

TABLE 1. Basic cost information for Tularosa Basin, Otero County, 2002.

Item		
Labor Wage Rate:		
Equipment operators	\$/hour	\$6.75
General & Irrigators	\$/hour	\$6.45
Purchased Inputs:		
Fertilizer:		
Nitrogen (N)	\$/pound	\$0.32
Seed:		
Alfalfa	\$/pound	\$2.90
Oats for Hay	\$/pound	\$0.23
Natural Gas (Gas NM) (service charge)		
	\$/month	\$10.00
Diesel fuel	\$/gallon	\$1.05
Gasoline	\$/gallon	\$1.00
Electricity (Otero Coop)	cents/KwHr	6.81
Employee Liability Insurance	\$/(\$1,000 wages)	\$12.00
Employee Benefits	percent/wages	12.00%
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%
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%

BUDGET AREA..... TULAROSA BASIN, OTERO COUNTY, 2002.
 FARM SIZE..... 50 ACRES
 IRRIGATION TYPE..... SPRINKLER
 NUMBER OF CROPS... 3

ACREAGE SUMMARY:	LAND USE (ACRES)	WATER USE	
		AC.IN. PER AC.	TOTAL AC.IN.
ALFALFA ESTABLISHMENT	4 *	8	32
ALFALFA HAY	40	45	1,800
OAT HAY	5	18	90
SORGHUM/SUDAN ROADS, DITCHES, HOMESTEAD	5 *	16	80
	5		
TOTAL	50		2,002
ACRE FEET PER ACRE OF WATER RIGHTS			3.34

* DOUBLE-CROPPED

TABLE 1a. Overhead cost information for Tularosa Basin, Otero County, 2002.

ITEM			
Electricity (Domestic & Shop)		\$65.00 per month	\$780
Telephone		\$70.00 per month	\$840
Accounting & Legal			\$160
Misc. Supplies & Hand Tools			\$535
Pickup and Auto			
miles	5,150	@ \$0.345 per mile	\$1,777
Insurance			
- general liability (non-employee)			\$250
- fire/theft			\$170
Property Taxes			
- non-planted land			\$180
- other than land & machinery			\$130
Building repairs and maintenance			\$250
Dues, fees, publications			\$140
Farmstead Equipment			\$170
		Total	\$5,381
		Total per planted acre	\$119.58

TABLE 2. Pumping costs and data for irrigation wells, Tularosa Basin, Otero County, 2002.

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.....	\$6.81	CENTS/KwHr	
NATURAL GAS.....	\$3.28	\$/MCF	
LP GAS.....	\$0.62	\$/GAL	
DIESEL.....	\$1.05	\$/GAL	

PUMPING COSTS

ELECTRICAL WELL:	
COST PER HOUR.....	\$3.65
COST PER ACRE INCH.....	\$5.50
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.....	\$2.19
COST PER ACRE INCH.....	\$3.30

TABLE 3. Equipment summary for a 50 acre part-time farm, Tularosa Basin, Otero County, 2002.

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	DEPRECIATION	TAXES	TOTAL PER HOUR
(DOLLARS)										
TRACTOR 50 HP	122	1	\$9,750	\$456.21	\$402.53	\$3.74	\$3.30	\$1,100	\$106	\$9.89
BALEWAGON, PTO	43	1	\$1,850		\$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	\$5,100	\$128.79	\$59.86	\$3.74	\$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
			\$57,750	\$4,453	\$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, 2002.
Planting dates: September 1 - November 1

ITEM	PRICE	QUANTITY	PURCHASED INPUTS				TOTAL	
<u>PURCHASED INPUTS</u>								
ALFALFA SEED	\$2.90	30 LBS	\$87.00				\$87.00	
PUMP WATER*		8 AC. IN.						
SUBTOTAL			<u>\$87.00</u>				<u>\$87.00</u>	
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL
DISC	50 HP	0.39 HR		\$2.63	\$1.46	\$1.31	\$3.95	\$9.35
PLOW	50 HP	1.05 HR		\$7.09	\$3.93	\$3.79	\$19.32	\$34.13
DISC (2X)	50 HP	0.78 HR		\$5.27	\$2.92	\$3.04	\$13.97	\$25.20
FLOAT (2X)	50 HP	0.64 HR		\$4.32	\$2.39	\$2.12	\$9.39	\$18.23
DRILL	50 HP	0.21 HR		\$1.42	\$0.79	\$0.91	\$35.02	\$38.14
IRRIGATE (4X)		2.00 HR		\$12.90	\$15.46	\$2.98	\$21.53	\$52.86
SUBTOTAL		5.07 HR		\$33.62	\$26.94	\$14.15	\$103.19	\$177.90
<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				\$14.13				\$14.13
SUBTOTAL		0.77 HR	\$0.40	\$23.35				\$23.75
TOTAL OPERATING EXPENSES		5.84 HR	\$87.40	\$56.97	\$26.94	\$14.15	\$103.19	\$288.65

TABLE 5. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, 2002.
Harvesting dates: May 10 - October 15

ITEM	PRICE	YIELD						TOTAL	
GROSS RETURNS									
ALFALFA HAY	\$120.00	6.00 TONS (STACKED)						\$720.00	
TOTAL								\$720.00	
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL	
FERT. (ALFALFA MIX)	\$0.16	250 LBS	\$40.00					\$40.00	
INSECTICIDE	\$23.41	1 ACRE	\$23.41					\$23.41	
WIRE	\$0.36	56 LBS	\$20.16					\$20.16	
ESTABLISHMENT: Principal		10 YEARS					\$28.87	\$28.87	
: Interest							\$9.09	\$9.09	
PUMP WATER*		45 AC. IN.							
SUBTOTAL			\$83.57				\$37.96	\$121.53	
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	\$3.00	\$1.39	\$36.98	\$46.77	
BALER, PTO (5X)	50 HP	1.05 HR		\$7.09	\$3.93	\$4.35	\$20.20	\$35.57	
BALEWAGON, PTO (5X)	50 HP	1.00 HR		\$6.75	\$3.74	\$6.18	\$30.29	\$46.96	
SUBTOTAL		2.85 HR		\$19.24	\$10.66	\$11.93	\$87.47	\$129.30	
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				\$35.73				\$35.73	
OTHER EXPENSES			\$119.58					\$119.58	
SUBTOTAL		0.71 HR		\$120.24	\$47.10			\$2.90	\$170.24
TOTAL OPERATING EXPENSES		9.06 HR		\$203.81	\$101.81	\$97.60	\$28.69	\$249.43	\$681.35
NET OPERATING PROFIT								\$38.65	
INTEREST ON OPERATING CAPITAL	(\$69.59	@	8.00%				\$5.57	
INTEREST ON EQUIPMENT INVESTMENT								\$96.18	
RETURN TO LAND AND RISK								(\$63.09)	

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

BUDGET SUMMARY

GROSS RETURN		\$720.00	
VARIABLE OPERATING EXPENSES	\$335.67		
RETURN OVER VARIABLE EXPENSES	\$384.33	(GROSS MARGINS)	
FIXED EXPENSES	\$249.43		
NET FARM INCOME	\$134.90	(RETURNS TO CAPITAL, LABOR, LAND & RISK)	
LABOR AND MANAGEMENT COST	\$101.81		
NET OPERATING PROFIT	\$33.08	(RETURNS TO CAPITAL, LAND & RISK)	
CAPITAL COSTS	\$96.18		
RETURN TO LAND AND RISK		(\$63.09)	

TABLE 6. Oats for hay, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, 2002.

Planting dates: September 1 - November 1

Harvesting dates: April 15 - May 15

ITEM	PRICE	YIELD						TOTAL	
GROSS RETURNS									
OATS FOR HAY	\$110.00	3.00	TONS (STACKED)					\$330.00	
TOTAL								\$330.00	
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS					FIXED COST	TOTAL
OAT SEED	\$0.23	100 LBS	\$23.00					\$23.00	
NITROGEN (N)	\$0.32	100 LBS	\$32.00					\$32.00	
PUMP WATER*		18 AC. IN.							
SUBTOTAL								\$55.00	
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	\$1.46	\$1.52	\$6.98	\$12.60	
PLOW	50 HP	1.05 HR		\$7.09	\$3.93	\$3.79	\$19.32	\$34.13	
DISC (2X)	50 HP	0.78 HR		\$5.27	\$2.92	\$3.04	\$13.97	\$25.20	
FLOAT (2X)	50 HP	0.64 HR		\$4.32	\$2.39	\$2.12	\$9.39	\$18.23	
DRILL	50 HP	0.21 HR		\$1.42	\$0.79	\$0.91	\$35.02	\$38.14	
IRRIGATE (4X)		2.00 HR		\$12.90	\$34.78	\$6.71	\$48.44	\$102.82	
SUBTOTAL								\$231.11	
HARVEST OPERATIONS									
SWATHER	14 FT	0.16 HR		\$1.08	\$0.60	\$0.28	\$7.40	\$9.35	
BALER, PTO	50 HP	0.21 HR		\$1.42	\$0.79	\$0.87	\$4.04	\$7.11	
BALE WAGON	50 HP	0.20 HR		\$1.35	\$0.75	\$1.24	\$6.06	\$9.39	
SUBTOTAL								\$25.86	
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				\$17.02				\$17.02	
OTHER EXPENSES			\$59.79					\$59.79	
SUBTOTAL								\$89.35	
TOTAL OPERATING EXPENSES								\$401.32	
NET OPERATING PROFIT								(\$71.32)	
INTEREST ON OPERATING CAPITAL	(\$43.97	@	8.00%)			\$3.52	
INTEREST ON EQUIPMENT INVESTMENT								\$67.39	
RETURN TO LAND AND RISK								(\$142.23)	

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

BUDGET SUMMARY

GROSS RETURN		\$330.00	
VARIABLE OPERATING EXPENSES	\$187.63		
RETURN OVER VARIABLE EXPENSES		\$142.37	(GROSS MARGINS)
FIXED EXPENSES	\$152.08		
NET FARM INCOME		(\$9.71)	(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$65.13		
NET OPERATING PROFIT		(\$74.84)	(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$67.39		
RETURN TO LAND AND RISK		(\$142.23)	

TABLE 7. Sorghum-sudan hay, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, 2002.
 Planting dates: May 1 - June 1
 Harvesting dates: June 1 - August 1

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
SORGHUM/SUDAN HAY	\$90.00	5.00	TONS (STACKED)					\$450.00
TOTAL								\$450.00
PURCHASED INPUTS								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
SEED	\$1.04	50 LBS	\$52.00					\$52.00
NITROGEN (N)	\$0.32	100 LBS	\$32.00					\$32.00
PUMP WATER*		16 AC. IN.						
SUBTOTAL								\$84.00
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	\$1.46	\$1.52	\$6.98	\$12.60
FLOAT (2X)	50 HP	0.64 HR		\$4.32	\$2.39	\$2.12	\$9.39	\$18.23
DRILL	50 HP	0.21 HR		\$1.42	\$0.79	\$0.91	\$35.02	\$38.14
IRRIGATE (4X)		2.00 HR		\$12.90	\$30.91	\$5.96	\$43.06	\$92.83
SUBTOTAL								\$161.80
HARVEST OPERATIONS								
SWATHER (2X)	14 FT	0.32 HR		\$2.16	\$1.20	\$0.56	\$14.79	\$18.71
BALER, PTO (2X)	50 HP	0.42 HR		\$2.84	\$1.57	\$1.74	\$8.08	\$14.23
BALE WAGON (2X)	50 HP	0.40 HR		\$2.70	\$1.50	\$2.47	\$12.12	\$18.78
SUBTOTAL								\$51.72
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				\$21.19				\$21.19
OTHER EXPENSES			\$59.79					\$59.79
SUBTOTAL								\$90.27
TOTAL OPERATING EXPENSES								\$387.79
NET OPERATING PROFIT								\$62.21
INTEREST ON OPERATING CAPITAL	(\$54.27	@	8.00%)			\$4.34
INTEREST ON EQUIPMENT INVESTMENT								\$62.01
RETURN TO LAND AND RISK								(\$4.14)

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

BUDGET SUMMARY

GROSS RETURN		\$450.00	
VARIABLE OPERATING EXPENSES	\$203.58		
RETURN OVER VARIABLE EXPENSES		\$246.42	(GROSS MARGINS)
FIXED EXPENSES	\$130.90		
NET FARM INCOME		\$115.52	(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$57.65		
NET OPERATING PROFIT		\$57.87	(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$62.01		
RETURN TO LAND AND RISK		(\$4.14)	

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

	ALFALFA ESTABLISHMENT	ALFALFA HAY -----FLOOD-----	OATS FOR HAY	SORGHUM SUDAN HAY
		TONS	TONS	TONS
PRIMARY YIELD		6.00	3.00	5.00
PRIMARY PRICE		120.00	110.00	90.00
GOVERNMENT PAYMENTS		0.00	0.00	0.00
SECOND INCOME		0.00	0.00	0.00
GROSS RETURN		\$720.00	\$330.00	\$450.00
CASH OPERATING EXPENSES				
SEED	\$87.00		\$23.00	\$52.00
FERTILIZER		\$40.00	\$32.00	\$32.00
CHEMICALS		\$23.41		
CROP INSURANCE				
OTHER PURCHASED INPUTS		\$20.16		
CANAL WATER				
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$11.48	\$10.66	\$13.61	\$8.90
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	\$120.24	\$60.24	\$60.14
TOTAL CASH EXPENSES	\$128.50	\$333.01	\$185.56	\$200.69
RETURN OVER CASH EXPENSES	(\$128.50)	\$386.99	\$144.44	\$249.31
FIXED EXPENSES	\$103.19	\$246.53	\$150.63	\$129.45
TOTAL EXPENSES	\$231.68	\$579.54	\$336.19	\$330.14
NET FARM INCOME	(\$231.68)	\$140.46	(\$6.19)	\$119.86
LABOR AND MANAGEMENT COSTS	\$56.97	\$101.81	\$65.13	\$57.65
NET OPERATING PROFIT	(\$288.65)	\$38.65	(\$71.32)	\$62.21
CAPITAL COSTS				
INTEREST ON OPERATING CAPITAL		\$5.57	\$3.52	\$4.34
INTEREST ON EQUIPMENT INVESTMENT		\$96.18	\$67.39	\$62.01
TOTAL CAPITAL COSTS	\$0.00	\$101.75	\$70.91	\$66.36
RETURN TO LAND AND RISK	(\$288.65)	(\$63.09)	(\$142.23)	(\$4.14)

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

GROSS RETURNS		
ALFALFA HAY CROP	40 ACRES	\$28,800
OATS FOR HAY CROP	5 ACRES	\$1,650
SORGHUM/SUDAN CROP	5 ACRES	\$2,250
GROSS RETURN		\$32,700
CASH OPERATING EXPENSES		
SEED		\$723
FERTILIZER		\$1,920
CHEMICALS		\$937
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$806
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$585
FUEL-IRRIGATION		\$3,868
REPAIRS		\$1,383
CUSTOM CHARGES		\$0
LAND TAXES		\$130
OTHER EXPENSES		\$5,413
TOTAL CASH EXPENSES		\$15,766
RETURN OVER CASH EXPENSES		\$16,934
FIXED EXPENSES		\$9,872
TOTAL EXPENSES		\$25,638
NET FARM INCOME		\$7,062
LABOR AND MANAGEMENT COSTS		\$4,914
NET OPERATING PROFIT		\$2,148
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$262
INTEREST ON EQUIPMENT INVESTMENT		\$4,494
TOTAL CAPITAL COSTS		\$4,756
RETURN TO LAND AND RISK		(\$2,608)

LAND VALUE	RETURNS TO RISK*	RETURN ON INVESTMENT**
\$700 /ACRE	(\$4,008)	2.32%
\$900 /ACRE	(\$4,408)	2.09%
\$1,100 /ACRE	(\$4,808)	1.90%
\$1,300 /ACRE	(\$5,208)	1.75%
\$1,500 /ACRE	(\$5,608)	1.62%
\$1,700 /ACRE	(\$6,008)	1.50%
\$1,900 /ACRE	(\$6,408)	1.41%
\$2,100 /ACRE	(\$6,808)	1.32%

* 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)