.84	\$127.45	
<b>SUBTOTAL</b>		<b>3.81 HR</b>		<b>\$25.04</b>	<b>\$110.93</b>	<b>\$10.48</b>	<b>\$119.87</b>	<b>\$266.33</b>	
<b>HARVEST OPERATIONS</b>									
SWATHER	14 FT	0.16 HR		\$1.08	\$0.90	\$0.28	\$7.24	\$9.49	
BALER	96 HP	0.21 HR		\$1.42	\$2.24	\$0.45	\$7.12	\$11.22	
BALE WAGON	96 HP	0.20 HR		\$1.35	\$2.13	\$0.83	\$8.94	\$13.26	
<b>SUBTOTAL</b>		<b>0.57 HR</b>		<b>\$3.85</b>	<b>\$5.27</b>	<b>\$1.56</b>	<b>\$23.30</b>	<b>\$33.98</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							\$2.23	\$2.23	
SUPERVISION AND MANAGEMENT				\$32.96				\$32.96	
<b>SUBTOTAL</b>		<b>1.74 HR</b>	<b>\$0.58</b>	<b>\$49.88</b>				<b>\$2.23</b>	<b>\$52.68</b>
<b>TOTAL OPERATING EXPENSES</b>		<b>6.12 HR</b>	<b>\$90.50</b>	<b>\$78.77</b>	<b>\$116.20</b>	<b>\$12.04</b>	<b>\$212.71</b>	<b>\$510.22</b>	
<b>NET OPERATING PROFIT</b>								<b>(\$230.22)</b>	
INTEREST ON OPERATING CAPITAL		(	\$75.88	@	6.50%	)		\$4.93	
INTEREST ON EQUIPMENT INVESTMENT								\$100.27	
<b>RETURN TO LAND AND RISK</b>								<b>(\$335.43)</b>	

TABLE 7. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, Projected 2004.  
Harvesting dates: June 1 - October 15

ITEM	PRICE	YIELD						TOTAL
<b>GROSS RETURNS</b>								
ALFALFA HAY	\$130.00	5.50 TONS (STACKED)						\$715.00
GRAZING	\$10.00	2.00 AUM						\$20.00
<b>TOTAL</b>								<b>\$735.00</b>
<b>PURCHASED INPUTS</b>								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
PHOSPHATE (P2O5)	\$0.29	40.00 LBS	\$11.60					\$11.60
INSECTICIDE (AERIAL)	\$19.20	1.00 ACRE	\$19.20					\$19.20
WIRE	\$0.38	43.00 LBS	\$16.45					\$16.45
LIVESTOCK FAC & EQUIP							\$5.00	\$5.00
ESTABLISHMENT: Principal		6.00 YEARS					\$55.90	\$55.90
: Interest							\$21.87	\$21.87
CANAL WATER		46.00 AC. IN.					\$69.96	\$69.96
CANAL WATER (MAINTENANCE)		1 ACRE					\$8.00	\$8.00
<b>SUBTOTAL</b>			<b>\$47.25</b>				<b>\$160.73</b>	<b>\$207.98</b>
<b>PREHARVEST OPERATIONS</b>								
PURCHASED INPUTS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
FERTILIZE	96 HP	0.05 HR		\$0.34	\$0.53	\$0.06	\$1.24	\$2.17
DITCHER (2X)	40 HP	0.10 HR		\$0.68	\$0.43	\$0.02	\$1.51	\$2.63
IRRIGATE (13X)		3.25 HR		\$20.96	\$111.97	\$6.09	\$15.14	\$154.17
<b>SUBTOTAL</b>		<b>3.40 HR</b>		<b>\$21.98</b>	<b>\$112.94</b>	<b>\$6.17</b>	<b>\$17.89</b>	<b>\$158.97</b>
<b>HARVEST OPERATIONS</b>								
SWATHER (3X)	14 FT	0.48 HR		\$3.24	\$2.70	\$0.84	\$21.71	\$28.48
BALER (3X)	40 HP	0.63 HR		\$4.25	\$2.73	\$0.62	\$6.51	\$14.12
BALE WAGON (3X)	96 HP	0.60 HR		\$4.05	\$6.40	\$2.50	\$26.83	\$39.78
<b>SUBTOTAL</b>		<b>1.71 HR</b>		<b>\$11.54</b>	<b>\$11.82</b>	<b>\$3.96</b>	<b>\$55.05</b>	<b>\$82.38</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						\$2.23		\$2.23
SUPERVISION AND MANAGEMENT				\$55.58				\$55.58
OTHER EXPENSES			\$152.89					\$152.89
<b>SUBTOTAL</b>		<b>0.44 HR</b>		<b>\$153.56</b>	<b>\$64.58</b>		<b>\$2.23</b>	<b>\$220.37</b>
<b>TOTAL OPERATING EXPENSES</b>		<b>5.55 HR</b>		<b>\$200.81</b>	<b>\$98.10</b>	<b>\$124.77</b>	<b>\$10.13</b>	<b>\$669.71</b>
<b>NET OPERATING PROFIT</b>								<b>\$65.29</b>
INTEREST ON OPERATING CAPITAL		( \$54.72 @	6.50%	)				\$3.56
INTEREST ON EQUIPMENT INVESTMENT								\$43.74
<b>RETURN TO LAND AND RISK</b>								<b>\$17.99</b>
<b>BUDGET SUMMARY</b>								
GROSS RETURN		\$735.00						
VARIABLE OPERATING EXPENSES	\$335.70							
RETURN OVER VARIABLE EXPENSES		\$399.30	(GROSS MARGIN)					
FIXED EXPENSES	\$235.90							
NET FARM INCOME		\$163.40	(RETURN TO CAPITAL, LABOR, LAND & RISK)					
LABOR AND MANAGEMENT COST	\$98.10							
NET OPERATING PROFIT		\$65.29	(RETURN TO CAPITAL, LAND & RISK)					
CAPITAL COSTS	\$47.30							
<b>RETURN TO LAND AND RISK</b>		<b>\$17.99</b>						

TABLE 8. Summary of per acre costs and returns for an 80 acre farm, San Juan County,  
Projected 2004.

	ALFALFA ESTABLISHMENT	ALFALFA HAY
	TONS	TONS
PRIMARY YIELD	2.25	5.50
PRIMARY PRICE	\$120.00	\$130.00
GOVERNMENT PAYMENTS	\$0.00	\$0.00
SECOND INCOME	\$10.00	\$20.00
GROSS RETURN	\$280.00	\$735.00
CASH OPERATING EXPENSES		
SEED	\$69.50	
FERTILIZER	\$13.05	\$11.60
CHEMICALS		\$19.20
CROP INSURANCE		
OTHER PURCHASED INPUTS	\$7.38	\$16.45
CANAL WATER		
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$21.26	\$12.79
FUEL-IRRIGATION	\$94.93	\$111.97
REPAIRS	\$12.04	\$10.13
CUSTOM CHARGES		
LAND TAXES	\$2.23	\$2.23
OTHER EXPENSES	\$0.58	\$153.56
TOTAL CASH EXPENSES	\$220.97	\$337.93
RETURN OVER CASH EXPENSES	\$59.03	\$397.07
FIXED EXPENSES	\$210.49	\$233.67
TOTAL EXPENSES	\$431.45	\$571.60
NET FARM INCOME	(\$151.45)	\$163.40
LABOR AND MANAGEMENT COSTS	\$78.77	\$98.10
NET OPERATING PROFIT	(\$230.22)	\$65.29
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL	\$4.93	\$3.56
INTEREST ON EQUIPMENT INVESTMENT	\$100.27	\$43.74
TOTAL CAPITAL COSTS	\$105.21	\$47.30
RETURN TO LAND AND RISK	(\$335.43)	\$17.99

TABLE 9. Whole farm summary, San Juan County,  
Projected 2004.

GROSS RETURNS		
OAT HAY	11.00 ACRES	
CROP		\$3,080
ALFALFA HAY	69.00 ACRES	
CROP		\$49,335
GRAZING		\$1,380
GROSS RETURN		<u>\$53,795</u>
CASH OPERATING EXPENSES		
SEED		\$765
FERTILIZER		\$944
CHEMICALS		\$1,325
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$1,216
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$1,116
FUEL-IRRIGATION		\$8,771
REPAIRS		\$831
CUSTOM CHARGES		\$0
LAND TAXES		\$178
OTHER EXPENSES		\$10,602
TOTAL CASH EXPENSES		<u>\$25,748</u>
RETURN OVER CASH EXPENSES		\$28,047
FIXED EXPENSES		\$14,581
TOTAL EXPENSES		\$40,329
NET FARM INCOME		\$13,466
LABOR AND MANAGEMENT COSTS		\$7,635
NET OPERATING PROFIT		\$5,830
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$300
INTEREST ON EQUIPMENT INVESTMENT		\$4,121
TOTAL CAPITAL COSTS		<u>\$4,421</u>
RETURN TO LAND AND RISK		<u>\$1,409</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$1,000 /ACRE	(\$1,791)	4.68%
\$2,500 /ACRE	(\$6,591)	2.38%
\$4,000 /ACRE	(\$11,391)	1.60%
\$5,500 /ACRE	(\$16,191)	1.20%
\$7,000 /ACRE	(\$20,991)	0.96%
\$8,500 /ACRE	(\$25,791)	0.80%

\* 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)