

TABLE 1. Basic cost information for Tularosa Basin, Otero County, 2003.

Item			
Labor Wage Rate:			
Equipment operators	\$/hour		\$6.75
General & Irrigators	\$/hour		\$6.45
Purchased Inputs:			
Fertilizer:			
Nitrogen (N)	\$/pound		\$0.36
Seed:			
Alfalfa	\$/pound		\$3.00
Oats for Hay	\$/pound		\$0.40
Natural Gas (Gas NM)	\$/MCF		\$3.28
(service charge)	\$/month		\$10.00
Diesel fuel	\$/gallon		\$1.30
Gasoline	\$/gallon		\$1.35
Electricity (Otero Coop)	cents/KwHr		7.15
Employee Liability Insurance	\$/ \$1,000	wages	\$12.00
Employee Benefits	percent/w	ages	12.00%
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%
Expected Inflation Rate	percent		4.00%
Land Taxes	\$300.00 /acre	(full value)	\$2.90
Personal Property Tax Rate - NR	\$/ \$1,000	(Assessed Value)	\$28.99
- R			\$23.18
Supervision Factors			
Field Crop-Irrigation	\$/acre		\$1.00
Field Crop-Equipment & General	\$/acre		\$0.50
Management Rate	percent		4.00%

TABLE 1a. Overhead cost information for Tularosa Basin, Otero County, 2003.

ITEM			
Electricity (Domestic & Shop)		\$70.00 per month	\$840
Telephone		\$75.00 per month	\$900
Accounting & Legal			\$165
Misc. Supplies & Hand Tools			\$550
Pickup and Auto			
miles	5,150	@ \$0.365 per mile	\$1,880
Insurance			
- general liability (non-employee)			\$260
- fire/theft			\$175
Property Taxes			
- non-planted land			\$180
- other than land & machinery			\$135
Building repairs and maintenance			\$260
Dues, fees, publications			\$145
Farmstead Equipment			\$175
		Total	\$5,665
		Total per planted acre	\$125.89

TABLE 2. Pumping costs and data for irrigation wells, Tularosa Basin,
Otero County, 2003.

INPUT DATA

DELIVERY PSI:		DEPTH CHARACTERISTICS:	
SPRINKLER...	40	STATIC... ..	145
		DRAW DOWN	35
		TOTAL HEAD.....	180
		CASING... ..	275
GALLONS PER MINUTE (GPM)...	300		
WORK HORSEPOWER..	21		
EFFICIENCY FACTOR:			
ELECTRICITY.	0.290		
NATURAL GAS.	0.151		
LP GAS.....	0.151		
DIESEL.....	0.180		
FUEL COST PER HOUR:			
ELECTRICITY.	\$7.15	CENTS/KwHr	
NATURAL GAS.	\$3.28	\$/MCF	
LP GAS.....	\$0.62	\$/GAL	
DIESEL.....	\$1.30	\$/GAL	

PUMPING COSTS

ELECTRICAL WELL:	
COST PER HOUR.....	\$3.83
COST PER ACRE INCH	\$5.77
NATURAL GAS WELL:	
COST PER HOUR.....	\$1.28
COST PER ACRE INCH	\$1.93
BUTANE WELL:	
COST PER HOUR.....	\$2.38
COST PER ACRE INCH	\$3.59
DIESEL WELL:	
COST PER HOUR.....	\$2.70
COST PER ACRE INCH	\$4.08

TABLE 3. Equipment summary for a 50 acre part-time farm, Tularosa Basin, Otero County, 2003.

EQUIPMENT		VARIABLE COSTS						FIXED COSTS		
ITEM & SIZE	ANNUAL HOURS OF USE	NUMBER	TOTAL VALUE	FUEL, OIL LUBRICANT	REPAIR	FUEL,OIL PER HR	REPAIR PER HR	DEPRE-CIATION	TAXES	TOTAL PER HOUR
(DOLLARS)										
TRACTOR 50 HP	122	1	\$8,320	\$615.88	\$402.53	\$5.05	\$3.30	\$1,100	\$106	\$9.89
BALEWAGON, PTO	43	1	\$1,650		\$123.84		\$2.88	\$800	\$77	\$20.40
BALER, PTO 2-WIRE	45	1	\$1,500		\$38.24		\$0.85	\$385	\$37	\$9.35
PLOW 2 BTM	4	1	\$250		\$1.30		\$0.31	\$33	\$2	\$8.51
FLOAT 8 FT	9	1	\$400		\$0.11		\$0.01	\$40	\$3	\$4.79
DISC 8 FT	12	1	\$700		\$7.51		\$0.60	\$93	\$7	\$8.02
SPRINKLER	3020	2	\$5,000		\$141.96		\$0.05	\$667	\$48	\$0.24
DRILL 12 FT.	3	1	\$2,200		\$3.10		\$1.06	\$440	\$21	\$156.89
SWATHER 14 FT.	34	1	\$4,300	\$173.87	\$59.86	\$5.05	\$1.74	\$1,450	\$140	\$46.22
NATURAL GAS WELL	3020	2	\$31,000	\$3,868.05	\$604.07	\$1.28	\$0.20	\$4,133	\$300	\$1.55
			\$55,320	\$4,658	\$1,383			\$9,142	\$742	

TABLE 4. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, 2003.
Planting dates: September 1 - November 1

ITEM	PRICE	QUANTITY	PURCHASED INPUTS				TOTAL	
<u>PURCHASED INPUTS</u>								
ALFALFA SEED	\$3.00	30 LBS					\$90.00	
PUMP WATER*		8 AC. IN.						
SUBTOTAL					\$90.00		\$90.00	
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL
DISC	50 HP	0.39 HR		\$2.63	\$1.97	\$1.31	\$3.95	\$9.86
PLOW	50 HP	1.05 HR		\$7.09	\$5.30	\$3.79	\$19.32	\$35.50
DISC (2X)	50 HP	0.78 HR		\$5.27	\$3.94	\$3.04	\$13.97	\$26.22
FLOAT (2X)	50 HP	0.64 HR		\$4.32	\$3.23	\$2.12	\$9.39	\$19.06
DRILL	50 HP	0.21 HR		\$1.42	\$1.06	\$0.91	\$35.02	\$38.42
IRRIGATE (4X)		2.00 HR		\$12.90	\$15.46	\$2.98	\$21.53	\$52.86
SUBTOTAL		5.07 HR		\$33.62	\$30.96	\$14.15	\$103.19	\$181.92
<u>OVERHEAD EXPENSES</u>								
DOWNTIME		0.77 HR		\$5.18				\$5.18
EMPLOYEE BENEFITS				\$4.03				\$4.03
FARM INSURANCE			\$0.40					\$0.40
SUPERVISION AND MANAGEMENT				\$14.41				\$14.41
SUBTOTAL		0.77 HR	\$0.40	\$23.63				\$24.03
TOTAL OPERATING EXPENSES		5.84 HR	\$90.40	\$57.25	\$30.96	\$14.15	\$103.19	\$295.95

TABLE 5. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, 2003.
Harvesting dates: May 10 - October 15

ITEM	PRICE	YIELD						TOTAL	
GROSS RETURNS									
ALFALFA HAY	\$140.00	4.50	TONS (STACKED)						\$630.00
TOTAL								\$630.00	
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS					FIXED COST	TOTAL
FERT. (ALFALFA MIX)	\$0.16	250	LBS					\$40.00	\$40.00
INSECTICIDE	\$23.97	1	ACRE					\$23.97	\$23.97
WIRE	\$0.36	56	LBS					\$20.16	\$20.16
ESTABLISHMENT: Principal		10	YEARS					\$29.59	\$29.59
: Interest								\$9.45	\$9.45
PUMP WATER*		45	AC. IN.						
SUBTOTAL				\$84.13				\$39.05	\$123.18
PREHARVEST OPERATIONS									
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL	
IRRIGATE (11X)		5.50 HR		\$35.48	\$86.94	\$16.77	\$121.10	\$260.28	
SUBTOTAL		5.50 HR		\$35.48	\$86.94	\$16.77	\$121.10	\$260.28	
HARVEST OPERATIONS									
SWATHER (5X)	14 FT	0.80 HR		\$5.40	\$4.04	\$1.39	\$36.98	\$47.82	
BALER, PTO (5X)	50 HP	1.05 HR		\$7.09	\$5.30	\$4.35	\$20.20	\$36.95	
BALEWAGON, PTO (5X)	50 HP	1.00 HR		\$6.75	\$5.05	\$6.18	\$30.29	\$48.27	
SUBTOTAL		2.85 HR		\$19.24	\$14.39	\$11.93	\$87.47	\$133.03	
OVERHEAD EXPENSES									
DOWNTIME		0.71 HR		\$4.81				\$4.81	
EMPLOYEE BENEFITS				\$6.57				\$6.57	
FARM INSURANCE				\$0.66				\$0.66	
LAND TAXES							\$2.90	\$2.90	
SUPERVISION AND MANAGEMENT				\$32.13				\$32.13	
OTHER EXPENSES				\$125.89				\$125.89	
SUBTOTAL		0.71 HR		\$126.54	\$43.50		\$2.90	\$172.94	
TOTAL OPERATING EXPENSES		9.06 HR		\$210.68	\$98.21	\$101.33	\$28.69	\$689.43	
NET OPERATING PROFIT								(\$59.43)	
INTEREST ON OPERATING CAPITAL	(\$70.19	@	8.00%				\$5.61	
INTEREST ON EQUIPMENT INVESTMENT								\$96.18	
RETURN TO LAND AND RISK								(\$161.23)	

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

BUDGET SUMMARY

GROSS RETURN		\$630.00	
VARIABLE OPERATING EXPENSES	\$346.32		
RETURN OVER VARIABLE EXPENSES	\$283.68		(GROSS MARGINS)
FIXED EXPENSES	\$250.52		
NET FARM INCOME	\$33.16		(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$98.21		
NET OPERATING PROFIT	(\$65.05)		(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$96.18		
RETURN TO LAND AND RISK	(\$161.23)		

TABLE 6. Oats for hay, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, 2003.
 Planting dates: September 1 - November 1
 Harvesting dates: April 15 - May 15

ITEM	PRICE	YIELD						TOTAL	
GROSS RETURNS									
OATS FOR HAY	\$130.00	3.00	TONS (STACKED)						\$390.00
TOTAL								\$390.00	
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS		FIXED COST			TOTAL	
OAT SEED	\$0.40	100	LBS		\$40.00			\$40.00	
NITROGEN (N)	\$0.36	100	LBS		\$36.00			\$36.00	
PUMP WATER*		18	AC. IN.						
SUBTOTAL				\$76.00		\$76.00			
PREHARVEST OPERATIONS									
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL	
DISC	50 HP	0.39 HR		\$2.63	\$1.97	\$1.52	\$6.98	\$13.11	
PLOW	50 HP	1.05 HR		\$7.09	\$5.30	\$3.79	\$19.32	\$35.50	
DISC (2X)	50 HP	0.78 HR		\$5.27	\$3.94	\$3.04	\$13.97	\$26.22	
FLOAT (2X)	50 HP	0.64 HR		\$4.32	\$3.23	\$2.12	\$9.39	\$19.06	
DRILL	50 HP	0.21 HR		\$1.42	\$1.06	\$0.91	\$35.02	\$38.42	
IRRIGATE (4X)		2.00 HR		\$12.90	\$34.78	\$6.71	\$48.44	\$102.82	
SUBTOTAL		5.07 HR		\$33.62	\$50.28	\$18.10	\$133.13	\$235.13	
HARVEST OPERATIONS									
SWATHER	14 FT	0.16 HR		\$1.08	\$0.81	\$0.28	\$7.40	\$9.56	
BALER, PTO	50 HP	0.21 HR		\$1.42	\$1.06	\$0.87	\$4.04	\$7.39	
BALE WAGON	50 HP	0.20 HR		\$1.35	\$1.01	\$1.24	\$6.06	\$9.65	
SUBTOTAL		0.57 HR		\$3.85	\$2.88	\$2.39	\$17.49	\$26.61	
OVERHEAD EXPENSES									
DOWNTIME		0.91 HR		\$6.14				\$6.14	
EMPLOYEE BENEFITS				\$4.50				\$4.50	
FARM INSURANCE			\$0.45					\$0.45	
LAND TAXES						\$1.45		\$1.45	
SUPERVISION AND MANAGEMENT				\$19.42				\$19.42	
OTHER EXPENSES			\$62.94					\$62.94	
SUBTOTAL		0.91 HR		\$63.39	\$30.06		\$1.45	\$94.90	
TOTAL OPERATING EXPENSES		6.55 HR		\$139.39	\$67.53	\$53.15	\$20.48	\$432.64	
NET OPERATING PROFIT								(\$42.64)	
INTEREST ON OPERATING CAPITAL	(\$55.53	@	8.00%)			\$4.44	
INTEREST ON EQUIPMENT INVESTMENT								\$67.39	
RETURN TO LAND AND RISK								(\$114.47)	

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

BUDGET SUMMARY

GROSS RETURN		\$390.00	
VARIABLE OPERATING EXPENSES	\$217.47		
RETURN OVER VARIABLE EXPENSES		\$172.53	(GROSS MARGINS)
FIXED EXPENSES	\$152.08		
NET FARM INCOME		\$20.45	(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$67.53		
NET OPERATING PROFIT		(\$47.08)	(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$67.39		
RETURN TO LAND AND RISK		(\$114.47)	

TABLE 7. Sorghum-sudan hay, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, 2003.
 Planting dates: May 1 - June 1
 Harvesting dates: June 1 - August 1

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
SORGHUM/SUDAN HAY	\$110.00	5.00	TONS (STACKED)					\$550.00
TOTAL								\$550.00
PURCHASED INPUTS								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
SEED	\$1.04	50	LBS		\$52.00			\$52.00
NITROGEN (N)	\$0.36	100	LBS		\$36.00			\$36.00
PUMP WATER*		16	AC. IN.					
SUBTOTAL				\$88.00				\$88.00
PREHARVEST OPERATIONS								
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL
DISC	50 HP	0.39 HR		\$2.63	\$1.97	\$1.52	\$6.98	\$13.11
FLOAT (2X)	50 HP	0.64 HR		\$4.32	\$3.23	\$2.12	\$9.39	\$19.06
DRILL	50 HP	0.21 HR		\$1.42	\$1.06	\$0.91	\$35.02	\$38.42
IRRIGATE (4X)		2.00 HR		\$12.90	\$30.91	\$5.96	\$43.06	\$92.83
SUBTOTAL		3.24 HR		\$21.27	\$37.17	\$10.52	\$94.46	\$163.42
HARVEST OPERATIONS								
SWATHER (2X)	14 FT	0.32 HR		\$2.16	\$1.62	\$0.56	\$14.79	\$19.13
BALER, PTO (2X)	50 HP	0.42 HR		\$2.84	\$2.12	\$1.74	\$8.08	\$14.78
BALE WAGON (2X)	50 HP	0.40 HR		\$2.70	\$2.02	\$2.47	\$12.12	\$19.31
SUBTOTAL		1.14 HR		\$7.70	\$5.76	\$4.77	\$34.99	\$53.21
OVERHEAD EXPENSES								
DOWNTIME		0.60 HR		\$4.02				\$4.02
EMPLOYEE BENEFITS				\$3.48				\$3.48
FARM INSURANCE				\$0.35				\$0.35
LAND TAXES							\$1.45	\$1.45
SUPERVISION AND MANAGEMENT				\$25.19				\$25.19
OTHER EXPENSES				\$62.94				\$62.94
SUBTOTAL		0.60 HR		\$63.29	\$32.68		\$1.45	\$97.42
TOTAL OPERATING EXPENSES		4.98 HR		\$151.29	\$61.65	\$42.93	\$15.29	\$130.90
NET OPERATING PROFIT								\$147.95
INTEREST ON OPERATING CAPITAL	(\$56.80	@	8.00%				\$4.54
INTEREST ON EQUIPMENT INVESTMENT								\$62.01
RETURN TO LAND AND RISK								\$81.39

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

BUDGET SUMMARY

GROSS RETURN		\$550.00	
VARIABLE OPERATING EXPENSES	\$214.05		
RETURN OVER VARIABLE EXPENSES		\$335.95	(GROSS MARGINS)
FIXED EXPENSES	\$130.90		
NET FARM INCOME		\$205.05	(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$61.65		
NET OPERATING PROFIT		\$143.40	(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$62.01		
RETURN TO LAND AND RISK		\$81.39	

TABLE 8. Summary of per acre costs and returns, 50-acre part-time farm, Tularosa Basin, Otero County, 2002.

	ALFALFA ESTABLISHMENT	ALFALFA HAY	OATS FOR HAY	SORGHUM SUDAN HAY
	-----FLOOD-----			
		TONS	TONS	TONS
PRIMARY YIELD		4.50	3.00	5.00
PRIMARY PRICE		140.00	130.00	110.00
GOVERNMENT PAYMENTS		0.00	0.00	0.00
SECOND INCOME		0.00	0.00	0.00
GROSS RETURN		\$630.00	\$390.00	\$550.00
CASH OPERATING EXPENSES				
SEED	\$90.00		\$40.00	\$52.00
FERTILIZER		\$40.00	\$36.00	\$36.00
CHEMICALS		\$23.97		
CROP INSURANCE				
OTHER PURCHASED INPUTS		\$20.16		
CANAL WATER				
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$15.50	\$14.39	\$18.38	\$12.02
FUEL-IRRIGATION	\$15.46	\$86.94	\$34.78	\$30.91
REPAIRS	\$14.15	\$28.69	\$20.48	\$15.29
CUSTOM CHARGES				
LAND TAXES		\$2.90	\$1.45	\$1.45
OTHER EXPENSES	\$0.40	\$126.54	\$63.39	\$63.29
TOTAL CASH EXPENSES	\$135.51	\$343.60	\$214.48	\$210.96
RETURN OVER CASH EXPENSES	(\$135.51)	\$286.40	\$175.52	\$339.04
FIXED EXPENSES	\$103.19	\$247.62	\$150.63	\$129.45
TOTAL EXPENSES	\$238.70	\$591.22	\$365.11	\$340.41
NET FARM INCOME	(\$238.70)	\$38.78	\$24.89	\$209.59
LABOR AND MANAGEMENT COSTS	\$57.25	\$98.21	\$67.53	\$61.65
NET OPERATING PROFIT	(\$295.95)	(\$59.43)	(\$42.64)	\$147.95
CAPITAL COSTS				
INTEREST ON OPERATING CAPITAL		\$5.61	\$4.44	\$4.54
INTEREST ON EQUIPMENT INVESTMENT		\$96.18	\$67.39	\$62.01
TOTAL CAPITAL COSTS	\$0.00	\$101.79	\$71.83	\$66.56
RETURN TO LAND AND RISK	(\$295.95)	(\$161.23)	(\$114.47)	\$81.39

TABLE 9. Whole farm summary, Tularosa Basin, Otero County, 2002.

GROSS RETURNS		
ALFALFA HAY CROP	40 ACRES	\$25,200
OATS FOR HAY CROP	5 ACRES	\$1,950
SORGHUM/SUDAN CROP	5 ACRES	\$2,750
GROSS RETURN		\$29,900
CASH OPERATING EXPENSES		
SEED		\$820
FERTILIZER		\$1,960
CHEMICALS		\$959
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$806
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$790
FUEL-IRRIGATION		\$3,868
REPAIRS		\$1,383
CUSTOM CHARGES		\$0
LAND TAXES		\$130
OTHER EXPENSES		\$5,697
TOTAL CASH EXPENSES		\$16,413
RETURN OVER CASH EXPENSES		\$13,487
FIXED EXPENSES		\$9,887
TOTAL EXPENSES		\$26,300
NET FARM INCOME		\$3,600
LABOR AND MANAGEMENT COSTS		\$4,803
NET OPERATING PROFIT		(\$1,204)
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$270
INTEREST ON EQUIPMENT INVESTMENT		\$4,494
TOTAL CAPITAL COSTS		\$4,764
RETURN TO LAND AND RISK		(\$5,967)

LAND VALUE	RETURNS TO RISK*	RETURN ON INVESTMENT**
\$700 /ACRE	(\$7,367)	-1.33%
\$900 /ACRE	(\$7,767)	-1.20%
\$1,100 /ACRE	(\$8,167)	-1.09%
\$1,300 /ACRE	(\$8,567)	-1.00%
\$1,500 /ACRE	(\$8,967)	-0.92%
\$1,700 /ACRE	(\$9,367)	-0.86%
\$1,900 /ACRE	(\$9,767)	-0.80%
\$2,100 /ACRE	(\$10,167)	-0.75%

* 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)