

TABLE 1. Acreage Summary, San Juan County,  
Projected 2005.

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 2005.

Item		
<b>Labor Wage Rate:</b>		
Equipment operators	\$/hour	\$6.65
General & Irrigators	\$/hour	\$6.35
<b>Purchased Inputs:</b>		
<b>Fertilizer:</b>		
Phosphate (P205)	\$/pound	\$0.31
<b>Seed:</b>		
Alfalfa	\$/pound	\$2.88
Oats	\$/pound	\$0.27
Wire	\$/pound	\$0.50
Canal Water	\$/acre foot	\$2.75
<b>Energy:</b>		
Diesel fuel	\$/gallon	\$2.10
Gasoline	\$/gallon	\$2.00
Electricity	cents/KwHr	8.56
LP Gas	\$/gallon	\$1.65
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	7.00%
Land Interest Rate	percent	7.00%
Equipment Interest Rate	percent	7.00%
Real Interest Rate	percent	3.00%
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 2005.

Item		
Electricity (Domestic & Shop)	\$215.00 per month	\$2,580
Telephone	\$115.00 per month	\$1,380
Accounting & Legal		\$1,525
Misc. Supplies & Hand Tools		\$1,430
Pickup and Auto		
miles	20,028 @ \$0.365 per mile	\$7,310
<b>Insurance</b>		
- general liability (non-employee)		\$1,710
- fire/theft		\$1,525
<b>Property Taxes</b>		
- non-farm land		\$0
- other than land & machinery		\$6,010
Building repairs and maintenance		\$1,290
Dues, fees, publications		\$405
Farmstead Equipment		\$185
	Total	\$25,350
	Total per planted acre	\$367.39

Table 4. Pumping costs and data for irrigation, San Juan County, Projected 2005.

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	8.56 CENTS/KwHr
NATURAL GAS	\$3.28 \$/MCF
LP GAS	\$1.65 \$/GAL
DIESEL	\$2.10 \$/GAL
PUMPING COSTS	
ELECTRIC WELL:	
COST PER HOUR	\$3.89
COST PER ACRE INCH	\$2.20
NATURAL GAS WELL:	
COST PER HOUR	\$1.97
COST PER ACRE INCH	\$1.12
LP GAS WELL:	
COST PER HOUR	\$9.73
COST PER ACRE INCH	\$5.50
DIESEL WELL:	
COST PER HOUR	\$7.73
COST PER ACRE INCH	\$4.37

TABLE 5. Equipment summary for an 80 acre sprinkler-irrigated farm, San Juan County Projected 2005.

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	\$7,609	\$385	\$56	\$7.48	\$1.08	\$359	\$79	\$8.52
TRACTOR 95 HP		65	1	\$9,473	\$837	\$136	\$12.79	\$2.07	\$1,152	\$152	\$19.93
SWATHER 14 FT		35	1	\$3,900	\$274	\$20	\$7.86	\$0.58	\$1,450	\$128	\$45.23
BALER, PTO 2 WIRE		46	1	\$1,600		\$7		\$0.15	\$385	\$34	\$9.15
BALE WAGON, PTO		44	1	\$1,500		\$56		\$1.28	\$800	\$70	\$19.96
DISC 12 FT		4	1	\$2,250		\$10		\$2.79	\$300	\$20	\$85.51
PLOW 3-14 IN		7	1	\$3,350		\$31		\$4.15	\$447	\$29	\$64.61
DITCHER (DOUBLE MOLDBOARD)		8	1	\$1,250		\$0		\$0.05	\$167	\$11	\$22.21
HARROW 12 FT		2	1	\$300		\$0		\$0.01	\$40	\$3	\$20.40
DRILL 12 FT		2	1	\$2,200		\$2		\$1.06	\$440	\$19	\$198.86
FERT SPREADER DEALER FURNISHED		4									
SIDEROLL SPRINKLER		2,038	1	\$2,500		\$0		\$0.00	\$333	\$22	\$0.17
NATURAL GAS BOOSTER PUMP		2,038	1	\$2,500	\$4,018	\$0	\$1.97	\$0.00	\$333	\$22	\$0.23
				\$38,432	\$5,514	\$318			\$6,206	\$589	

TABLE 6. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County  
 Projected 2005.  
 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>									
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL	
ALFALFA SEED	\$2.88	20 LBS	\$57.60					\$57.60	
OAT SEED	\$0.27	45 LBS	\$12.15					\$12.15	
PHOSPHATE (P2O5)	\$0.31	45 LBS	\$13.95					\$13.95	
WIRE	\$0.50	19 LBS	\$9.64					\$9.64	
CANAL WATER		39 AC. IN.					\$8.94	\$8.94	
CANAL WATER (MAINTENANCE)		1 ACRE					\$8.00	\$8.00	
<b>SUBTOTAL</b>			<b>\$93.34</b>				<b>\$16.94</b>	<b>\$110.28</b>	
<b>PREHARVEST OPERATIONS</b>									
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
PLOW	96 HP	0.67 HR		\$4.46	\$8.57	\$4.17	\$56.64	\$73.84	
DISC (2X)	96 HP	0.34 HR		\$2.26	\$4.35	\$1.65	\$35.85	\$44.11	
HARROW	96 HP	0.19 HR		\$1.26	\$2.43	\$0.40	\$7.66	\$11.75	
FERTILIZE	96 HP	0.05 HR		\$0.33	\$0.64	\$0.10	\$1.00	\$2.07	
DRILL	96 HP	0.21 HR		\$1.40	\$2.69	\$0.66	\$45.95	\$50.68	
DITCHER (2X)	40 HP	0.10 HR		\$0.67	\$0.75	\$0.11	\$3.07	\$4.60	
IRRIGATE (9X)		2.25 HR		\$14.29	\$43.49	\$0.00	\$8.99	\$66.77	
<b>SUBTOTAL</b>		<b>3.81 HR</b>		<b>\$24.66</b>	<b>\$62.91</b>	<b>\$7.10</b>	<b>\$159.16</b>	<b>\$253.82</b>	
<b>HARVEST OPERATIONS</b>									
SWATHER	14 FT	0.16 HR		\$1.06	\$1.26	\$0.09	\$7.24	\$9.65	
BALER	96 HP	0.21 HR		\$1.40	\$2.69	\$0.47	\$6.11	\$10.66	
BALE WAGON	96 HP	0.20 HR		\$1.33	\$2.56	\$0.67	\$7.98	\$12.54	
<b>SUBTOTAL</b>		<b>0.57 HR</b>		<b>\$3.79</b>	<b>\$6.50</b>	<b>\$1.23</b>	<b>\$21.32</b>	<b>\$32.84</b>	
<b>OVERHEAD EXPENSES</b>									
DOWNTIME		1.74 HR		\$11.54				\$11.54	
EMPLOYEE BENEFITS				\$5.12				\$5.12	
INSURANCE			\$0.57					\$0.57	
LAND TAXES							\$2.23	\$2.23	
SUPERVISION AND MANAGEMENT				\$28.80				\$28.80	
<b>SUBTOTAL</b>		<b>1.74 HR</b>	<b>\$0.57</b>	<b>\$45.46</b>				<b>\$2.23</b>	<b>\$48.26</b>
<b>TOTAL OPERATING EXPENSES</b>		<b>6.12 HR</b>	<b>\$93.91</b>	<b>\$73.91</b>	<b>\$69.41</b>	<b>\$8.33</b>	<b>\$199.65</b>	<b>\$445.20</b>	
<b>NET OPERATING PROFIT</b>								<b>(\$165.20)</b>	
INTEREST ON OPERATING CAPITAL		( \$64.82 @ 7.00% )						\$4.54	
INTEREST ON EQUIPMENT INVESTMENT								\$100.68	
<b>RETURN TO LAND AND RISK</b>								<b>(\$270.42)</b>	

TABLE 7. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, Projected 2005.  
Harvesting dates: June 1 - October 15

ITEM	PRICE	YIELD						TOTAL
<b>GROSS RETURNS</b>								
ALFALFA HAY	\$130.00	5.00 TONS (STACKED)						\$650.00
GRAZING	\$10.00	2.00 AUM						\$20.00
<b>TOTAL</b>							<b>\$670.00</b>	
<b>PURCHASED INPUTS</b>								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
PHOSPHATE (P2O5)	\$0.31	40.00 LBS	\$12.40					\$12.40
INSECTICIDE (AERIAL)	\$19.20	1.00 ACRE	\$19.20					\$19.20
WIRE	\$0.50	43.00 LBS	\$21.50					\$21.50
LIVESTOCK FAC & EQUIP							\$5.00	\$5.00
ESTABLISHMENT: Principal		6.00 YEARS					\$45.07	\$45.07
Interest							\$20.27	\$20.27
CANAL WATER		46.00 AC. IN.					\$10.54	\$10.54
CANAL WATER (MAINTENANCE)		1 ACRE					\$8.00	\$8.00
<b>SUBTOTAL</b>			<b>\$53.10</b>				<b>\$88.88</b>	<b>\$141.98</b>
<b>PREHARVEST OPERATIONS</b>								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
FERTILIZE	96 HP	0.05 HR		\$0.33	\$0.64	\$0.10	\$1.00	\$2.07
DITCHER (2X)	40 HP	0.10 HR		\$0.67	\$0.75	\$0.11	\$3.07	\$4.60
IRRIGATE (13X)		3.25 HR		\$20.64	\$51.30	\$0.00	\$10.61	\$82.54
<b>SUBTOTAL</b>	<b>3.40 HR</b>			<b>\$21.64</b>	<b>\$52.68</b>	<b>\$0.22</b>	<b>\$14.67</b>	<b>\$89.21</b>
<b>HARVEST OPERATIONS</b>								
SWATHER (3X)	14 FT	0.48 HR		\$3.19	\$3.77	\$0.28	\$21.71	\$28.96
BALER (3X)	40 HP	0.63 HR		\$4.19	\$4.71	\$0.78	\$11.13	\$20.81
BALE WAGON (3X)	96 HP	0.60 HR		\$3.99	\$7.67	\$2.01	\$23.94	\$37.61
<b>SUBTOTAL</b>	<b>1.71 HR</b>			<b>\$11.37</b>	<b>\$16.16</b>	<b>\$3.07</b>	<b>\$56.78</b>	<b>\$87.38</b>
<b>OVERHEAD EXPENSES</b>								
DOWNTIME		0.44 HR		\$2.93				\$2.93
EMPLOYEE BENEFITS				\$5.94				\$5.94
INSURANCE			\$0.66					\$0.66
LAND TAXES								\$2.23
SUPERVISION AND MANAGEMENT				\$51.03				\$51.03
OTHER EXPENSES			\$367.39					\$367.39
<b>SUBTOTAL</b>	<b>0.44 HR</b>			<b>\$368.05</b>	<b>\$59.90</b>			<b>\$2.23</b>
<b>TOTAL OPERATING EXPENSES</b>	<b>5.55 HR</b>			<b>\$421.15</b>	<b>\$92.90</b>	<b>\$68.84</b>	<b>\$3.28</b>	<b>\$162.57</b>
<b>NET OPERATING PROFIT</b>								<b>(\$78.75)</b>
INTEREST ON OPERATING CAPITAL		( \$41.38 @ 7.00% )						\$2.90
INTEREST ON EQUIPMENT INVESTMENT								\$51.88
<b>RETURN TO LAND AND RISK</b>								<b>(\$133.53)</b>

<b>BUDGET SUMMARY</b>			
GROSS RETURN		\$670.00	
VARIABLE OPERATING EXPENSES	\$493.28		
RETURN OVER VARIABLE EXPENSES	\$176.72		(GROSS MARGIN)
FIXED EXPENSES	\$162.57		
NET FARM INCOME		\$14.15	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$92.90		
NET OPERATING PROFIT		(\$78.75)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$54.78		
RETURN TO LAND AND RISK		(\$133.53)	

TABLE 8. Summary of per acre costs and returns for an 80 acre farm, San Juan County,  
Projected 2005.

	ALFALFA ESTABLISHMENT	ALFALFA HAY
	TONS	TONS
PRIMARY YIELD	2.25	5.00
PRIMARY PRICE	\$120.00	\$130.00
GOVERNMENT PAYMENTS	\$0.00	\$0.00
SECOND INCOME	\$10.00	\$20.00
GROSS RETURN	\$280.00	\$670.00
CASH OPERATING EXPENSES		
SEED	\$69.75	
FERTILIZER	\$13.95	\$12.40
CHEMICALS		\$19.20
CROP INSURANCE		
OTHER PURCHASED INPUTS	\$9.64	\$21.50
CANAL WATER		
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$25.92	\$17.55
FUEL-IRRIGATION	\$43.49	\$51.30
REPAIRS	\$8.33	\$3.28
CUSTOM CHARGES		
LAND TAXES	\$2.23	\$2.23
OTHER EXPENSES	\$0.57	\$368.05
TOTAL CASH EXPENSES	\$173.87	\$495.51
RETURN OVER CASH EXPENSES	\$106.13	\$174.49
FIXED EXPENSES	\$197.42	\$160.34
TOTAL EXPENSES	\$371.29	\$655.85
NET FARM INCOME	(\$91.29)	\$14.15
LABOR AND MANAGEMENT COSTS	\$73.91	\$92.90
NET OPERATING PROFIT	(\$165.20)	(\$78.75)
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL	\$4.54	\$2.90
INTEREST ON EQUIPMENT INVESTMENT	\$100.68	\$51.88
TOTAL CAPITAL COSTS	\$105.21	\$54.78
RETURN TO LAND AND RISK	(\$270.42)	(\$133.53)

TABLE 9. Whole farm summary, San Juan County,  
Projected 2005.

GROSS RETURNS		
OAT HAY	11.00 ACRES	
CROP		\$3,080
ALFALFA HAY	69.00 ACRES	
CROP		\$44,850
GRAZING		\$1,380
GROSS RETURN		<u>\$49,310</u>
CASH OPERATING EXPENSES		
SEED		\$767
FERTILIZER		\$1,009
CHEMICALS		\$1,325
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$1,590
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$1,496
FUEL-IRRIGATION		\$4,018
REPAIRS		\$318
CUSTOM CHARGES		\$0
LAND TAXES		\$178
OTHER EXPENSES		\$25,402
TOTAL CASH EXPENSES		<u>\$36,103</u>
RETURN OVER CASH EXPENSES		\$13,207
FIXED EXPENSES		\$10,125
TOTAL EXPENSES		\$46,228
NET FARM INCOME		\$3,082
LABOR AND MANAGEMENT COSTS		\$7,223
NET OPERATING PROFIT		(\$4,141)
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$250
INTEREST ON EQUIPMENT INVESTMENT		\$4,687
TOTAL CAPITAL COSTS		<u>\$4,937</u>
RETURN TO LAND AND RISK		<u>(\$9,078)</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$1,000 /ACRE	(\$11,478)	-3.50%
\$2,500 /ACRE	(\$15,078)	-1.74%
\$4,000 /ACRE	(\$18,678)	-1.16%
\$5,500 /ACRE	(\$22,278)	-0.87%
\$7,000 /ACRE	(\$25,878)	-0.69%
\$8,500 /ACRE	(\$29,478)	-0.58%

\* 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)