

TABLE 6. Alfalfa establishment, flood-irrigated, budgeted per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County, Actual 2018
Planting dates: August 15 - September 15

ITEM	PRICE	QUANTITY	PURCHASED INPUTS					TOTAL
PURCHASED INPUTS								
SEED	\$2.95	18 LBS		\$53.10				\$53.10
CANAL WATER		5 AC. IN.						
SUBTOTAL				\$53.10				\$53.10
PREHARVEST OPERATIONS								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
CHISEL	40 HP	0.20 HR		\$1.71	\$2.28	\$0.20	\$0.56	\$4.76
DISC	40 HP	0.17 HR		\$1.45	\$1.94	\$0.17	\$0.48	\$4.04
DRILL	40 HP	0.25 HR		\$2.14	\$2.85	\$0.25	\$0.70	\$5.95
DITCH MAINTENANCE		0.50 HR		\$4.28				\$4.28
IRRIGATE (1X)		0.75 HR		\$5.63				\$5.63
SUBTOTAL		1.87 HR		\$15.20	\$7.07	\$0.63	\$1.75	\$24.65
OVERHEAD EXPENSES								
DOWNTIME		0.16 HR		\$1.33				\$1.33
EMPLOYEE BENEFITS				\$2.74				\$2.74
INSURANCE			\$0.30					\$0.30
SUPERVISION AND MANAGEMENT				\$6.50				\$6.50
SUBTOTAL		0.16 HR	\$0.30	\$10.56				\$10.87
TOTAL OPERATING EXPENSES		2.03 HR	\$53.40	\$25.76	\$7.07	\$0.63	\$1.75	\$88.61

TABLE 7. Alfalfa hay, flood-irrigated, budgeted per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County, Actual 2018
Harvesting dates: May 15 - September 15

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
ALFALFA HAY	\$230.00	5.25 TONS (STACKED)						\$1,207.50
GRAZING	\$15.00	1.00 ACRE						\$15.00
TOTAL								\$1,222.50
PURCHASED INPUTS								
	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
LIVESTOCK FAC & EQUIP ESTABLISHMENT: Principal		10.00 YEARS					\$4.00	\$4.00
: Interest							\$8.86	\$8.86
BALING WIRE	\$1.32	44.99 LBS	\$59.39				\$2.98	\$2.98
CANAL WATER		16.00 AC. IN.	\$5.00					\$59.39
PUMP WATER*		8.00 AC. IN.						\$5.00
SUBTOTAL			\$64.39				\$15.84	\$80.23
PREHARVEST OPERATIONS								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DITCH MAINTENANCE		0.50 HR		\$4.28				\$4.28
IRRIGATE (8X)		4.00 HR		\$30.00	\$6.64	\$0.00	\$14.38	\$51.02
SUBTOTAL			4.50 HR	\$34.28	\$6.64	\$0.00	\$14.38	\$55.30
HARVEST OPERATIONS								
MOWER (3X)	40 HP	1.11 HR		\$9.49	\$12.66	\$1.53	\$5.22	\$28.90
RAKE (3X)	40 HP	0.36 HR		\$3.08	\$4.11	\$0.52	\$3.51	\$11.22
BALER (3X)	40 HP	0.63 HR		\$5.39	\$7.19	\$0.74	\$7.98	\$21.29
HAUL (3X)	1 TON TRUCK	4.50 HR		\$38.48	\$87.19	\$37.46	\$49.07	\$212.19
SUBTOTAL			6.60 HR	\$56.43	\$111.14	\$40.24	\$65.79	\$273.61
OVERHEAD EXPENSES								
DOWNTIME		1.65 HR		\$14.11				\$14.11
EMPLOYEE BENEFITS				\$16.33				\$16.33
INSURANCE			\$1.81					\$1.81
LAND TAXES							\$0.20	\$0.20
SUPERVISION AND MANAGEMENT				\$92.88				\$92.88
OTHER EXPENSES			\$249.13					\$249.13
SUBTOTAL			1.65 HR	\$250.94	\$123.31		\$0.20	\$374.45
TOTAL OPERATING EXPENSES			12.75 HR	\$315.33	\$214.01	\$117.79	\$40.24	\$783.58
NET OPERATING PROFIT								\$438.92
INTEREST ON OPERATING CAPITAL		(\$46.47 @	5.75%)				\$2.67
INTEREST ON EQUIPMENT INVESTMENT								\$2.11
RETURN TO LAND AND RISK								\$434.14

* Pump water costs are shown under irrigation in the preharvest operations section.

BUDGET SUMMARY

GROSS RETURN		\$1,222.50	
VARIABLE OPERATING EXPENSES	\$473.36		
RETURN OVER VARIABLE EXPENSES		\$749.14	(GROSS MARGIN)
FIXED EXPENSES	\$96.21		
NET FARM INCOME		\$652.93	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$214.01		
NET OPERATING PROFIT		\$438.92	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$4.78		
RETURN TO LAND AND RISK		\$434.14	

TABLE 8. Native grass hay, flood-irrigated, budgeted per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County, Actual 2018
Harvesting dates: July 20 - September 15

ITEM	PRICE	YIELD						TOTAL	
GROSS RETURNS									
HAY	\$195.00	1.50 TONS (STACKED)						\$292.50	
GRAZING	\$13.00	1.00 ACRE						\$13.00	
TOTAL								\$305.50	
PURCHASED INPUTS									
	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL	
LIVESTOCK FAC & EQUIP							\$4.00	\$4.00	
BALING WIRE	\$1.32	13 LBS	\$16.97					\$16.97	
CANAL WATER		12 AC. IN.	\$5.00					\$5.00	
PUMP WATER*		6 AC. IN.							
SUBTOTAL			\$21.97				\$4.00	\$25.97	
PREHARVEST OPERATIONS									
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
DITCH MAINTENANCE		0.50 HR		\$4.28				\$4.28	
IRRIGATE (5X)		2.50 HR		\$21.38	\$4.98	\$0.00	\$10.78	\$37.14	
SUBTOTAL			3.00 HR	\$25.65	\$4.98	\$0.00	\$10.78	\$41.42	
HARVEST OPERATIONS									
MOWER (2X)	40 HP	0.74 HR		\$6.33	\$8.44	\$1.02	\$3.48	\$19.27	
RAKE (2X)	40 HP	0.24 HR		\$2.05	\$2.74	\$0.35	\$2.34	\$7.48	
BALER, 1-TON (2X)	40 HP	0.42 HR		\$3.59	\$4.79	\$0.49	\$5.32	\$14.19	
HAUL (2X)	TRUCK	1.60 HR		\$13.68	\$31.00	\$13.32	\$17.45	\$75.45	
SUBTOTAL			3.00 HR	\$0.00	\$25.65	\$46.97	\$15.18	\$28.59	\$116.39
OVERHEAD EXPENSES									
DOWNTIME		0.75 HR		\$6.41				\$6.41	
EMPLOYEE BENEFITS				\$9.23				\$9.23	
INSURANCE			\$1.03					\$1.03	
LAND TAXES							\$0.20	\$0.20	
SUPERVISION AND MANAGEMENT				\$22.89				\$22.89	
OTHER EXPENSES			\$249.13					\$249.13	
SUBTOTAL			0.75 HR	\$250.15	\$38.53		\$0.20	\$288.89	
TOTAL OPERATING EXPENSES			3.75 HR	\$272.12	\$89.83	\$51.95	\$15.18	\$43.58	\$472.66
NET OPERATING PROFIT								(\$167.16)	
INTEREST ON OPERATING CAPITAL		(\$17.41	@	5.75%)		\$1.00	
INTEREST ON EQUIPMENT INVESTMENT								\$21.00	
RETURN TO LAND AND RISK								(\$189.16)	

* Pump water costs are shown under irrigation in the preharvest operations section.

BUDGET SUMMARY

GROSS RETURN		\$305.50	
VARIABLE OPERATING EXPENSES	\$339.25		
RETURN OVER VARIABLE EXPENSES		(\$33.75)	(GROSS MARGIN)
FIXED EXPENSES	\$43.58		
NET FARM INCOME		(\$77.33)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$89.83		
NET OPERATING PROFIT		(\$167.16)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$22.00		
RETURN TO LAND AND RISK		(\$189.16)	

TABLE 9. Summary of per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County, Actual 2018

	ALFALFA ESTABLISHMENT	ALFALFA HAY	NATIVE GRASS HAY
		TONS	TONS
PRIMARY YIELD		5.25	1.50
PRIMARY PRICE		\$230.00	\$195.00
GOVERNMENT PAYMENTS		\$0.00	\$0.00
SECOND INCOME		\$15.00	\$13.00
GROSS RETURN		\$1,222.50	\$305.50
CASH OPERATING EXPENSES			
SEED	\$53.10		
FERTILIZER			
CHEMICALS			
CROP INSURANCE			
OTHER PURCHASED INPUTS		\$59.39	\$16.97
CANAL WATER		\$5.00	\$5.00
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$7.07	\$111.14	\$46.97
FUEL-IRRIGATION		\$6.64	\$4.98
REPAIRS	\$0.63	\$40.24	\$15.18
CUSTOM CHARGES			
LAND TAXES		\$0.20	\$0.20
OTHER EXPENSES	\$0.30	\$250.94	\$250.15
TOTAL CASH EXPENSES	\$61.10	\$473.56	\$339.45
RETURN OVER CASH EXPENSES	(\$61.10)	\$748.94	(\$33.95)
FIXED EXPENSES	\$1.75	\$96.00	\$43.38
TOTAL EXPENSES	\$62.85	\$569.57	\$382.83
NET FARM INCOME	(\$62.85)	\$652.93	(\$77.33)
LABOR AND MANAGEMENT COSTS	\$25.76	\$214.01	\$89.83
NET OPERATING PROFIT	(\$88.61)	\$438.92	(\$167.16)
CAPITAL COSTS			
INTEREST ON OPERATING CAPITAL		\$2.67	\$1.00
INTEREST ON EQUIPMENT INVESTMENT		\$2.11	\$21.00
TOTAL CAPITAL COSTS	\$0.00	\$4.78	\$22.00
RETURN TO LAND AND RISK	(\$88.61)	\$434.14	(\$189.16)

TABLE 10. Whole farm summary, Union County,
Actual 2018

GROSS RETURNS		
ALFALFA HAY	40 ACRES	
CROP		\$48,300
GRAZING		\$600
NATIVE GRASS HAY	40 ACRES	
CROP		\$11,700
GRAZING		\$520
GROSS RETURN		\$61,120
CASH OPERATING EXPENSES		
SEED		\$212
FERTILIZER		\$0
CHEMICALS		\$0
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$3,054
CANAL WATER		\$400
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$6,353
FUEL-IRRIGATION		\$465
REPAIRS		\$2,219
CUSTOM CHARGES		\$0
LAND TAXES		\$16
OTHER EXPENSES		\$20,045
TOTAL CASH EXPENSES		\$32,765
RETURN OVER CASH EXPENSES		\$28,355
FIXED EXPENSES		\$5,228
TOTAL EXPENSES		\$37,993
NET FARM INCOME		\$23,127
LABOR AND MANAGEMENT COSTS		\$12,257
NET OPERATING PROFIT		\$10,870
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$147
INTEREST ON EQUIPMENT INVESTMENT		\$925
TOTAL CAPITAL COSTS		\$1,072
RETURN TO LAND AND RISK		\$9,799

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$200 /ACRE	\$9,319	20.51%
\$350 /ACRE	\$8,959	16.72%
\$500 /ACRE	\$8,599	14.12%

* 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)