

TABLE 1. Acreage Summary, San Juan County,
Projected 2019

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 2019

Item			
Labor Wage Rate:			
Equipment operators		\$/hour	\$7.80
General & Irrigators		\$/hour	\$7.50
Purchased Inputs:			
Fertilizer:			
Phosphate (P205)		\$/pound	\$0.49
Seed:			
Alfalfa		\$/pound	\$3.05
Oats		\$/pound	\$0.34
Wire			
Canal Water		\$/pound	\$1.32
		/acre foot	\$45.00
Energy:			
Diesel fuel		\$/gallon	\$2.65
Gasoline		\$/gallon	\$2.35
Electricity		cents/KwHr	12.31
LP Gas		\$/gallon	\$2.45
Natural Gas		\$/MCF	\$4.00
(service charge)		\$/month	\$10.00
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	5.50%
Land Interest Rate		percent	5.00%
Equipment Interest Rate		percent	5.50%
Real Interest Rate		percent	3.00%
Land Taxes	\$253.00	/acre (full value)	\$2.44
Personal Property Tax Rate	- NR	\$/ \$1,000 (Assessed Value)	\$28.92
	- R		\$24.67
Supervision Factors			
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 2019

Item			
Electricity (Domestic & Shop)		\$134.40 per month	\$1,613
Telephone		\$96.00 per month	\$1,152
Accounting & Legal			\$570
Misc. Supplies & Hand Tools			\$960
Pickup and Auto			
miles	13,184	@ \$0.500 per mile	\$6,592
Insurance			
- general liability (non-employee)			\$1,190
- fire/theft			\$774
Property Taxes			
- non-farm land			\$0
- other than land & machinery			\$6,010
Building repairs and maintenance			\$595
Dues, fees, publications			\$294
Farmstead Equipment			\$192
Total			\$19,943
Total per planted acre			\$289.03

TABLE 6. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, Projected 2019
 Planting dates: April 15 - June 1
 Harvesting dates: June 15 - July 1

ITEM	PRICE	YIELD						TOTAL	
GROSS RETURNS									
OAT HAY	\$160.00	2.25 TONS (STACKED)						\$360.00	
GRAZING	\$10.00	1.00 AUM						\$10.00	
TOTAL							\$370.00		
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL	
ALFALFA SEED	\$3.05	20 LBS	\$61.00					\$61.00	
OAT SEED	\$0.34	45 LBS	\$15.30					\$15.30	
PHOSPHATE (P2O5)	\$0.49	45 LBS	\$22.05					\$22.05	
WIRE	\$1.32	19 LBS	\$25.45					\$25.45	
CANAL WATER		39 AC. IN.					\$146.25	\$146.25	
CANAL WATER (MAINTENANCE)		1 ACRE					\$8.00	\$8.00	
SUBTOTAL			\$123.80				\$154.25	\$278.05	
PREHARVEST OPERATIONS									
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
PLOW	96 HP	0.67 HR		\$5.23	\$10.81	\$3.39	\$49.40	\$68.82	
DISC (2X)	96 HP	0.34 HR		\$2.65	\$5.49	\$1.25	\$32.21	\$41.61	
HARROW	96 HP	0.19 HR		\$1.48	\$3.07	\$0.17	\$5.56	\$10.28	
FERTILIZE	96 HP	0.05 HR		\$0.39	\$0.81	\$0.04	\$0.44	\$1.68	
DRILL	96 HP	0.21 HR		\$1.64	\$3.39	\$0.41	\$43.76	\$49.20	
DITCHER (2X)	40 HP	0.10 HR		\$0.78	\$0.88	\$0.11	\$3.05	\$4.81	
IRRIGATE (9X)		2.25 HR		\$16.88	\$52.89	\$0.00	\$9.04	\$78.80	
SUBTOTAL		3.81 HR		\$29.04	\$77.33	\$5.37	\$143.45	\$255.20	
HARVEST OPERATIONS									
SWATHER	14 FT	0.16 HR		\$1.25	\$1.59	\$0.09	\$6.92	\$9.84	
BALER	96 HP	0.21 HR		\$1.64	\$3.39	\$0.22	\$3.77	\$9.02	
BALE WAGON	96 HP	0.20 HR		\$1.56	\$3.23	\$0.44	\$5.77	\$10.99	
SUBTOTAL		0.57 HR		\$4.45	\$8.20	\$0.74	\$16.46	\$29.85	
OVERHEAD EXPENSES									
DOWNTIME		1.74 HR		\$13.53				\$13.53	
EMPLOYEE BENEFITS				\$6.03				\$6.03	
INSURANCE			\$0.67					\$0.67	
LAND TAXES							\$2.44	\$2.44	
SUPERVISION AND MANAGEMENT				\$40.64				\$40.64	
SUBTOTAL		1.74 HR	\$0.67	\$60.20				\$2.44	\$63.31
TOTAL OPERATING EXPENSES		6.12 HR	\$124.47	\$93.69	\$85.53	\$6.12	\$316.60	\$626.42	
NET OPERATING PROFIT							(\$256.42)		
INTEREST ON OPERATING CAPITAL		(\$83.32	@	5.50%)	\$4.58		
INTEREST ON EQUIPMENT INVESTMENT							\$63.47		
RETURN TO LAND AND RISK							(\$324.47)		

TABLE 7. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, Projected 2019
Harvesting dates: June 1 - October 15

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
ALFALFA HAY	\$185.00	5.00	TONS (STACKED)					\$925.00
GRAZING	\$10.00	2.00	AUM					\$20.00
TOTAL								\$945.00

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
PHOSPHATE (P2O5)	\$0.49	40.00 LBS	\$19.60		\$19.60
INSECTICIDE (AERIAL)	\$19.20	1.00 ACRE	\$19.20		\$19.20
WIRE	\$1.32	43.00 LBS	\$56.76		\$56.76
LIVESTOCK FAC & EQUIP ESTABLISHMENT: Principal		6.00 YEARS		\$5.00	\$5.00
: Interest				\$54.08	\$54.08
CANAL WATER		46.00 AC. IN.		\$21.48	\$21.48
CANAL WATER (MAINTENANCE)		1 ACRE		\$172.50	\$172.50
				\$8.00	\$8.00
SUBTOTAL			\$95.56	\$261.06	\$356.62

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
FERTILIZE	96 HP	0.05 HR		\$0.39	\$0.81	\$0.04	\$0.44	\$1.68
DITCHER (2X)	40 HP	0.10 HR		\$0.78	\$0.88	\$0.11	\$3.05	\$4.81
IRRIGATE (13X)		3.25 HR		\$24.38	\$62.38	\$0.00	\$10.66	\$97.42
SUBTOTAL		3.40 HR		\$25.55	\$64.07	\$0.15	\$14.14	\$103.91

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SWATHER (3X)	14 FT	0.48 HR		\$3.74	\$4.76	\$0.26	\$20.75	\$29.52
BALER (3X)	40 HP	0.63 HR		\$4.91	\$5.54	\$0.74	\$10.94	\$22.12
BALE WAGON (3X)	96 HP	0.60 HR		\$4.68	\$9.68	\$1.31	\$17.31	\$32.98
SUBTOTAL		1.71 HR		\$13.34	\$19.98	\$2.31	\$49.00	\$84.62

OVERHEAD EXPENSES	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DOWNTIME	0.44 HR		\$3.43				\$3.43
EMPLOYEE BENEFITS			\$7.00				\$7.00
INSURANCE		\$0.78					\$0.78
LAND TAXES						\$2.44	\$2.44
SUPERVISION AND MANAGEMENT			\$70.28				\$70.28
OTHER EXPENSES		\$289.03					\$289.03
SUBTOTAL	0.44 HR	\$289.80	\$80.71			\$2.44	\$372.95

TOTAL OPERATING EXPENSES	5.55 HR	\$385.36	\$119.59	\$84.05	\$2.46	\$326.64	\$918.11
NET OPERATING PROFIT							\$26.89
INTEREST ON OPERATING CAPITAL	(\$65.69	@	5.50%)		\$3.61
INTEREST ON EQUIPMENT INVESTMENT							\$34.42
RETURN TO LAND AND RISK							(\$11.14)

BUDGET SUMMARY	
GROSS RETURN	\$945.00
VARIABLE OPERATING EXPENSES	\$471.87
RETURN OVER VARIABLE EXPENSES	\$473.13 (GROSS MARGIN)
FIXED EXPENSES	\$326.64
NET FARM INCOME	\$146.49 (RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$119.59
NET OPERATING PROFIT	\$26.89 (RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$38.04
RETURN TO LAND AND RISK	(\$11.14)

TABLE 8. Summary of per acre costs and returns for an 80 acre farm, San Juan County,
Projected 2019

	ALFALFA ESTABLISHMENT	ALFALFA HAY
	TONS	TONS
PRIMARY YIELD	2.25	5.00
PRIMARY PRICE	\$160.00	\$185.00
GOVERNMENT PAYMENTS	\$0.00	\$0.00
SECOND INCOME	\$10.00	\$20.00
GROSS RETURN	\$370.00	\$945.00
CASH OPERATING EXPENSES		
SEED	\$76.30	
FERTILIZER	\$22.05	\$19.60
CHEMICALS		\$19.20
CROP INSURANCE		
OTHER PURCHASED INPUTS	\$25.45	\$56.76
CANAL WATER		
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$32.64	\$21.67
FUEL-IRRIGATION	\$52.89	\$62.38
REPAIRS	\$6.12	\$2.46
CUSTOM CHARGES		
LAND TAXES	\$2.44	\$2.44
OTHER EXPENSES	\$0.67	\$289.80
TOTAL CASH EXPENSES	\$218.56	\$474.31
RETURN OVER CASH EXPENSES	\$151.44	\$470.69
FIXED EXPENSES	\$314.16	\$324.20
TOTAL EXPENSES	\$532.73	\$798.51
NET FARM INCOME	(\$162.73)	\$146.49
LABOR AND MANAGEMENT COSTS	\$93.69	\$119.59
NET OPERATING PROFIT	(\$256.42)	\$26.89
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL	\$4.58	\$3.61
INTEREST ON EQUIPMENT INVESTMENT	\$63.47	\$34.42
TOTAL CAPITAL COSTS	\$68.05	\$38.04
RETURN TO LAND AND RISK	(\$324.47)	(\$11.14)

TABLE 9. Whole farm summary, San Juan County,
Projected 2019

GROSS RETURNS		
OAT HAY	11.00 ACRES	
CROP		\$4,070
ALFALFA HAY	69.00 ACRES	
CROP		\$63,825
GRAZING		\$1,380
GROSS RETURN		<u>\$69,275</u>
CASH OPERATING EXPENSES		
SEED		\$839
FERTILIZER		\$1,595
CHEMICALS		\$1,325
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$4,196
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$1,854
FUEL-IRRIGATION		\$4,886
REPAIRS		\$237
CUSTOM CHARGES		\$0
LAND TAXES		\$195
OTHER EXPENSES		\$20,004
TOTAL CASH EXPENSES		<u>\$35,132</u>
RETURN OVER CASH EXPENSES		\$34,143
FIXED EXPENSES		\$22,094
TOTAL EXPENSES		\$57,226
NET FARM INCOME		\$12,049
LABOR AND MANAGEMENT COSTS		\$9,283
NET OPERATING PROFIT		\$2,766
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$300
INTEREST ON EQUIPMENT INVESTMENT		\$3,073
TOTAL CAPITAL COSTS		<u>\$3,373</u>
RETURN TO LAND AND RISK		<u>(\$607)</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$1,000 /ACRE	(\$3,007)	2.20%
\$2,500 /ACRE	(\$6,607)	1.13%
\$4,000 /ACRE	(\$10,207)	0.76%
\$5,500 /ACRE	(\$13,807)	0.57%
\$7,000 /ACRE	(\$17,407)	0.46%
\$8,500 /ACRE	(\$21,007)	0.38%

* 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)