

TABLE 5. Alfalfa establishment, flood-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, Actual 2018
 Planting dates: April 15 - June 1
 Harvest dates: June 1 - July 31

ITEM	PRICE	YIELD						TOTAL	
GROSS RETURNS									
OAT HAY	\$170.00	2.25 TONS (STACKED)						\$382.50	
GRAZING	\$10.00	1.00 AUM						\$10.00	
TOTAL							\$392.50		
PURCHASED INPUTS									
	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL	
ALFALFA SEED	\$2.95	20 LBS	\$59.00					\$59.00	
OAT SEED	\$0.37	45 LBS	\$16.65					\$16.65	
PHOSPHATE (P2O5)	\$0.49	45 LBS	\$22.05					\$22.05	
WIRE	\$1.32	19 LBS	\$25.45					\$25.45	
CANAL WATER		48 AC. IN.					\$180.00	\$180.00	
CANAL WATER (MAINTENANCE)		1 ACRE					\$8.00	\$8.00	
SUBTOTAL			\$123.15				\$188.00	\$311.15	
PREHARVEST OPERATIONS									
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
PLOW	96 HP	0.67 HR		\$5.23	\$11.51	\$3.39	\$21.51	\$41.63	
DISC (2X)	96 HP	0.34 HR		\$2.65	\$5.84	\$1.25	\$13.83	\$23.57	
HARROW	96 HP	0.19 HR		\$1.48	\$3.26	\$0.17	\$2.66	\$7.58	
FERTILIZE	96 HP	0.05 HR		\$0.39	\$0.86	\$0.04	\$0.28	\$1.57	
CORRUGATE	40 HP	0.21 HR		\$1.64	\$2.21	\$0.73	\$5.57	\$10.15	
DRILL	96 HP	0.21 HR		\$1.64	\$3.61	\$0.41	\$67.07	\$72.72	
DITCHER (2X)	40 HP	0.10 HR		\$0.78	\$1.05	\$0.11	\$4.02	\$5.96	
IRRIGATE (6X)		3.00 HR		\$22.50				\$22.50	
SUBTOTAL		4.77 HR		\$36.31	\$28.34	\$6.11	\$114.93	\$185.68	
HARVEST OPERATIONS									
SWATHER	14 FT	0.16 HR		\$1.25	\$1.69	\$0.09	\$13.96	\$16.98	
BALER	96 HP	0.21 HR		\$1.64	\$3.61	\$0.22	\$5.09	\$10.56	
BALE WAGON	96 HP	0.20 HR		\$1.56	\$3.43	\$0.44	\$9.25	\$14.68	
SUBTOTAL		0.57 HR		\$4.45	\$8.73	\$0.74	\$28.30	\$42.22	
OVERHEAD EXPENSES									
DOWNTIME		2.16 HR		\$16.87				\$16.87	
EMPLOYEE BENEFITS				\$7.34				\$7.34	
INSURANCE			\$0.82					\$0.82	
LAND TAXES							\$2.44	\$2.44	
SUPERVISION AND MANAGEMENT				\$38.95				\$38.95	
SUBTOTAL		2.16 HR	\$0.82	\$63.15				\$2.44	\$66.41
TOTAL OPERATING EXPENSES		7.50 HR	\$123.97	\$103.90	\$37.07	\$6.85	\$333.66	\$605.46	
NET OPERATING PROFIT							(\$212.96)		
INTEREST ON OPERATING CAPITAL		(\$70.98 @	5.75%)				\$4.08	
INTEREST ON EQUIPMENT INVESTMENT								\$58.59	
RETURN TO LAND AND RISK							(\$275.63)		

TABLE 6. Alfalfa hay, flood-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, Actual 2018
Harvesting dates: June 1 - October 15

ITEM	PRICE	YIELD						TOTAL	
GROSS RETURNS									
ALFALFA HAY	\$230.00	5.20	TONS (STACKED)						\$1,196.00
GRAZING	\$170.00	2.00	AUM						\$340.00
TOTAL								\$1,536.00	
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS					FIXED COST	TOTAL
PHOSPHATE (P2O5)	\$0.49	45 LBS	\$22.05						\$22.05
INSECTICIDE (AERIAL)	\$17.25	1 ACRE	\$17.25						\$17.25
WIRE	\$1.32	45 LBS	\$58.82						\$58.82
ESTABLISHMENT: Principal		6 YEARS						\$45.94	\$45.94
: Interest								\$21.39	\$21.39
LIVESTOCK FAC & EQUIP								\$5.00	\$5.00
CANAL WATER		60 AC. IN.						\$225.00	\$225.00
CANAL WATER (MAINTENANCE)		1 ACRE						\$8.00	\$8.00
SUBTOTAL			\$98.13					\$305.33	\$403.45
PREHARVEST OPERATIONS									
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
FERTILIZE	96 HP	0.05 HR		\$0.39	\$0.86	\$0.04	\$0.28	\$1.57	
DITCHER (2X)	40 HP	0.10 HR		\$0.78	\$1.05	\$0.11	\$4.02	\$5.96	
IRRIGATE (10X)		5.00 HR		\$37.50				\$37.50	
SUBTOTAL		5.15 HR		\$38.67	\$1.91	\$0.15	\$4.30	\$45.03	
HARVEST OPERATIONS									
SWATHER (3X)	14 FT	0.48 HR		\$3.74	\$5.07	\$0.26	\$41.88	\$50.95	
BALER (3X)	96 HP	0.63 HR		\$4.91	\$10.82	\$0.66	\$15.27	\$31.67	
BALE WAGON (3X)	96 HP	0.60 HR		\$4.68	\$10.30	\$1.31	\$27.74	\$44.03	
SUBTOTAL		1.71 HR		\$13.34	\$26.19	\$2.23	\$84.89	\$126.65	
OVERHEAD EXPENSES									
DOWNTIME		0.44 HR		\$3.43				\$3.43	
EMPLOYEE BENEFITS				\$9.36				\$9.36	
INSURANCE			\$1.04					\$1.04	
LAND TAXES						\$2.44		\$2.44	
SUPERVISION AND MANAGEMENT				\$113.40				\$113.40	
OTHER EXPENSES			\$267.68					\$267.68	
SUBTOTAL		0.44 HR	\$268.72	\$126.19		\$2.44		\$397.35	
TOTAL OPERATING EXPENSES		7.30 HR	\$366.85	\$178.20	\$28.10	\$2.39	\$396.95	\$972.49	
NET OPERATING PROFIT								\$563.51	
INTEREST ON OPERATING CAPITAL		(\$51.95 @	5.75%)				\$2.99	
INTEREST ON EQUIPMENT INVESTMENT								\$48.75	
RETURN TO LAND AND RISK								\$511.77	
BUDGET SUMMARY									
GROSS RETURN		\$1,536.00							
VARIABLE OPERATING EXPENSES	\$397.34								
RETURN OVER VARIABLE EXPENSES	\$1,138.66	(GROSS MARGIN)							
FIXED EXPENSES	\$396.95								
NET FARM INCOME	\$741.71	(RETURN TO CAPITAL, LABOR, LAND & RISK)							
LABOR AND MANAGEMENT COST	\$178.20								
NET OPERATING PROFIT	\$563.51	(RETURN TO CAPITAL, LAND & RISK)							
CAPITAL COSTS	\$51.74								
RETURN TO LAND AND RISK	\$511.77								

TABLE 7. Permanent pasture establishment, flood-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County,
 Actual 2018
 Planting dates: August 15 - September 15

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS			FIXED COST	TOTAL
SEED	\$170.00	14 LBS	\$2,380.00				\$2,380.00
NITROGEN (N)	\$0.42	20 LBS	\$8.40				\$8.40
PHOSPHATE (P205)	\$0.49	50 LBS	\$24.50				\$24.50
CANAL WATER		21 AC. IN.				\$78.75	\$78.75
CANAL WATER (MAINTENANCE)						\$8.00	\$8.00
SUBTOTAL			\$2,412.90			\$78.75	\$2,491.65

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
PLOW	96 HP	0.67 HR		\$5.23	\$11.51	\$3.39	\$21.51	\$41.63
DISC (2X)	96 HP	0.34 HR		\$2.65	\$5.84	\$1.25	\$13.83	\$23.57
HARROW	96 HP	0.19 HR		\$1.48	\$3.26	\$0.17	\$2.66	\$7.58
FERTILIZE	96 HP	0.05 HR		\$0.39	\$0.86	\$0.04	\$0.28	\$1.57
CORRUGATE	40 HP	0.21 HR		\$1.64	\$2.21	\$0.73	\$5.57	\$10.15
DRILL	96 HP	0.21 HR		\$1.64	\$3.61	\$0.41	\$67.07	\$72.72
DITCHER (2X)	40 HP	0.10 HR		\$0.78	\$1.05	\$0.11	\$4.02	\$5.96
IRRIGATE (3X)		1.50 HR		\$11.25				\$11.25
SUBTOTAL		3.27 HR		\$25.06	\$28.34	\$6.11	\$114.93	\$174.43

OVERHEAD EXPENSES							
DOWNTIME		0.44 HR		\$3.45			\$3.45
EMPLOYEE BENEFITS				\$4.51			\$4.51
INSURANCE			\$0.50				\$0.50
SUPERVISION AND MANAGEMENT				\$189.01			\$189.01
SUBTOTAL		0.44 HR	\$0.50	\$196.97			\$197.47

TOTAL OPERATING EXPENSES		3.71 HR	\$2,413.40	\$222.03	\$28.34	\$6.11	\$193.68	\$2,863.55
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TABLE 8. Permanent pasture, flood-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, Actual 2018
Harvesting dates: Year Round

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
PASTURE	\$12.00	12.00	AUMS					\$144.00
TOTAL	170							\$144.00
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PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
NITROGEN (N)	\$0.42	100 LBS	\$42.00					\$42.00
LIVESTOCK FAC & EQUIP ESTABLISHMENT: Principal		15 YEARS					\$5.00	\$5.00
: Interest							\$190.90	\$190.90
CANAL WATER		62 AC. IN.					\$92.43	\$92.43
CANAL WATER (MAINTENANCE)		1 ACRE					\$232.50	\$232.50
							\$8.00	\$8.00
SUBTOTAL			\$42.00				\$528.84	\$570.84
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PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
FERTILIZE	96 HP	0.05 HR		\$0.39	\$0.86	\$0.04	\$0.28	\$1.57
CORRUGATE	40 HP	0.21 HR		\$1.64	\$2.21	\$0.73	\$5.57	\$10.15
DITCHER (2X)	40 HP	0.10 HR		\$0.78	\$1.05	\$0.11	\$4.02	\$5.96
IRRIGATE (11X)		5.50 HR		\$41.25				\$41.25
SUBTOTAL		5.86 HR		\$44.06	\$4.13	\$0.88	\$9.87	\$58.94
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OVERHEAD EXPENSES								
DOWNTIME		0.09 HR		\$0.70				\$0.70
EMPLOYEE BENEFITS				\$7.93				\$7.93
INSURANCE			\$0.88					\$0.88
LAND TAXES							\$2.44	\$2.44
SUPERVISION AND MANAGEMENT				\$15.76				\$15.76
OTHER EXPENSES			\$267.68					\$267.68
SUBTOTAL		0.09 HR	\$268.56	\$24.39			\$2.44	\$295.39
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TOTAL OPERATING EXPENSES		5.95 HR	\$310.56	\$68.45	\$4.13	\$0.88	\$541.14	\$925.17
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NET OPERATING PROFIT								(\$781.17)
INTEREST ON OPERATING CAPITAL		(\$22.25 @	5.75%)				\$1.28
INTEREST ON EQUIPMENT INVESTMENT								\$6.61
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RETURN TO LAND AND RISK								(\$789.06)
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BUDGET SUMMARY								
GROSS RETURN		\$144.00						
VARIABLE OPERATING EXPENSES	\$315.58							
RETURN OVER VARIABLE EXPENSES	(\$171.58)	(GROSS MARGIN)						
FIXED EXPENSES	\$541.14							
NET FARM INCOME	(\$712.72)	(RETURN TO CAPITAL, LABOR, LAND & RISK)						
LABOR AND MANAGEMENT COST	\$68.45							
NET OPERATING PROFIT	(\$781.17)	(RETURN TO CAPITAL, LAND & RISK)						
CAPITAL COSTS	\$7.89							
RETURN TO LAND AND RISK	(\$789.06)							

TABLE 9. Corn for silage, flood-irrigated, budgeted per acre costs and returns for an 80 acre farm, San Juan County, Actual 2018
 Planting dates: May 1 - May 20
 Harvesting dates: September 1 - September 30

ITEM	PRICE	YIELD							TOTAL
GROSS RETURNS									
CORN SILAGE	\$170.00	21.00	TONS (HAULED)						\$3,570.00
TOTAL									\$3,570.00

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
SEED	\$3.11	30 000	\$93.38					\$93.38
ANHYDROUS AMMONIA (NH3)	\$0.37	225 LBS	\$83.81					\$83.81
HERBICIDE	\$16.00	1 ACRE	\$16.00					\$16.00
CANAL WATER		48 AC. IN.				\$180.00		\$180.00
CANAL WATER (MAINTENANCE)		1 ACRE				\$8.00		\$8.00
SUBTOTAL			\$193.19			\$188.00		\$381.19

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
PLOW	96 HP	0.67 HR		\$5.23	\$11.51	\$3.39	\$21.51	\$41.63
DISC (2X)	96 HP	0.34 HR		\$2.65	\$5.84	\$1.25	\$13.83	\$23.57
HARROW	96 HP	0.19 HR		\$1.48	\$3.26	\$0.17	\$2.66	\$7.58
FERTILIZE	96 HP	0.05 HR		\$0.39	\$0.86	\$0.04	\$0.28	\$1.57
CORRUGATE	40 HP	0.21 HR		\$1.64	\$2.21	\$0.73	\$5.57	\$10.15
PRE-IRRIGATE		0.75 HR		\$5.63				\$5.63
PLANTER	96 HP	0.26 HR		\$2.03	\$4.46	\$0.66	\$37.10	\$44.25
CULTIVATOR (2X)	40 HP	0.42 HR		\$3.28	\$4.43	\$1.47	\$11.14	\$20.31
IRRIGATE (9X)		4.50 HR		\$33.75				\$33.75
SUBTOTAL		7.39 HR		\$56.07	\$32.58	\$7.72	\$92.08	\$188.44

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SILAGE CHOPPER, PTO	96 HP	0.71 HR		\$5.54	\$12.19	\$0.90	\$54.43	\$73.06
LOAD & HAUL	40 HP	0.71 HR		\$5.54	\$7.49	\$1.16	\$28.82	\$43.00
SUBTOTAL		1.42 HR		\$11.08	\$19.68	\$2.06	\$83.25	\$116.06

OVERHEAD EXPENSES	QUANTITY	PRICE	TOTAL
DOWNTIME	0.89 HR		\$6.94
EMPLOYEE BENEFITS			\$12.09
INSURANCE		\$1.34	\$1.34
LAND TAXES			\$2.44
SUPERVISION AND MANAGEMENT			\$256.18
OTHER EXPENSES		\$267.68	\$267.68
SUBTOTAL	0.89 HR		\$275.21

TOTAL OPERATING EXPENSES	9.70 HR	\$462.21	\$342.35	\$52.26	\$9.77	\$365.76	\$1,232.35
NET OPERATING PROFIT							\$2,337.65
INTEREST ON OPERATING CAPITAL	(\$108.48	@	5.75%)		\$6.24
INTEREST ON EQUIPMENT INVESTMENT							\$90.09
RETURN TO LAND AND RISK							\$2,241.31

BUDGET SUMMARY			
GROSS RETURN		\$3,570.00	
VARIABLE OPERATING EXPENSES	\$524.24		
RETURN OVER VARIABLE EXPENSES		\$3,045.76	(GROSS MARGIN)
FIXED EXPENSES	\$365.76		
NET FARM INCOME		\$2,680.00	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$342.35		
NET OPERATING PROFIT		\$2,337.65	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$96.33		
RETURN TO LAND AND RISK		\$2,241.31	

TABLE 10. Summary of per acre costs and returns for an 80 acre farm, San Juan County,
Actual 2018

	ALFALFA ESTABLISHMENT	ALFALFA HAY	ANNUAL PASTURE ESTABLISHMENT	ANNUAL PASTURE	CORN FOR SILAGE
	TONS	TONS		AUMS	TONS
PRIMARY YIELD	170.00	2.25	5.20	12.00	21.00
PRIMARY PRICE		\$170.00	\$230.00	\$12.00	\$170.00
GOVERNMENT PAYMENTS		\$0.00	\$0.00	\$0.00	\$0.00
SECOND INCOME		\$10.00	\$340.00	\$0.00	\$0.00
GROSS RETURN		\$392.50	\$1,536.00	\$144.00	\$3,570.00
CASH OPERATING EXPENSES					
SEED		\$75.65		\$2,380.00	\$93.38
FERTILIZER		\$22.05	\$22.05	\$32.90	\$83.81
CHEMICALS			\$17.25		\$16.00
CROP INSURANCE					
OTHER PURCHASED INPUTS		\$25.45	\$58.82	\$0.00	\$0.00
CANAL WATER					
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$37.07	\$28.10	\$28.34	\$4.13
FUEL-IRRIGATION					
REPAIRS		\$6.85	\$2.39	\$6.11	\$0.88
CUSTOM CHARGES					
LAND TAXES		\$2.44	\$2.44	\$2.44	\$2.44
OTHER EXPENSES		\$0.82	\$268.72	\$0.50	\$268.56
TOTAL CASH EXPENSES		\$170.33	\$399.78	\$2,447.85	\$318.01
RETURN OVER CASH EXPENSES		\$222.17	\$1,136.22	(\$2,447.85)	(\$174.01)
FIXED EXPENSES		\$331.22	\$394.51	\$193.68	\$538.70
TOTAL EXPENSES		\$501.55	\$794.29	\$2,641.53	\$856.72
NET FARM INCOME		(\$109.05)	\$741.71	(\$2,641.53)	(\$712.72)
LABOR AND MANAGEMENT COSTS		\$103.90	\$178.20	\$222.03	\$68.45
NET OPERATING PROFIT		(\$212.96)	\$563.51	(\$2,863.55)	(\$781.17)
CAPITAL COSTS					
INTEREST ON OPERATING CAPITAL		\$4.08	\$2.99		\$1.28
INTEREST ON EQUIPMENT INVESTMENT		\$58.59	\$48.75		\$6.61
TOTAL CAPITAL COSTS		\$62.67	\$51.74	\$0.00	\$7.89
RETURN TO LAND AND RISK		(\$275.63)	\$511.77	(\$2,863.55)	(\$789.06)

TABLE 11. Whole farm summary, San Juan County,
Actual 2018

GROSS RETURNS		
OAT HAY	6.00 ACRES	
CROP		\$2,295
GRAZING	170	\$60
ALFALFA HAY	34.00 ACRES	
CROP		\$40,664
GRAZING		\$11,560
PASTURE	20.00 ACRES	
GRAZING		\$2,880
CORN FOR SILAGE	20.00 ACRES	
CROP		\$71,400
GROSS RETURN		<u>\$128,859</u>
CASH OPERATING EXPENSES		
SEED		\$4,701
FERTILIZER		\$3,431
CHEMICALS		\$907
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$2,153
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$2,334
FUEL-IRRIGATION		\$0
REPAIRS		\$341
CUSTOM CHARGES		\$0
LAND TAXES		\$195
OTHER EXPENSES		\$19,894
TOTAL CASH EXPENSES		<u>\$33,956</u>
RETURN OVER CASH EXPENSES		\$94,903
FIXED EXPENSES		\$28,255
TOTAL EXPENSES		\$62,211
NET FARM INCOME		\$66,648
LABOR AND MANAGEMENT COSTS		\$15,120
NET OPERATING PROFIT		\$51,528
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$276
INTEREST ON EQUIPMENT INVESTMENT		\$3,943
TOTAL CAPITAL COSTS		<u>\$4,220</u>
RETURN TO LAND AND RISK		<u>\$47,308</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$1,000 /ACRE	\$44,908	38.09%
\$2,500 /ACRE	\$41,308	20.18%
\$4,000 /ACRE	\$37,708	13.73%
\$5,500 /ACRE	\$34,108	10.40%
\$7,000 /ACRE	\$30,508	8.37%
\$8,500 /ACRE	\$26,908	7.01%

* 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)