

TABLE 1. Acreage Summary, Otero County,  
Projected 2016

BUDGET AREA..... TULAROSA BASIN, OTERO COUNTY		WATER USE	
FARM SIZE.....	# ACRES	AC.IN. PER AC.	TOTAL AC.IN.
IRRIGATION TYPE.....	SPRINKLER		
NUMBER OF CROPS...	3		
ALFALFA ESTABLISHMENT	4.00 *	8	32
ALFALFA HAY	40.00	45	1,800
OAT HAY	5.00	18	90
SORGHUM/SUDAN ROADS, DITCHES, HOMESTEAD	5.00 *	16	80
	5.00		
TOTAL	50.00		2,002
ACRE FEET PER ACRE OF WATER RIGHTS			3.34

\* DOUBLE-CROPPED

TABLE 2. Basic cost information for Tularosa Basin, Otero County,  
Projected 2016

Item		
Labor Wage Rate:		
Equipment operators	\$/hour	\$8.00
General & Irrigators	\$/hour	\$7.50
Purchased Inputs:		
Fertilizer:		
Nitrogen (N)	\$/pound	\$0.48
Seed:		
Alfalfa	\$/pound	\$6.00
Oats for Hay	\$/pound	\$0.40
Natural Gas (Gas NM)		
(service charge)	\$/MCF	\$3.01
Diesel fuel	\$/month	\$10.00
Gasoline	\$/gallon	\$2.55
Electricity (Otero Coop)	\$/gallon	\$2.40
	cents/KwHr	7.34
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	5.50%
Land Interest Rate	percent	5.00%
Equipment Interest Rate	percent	5.50%
Expected Inflation Rate	percent	3.00%
Land Taxes	\$300.00 /acre (full value)	\$2.66
Personal Property Tax Rate	- NR \$/ \$1,000 (Assessed Value)	\$26.58
	- R	\$20.68
Supervision Factors		
Field Crop-Irrigation	\$/acre	\$1.00
Field Crop-Equipment & General	\$/acre	\$0.50
Management Rate	percent	4.00%

TABLE 3. Overhead cost information for Tularosa Basin, Otero County,  
Projected 2016

Item		
Electricity (Domestic & Shop)	\$81.25 per month	\$975
Telephone	\$87.50 per month	\$1,050
Accounting & Legal		\$188
Misc. Supplies & Hand Tools		\$650
Pickup and Auto		
miles	6,438 @ \$0.500 per mile	\$3,219
Insurance		
- general liability (non-employee)		\$300
- fire/theft		\$200
Property Taxes		
- non-planted land		\$0
- other than land & machinery		\$6,010
Building repairs and maintenance		\$300
Dues, fees, publications		\$163
Farmstead Equipment		\$200
	Total	\$13,254
Total per planted acre		\$294.53

TABLE 6. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County,  
 Projected 2016  
 Planting dates: September 1 - November 1

ITEM	PRICE	QUANTITY	PURCHASED INPUTS					TOTAL
<u>PURCHASED INPUTS</u>								
ALFALFA SEED	\$6.00	30 LBS	\$180.00					\$180.00
PUMP WATER*		8 AC. IN.						
SUBTOTAL			<u>\$180.00</u>					<u>\$180.00</u>
<u>PREHARVEST OPERATIONS</u>								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC	50 HP	0.39 HR		\$3.12	\$3.50	\$0.42	\$3.17	\$10.22
PLOW	50 HP	1.05 HR		\$8.40	\$9.42	\$1.46	\$17.31	\$36.59
DISC (2X)	50 HP	0.78 HR		\$6.24	\$7.00	\$1.52	\$12.48	\$27.24
FLOAT (2X)	50 HP	0.64 HR		\$5.12	\$5.74	\$0.70	\$8.18	\$19.74
DRILL	50 HP	0.21 HR		\$1.68	\$1.88	\$0.45	\$34.51	\$38.52
IRRIGATE (4X)		2.00 HR		\$15.00	\$14.21	\$0.00	\$6.52	\$35.74
SUBTOTAL		5.07 HR		\$39.56	\$41.77	\$4.54	\$82.17	\$168.04
<u>OVERHEAD EXPENSES</u>								
DOWNTIME		0.77 HR		\$6.14				\$6.14
EMPLOYEE BENEFITS				\$4.75				\$4.75
FARM INSURANCE			\$0.47					\$0.47
SUPERVISION AND MANAGEMENT				\$17.46				\$17.46
SUBTOTAL		0.77 HR	\$0.47	\$28.34				\$28.82
<u>TOTAL OPERATING EXPENSES</u>		5.84 HR	\$180.47	\$67.90	\$41.77	\$4.54	\$82.17	\$376.86

TABLE 7. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, Projected 2016  
Harvesting dates: May 10 - October 15

ITEM	PRICE	YIELD	TOTAL
GROSS RETURNS			
ALFALFA HAY	\$195.00	6.00 TONS (STACKED)	\$1,170.00
TOTAL			\$1,170.00

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		\$37.69	\$37.69
: Interest				\$9.63	\$9.63
PUMP WATER*		45 AC. IN.			
SUBTOTAL			\$84.13	\$47.31	\$131.45

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
IRRIGATE (11X)		5.50 HR		\$41.25	\$79.95	\$0.00	\$36.70	\$157.90
SUBTOTAL		5.50 HR		\$41.25	\$79.95	\$0.00	\$36.70	\$157.90

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SWATHER (5X)	14 FT	0.80 HR		\$6.40	\$0.00	\$0.22	\$17.72	\$24.35
BALER, PTO (5X)	50 HP	1.05 HR		\$8.40	\$9.42	\$1.29	\$18.17	\$37.29
BALEWAGON, PTO (5X)	50 HP	1.00 HR		\$8.00	\$8.98	\$2.36	\$28.27	\$47.61
SUBTOTAL		2.85 HR		\$22.80	\$18.40	\$3.88	\$64.16	\$109.24

OVERHEAD EXPENSES	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DOWNTIME	0.71 HR		\$5.70				\$5.70
EMPLOYEE BENEFITS			\$7.69				\$7.69
FARM INSURANCE		\$0.77					\$0.77
LAND TAXES						\$2.66	\$2.66
SUPERVISION AND MANAGEMENT			\$53.73				\$53.73
OTHER EXPENSES		\$294.53					\$294.53
SUBTOTAL	0.71 HR	\$295.30	\$67.11			\$2.66	\$365.07

TOTAL OPERATING EXPENSES	9.06 HR	\$379.43	\$131.16	\$98.35	\$3.88	\$150.84	\$763.65
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NET OPERATING PROFIT							\$406.35
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INTEREST ON OPERATING CAPITAL	( \$63.91 @ 5.50% )						\$3.52
INTEREST ON EQUIPMENT INVESTMENT							\$51.61

RETURN TO LAND AND RISK							\$351.22
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\* Pump water costs are shown under irrigation in the preharvest operations section.  
BUDGET SUMMARY

GROSS RETURN		\$1,170.00	
VARIABLE OPERATING EXPENSES	\$485.17		
RETURN OVER VARIABLE EXPENSES		\$684.83	(GROSS MARGINS)
FIXED EXPENSES	\$150.84		
NET FARM INCOME		\$533.99	(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$131.16		
NET OPERATING PROFIT		\$402.83	(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$51.61		
RETURN TO LAND AND RISK		\$351.22	

TABLE 8. Oats for hay, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, Projected 2016  
 Planting dates: September 1 - November 1  
 Harvesting dates: April 15 - May 15

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
OATS FOR HAY	\$155.00	3.00 TONS (STACKED)						\$465.00
TOTAL								\$465.00

  

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
OAT SEED	\$0.40	100 LBS	\$40.00		\$40.00
NITROGEN (N)	\$0.48	100 LBS	\$48.00		\$48.00
PUMP WATER*		18 AC. IN.			
SUBTOTAL			\$88.00		\$88.00

  

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC	50 HP	0.39 HR		\$3.12	\$3.50	\$0.76	\$6.24	\$13.62
PLOW	50 HP	1.05 HR		\$8.40	\$9.42	\$1.46	\$17.31	\$36.59
DISC (2X)	50 HP	0.78 HR		\$6.24	\$7.00	\$1.52	\$12.48	\$27.24
FLOAT (2X)	50 HP	0.64 HR		\$5.12	\$5.74	\$0.70	\$8.18	\$19.74
DRILL	50 HP	0.21 HR		\$1.68	\$1.88	\$0.45	\$34.51	\$38.52
IRRIGATE (4X)		2.00 HR		\$15.00	\$31.98	\$0.00	\$14.68	\$61.66
SUBTOTAL		5.07 HR		\$39.56	\$59.54	\$4.88	\$93.39	\$197.37

  

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SWATHER	14 FT	0.16 HR		\$1.28	\$0.00	\$0.04	\$3.54	\$4.87
BALER, PTO	50 HP	0.21 HR		\$1.68	\$1.88	\$0.26	\$3.63	\$7.46
BALE WAGON	50 HP	0.20 HR		\$1.60	\$1.80	\$0.47	\$5.65	\$9.52
SUBTOTAL		0.57 HR		\$4.56	\$3.68	\$0.78	\$12.83	\$21.85

  

OVERHEAD EXPENSES	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DOWNTIME	0.91 HR		\$7.28				\$7.28
EMPLOYEE BENEFITS			\$5.29				\$5.29
FARM INSURANCE		\$0.53					\$0.53
LAND TAXES						\$1.33	\$1.33
SUPERVISION AND MANAGEMENT			\$22.42				\$22.42
OTHER EXPENSES		\$147.26					\$147.26
SUBTOTAL	0.91 HR	\$147.79	\$34.99			\$1.33	\$184.12

  

TOTAL OPERATING EXPENSES	6.55 HR	\$235.79	\$79.11	\$63.22	\$5.66	\$107.55	\$491.33
NET OPERATING PROFIT							(\$26.33)
INTEREST ON OPERATING CAPITAL	( \$60.48 @ 5.50% )						\$3.33
INTEREST ON EQUIPMENT INVESTMENT							\$40.03
RETURN TO LAND AND RISK							(\$69.69)

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

BUDGET SUMMARY

GROSS RETURN	\$465.00	
VARIABLE OPERATING EXPENSES	\$307.99	
RETURN OVER VARIABLE EXPENSES	\$157.01	(GROSS MARGINS)
FIXED EXPENSES	\$107.55	
NET FARM INCOME	\$49.46	(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$79.11	
NET OPERATING PROFIT	(\$29.66)	(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$40.03	
RETURN TO LAND AND RISK	(\$69.69)	

TABLE 9. Sorghum-sudan hay, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, Projected 2016  
 Planting dates: May 1 - June 1  
 Harvesting dates: June 1 - August 1

ITEM	PRICE	YIELD						TOTAL
<b>GROSS RETURNS</b>								
SORGHUM/SUDAN HAY	\$165.00	5.00 TONS (STACKED)						\$825.00
<b>TOTAL</b>							\$825.00	
<b>PURCHASED INPUTS</b>								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
SEED	\$1.04	50 LBS	\$52.00					\$52.00
NITROGEN (N)	\$0.48	100 LBS	\$48.00					\$48.00
PUMP WATER*		16 AC. IN.						
<b>SUBTOTAL</b>			\$100.00					\$100.00
<b>PREHARVEST OPERATIONS</b>								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC	50 HP	0.39 HR		\$3.12	\$3.50	\$0.76	\$6.24	\$13.62
FLOAT (2X)	50 HP	0.64 HR		\$5.12	\$5.74	\$0.70	\$8.18	\$19.74
DRILL	50 HP	0.21 HR		\$1.68	\$1.88	\$0.45	\$34.51	\$38.52
IRRIGATE (4X)		2.00 HR		\$15.00	\$28.43	\$0.00	\$13.05	\$56.48
<b>SUBTOTAL</b>		3.24 HR		\$24.92	\$39.56	\$1.91	\$61.97	\$128.36
<b>HARVEST OPERATIONS</b>								
SWATHER (2X)	14 FT	0.32 HR		\$2.56	\$0.00	\$0.09	\$7.09	\$9.74
BALER, PTO (2X)	50 HP	0.42 HR		\$3.36	\$3.77	\$0.52	\$7.27	\$14.92
BALE WAGON (2X)	50 HP	0.40 HR		\$3.20	\$3.59	\$0.94	\$11.31	\$19.04
<b>SUBTOTAL</b>		1.14 HR		\$9.12	\$7.36	\$1.55	\$25.67	\$43.70
<b>OVERHEAD EXPENSES</b>								
DOWNTIME		0.60 HR		\$4.76				\$4.76
EMPLOYEE BENEFITS				\$4.08				\$4.08
FARM INSURANCE			\$0.41					\$0.41
LAND TAXES							\$1.33	\$1.33
SUPERVISION AND MANAGEMENT				\$36.19				\$36.19
OTHER EXPENSES			\$147.26					\$147.26
<b>SUBTOTAL</b>		0.60 HR	\$147.67	\$45.03			\$1.33	\$194.04
<b>TOTAL OPERATING EXPENSES</b>		4.98 HR	\$247.67	\$79.07	\$46.92	\$3.46	\$88.97	\$466.09
<b>NET OPERATING PROFIT</b>							\$358.91	
INTEREST ON OPERATING CAPITAL		(	\$61.11	@	5.50%	)	\$3.36	
INTEREST ON EQUIPMENT INVESTMENT							\$35.84	
<b>RETURN TO LAND AND RISK</b>							\$319.71	

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

**BUDGET SUMMARY**

GROSS RETURN		\$825.00	
VARIABLE OPERATING EXPENSES	\$301.41		
RETURN OVER VARIABLE EXPENSES		\$523.59	(GROSS MARGINS)
FIXED EXPENSES	\$88.97		
NET FARM INCOME		\$434.63	(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$79.07		
NET OPERATING PROFIT		\$355.55	(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$35.84		
RETURN TO LAND AND RISK		\$319.71	

TABLE 10. Summary of per acre costs and returns, 50-acre part-time farm, Tularosa Basin, Otero County,  
Projected 2016

	ALFALFA ESTABLISHMENT	ALFALFA HAY	OATS FOR HAY	SORGHUM SUDAY HAY
		TONS	TONS	TONS
PRIMARY YIELD		6.00	3.00	5.00
PRIMARY PRICE		\$195.00	\$155.00	\$165.00
GOVERNMENT PAYMENTS		\$0.00	\$0.00	\$0.00
SECOND INCOME		\$0.00	\$0.00	\$0.00
GROSS RETURN		\$1,170.00	\$465.00	\$825.00
CASH OPERATING EXPENSES				
SEED	\$180.00		\$40.00	\$52.00
FERTILIZER		\$40.00	\$48.00	\$48.00
CHEMICALS		\$23.97		
CROP INSURANCE				
OTHER PURCHASED INPUTS		\$20.16		
CANAL WATER				
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$27.56	\$18.40	\$31.24	\$18.49
FUEL-IRRIGATION	\$14.21	\$79.95	\$31.98	\$28.43
REPAIRS	\$4.54	\$3.88	\$5.66	\$3.46
CUSTOM CHARGES				
LAND TAXES		\$2.66	\$1.33	\$1.33
OTHER EXPENSES	\$0.47	\$295.30	\$147.79	\$147.67
TOTAL CASH EXPENSES	\$226.79	\$484.32	\$306.00	\$299.37
RETURN OVER CASH EXPENSES	(\$226.79)	\$685.68	\$159.00	\$525.63
FIXED EXPENSES	\$82.17	\$148.18	\$106.22	\$87.64
TOTAL EXPENSES	\$308.96	\$632.49	\$412.22	\$387.01
NET FARM INCOME	(\$308.96)	\$537.51	\$52.78	\$437.99
LABOR AND MANAGEMENT COSTS	\$67.90	\$131.16	\$79.11	\$79.07
NET OPERATING PROFIT	(\$376.86)	\$406.35	(\$26.33)	\$358.91
CAPITAL COSTS				
INTEREST ON OPERATING CAPITAL		\$3.52	\$3.33	\$3.36
INTEREST ON EQUIPMENT INVESTMENT		\$51.61	\$40.03	\$35.84
TOTAL CAPITAL COSTS	\$0.00	\$55.12	\$43.36	\$39.20
RETURN TO LAND AND RISK	(\$376.86)	\$351.22	(\$69.69)	\$319.71

TABLE 11. Whole farm summary, Tularosa Basin, Otero County,  
Projected 2016

GROSS RETURNS		
ALFALFA HAY CROP	40.00 ACRES	\$46,800
OATS FOR HAY CROP	5.00 ACRES	\$2,325
SORGHUM/SUDAN CROP	5.00 ACRES	\$4,125
GROSS RETURN		<u>\$53,250</u>
CASH OPERATING EXPENSES		
SEED		\$1,180
FERTILIZER		\$2,080
CHEMICALS		\$959
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$806
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$1,095
FUEL-IRRIGATION		\$3,557
REPAIRS		\$219
CUSTOM CHARGES		\$0
LAND TAXES		\$120
OTHER EXPENSES		\$13,291
TOTAL CASH EXPENSES		<u>\$23,307</u>
RETURN OVER CASH EXPENSES		\$29,943
FIXED EXPENSES		\$5,279
TOTAL EXPENSES		\$28,586
NET FARM INCOME		\$24,664
LABOR AND MANAGEMENT COSTS		\$6,309
NET OPERATING PROFIT		\$18,355
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$174
INTEREST ON EQUIPMENT INVESTMENT		\$2,444
TOTAL CAPITAL COSTS		<u>\$2,618</u>
RETURN TO LAND AND RISK		<u>\$15,737</u>

LAND VALUE	RETURNS TO RISK*	RETURN ON INVESTMENT**
\$700 /ACRE	\$14,687	26.67%
\$900 /ACRE	\$14,387	23.28%
\$1,100 /ACRE	\$14,087	20.66%
\$1,300 /ACRE	\$13,787	18.57%
\$1,500 /ACRE	\$13,487	16.87%
\$1,700 /ACRE	\$13,187	15.45%
\$1,900 /ACRE	\$12,887	14.25%
\$2,100 /ACRE	\$12,587	13.22%

\* 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)