

TABLE 1. Basic cost information for Dry Cimarron area, Union County, 2002.

Item		
Labor Wage Rate:		
Equipment operators	\$/hour	\$7.55
General & Irrigators	\$/hour	\$6.75
Purchased Inputs:		
Seed:		
Alfalfa	\$/pound	\$2.90
Natural gas		
Diesel fuel	\$/MCF	\$3.28
Diesel fuel	\$/gallon	\$1.05
Gasoline	\$/gallon	\$1.00
Electricity	cents/KwHr	5.45
LP Gas	\$/gallon	\$0.86
Baling Wire		
	\$/pound	\$0.37
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	8.00%
Land Interest Rate	percent	7.50%
Equipment Interest Rate	percent	8.00%
Real Interest Rate	percent	4.00%
Land Taxes		
	\$27.00 /acre (full value)	\$0.28
Personal Property Tax Rate - NR		
- R	\$/ \$1,000 (Assessed Value)	\$30.93
		\$27.08
Supervision Factors		
Field Crop-Irrigation	\$/labor hour	\$1.00
Field Crop-Equipment & General	\$/labor hour	\$0.50
Management Rate		
	percent	7.00%

BUDGET AREA..... DRY CIMARRON AREA, UNION COUNTY, 2002.
 FARM SIZE..... 80 ACRES
 IRRIGATION TYPE..... FLOOD
 NUMBER OF CROPS.... 2

ACREAGE SUMMARY:	LAND USE (ACRES)	WATER USE	
		AC.IN. PER AC.	TOTAL AC.IN.
ALFALFA ESTABLISHMENT	4	4.5	18
ALFALFA	40	24	960
NATIVE GRASS	40	18	720
TOTAL	84		1,698
ACRE FEET PER ACRE OF WATER RIGHTS			1.68

TABLE 1a. Overhead cost information for the Dry Cimarron area, 2002.

ITEM			
Electricity (Domestic & Shop)		\$110.00 per month	\$1,320
Telephone		\$80.00 per month	\$960
Accounting & Legal			\$480
Misc. Supplies & Hand Tools			\$785
Pickup and Auto			
miles	10,300	@ \$0.345 per mile	\$3,554
Insurance			
- general liability (non-employee)			\$1,020
- fire/theft			\$665
Property Taxes			
- other than land & machinery			\$310
Building repairs and maintenance			\$505
Dues, fees, publications			\$250
Farmstead Equipment			\$75
		Total	\$9,923
		Total per planted acre	\$124.04

TABLE 2. Pumping costs and data for irrigation wells, Dry Cimarron area, Union County, 2002.

INPUT DATA

		DEPTH CHARACTERISTICS:	
		STATIC.....	50
		DRAW DOWN.....	15
		TOTAL HEAD.....	65
		CASING.....	75
GALLONS PER MINUTE (GPM).....	900		
WORK HORSEPOWER.....	15		
EFFICIENCY FACTOR:			
ELECTRICITY.....	0.540		
NATURAL GAS.....	0.154		
LP GAS.....	0.154		
DIESEL.....	0.160		
FUEL COST PER UNIT:			
ELECTRICITY.....	5.45	CENTS/KwHr	
NATURAL GAS.....	\$3.28	\$/MCF	
LP GAS.....	\$0.86	\$/GAL	
DIESEL.....	\$1.05	\$/GAL	

FUEL PUMPING COSTS

ELECTRIC WELL:	
COST PER HOUR.....	\$1.14
COST PER ACRE INCH.....	\$0.57
NATURAL GAS WELL:	
COST PER HOUR.....	\$0.91
COST PER ACRE INCH.....	\$0.46
LP GAS WELL:	
COST PER HOUR.....	\$2.31
COST PER ACRE INCH.....	\$1.16
DIESEL WELL:	
COST PER HOUR.....	\$1.77
COST PER ACRE INCH.....	\$0.89

TABLE 3. Equipment summary for an 80 acre part-time flood-irrigated farm, Dry Cimarron area, Union County, 2002.

EQUIPMENT	ANNUAL		VARIABLE COSTS					FIXED COSTS		
	HOURS OF USE	NUMBER	TOTAL VALUE	FUEL LUBRICANT	REPAIR	FUEL, LUBE PER HR	REPAIR PER HR	DEPRECIATION	TAXES	TOTAL PER HOUR
TRACTOR 40 HP	142	1	\$1,800	\$448	\$58	\$3.14	\$0.41	\$50	\$13	\$0.44
MOWER	74	1	\$1,300		\$92		\$1.25	\$130	\$13	\$1.94
BALER, 2 WIRE	42	1	\$1,500		\$32		\$0.77	\$385	\$40	\$10.11
RAKE	24	1	\$1,550		\$23		\$0.96	\$155	\$16	\$7.12
CHISEL 7 PT (BORROWED)	1	1	\$0		\$0		\$0.00	\$0	\$0	\$0.00
DISC 12 FT (BORROWED)	1	1	\$0		\$0		\$0.00	\$0	\$0	\$0.00
DRILL 10 FT (BORROWED)	1	1	\$0		\$0		\$0.00	\$0	\$0	\$0.00
TRUCK	244	1	\$9,500	\$1,705	\$2,028	\$6.99	\$8.31	\$1,900	\$98	\$8.19
BALE LOADER	244	1	\$600		\$166		\$0.68	\$60	\$6	\$0.27
ELECTRIC WELL	282	1	\$12,438	\$322	\$29	\$1.14	\$0.10	\$1,244	\$128	\$4.87
			\$28,688	\$2,474	\$2,429			\$3,924	\$314	

TABLE 4. Alfalfa establishment, flood-irrigated, budgeted per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County, 2002.
Planting dates: August 15 - September 15

ITEM	PRICE	QUANTITY	PURCHASED INPUTS						TOTAL
<u>PURCHASED INPUTS</u>									
SEED	\$2.90	18 LBS	\$52.20						\$52.20
CANAL WATER		5 AC. IN.							
SUBTOTAL			\$52.20						\$52.20
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
CHISEL	40 HP	0.20 HR		\$1.51	\$0.63	\$0.08	\$0.09	\$2.31	
DISC	40 HP	0.17 HR		\$1.28	\$0.53	\$0.07	\$0.08	\$1.96	
DRILL	40 HP	0.25 HR		\$1.89	\$0.79	\$0.10	\$0.11	\$2.88	
DITCH MAINTENANCE		0.50 HR		\$3.78				\$3.78	
IRRIGATE (1X)		0.75 HR		\$5.06				\$5.06	
SUBTOTAL		1.87 HR		\$13.52	\$1.95	\$0.25	\$0.27	\$15.99	
<u>OVERHEAD EXPENSES</u>									
DOWNTIME		0.16 HR		\$1.17				\$1.17	
EMPLOYEE BENEFITS				\$2.43				\$2.43	
INSURANCE			\$0.27					\$0.27	
SUPERVISION AND MANAGEMENT				\$5.83				\$5.83	
SUBTOTAL		0.16 HR	0.27	9.44				9.71	
TOTAL OPERATING EXPENSES		2.03 HR	\$52.47	\$22.96	\$1.95	\$0.25	\$0.27	\$77.90	

TABLE 5. Alfalfa hay, flood-irrigated, budgeted per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County, 2002.
Harvesting dates: May 15 - September 15

ITEM	PRICE	YIELD							TOTAL
GROSS RETURNS									
ALFALFA FA HAY	\$120.00	4.00	TONS (STACKED)						\$480.00
GRAZING	\$15.00	1.00	ACRE						\$15.00
TOTAL									\$495.00
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY		PURCHASED INPUTS				FIXED COST	TOTAL
LIVESTOCK FAC & EQUIP ESTABLISHMENT: Principal		10	YEARS					\$4.00	\$4.00
: Interest								\$7.79	\$7.79
BALING WIRE	\$0.37	34	LBS	\$12.74				\$3.81	\$3.81
CANAL WATER		16	AC. IN.	\$5.00					\$12.74
PUMP WATER*		8	AC. IN.						\$5.00
SUBTOTAL				\$17.74				\$15.60	\$33.33
PREHARVEST OPERATIONS									
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE		PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DITCH MAINTENANCE		0.50	HR		\$3.78				\$3.78
IRRIGATE (8X)		4.00	HR		\$27.00	\$4.60	\$0.42	\$19.60	\$51.61
SUBTOTAL		4.50	HR		\$30.78	\$4.60	\$0.42	\$19.60	\$55.39
HARVEST OPERATIONS									
MOWER (3X)	40 HP	1.11	HR		\$8.38	\$3.49	\$1.83	\$2.64	\$16.34
RAKE (3X)	40 HP	0.36	HR		\$2.72	\$1.13	\$0.49	\$2.72	\$7.06
BALER (3X)	40 HP	0.63	HR		\$4.76	\$1.98	\$0.74	\$6.65	\$14.12
HAUL (3X)	1 TON TRUCK	4.50	HR		\$33.98	\$31.44	\$37.46	\$38.07	\$140.95
SUBTOTAL		6.60	HR		\$49.83	\$38.04	\$40.53	\$50.08	\$178.48
OVERHEAD EXPENSES									
DOWNTIME		1.65	HR		\$12.46				\$12.46
EMPLOYEE BENEFITS					\$14.51				\$14.51
INSURANCE				\$1.61					\$1.61
LAND TAXES								\$0.28	\$0.28
SUPERVISION AND MANAGEMENT					\$41.95				\$41.95
OTHER EXPENSES				\$124.04					\$124.04
SUBTOTAL		1.65	HR		\$125.65	\$68.92		\$0.28	\$194.84
TOTAL OPERATING EXPENSES		12.75	HR		\$143.38	\$149.52	\$42.64	\$40.94	\$85.55
NET OPERATING PROFIT									\$32.96
INTEREST ON OPERATING CAPITAL	(\$16.67	@	8.00%					\$1.33
INTEREST ON EQUIPMENT INVESTMENT									\$0.44
RETURN TO LAND AND RISK									\$31.19

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

BUDGET SUMMARY

GROSS RETURN		\$495.00	
VARIABLE OPERATING EXPENSES	\$226.97		
RETURN OVER VARIABLE EXPENSES		\$268.03	(GROSS MARGIN)
FIXED EXPENSES	\$85.55		
NET FARM INCOME		\$182.48	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$149.52		
NET OPERATING PROFIT		\$32.96	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$1.77		
RETURN TO LAND AND RISK		\$31.19	

TABLE 6. Native grass hay, flood-irrigated, budgeted per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County, 2002.
Harvesting dates: July 20 - September 15

ITEM	PRICE	YIELD							TOTAL	
GROSS RETURNS										
HAY	\$110.00	1.50	TONS (STACKED)						\$165.00	
GRAZING	\$13.00	1.00	ACRE						\$13.00	
TOTAL									\$178.00	
PURCHASED INPUTS										
PURCHASED INPUTS	PRICE	QUANTITY		PURCHASED INPUTS				FIXED COSTS	TOTAL	
LIVESTOCK FAC & EQUIP								\$4.00	\$4.00	
BALING WIRE	\$0.37	13	LBS	\$4.78					\$4.78	
CANAL WATER		12	AC. IN.	\$5.00					\$5.00	
PUMP WATER*		6	AC. IN.							
SUBTOTAL				\$9.78				\$4.00	\$13.78	
PREHARVEST OPERATIONS										
	POWER UNIT	ACCOMPLISHMENT RATE		PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
DITCH MAINTENANCE		0.50	HR		\$3.78				\$3.78	
IRRIGATE (5X)		2.50	HR		\$18.88	\$3.45	\$0.31	\$14.70	\$37.33	
SUBTOTAL		3.00	HR		\$22.65	\$3.45	\$0.31	\$14.70	\$41.11	
HARVEST OPERATIONS										
MOWER (2X)	40 HP	0.74	HR		\$5.59	\$2.32	\$1.22	\$1.76	\$10.90	
RAKE (2X)	40 HP	0.24	HR		\$1.81	\$0.75	\$0.33	\$1.82	\$4.71	
BALER, 1-TON (2X)	40 HP	0.42	HR		\$3.17	\$1.32	\$0.49	\$4.43	\$9.42	
HAUL (2X)	TRUCK	1.60	HR		\$12.08	\$11.18	\$13.32	\$13.54	\$50.12	
SUBTOTAL		3.00	HR	\$0.00	\$22.65	\$15.58	\$15.36	\$21.54	\$75.14	
OVERHEAD EXPENSES										
DOWNTIME		0.75	HR		\$5.66				\$5.66	
EMPLOYEE BENEFITS					\$8.15				\$8.15	
INSURANCE				\$0.91					\$0.91	
LAND TAXES								\$0.28	\$0.28	
SUPERVISION AND MANAGEMENT					\$13.96				\$13.96	
OTHER EXPENSES				\$124.04					\$124.04	
SUBTOTAL		0.75	HR	\$124.94	\$27.78			\$0.28	\$153.00	
TOTAL OPERATING EXPENSES		3.75	HR	\$134.72	\$73.08	\$19.03	\$15.68	\$40.52	\$283.02	
NET OPERATING PROFIT									(\$105.02)	
INTEREST ON OPERATING CAPITAL										
INTEREST ON OPERATING CAPITAL	(\$8.41	@	8.00%)	\$0.67
INTEREST ON EQUIPMENT INVESTMENT									\$22.30	
RETURN TO LAND AND RISK									(\$127.99)	

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

BUDGET SUMMARY

GROSS RETURN		\$178.00	
VARIABLE OPERATING EXPENSES	\$169.42		
RETURN OVER VARIABLE EXPENSES		\$8.58	(GROSS MARGIN)
FIXED EXPENSES	\$40.52		
NET FARM INCOME		(\$31.94)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$73.08		
NET OPERATING PROFIT		(\$105.02)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$22.97		
RETURN TO LAND AND RISK		(\$127.99)	

TABLE 7. Summary of per acre costs and returns for an 80 acre part-time farm,
 Dry Cimarron area, Union County, 2002.

	ALFALFA ESTABLISHMENT	ALFALFA HAY -----FLOOD-----	NATIVE GRASS HAY
		TONS	TONS
PRIMARY YIELD		4.00	1.50
PRIMARY PRICE		120.00	110.00
GOVERNMENT PAYMENTS		0.00	0.00
SECOND INCOME		15.00	13.00
GROSS RETURN		\$495.00	\$178.00
CASH OPERATING EXPENSES			
SEED	\$52.20		
FERTILIZER			
CHEMICALS			
CROP INSURANCE			
OTHER PURCHASED INPUTS		\$12.74	\$4.78
CANAL WATER		\$5.00	\$5.00
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$1.95	\$38.04	\$15.58
FUEL-IRRIGATION		\$4.60	\$3.45
REPAIRS	\$0.25	\$40.94	\$15.68
CUSTOM CHARGES			
LAND TAXES		\$0.28	\$0.28
OTHER EXPENSES	\$0.27	\$125.65	\$124.94
TOTAL CASH EXPENSES	\$54.67	\$227.24	\$169.70
RETURN OVER CASH EXPENSES	(\$54.67)	\$267.76	\$8.30
FIXED EXPENSES	\$0.27	\$85.28	\$40.24
TOTAL EXPENSES	\$54.94	\$312.52	\$209.94
NET FARM INCOME	(\$54.94)	\$182.48	(\$31.94)
LABOR AND MANAGEMENT COSTS	\$22.96	\$149.52	\$73.08
NET OPERATING PROFIT	(\$77.90)	\$32.96	(\$105.02)
CAPITAL COSTS			
INTEREST ON OPERATING CAPITAL		\$1.33	\$0.67
INTEREST ON EQUIPMENT INVESTMENT		\$0.44	\$22.30
TOTAL CAPITAL COSTS	\$0.00	\$1.77	\$22.97
RETURN TO LAND AND RISK	(\$77.90)	\$31.19	(\$127.99)

TABLE 8. Whole farm summary, Union County, 2002.

GROSS RETURNS		
ALFALFA HAY	40 ACRES	
CROP		\$19,200
GRAZING		\$600
NATIVE GRASS HAY	40 ACRES	
CROP		\$6,600
GRAZING		\$520
GROSS RETURN		\$26,920
CASH OPERATING EXPENSES		
SEED		\$209
FERTILIZER		\$0
CHEMICALS		\$0
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$700
CANAL WATER		\$400
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$2,153
FUEL-IRRIGATION		\$322
REPAIRS		\$2,266
CUSTOM CHARGES		\$0
LAND TAXES		\$22
OTHER EXPENSES		\$10,025
TOTAL CASH EXPENSES		\$16,096
RETURN OVER CASH EXPENSES		\$10,824
FIXED EXPENSES		\$4,710
TOTAL EXPENSES		\$20,807
NET FARM INCOME		\$6,113
LABOR AND MANAGEMENT COSTS		\$8,996
NET OPERATING PROFIT		(\$2,882)
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$80
INTEREST ON EQUIPMENT INVESTMENT		\$909
TOTAL CAPITAL COSTS		\$990
RETURN TO LAND AND RISK		(\$3,872)

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$200 /ACRE	(\$4,512)	-6.45%
\$350 /ACRE	(\$4,992)	-5.08%
\$500 /ACRE	(\$5,472)	-4.20%

* 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)