

Table 3a. Livestock Production Parameters

NUMBER OF COWS	0
COWS PER BULL	0
NUMBER OF HORSES	0
REPLACEMENT RATE (%)	0
CALF DEATH LOSS (%)	0.03
YEARLING DEATH LOSS (%)	0.0125
COW DEATH LOSS (%)	0.01
BULL DEATH LOSS (%)	0
CALF CROP (%)	0.9
PRODUCTIVE LIFE OF BULLS (5
CALVES PURCHASED	
HEIFERS	0
STEERS	20

Table 3b. Forage Sources for Livestock

	ACRES	AUMS/ ACRE	AUMS PROVIDED
ALFALFA	9.00	1.40	12.60
PERMANENT PASTURE	10	7	70
BALED HAY (TONS)		0.56	1.4
TOTAL	19.00		84.00

Table 3c. STOCK COUNT CHART

SEASON	YEARLING		TOTAL
	STEERS	HEIFERS	AUMs REQUIRED
	0.7	0.7	
JANUARY			0
FEBUARY			0
MARCH			0
APRIL			0
MAY	20		14
JUNE	20		14
JULY	20		14
AUGUST	20		14

SEPTEMBER	20	14
OCTOBER	20	14
NOVEMBER		0
DECEMBER		0
		<u>84</u>

Table 3d. FORAGE BALANCE CHART

	TOTAL AUMs REQUIRED	PERMANENT ALFALFA PASTURE	TOTAL AUMs SUPPLIED	HAY
JANUARY	0	0	0	0
FEBRUARY	0	0	0	0
MARCH	0	0	0	0
APRIL	0	0	0	0
MAY	14	0	14	0
JUNE	14	0	14	0
JULY	14	0	14	0
AUGUST	14	0	14	0
SEPTEMBER	14	0	14	0
OCTOBER	14	12.6	0	12.6
NOVEMBER	0	0	0	0
DECEMBER	0	0	0	0
Total AUM	84	12.6	70	82.6

TABLE 4. Alfalfa establishment, flood-irrigated, budgeted per acre costs and returns for a 20 acre part-time farm, San Juan County. Actual 2018
 Planting dates: April 15 - June 1
 Harvest dates: June 15 - July 1

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
OAT HAY	100.00	2.00 TONS (IN FIELD)						200.00
TOTAL								200.00
PURCHASED INPUTS								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS					TOTAL
ALFALFA SEED	2.80	20.00 LBS	56.00					56.00
OAT SEED	0.30	45.00 LBS	13.50					13.50
PHOSPHATE (P2O5)	0.20	45.00 LBS	9.00					9.00
CANAL WATER		48.00 AC. IN.			75.00			75.00
CANAL WATER (MAINTENANCE)		1 ACRE			8.00			8.00
SUBTOTAL			78.50		83.00		161.50	
PREHARVEST OPERATIONS								
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
PLOW	65 HP	0.83 HR		5.60	5.85	0.21	3.71	15.37
DISC (2X)	65 HP	0.84 HR		5.67	5.92	0.21	3.75	15.55
FERTILIZE	65 HP	0.05 HR		0.34	0.35	0.01	0.22	0.93
CORRUGATE	65 HP	0.41 HR		2.77	2.89	0.10	2.84	8.61
DRILL	65 HP	0.33 HR		2.23	2.33	0.08	1.47	6.11
DITCHER	65 HP	0.10 HR		0.68	0.70	0.02	0.45	1.85
IRRIGATE (6X)		3.00 HR		19.35				19.35
SUBTOTAL		5.56 HR		36.63	18.05	0.64	12.45	67.76
HARVEST OPERATIONS								
MOWER	65 HP	0.45 HR		3.04	3.17	0.37	6.97	13.55
RAKE	65 HP	0.26 HR		1.76	1.83	0.15	4.02	7.76
BALER (CUSTOM)			65.60					65.60
SUBTOTAL		0.71 HR	65.60	4.79	5.01	0.52	11.00	86.91
OVERHEAD EXPENSES								
DOWNTIME		2.43 HR		16.37				16.37
EMPLOYEE BENEFITS				4.97				4.97
INSURANCE			0.50					0.50
LAND TAXES							2.23	2.23
SUPERVISION AND MANAGEMENT				13.81				13.81
OTHER EXPENSES			144.71					144.71
SUBTOTAL		2.43 HR	145.21	35.14			2.23	182.58
TOTAL OPERATING EXPENSES		8.70 HR	289.31	76.57	23.05	1.16	108.67	498.76
NET OPERATING PROFIT								-298.76
INTEREST ON OPERATING CAPITAL (49.85 @	0.07)					3.24
INTEREST ON EQUIPMENT INVESTMENT								21.43
RETURN TO LAND AND RISK								-323.43

TABLE 5. Alfalfa hay, flood-irrigated, budgeted per acre costs and returns for a 20 acre part-time farm,
 San Juan County Actual 2018
 Harvesting dates: June 10 - October 15

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
ALFALFA HAY	220.00	5.50 TONS (IN FIELD)						1,210.00
GRAZING	10.00	1.40 AUM						14.00
TOTAL							1,224.00	
PURCHASED INPUTS		PRICE	QUANTITY	PURCHASED INPUTS		FIXED COST		TOTAL
PHOSPHATE (P2O5)	0.49	45.00 LBS	22.05					22.05
ESTABLISHMENT: Principal		6.00 YEARS				53.90		53.90
: Interest						17.24		17.24
LIVESTOCK FAC & EQUIP						5.00		5.00
CANAL WATER		60.00 AC. IN.				93.75		93.75
CANAL WATER (MAINTENANCE)		1 ACRE				8.00		8.00
SUBTOTAL				22.05		177.90		199.95
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
FERTILIZE	65 HP	0.05 HR		0.34	0.35	0.01	0.22	0.93
DITCHER	65 HP	0.10 HR		0.68	0.70	0.02	0.45	1.85
CORRUGATE	65 HP	0.41 HR		2.77	2.89	0.10	2.84	8.61
IRRIGATE (10X)		5.00 HR		32.25				32.25
SUBTOTAL		5.56 HR		36.03	3.95	0.14	3.51	43.63
HARVEST OPERATIONS								
MOWER (3X)	65 HP	1.35 HR		9.11	9.52	1.11	20.92	40.66
RAKE (3X)	65 HP	0.78 HR		5.27	5.50	0.45	12.07	23.29
BALER (CUSTOM)			180.40					180.40
SUBTOTAL		2.13 HR	180.40	14.38	15.02	1.56	32.99	244.34
OVERHEAD EXPENSES								
DOWNTIME		0.55 HR		3.68				3.68
EMPLOYEE BENEFITS				6.05				6.05
INSURANCE			0.60					0.60
LAND TAXES							2.23	2.23
SUPERVISION AND MANAGEMENT				55.05				55.05
OTHER EXPENSES			144.71					144.71
SUBTOTAL		0.55 HR	145.32	64.78			2.23	212.32
TOTAL OPERATING EXPENSES		8.24 HR	347.77	115.19	18.96	1.70	216.63	700.25
NET OPERATING PROFIT							523.75	
INTEREST ON OPERATING CAPITAL	(28.46	@	0.07			1.85	
INTEREST ON EQUIPMENT INVESTMENT							27.91	
RETURN TO LAND AND RISK							493.99	

BUDGET SUMMARY

GROSS RETURN		1,224.00	
VARIABLE OPERATING EXPENSES	368.43		
RETURN OVER VARIABLE EXPENSES		855.57	(GROSS MARGIN)
FIXED EXPENSES	216.63		
NET FARM INCOME		638.94	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	115.19		
NET OPERATING PROFIT		523.75	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	29.76		
RETURN TO LAND AND RISK		493.99	

TABLE 6. Permanent pasture establishment, flood-irrigated, budgeted per acre costs and returns for a 20 acre part-time farm, San Juan County. Actual 2018
Planting dates: August 15 - September 15

ITEM	PRICE	QUANTITY	PURCHASED INPUTS				TOTAL	
						FIXED COST		
PURCHASED INPUTS								
SEED	2.50	15.00 LBS	37.50				37.50	
NITROGEN (N)	0.29	20.00 LBS	5.80				5.80	
PHOSPHATE (P205)	0.20	50.00 LBS	10.00				10.00	
CANAL WATER		21.00 AC. IN.					32.81	
CANAL WATER (MAINTENANCE)							8.00	
			<u>53.30</u>				<u>80.81</u>	
SUBTOTAL							94.11	
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
PLOW	65 HP	0.83 HR		5.60	5.85	0.21	3.71	15.37
DISC (2X)	65 HP	0.84 HR		5.67	5.92	0.21	3.75	15.55
HARROW	65 HP	0.41 HR		2.77	2.89	0.10	2.84	8.61
FERTILIZE	65 HP	0.05 HR		0.34	0.35	0.01	0.22	0.93
CORRUGATE	65 HP	0.41 HR		2.77	2.89	0.10	2.84	8.61
DRILL	65 HP	0.33 HR		2.23	2.33	0.08	1.47	6.11
DITCHER	65 HP	0.10 HR		0.68	0.70	0.02	0.45	1.85
IRRIGATE (3X)		1.50 HR		9.68				9.68
				<u>29.72</u>	<u>20.94</u>	<u>0.74</u>	<u>15.29</u>	<u>66.69</u>
SUBTOTAL		4.47 HR						
OVERHEAD EXPENSES								
DOWNTIME		0.74 HR		5.01				5.01
EMPLOYEE BENEFITS				3.57				3.57
INSURANCE			0.36					0.36
SUPERVISION AND MANAGEMENT				9.42				9.42
				<u>18.00</u>				<u>18.35</u>
SUBTOTAL		0.74 HR	0.36					
TOTAL OPERATING EXPENSES			<u>5.21 HR</u>	<u>53.66</u>	<u>47.72</u>	<u>20.94</u>	<u>0.74</u>	<u>56.10</u>
							<u>179.16</u>	

TABLE 7. Permanent pasture, flood-irrigated, budgeted per acre costs and returns for a 20 acre part-time farm,
 San Juan County.
 Actual 2018
 Harvesting dates: Year Round

ITEM	PRICE	YIELD						TOTAL	
GROSS RETURNS									
PASTURE	12.00	7.00 AUMS						84.00	
TOTAL							84.00		
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL	
NITROGEN (N)	0.29	100.00 LBS	29.00					29.00	
ESTABLISHMENT: Principal		20.00 YEARS					8.96	8.96	
: Interest							5.02	5.02	
CANAL WATER		62.00 AC. IN.					96.88	96.88	
CANAL WATER (MAINTENANCE)		1 ACRE					8.00	8.00	
SUBTOTAL			29.00				118.85	147.85	
PREHARVEST OPERATIONS									
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
FERTILIZE	65 HP	0.05 HR		0.34	0.35	0.01	0.22	0.93	
CORRUGATE	65 HP	0.41 HR		2.77	2.89	0.10	2.84	8.61	
DITCHER	65 HP	0.10 HR		0.68	0.70	0.02	0.45	1.85	
IRRIGATE (11X)		5.50 HR		35.48				35.48	
SUBTOTAL			6.06 HR	39.26	3.95	0.14	3.51	46.86	
OVERHEAD EXPENSES									
DOWNTIME		0.14 HR		0.95				0.95	
EMPLOYEE BENEFITS				4.71				4.71	
INSURANCE			0.47					0.47	
LAND TAXES								2.23	
SUPERVISION AND MANAGEMENT				9.14				9.14	
OTHER EXPENSES			144.71					144.71	
SUBTOTAL			0.14 HR	145.18	14.80			2.23	162.21
TOTAL OPERATING EXPENSES			6.20 HR	174.18	54.05	3.95	0.14	124.59	356.91
NET OPERATING PROFIT								-272.91	PASTURE LIVESTOCK
INTEREST ON OPERATING CAPITAL	(15.52	@	0.07				1.01	-0.067355
INTEREST ON EQUIPMENT INVESTMENT								3.37	0.01
RETURN TO LAND AND RISK								-277.29	

BUDGET SUMMARY

GROSS RETURN		84.00	
VARIABLE OPERATING EXPENSES	178.27		
RETURN OVER VARIABLE EXPENSES		-94.27	(GROSS MARGIN)
FIXED EXPENSES	124.59		
NET FARM INCOME		-218.86	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	54.05		
NET OPERATING PROFIT		-272.91	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	4.38		
RETURN TO LAND AND RISK		-277.29	

TABLE 8. Summary of per acre costs and returns for a 20 acre part-time farm,
San Juan County. Actual 2018

	ALFALFA ESTABLISHMENT	ALFALFA HAY	ANNUAL PASTURE EST. -----FLOOD-----	ANNUAL PASTURE
	TONS	TONS		AUMS
PRIMARY YIELD	2.00	5.50		7.00
PRIMARY PRICE	100.00	220.00		12.00
GOVERNMENT PAYMENTS	0.00	0.00		0.00
SECOND INCOME	0.00	14.00		0.00
GROSS RETURN	200.00	1,224.00		84.00
CASH OPERATING EXPENSES				
SEED	69.50		37.50	
FERTILIZER	9.00	22.05	15.80	29.00
CHEMICALS				
CROP INSURANCE				
OTHER PURCHASED INPUTS	0.00	0.00	0.00	0.00
CANAL WATER				
FUEL, OIL & LUBRICANTS-EQUIPMENT	23.05	18.96	20.94	3.95
FUEL-IRRIGATION				
REPAIRS	1.16	1.70	0.74	0.14
CUSTOM CHARGES	65.60	180.40		
LAND TAXES	2.23	2.23		2.23
OTHER EXPENSES	145.21	145.32	0.36	145.18
TOTAL CASH EXPENSES	315.75	370.66	75.34	180.50
RETURN OVER CASH EXPENSES	-115.75	853.34	-75.34	-96.50
FIXED EXPENSES	106.45	214.40	56.10	122.36
TOTAL EXPENSES	422.19	585.06	131.44	302.86
NET FARM INCOME	-222.19	638.94	-131.44	-218.86
LABOR AND MANAGEMENT COSTS	76.57	115.19	47.72	54.05
NET OPERATING PROFIT	-298.76	523.75	-179.16	-272.91
CAPITAL COSTS				
INTEREST ON OPERATING CAPITAL	3.24	1.85		1.01
INTEREST ON EQUIPMENT INVESTMENT	21.43	27.91		3.37
TOTAL CAPITAL COSTS	24.67	29.76	0.00	4.38
RETURN TO LAND AND RISK	-323.43	493.99	-179.16	-277.29

TABLE 9. Whole farm summary, San Juan County. Actual 2018

GROSS RETURNS		
OAT HAY	1.50 ACRES	
CROP		300.00
GRAZING		0.00
ALFALFA HAY	9.00 ACRES	
CROP		10,890.00
GRAZING		126.00
PASTURE	10.00 ACRES	
GRAZING		840.00
LIVESTOCK		15,384.00
GROSS RETURN		<u>27,540</u>
CASH OPERATING EXPENSES		
FORAGE		966.00
FEED AND LIVESTOCK		11,681.58
SEED		123.00
FERTILIZER		509.85
CHEMICALS		0.00
CROP INSURANCE		0.00
OTHER PURCHASED INPUTS		0.00
CANAL WATER		0.00
FUEL, OIL & LUBRICANTS-EQUIPMENT		255.21
FUEL-IRRIGATION		0.00
REPAIRS		18.81
CUSTOM CHARGES		1,722.00
LAND TAXES		45.66
OTHER EXPENSES		3,699.11
TOTAL CASH EXPENSES		<u>19,021</u>
RETURN OVER CASH EXPENSES		8,518.78
FIXED EXPENSES		3,906.25
TOTAL EXPENSES		<u>22,927.46</u>
NET FARM INCOME		4,612.54
LABOR AND MANAGEMENT COSTS		2,287.56
NET OPERATING PROFIT		2,324.97
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		31.60
INTEREST ON EQUIPMENT INVESTMENT		317.06
INTEREST ON LIVESTOCK ENTERPRISE		2,146.82
TOTAL CAPITAL COSTS		<u>2,495</u>
RETURN TO LAND AND RISK		<u>-170.51</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
1,000.00 /ACRE	-970.51	0.09
2,500.00 /ACRE	-2,170.51	0.04
4,000.00 /ACRE	-3,370.51	0.03
5,500.00 /ACRE	-4,570.51	0.02
7,000.00 /ACRE	-5,770.51	0.02
8,500.00 /ACRE	-6,970.51	0.01

* 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)