

TABLE 1. Basic cost information for Dry Cimarron area,
Union County, 2003.

Item			
Labor Wage Rate:			
Equipment operators		\$/hour	\$7.55
General & Irrigators		\$/hour	\$6.75
Purchased Inputs:			
Seed:			
Alfalfa		\$/pound	\$3.00
Natural gas		\$/MCF	\$3.28
Diesel fuel		\$/gallon	\$1.30
Gasoline		\$/gallon	\$1.35
Electricity		cents/KwHr	3.65
LP Gas		\$/gallon	\$1.21
Baling Wire		\$/pound	\$0.39
Employee Liability Insurance		\$/ \$1,000 wages	\$20.00
Employee Benefits		percent/w ages	18.00%
Labor Downtime		percent	25.00%
Financial Rates:			
Operating Capital Interest Rate		percent	8.00%
Land Interest Rate		percent	7.00%
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		\$/ \$1,000 (Assessed Value)	\$30.93
- R			\$27.08
Supervision Factors			
Field Crop-Irrigation		\$/labor hour	\$1.00
Field Crop-Equipment & General		\$/labor hour	\$0.50
Management Rate		percent	7.00%

TABLE 1a. Overhead cost information for the Dry Cimarron area, 2003.

ITEM			
Electricity (Domestic & Shop)		\$115.00 per month	\$1,380
Telephone		\$85.00 per month	\$1,020
Accounting & Legal			\$495
Misc. Supplies & Hand Tools			\$810
Pickup and Auto			
miles	10,300	@ \$0.365 per mile	\$3,760
Insurance			
- general liability (non-employee)			\$1,050
- fire/theft			\$685
Property Taxes			
- other than land & machinery			\$320
Building repairs and maintenance			\$520
Dues, fees, publications			\$260
Farmstead Equipment			\$75
		Total	\$10,375
		Total per planted acre	\$129.68

TABLE 2. Pumping costs and data for irrigation wells, Dry Cimarron area,
Union County, 2003.

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.....	3.65	CENTS/K	wHr		
NATURAL GAS.....	\$3.28	\$/MCF			
LP GAS.....	\$1.21	\$/GAL			
DIESEL.....	\$1.30	\$/GAL			

FUEL PUMPING COSTS

ELECTRIC WELL:	
COST PER HOUR.....\$	\$0.78
COST PER ACRE INCH.....\$	\$0.39
NATURAL GAS WELL:	
COST PER HOUR.....\$	\$0.91
COST PER ACRE INCH.....\$	\$0.46
LP GAS WELL:	
COST PER HOUR.....\$	\$3.24
COST PER ACRE INCH.....\$	\$1.63
DIESEL WELL:	
COST PER HOUR.....\$	\$2.18
COST PER ACRE INCH.....\$	\$1.10

TABLE 3. Equipment summary for an 80 acre part-time flood-irrigated farm, Dry Cimarron area, Union County, 2003.

EQUIPMENT		VARIABLE COSTS						FIXED COSTS		
ITEM & SIZE	ANNUAL HOURS OF USE	NUMBER	TOTAL VALUE	FUEL, LUBRICANT	FUEL, LUBE REPAIR	PER HR	REPAIR PER HR	DEPRECIATION	TAXES	TOTAL PER HOUR
TRACTOR 40 HP	142	1	\$1,600	\$554	\$58	\$3.89	\$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	\$2,111	\$2,028	\$8.65	\$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	\$218	\$20	\$0.78	\$0.07	\$1,244	\$128	\$4.87
			\$28,488	\$2,884	\$2,419			\$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, 2003.
Planting dates: August 15 - September 15

ITEM	PRICE	QUANTITY	PURCHASED INPUTS						TOTAL
<u>PURCHASED INPUTS</u>									
SEED	\$3.00	18 LBS	\$54.00						\$54.00
CANAL WATER		5 AC. IN.							
SUBTOTAL			\$54.00						\$54.00
<u>PREHARVEST OPERATIONS</u>	<u>POWER UNIT</u>	<u>ACCOMPLISHMENT RATE</u>	<u>PURCHASED INPUTS</u>	<u>LABOR</u>	<u>FUEL & LUBE</u>	<u>REPAIRS</u>	<u>FIXED COST</u>	<u>TOTAL</u>	
CHISEL	40 HP	0.20 HR		\$1.51	\$0.78	\$0.08	\$0.09	\$2.46	
DISC	40 HP	0.17 HR		\$1.28	\$0.66	\$0.07	\$0.08	\$2.09	
DRILL	40 HP	0.25 HR		\$1.89	\$0.97	\$0.10	\$0.11	\$3.07	
DITCH MAINTENANCE		0.50 HR		\$3.78				\$3.78	
IRRIGATE (1X)		0.75 HR		\$5.06				\$5.06	
SUBTOTAL		1.87 HR		\$13.52	\$2.41	\$0.25	\$0.27	\$16.45	
<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				\$5.99				\$5.99	
SUBTOTAL		0.16 HR	0.27	9.60				9.87	
TOTAL OPERATING EXPENSES		2.03 HR	\$54.27	\$23.11	\$2.41	\$0.25	\$0.27	\$80.32	

TABLE 5. Alfalfa hay, flood-irrigated, budgeted per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County, 2003.
Harvesting dates: May 15 - September 15

ITEM	PRICE	YIELD							TOTAL	
GROSS RETURNS										
ALFALFA FA HAY	\$140.00	7.00	TONS (STACKED)						\$980.00	
GRAZING	\$15.00	1.00	ACRE						\$15.00	
TOTAL									\$995.00	
PURCHASED INPUTS										
PURCHASED INPUTS	PRICE	QUANTITY		PURCHASED INPUTS				FIXED COST	TOTAL	
LIVESTOCK FAC & EQUIP ESTABLISHMENT: Principal		10	YEARS					\$4.00	\$4.00	
: Interest								\$8.03	\$8.03	
BALING WIRE	\$0.39	60	LBS	\$23.40				\$3.92	\$3.92	
CANAL WATER		16	AC. IN.	\$5.00					\$23.40	
PUMP WATER*		8	AC. IN.						\$5.00	
SUBTOTAL				\$28.40				\$15.96	\$44.35	
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	\$3.12	\$0.28	\$19.60	\$50.00	
SUBTOTAL				4.50 HR	\$30.78	\$3.12	\$0.28	\$19.60	\$53.77	
HARVEST OPERATIONS										
MOWER (3X)	40 HP	1.11	HR		\$8.38	\$4.32	\$1.83	\$2.64	\$17.17	
RAKE (3X)	40 HP	0.36	HR		\$2.72	\$1.40	\$0.49	\$2.72	\$7.33	
BALER (3X)	40 HP	0.63	HR		\$4.76	\$2.45	\$0.74	\$6.65	\$14.60	
HAUL (3X)	1 TON TRUCK	4.50	HR		\$33.98	\$38.93	\$37.46	\$38.07	\$148.43	
SUBTOTAL				6.60 HR	\$49.83	\$47.10	\$40.53	\$50.08	\$187.54	
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					\$76.95				\$76.95	
OTHER EXPENSES				\$129.68					\$129.68	
SUBTOTAL				1.65 HR	\$131.29	\$103.92		\$0.28	\$235.49	
TOTAL OPERATING EXPENSES				12.75 HR	\$159.69	\$184.52	\$50.22	\$40.81	\$85.91	\$521.15
NET OPERATING PROFIT									\$473.85	
INTEREST ON OPERATING CAPITAL	(\$22.35	@	8.00%					\$1.79	
INTEREST ON EQUIPMENT INVESTMENT									\$0.44	
RETURN TO LAND AND RISK									\$471.62	

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

BUDGET SUMMARY

GROSS RETURN		\$995.00	
VARIABLE OPERATING EXPENSES	\$250.72		
RETURN OVER VARIABLE EXPENSES		\$744.28	(GROSS MARGIN)
FIXED EXPENSES	\$85.91		
NET FARM INCOME		\$658.37	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$184.52		
NET OPERATING PROFIT		\$473.85	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$2.22		
RETURN TO LAND AND RISK		\$471.62	

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, 2003.
Harvesting dates: July 20 - September 15

ITEM	PRICE	YIELD							TOTAL	
GROSS RETURNS										
HAY	\$130.00	1.50	TONS (STACKED)						\$195.00	
GRAZING	\$13.00	1.00	ACRE						\$13.00	
TOTAL									\$208.00	
PURCHASED INPUTS		PRICE	QUANTITY	PURCHASED INPUTS			FIXED COSTS	TOTAL		
LIVESTOCK FAC & EQUIP							\$4.00	\$4.00		
BALING WIRE	\$0.39	13	LBS	\$5.01				\$5.01		
CANAL WATER		12	AC. IN.	\$5.00				\$5.00		
PUMP WATER*		6	AC. IN.							
SUBTOTAL				\$10.01				\$4.00	\$14.01	
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	\$2.34	\$0.21	\$14.70	\$36.12	
SUBTOTAL			3.00 HR		\$22.65	\$2.34	\$0.21	\$14.70	\$39.90	
HARVEST OPERATIONS										
MOWER (2X)	40 HP	0.74	HR	\$5.59	\$2.88	\$1.22	\$1.76	\$11.45		
RAKE (2X)	40 HP	0.24	HR	\$1.81	\$0.93	\$0.33	\$1.82	\$4.89		
BALER, 1-TON (2X)	40 HP	0.42	HR	\$3.17	\$1.63	\$0.49	\$4.43	\$9.73		
HAUL (2X)	TRUCK	1.60	HR	\$12.08	\$13.84	\$13.32	\$13.54	\$52.78		
SUBTOTAL			3.00 HR	\$0.00	\$22.65	\$19.29	\$15.36	\$21.54	\$78.85	
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					\$16.06				\$16.06	
OTHER EXPENSES				\$129.68				\$129.68		
SUBTOTAL			0.75 HR	\$130.59	\$29.88				\$0.28	\$160.74
TOTAL OPERATING EXPENSES			3.75 HR	\$140.60	\$75.18	\$21.63	\$15.58	\$40.52	\$293.50	
NET OPERATING PROFIT									(\$85.50)	
INTEREST ON OPERATING CAPITAL	(\$8.53	@	8.00%				\$0.68		
INTEREST ON EQUIPMENT INVESTMENT									\$22.30	
RETURN TO LAND AND RISK									(\$108.49)	

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

BUDGET SUMMARY

GROSS RETURN		\$208.00	
VARIABLE OPERATING EXPENSES	\$177.81		
RETURN OVER VARIABLE EXPENSES		\$30.19	(GROSS MARGIN)
FIXED EXPENSES	\$40.52		
NET FARM INCOME		(\$10.33)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$75.18		
NET OPERATING PROFIT		(\$85.50)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$22.98		
RETURN TO LAND AND RISK		(\$108.49)	

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		7.00	1.50
PRIMARY PRICE		140.00	130.00
GOVERNMENT PAYMENTS		0.00	0.00
SECOND INCOME		15.00	13.00
GROSS RETURN		\$995.00	\$208.00
CASH OPERATING EXPENSES			
SEED	\$54.00		
FERTILIZER			
CHEMICALS			
CROP INSURANCE			
OTHER PURCHASED INPUTS		\$23.40	\$5.01
CANAL WATER		\$5.00	\$5.00
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$2.41	\$47.10	\$19.29
FUEL-IRRIGATION		\$3.12	\$2.34
REPAIRS	\$0.25	\$40.81	\$15.58
CUSTOM CHARGES			
LAND TAXES		\$0.28	\$0.28
OTHER EXPENSES	\$0.27	\$131.29	\$130.59
TOTAL CASH EXPENSES	\$56.93	\$251.00	\$178.08
RETURN OVER CASH EXPENSES	(\$56.93)	\$744.00	\$29.92
FIXED EXPENSES	\$0.27	\$85.64	\$40.24
TOTAL EXPENSES	\$57.21	\$336.63	\$218.33
NET FARM INCOME	(\$57.21)	\$658.37	(\$10.33)
LABOR AND MANAGEMENT COSTS	\$23.11	\$184.52	\$75.18
NET OPERATING PROFIT	(\$80.32)	\$473.85	(\$85.50)
CAPITAL COSTS			
INTEREST ON OPERATING CAPITAL		\$1.79	\$0.68
INTEREST ON EQUIPMENT INVESTMENT		\$0.44	\$22.30
TOTAL CAPITAL COSTS	\$0.00	\$2.22	\$22.98
RETURN TO LAND AND RISK	(\$80.32)	\$471.62	(\$108.49)

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

GROSS RETURNS		
ALFALFA HAY	40 ACRES	
CROP		\$39,200
GRAZING		\$600
NATIVE GRASS HAY	40 ACRES	
CROP		\$7,800
GRAZING		\$520
GROSS RETURN		\$48,120
CASH OPERATING EXPENSES		
SEED		\$216
FERTILIZER		\$0
CHEMICALS		\$0
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$1,136
CANAL WATER		\$400
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$2,665
FUEL-IRRIGATION		\$218
REPAIRS		\$2,256
CUSTOM CHARGES		\$0
LAND TAXES		\$22
OTHER EXPENSES		\$10,476
TOTAL CASH EXPENSES		\$17,391
RETURN OVER CASH EXPENSES		\$30,729
FIXED EXPENSES		\$4,715
TOTAL EXPENSES		\$22,106
NET FARM INCOME		\$26,014
LABOR AND MANAGEMENT COSTS		\$10,480
NET OPERATING PROFIT		\$15,534
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$99
INTEREST ON EQUIPMENT INVESTMENT		\$909
TOTAL CAPITAL COSTS		\$1,008
RETURN TO LAND AND RISK		\$14,525

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$200 /ACRE	\$13,885	34.92%
\$350 /ACRE	\$13,405	27.50%
\$500 /ACRE	\$12,925	22.68%

* 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)