

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... OTERO COUNTY Projected 2018  
FARM SIZE..... 320.00 ACRES  
IRRIGATION TYPE..... SPRINKLER  
NUMBER OF CROPS..... 4

VERSION 1.0

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TABLE 1. Acreage Summary, Otero County,  
Projected 2018

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

ACREAGE SUMMARY:	WATER USE		
	LAND USE (ACRES)	AC.IN. PER AC.	TOTAL AC.IN.
ALFALFA ESTABLISHMENT	4.00 *	8	32
ALFALFA HAY	40.00	45	1,800
OAT HAY	5.00	18	90
SORGHUM/SUDAN	5.00 *	16	80
ROADS, DITCHES, HOMESTEAD	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 2018

Item		
Labor Wage Rate:		
Equipment operators	\$/hour	\$7.50
General & Irrigators	\$/hour	\$7.50
Purchased Inputs:		
Fertilizer:		
Nitrogen (N)	\$/pound	\$0.31
Seed:		
Alfalfa	\$/pound	\$4.00
Oats for Hay	\$/pound	\$0.44
Natural Gas (Gas NM)	\$/MCF	\$4.01
(service charge)	\$/month	\$10.00
Diesel fuel	\$/gallon	\$2.70
Gasoline	\$/gallon	\$2.40
Electricity (Otero Coop)	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)	\$3.20
Personal Property Tax Rate	- NR \$/ \$1,000 (Assessed Value)	\$31.99
	- R	\$24.12
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 2018

Item			
Electricity (Domestic & Shop)		\$82.55 per month	\$991
Telephone		\$88.90 per month	\$1,067
Accounting & Legal			\$191
Misc. Supplies & Hand Tools			\$660
Pickup and Auto			
miles	6,541 @	\$0.500 per mile	\$3,270
Insurance			
- general liability (non-employee)			\$305
- fire/theft			\$203
Property Taxes			
- non-planted land			\$0
- other than land & machinery			\$6,010
Building repairs and maintenance			\$305
Dues, fees, publications			\$165
Farmstead Equipment			\$203
Total			\$13,370
Total per planted acre			\$297.10

TABLE 4. Pumping costs and data for irrigation wells, Tularosa Basin, Ohio County, Pennsylvania.

ANNUAL DATA	
DELIVERY PSI	40
DEPTH CHARACTERISTICS	
SPRINKLER	145
STATIC	20
DRAW DOWN	180
TOTAL HEAD	270
CABLE	
GALLONS PER MINUTE (GPM)	300
WORK HORSEPOWER	21
EFFICIENCY FACTOR	
ELECTRICITY	0.038
NATURAL GAS	0.151
LP GAS	0.161
DIESEL	0.180
FUEL COST PER HOUR:	
ELECTRICITY	7.34 CENTS/KWH
NATURAL GAS	\$4.01 SMC/CF
LP GAS	\$0.62 S/GAL
DIESEL	\$2.70 S/GAL
PUMPING COSTS	
ELECTRICAL WELL:	
COST PER HOUR	\$3.93
COST PER ACRE INCH	\$3.93
NATURAL GAS WELL:	
COST PER HOUR	\$1.56
COST PER ACRE INCH	\$1.56
BUTANE WELL:	
COST PER HOUR	\$2.58
COST PER ACRE INCH	\$2.58
DIESEL WELL:	
COST PER HOUR	\$5.58
COST PER ACRE INCH	\$5.58

TABLE 5. Equipment summary for a 50 acre past-ure farm, Tularosa Basin, Ohio County, Pennsylvania.

EQUIPMENT	ANNUAL		VARIABLE COSTS				FIXED COSTS			
	ITEM & SIZE	MO. OF USE	TOTAL VALUE	FUEL, OIL, LUBRICANT	REPAIR	FUEL, OIL, PER HR	REPAIR PER HR	DEPRECIATION	TAXES	TOTAL PER HR
TRACTOR	50 HP	122	1 \$7,000	\$1,085	\$132	\$8.98	\$1.08	\$899	\$96	\$615
BALEWAGON PTO		43	1 \$1,500		\$55		\$1.28	\$800	\$85	\$2059
BALER PTD	2 WIRE	40	1 \$1,000		\$7		\$0.15	\$385	\$41	\$644
PLow	2 BTM	4	1 \$200		\$1		\$0.31	\$33	\$3	\$837
FLoAT	8 FT	9	1 \$400		\$40		\$0.21	\$45	\$3	\$482
DISC	8 FT	12	1 \$700		\$11		\$0.07	\$93	\$7	\$608
SPRINKLER		3,000	1 \$2,500		\$2		\$0.00	\$33	\$27	\$0.12
DRILL	12 FT	3	1 \$2,200		\$3		\$1.06	\$40	\$23	\$157.64
SWATHER	14 FT	24	1 \$2,100		\$10		\$0.28	\$70	\$75	\$22.52
NATURAL GAS WELL		3,000	1 \$13,025	\$4,709	\$0	\$1.56	\$0.00	\$1,042	\$159	\$0.43
				\$31,275	\$5,804	\$219		\$4,786	\$409	

EQUIPMENT LIST

ITEM	NEW VALUE	USED VALUE	YEARS LIFE	EQUP CODE	MAX HOURS	FUEL L/HR	LUBE COEF	ACCUH HOURS	AGE INTEREST EXPENSE	ALFALFA EST	ALFALFA INV	GATS FOR INV	SORGHAM FOR INV	BUDAN PER ACRE	TOTALS	
TRACTOR	50 HP	17975.00	7000.00	20.00	1.00	800.00	3.40	0.10	1829.70	15.00	494.31	3.07	2.05	3.48	2.08	10.86
BALEWAGON PTD		1500.00	1500.00	20.00	3.00	800.00			258.00	6.00	440.00	0.00	1.50	0.20	0.4	1.80
BALER PTD	2 WIRE	7700.00	1600.00	20.00	2.00	300.00			812.70	18.00	211.75	0.00	1.05	0.21	0.42	1.68
PLow	2 BTM	200.00	150.00	15.00	3.00	200.00			57.20	16.00	13.75	1.05	0.00	0.00	1.05	
FLoAT	8 FT	800.00	400.00	15.00	4.00	300.00			134.40	18.00	16.50	0.54	0.00	0.54	0.54	1.92
DISC	8 FT	800.00	400.00	15.00	4.00	300.00			159.60	16.00	38.50	1.17	0.00	1.17	0.38	2.73
SPRINKLER		2500.00	2500.00	15.00	0.00	8742.00			4535.28	15.00	137.50	12.07	67.89	27.15	24.136889	131.24
DRILL	12 FT	4000.00	2200.00	10.00	8.00	700.00			38.22	13.00	137.00	0.21	0.00	0.21	0.21	0.63
SWATHER	14 FT	14000.00	2100.00	20.00	2.00	800.00			447.20	13.00	385.00	0.00	0.00	0.16	0.32	1.28
NATURAL GAS WELL		20000.00	13025.00	20.00	0.00	8742.00			4535.28	15.00	716.38	12.07	67.89	27.15	24.136889	131.24

INTEREST PROGRATION

ALFALFA EST.	GATS FOR	SORGHAM FOR	BUDAN	TOTAL
13.31	14.10	8.35		35.84
19.23	2.00	4.09		25.32
4.92	0.88	1.97		7.77
0.00	0.00	0.00		0.00
0.00	1.18	1.18		2.36
0.00	2.81	1.20		4.01
3.09	1.24	1.10		5.43
1.90	1.54	3.64		7.08
1.79				1.79
16.10	6.44	5.72		28.26
51.61	40.03	35.84		127.48

ALFALFA ESTABLISHMENT ACRES 4 PUMP WATER 8.00

MACHINE	POWER UNIT	ACCOMPLISHMENT			
		TIMES OVER	RATE	TOTAL	CUSTOM
DISC	50 HP	1.00	0.39	0.39	
PLow	50 HP	1.00	0.25	0.25	
DISC (2X)	50 HP	2.00	0.39	0.78	
FLoAT (4X)	50 HP	2.00	0.32	0.64	
DRILL	50 HP	1.00	0.21	0.21	
IRRIGATE (4X)	4.00	1.51	12.07		

ALFALFA INV ACRES 40 PUMP WATER 45.00

MACHINE	POWER UNIT	ACCOMPLISHMENT			
		TIMES OVER	RATE	TOTAL	CUSTOM
IRRIGATE (11X)		11.00	1.51	67.89	
SWATHER (5X)	14 FT	5.00	0.16	0.80	
BALER PTD (5X)	50 HP	5.00	0.21	1.05	
BALEWAGON PTD (5X)	50 HP	5.00	0.20	1.00	

GATS FOR INV ACRES 5 PUMP WATER 16.00

MACHINE	POWER UNIT	ACCOMPLISHMENT			
		TIMES OVER	RATE	TOTAL	CUSTOM
DISC	50 HP	1.00	0.39	0.39	
PLow	50 HP	1.00	0.25	0.25	
DISC (2X)	50 HP	2.00	0.32	0.64	
FLoAT (2X)	50 HP	2.00	0.32	0.64	
DRILL	50 HP	1.00	0.21	0.21	
IRRIGATE (4X)	4.00	1.51	27.15		

SWATHER ACRES 14 FT 2.00 0.16 0.32

BALER PTD	50 HP	2.00	0.21	0.42
BAL WAGON	50 HP	2.00	0.20	0.40

ANNUAL REPAIR COSTS AS A PERCENT OF NEW VALUE

Hours of Use	1	2	3	4	5	6	7	8	9
0	0.000000	0.000020	0.000620	0.002020	0.005080	0.009140	0.000040	0.002040	0.002020
50	0.000080	0.000020	0.000620	0.002020	0.005080	0.009140	0.000040	0.002040	0.002020
100	0.000080	0.000020	0.000620	0.002020	0.005080	0.009140	0.000040	0.002040	0.002020
200	0.000080	0.000020	0.000620	0.002020	0.005080	0.009140	0.000040	0.002040	0.002020
300	0.000030	0.000050	0.001390	0.000890	0.000230	0.000110	0.000140	0.000930	0.000400
400	0.000030	0.000050	0.001390	0.000890	0.000230	0.000110	0.000140	0.000930	0.000400
500	0.000030	0.000070	0.001390	0.001100	0.000280	0.000170	0.000170	0.000900	0.000360
600	0.000030	0.000090	0.001390	0.001310	0.000330	0.000220	0.000220	0.000870	0.000330
700	0.000030	0.000110	0.001390	0.001520	0.000380	0.000270	0.000270	0.000840	0.000300
800	0.000030	0.000130	0.001390	0.001730	0.000430	0.000320	0.000320	0.000810	0.000270
900	0.000030	0.000150	0.001390	0.001940	0.000480	0.000370	0.000370	0.000780	0.000240
1000	0.000030	0.000170	0.001390	0.002150	0.000530	0.000420	0.000420	0.000750	0.000210
1200	0.000045	0.000145	0.001390	0.002025	0.000435	0.000345	0.000345	0.000745	0.000210
1400	0.000045	0.000170	0.001390	0.002025	0.000435	0.000345	0.000345	0.000745	0.000210
1500	0.000150	0.000170	0.001390	0.002025	0.000435	0.000345	0.000345	0.000745	0.000210
1600	0.000150	0.000190	0.001390	0.002025	0.000435	0.000345	0.000345	0.000745	0.000210
1800	0.000075	0.000170	0.001390	0.002025	0.000435	0.000345	0.000345	0.000745	0.000210
2000	0.000110	0.000095	0.000785	0.000785	0.000550	0.000550	0.000290	0.000290	0.000110
2500	0.000070								
3000	0.000050								
4000	0.000030								
4500	0.000108								
5000	0.000122								
5500	0.000136								
6000	0.000148								
6500	0.000162								
7000	0.000176								
7500	0.000188								
8000	0.000204								

Based on unpublished data of D. R. Horn, Department of Agricultural Engineering, University of Illinois.  
 Based on "Agricultural Machinery Data" in Agricultural Engineers Yearbook, 1963.

- Codes
- 1 tractor
  - 2 baler, combine, forage harrow, windrower, picker
  - 3 rotary law, disk, moldboard plow, chisel, field cultivator, row cultivator, laser plow
  - 4 harrow, reg. harrow, disk, sub (3x), roller, water furrow, bed shaper
  - 5 baler/wagon, cotton picker, cotton stripper, com picker
  - 6 roller, brush, ridge equipment, rotary mower, disk choppers
  - 7 disk, chisel, row
  - 8 disk, chisel, row
  - 9 baler or engine, manure spreader
  - 0 balers, disk, seeding equipment, mounted sprayer
  - 9 fertilizer distributing equipment

TABLE 6. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County,  
 Projected 2018  
 Planting dates: September 1 - November 1

ITEM	PRICE	QUANTITY	PURCHASED INPUTS					TOTAL
<b>PURCHASED INPUTS</b>								
ALFALFA SEED	\$4.00	30 LBS	\$120.00					\$120.00
PUMP WATER*		8 AC. IN.						
SUBTOTAL			\$120.00					\$120.00
<b>PREHARVEST OPERATIONS</b>								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC	50 HP	0.39 HR		\$2.93	\$3.50	\$0.42	\$3.23	\$10.07
PLOW	50 HP	1.05 HR		\$7.88	\$9.42	\$1.46	\$17.56	\$36.32
DISC (2X)	50 HP	0.78 HR		\$5.85	\$7.00	\$1.52	\$12.66	\$27.03
FLOAT (2X)	50 HP	0.64 HR		\$4.80	\$5.74	\$0.70	\$8.30	\$19.55
DRILL	50 HP	0.21 HR		\$1.58	\$1.88	\$0.45	\$34.82	\$38.72
IRRIGATE (4X)		2.00 HR		\$15.00	\$18.81	\$0.00	\$6.64	\$40.45
SUBTOTAL		5.07 HR		\$38.03	\$46.37	\$4.54	\$83.20	\$172.14
<b>OVERHEAD EXPENSES</b>								
DOWNTIME		0.77 HR		\$5.76				\$5.76
EMPLOYEE BENEFITS				\$4.56				\$4.56
FARM INSURANCE			\$0.46					\$0.46
SUPERVISION AND MANAGEMENT				\$15.22				\$15.22
SUBTOTAL		0.77 HR	\$0.46	\$25.54				\$26.00
<b>TOTAL OPERATING EXPENSES</b>		5.84 HR	\$120.46	\$63.56	\$46.37	\$4.54	\$83.20	\$318.14

TABLE 7. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, Projected 2018  
Harvesting dates: May 10 - October 15

ITEM	PRICE	YIELD						TOTAL	
<b>GROSS RETURNS</b>									
ALFALFA HAY	\$185.00	6.00 TONS (STACKED)						\$1,110.00	
<b>TOTAL</b>								\$1,110.00	
<b>PURCHASED INPUTS</b>									
	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						\$31.81	\$31.81
: Interest								\$7.67	\$7.67
PUMP WATER*		45 AC. IN.							
<b>SUBTOTAL</b>			<b>\$84.13</b>					<b>\$39.49</b>	<b>\$123.62</b>
<b>PREHARVEST OPERATIONS</b>									
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
IRRIGATE (11X)		5.50 HR		\$41.25	\$105.83	\$0.00	\$37.33	\$184.41	
<b>SUBTOTAL</b>		<b>5.50 HR</b>		<b>\$41.25</b>	<b>\$105.83</b>	<b>\$0.00</b>	<b>\$37.33</b>	<b>\$184.41</b>	
<b>HARVEST OPERATIONS</b>									
SWATHER (5X)	14 FT	0.80 HR		\$6.00	\$0.00	\$0.22	\$18.01	\$24.24	
BALER, PTO (5X)	50 HP	1.05 HR		\$7.88	\$9.42	\$1.29	\$18.47	\$37.06	
BALEWAGON, PTO (5X)	50 HP	1.00 HR		\$7.50	\$8.98	\$2.36	\$28.74	\$47.58	
<b>SUBTOTAL</b>		<b>2.85 HR</b>		<b>\$21.38</b>	<b>\$18.40</b>	<b>\$3.88</b>	<b>\$65.23</b>	<b>\$108.88</b>	
<b>OVERHEAD EXPENSES</b>									
DOWNTIME		0.71 HR		\$5.34				\$5.34	
EMPLOYEE BENEFITS				\$7.52				\$7.52	
FARM INSURANCE			\$0.75					\$0.75	
LAND TAXES							\$3.20	\$3.20	
SUPERVISION AND MANAGEMENT				\$51.33				\$51.33	
OTHER EXPENSES			\$297.10					\$297.10	
<b>SUBTOTAL</b>		<b>0.71 HR</b>		<b>\$297.85</b>	<b>\$64.18</b>		<b>\$3.20</b>	<b>\$365.24</b>	
<b>TOTAL OPERATING EXPENSES</b>		<b>9.06 HR</b>		<b>\$381.99</b>	<b>\$126.81</b>	<b>\$124.23</b>	<b>\$3.88</b>	<b>\$782.15</b>	
<b>NET OPERATING PROFIT</b>								<b>\$327.85</b>	
INTEREST ON OPERATING CAPITAL		( \$70.38 @	5.50%	)				\$3.87	
INTEREST ON EQUIPMENT INVESTMENT								\$51.61	
<b>RETURN TO LAND AND RISK</b>								<b>\$272.37</b>	

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

**BUDGET SUMMARY**

GROSS RETURN		\$1,110.00	
VARIABLE OPERATING EXPENSES	\$513.97		
RETURN OVER VARIABLE EXPENSES	\$596.03		(GROSS MARGINS)
FIXED EXPENSES	\$145.24		
NET FARM INCOME	\$450.79		(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$126.81		
NET OPERATING PROFIT	\$323.98		(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$51.61		
RETURN TO LAND AND RISK		\$272.37	

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 2018  
 Planting dates: September 1 - November 1  
 Harvesting dates: April 15 - May 15

ITEM	PRICE	YIELD							TOTAL
<b>GROSS RETURNS</b>									
OATS FOR HAY	\$150.00	3.00 TONS (STACKED)							\$450.00
<b>TOTAL</b>									<b>\$450.00</b>
<hr/>									
PURCHASED INPUTS		PRICE	QUANTITY	PURCHASED INPUTS		FIXED COST		TOTAL	
OAT SEED	\$0.44	100 LBS	\$44.00					\$44.00	
NITROGEN (N)	\$0.31	100 LBS	\$31.00					\$31.00	
PUMP WATER*		18 AC. IN.							
<b>SUBTOTAL</b>			<b>\$75.00</b>					<b>\$75.00</b>	
<hr/>									
PREHARVEST OPERATIONS		POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC	50 HP	0.39 HR			\$2.93	\$3.50	\$0.76	\$6.33	\$13.51
PLOW	50 HP	1.05 HR			\$7.88	\$9.42	\$1.46	\$17.56	\$36.32
DISC (2X)	50 HP	0.78 HR			\$5.85	\$7.00	\$1.52	\$12.66	\$27.03
FLOAT (2X)	50 HP	0.64 HR			\$4.80	\$5.74	\$0.70	\$8.30	\$19.55
DRILL	50 HP	0.21 HR			\$1.58	\$1.88	\$0.45	\$34.82	\$38.72
IRRIGATE (4X)		2.00 HR			\$15.00	\$42.33	\$0.00	\$14.93	\$72.27
<b>SUBTOTAL</b>			<b>5.07 HR</b>		<b>\$38.03</b>	<b>\$69.89</b>	<b>\$4.88</b>	<b>\$94.60</b>	<b>\$207.40</b>
<hr/>									
HARVEST OPERATIONS									
SWATHER	14 FT	0.16 HR			\$1.20	\$0.00	\$0.04	\$3.60	\$4.85
BALER, PTO	50 HP	0.21 HR			\$1.58	\$1.88	\$0.26	\$3.69	\$7.41
BALE WAGON	50 HP	0.20 HR			\$1.50	\$1.80	\$0.47	\$5.75	\$9.52
<b>SUBTOTAL</b>			<b>0.57 HR</b>		<b>\$4.28</b>	<b>\$3.68</b>	<b>\$0.78</b>	<b>\$13.05</b>	<b>\$21.78</b>
<hr/>									
OVERHEAD EXPENSES									
DOWNTIME		0.91 HR			\$6.83				\$6.83
EMPLOYEE BENEFITS					\$5.08				\$5.08
FARM INSURANCE				\$0.51					\$0.51
LAND TAXES							\$1.60		\$1.60
SUPERVISION AND MANAGEMENT					\$21.82				\$21.82
OTHER EXPENSES				\$148.55					\$148.55
<b>SUBTOTAL</b>			<b>0.91 HR</b>		<b>\$149.06</b>	<b>\$33.72</b>		<b>\$1.60</b>	<b>\$184.38</b>
<b>TOTAL OPERATING EXPENSES</b>			<b>6.55 HR</b>		<b>\$224.06</b>	<b>\$76.02</b>	<b>\$73.57</b>	<b>\$5.66</b>	<b>\$109.25</b>
<b>NET OPERATING PROFIT</b>									<b>(\$38.55)</b>
INTEREST ON OPERATING CAPITAL ( \$56.56 @ 5.50% )									\$3.11
INTEREST ON EQUIPMENT INVESTMENT									\$40.03
<b>RETURN TO LAND AND RISK</b>									<b>(\$81.70)</b>

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

GROSS RETURN		\$450.00	
VARIABLE OPERATING EXPENSES	\$306.40		
RETURN OVER VARIABLE EXPENSES		\$143.60	(GROSS MARGINS)
FIXED EXPENSES	\$109.25		
NET FARM INCOME		\$34.36	(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$76.02		
NET OPERATING PROFIT		(\$41.67)	(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$40.03		
RETURN TO LAND AND RISK		(\$81.70)	

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 2018  
 Planting dates: May 1 - June 1  
 Harvesting dates: June 1 - August 1

ITEM	PRICE	YIELD						TOTAL
<b>GROSS RETURNS</b>								
SORGHUM/SUDAN HAY	\$170.00	5.00 TONS (STACKED)						\$850.00
<b>TOTAL</b>							<b>\$850.00</b>	
<b>PURCHASED INPUTS</b>								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS			FIXED COST	TOTAL	
SEED	\$1.04	50 LBS	\$52.00				\$52.00	
NITROGEN (N)	\$0.31	100 LBS	\$31.00				\$31.00	
PUMP WATER*		16 AC. IN.						
<b>SUBTOTAL</b>			<b>\$83.00</b>				<b>\$83.00</b>	
<b>PREHARVEST OPERATIONS</b>								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC	50 HP	0.39 HR		\$2.93	\$3.50	\$0.76	\$6.33	\$13.51
FLOAT (2X)	50 HP	0.64 HR		\$4.80	\$5.74	\$0.70	\$8.30	\$19.55
DRILL	50 HP	0.21 HR		\$1.58	\$1.88	\$0.45	\$34.82	\$38.72
IRRIGATE (4X)		2.00 HR		\$15.00	\$37.63	\$0.00	\$13.27	\$65.90
<b>SUBTOTAL</b>		<b>3.24 HR</b>		<b>\$24.30</b>	<b>\$48.76</b>	<b>\$1.91</b>	<b>\$62.72</b>	<b>\$137.69</b>
<b>HARVEST OPERATIONS</b>								
SWATHER (2X)	14 FT	0.32 HR		\$2.40	\$0.00	\$0.09	\$7.21	\$9.70
BALER, PTO (2X)	50 HP	0.42 HR		\$3.15	\$3.77	\$0.52	\$7.39	\$14.83
BALE WAGON (2X)	50 HP	0.40 HR		\$3.00	\$3.59	\$0.94	\$11.50	\$19.03
<b>SUBTOTAL</b>		<b>1.14 HR</b>		<b>\$8.55</b>	<b>\$7.36</b>	<b>\$1.55</b>	<b>\$26.09</b>	<b>\$43.55</b>
<b>OVERHEAD EXPENSES</b>								
DOWNTIME		0.60 HR		\$4.46				\$4.46
EMPLOYEE BENEFITS				\$3.94				\$3.94
FARM INSURANCE			\$0.39					\$0.39
LAND TAXES						\$1.60		\$1.60
SUPERVISION AND MANAGEMENT				\$37.19				\$37.19
OTHER EXPENSES			\$148.55					\$148.55
<b>SUBTOTAL</b>		<b>0.60 HR</b>	<b>\$148.95</b>	<b>\$45.59</b>		<b>\$1.60</b>		<b>\$196.14</b>
<b>TOTAL OPERATING EXPENSES</b>		<b>4.98 HR</b>	<b>\$231.95</b>	<b>\$78.44</b>	<b>\$56.12</b>	<b>\$3.46</b>	<b>\$90.41</b>	<b>\$460.38</b>
<b>NET OPERATING PROFIT</b>							<b>\$389.62</b>	
INTEREST ON OPERATING CAPITAL		( \$54.91 @ 5.50% )						\$3.02
INTEREST ON EQUIPMENT INVESTMENT								\$35.84
<b>RETURN TO LAND AND RISK</b>							<b>\$350.76</b>	

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

**BUDGET SUMMARY**

GROSS RETURN		\$850.00	
VARIABLE OPERATING EXPENSES	\$294.54		
RETURN OVER VARIABLE EXPENSES	\$555.46		(GROSS MARGINS)
FIXED EXPENSES	\$90.41		
NET FARM INCOME	\$465.05		(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$78.44		
NET OPERATING PROFIT	\$386.60		(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$35.84		
RETURN TO LAND AND RISK	\$350.76		

TABLE 10. Summary of per acre costs and returns, 50-acre part-time farm, Tularosa Basin, Otero County,  
Projected 2018

	ALFALFA ESTABLISHMENT	ALFALFA HAY	OATS FOR HAY	SORGHUM SUDAY HAY
		TONS	TONS	TONS
PRIMARY YIELD		6.00	3.00	5.00
PRIMARY PRICE		\$185.00	\$150.00	\$170.00
GOVERNMENT PAYMENTS		\$0.00	\$0.00	\$0.00
SECOND INCOME		\$0.00	\$0.00	\$0.00
GROSS RETURN		\$1,110.00	\$450.00	\$850.00
CASH OPERATING EXPENSES				
SEED	\$120.00		\$44.00	\$52.00
FERTILIZER		\$40.00	\$31.00	\$31.00
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	\$18.81	\$105.83	\$42.33	\$37.63
REPAIRS	\$4.54	\$3.88	\$5.66	\$3.46
CUSTOM CHARGES				
LAND TAXES		\$3.20	\$1.60	\$1.60
OTHER EXPENSES	\$0.46	\$297.85	\$149.06	\$148.95
TOTAL CASH EXPENSES	\$171.37	\$513.30	\$304.89	\$293.12
RETURN OVER CASH EXPENSES	(\$171.37)	\$596.70	\$145.11	\$556.88
FIXED EXPENSES	\$83.20	\$142.04	\$107.65	\$88.81
TOTAL EXPENSES	\$254.57	\$655.34	\$412.53	\$381.93
NET FARM INCOME	(\$254.57)	\$454.66	\$37.47	\$468.07
LABOR AND MANAGEMENT COSTS	\$63.56	\$126.81	\$76.02	\$78.44
NET OPERATING PROFIT	(\$318.14)	\$327.85	(\$38.55)	\$389.62
CAPITAL COSTS				
INTEREST ON OPERATING CAPITAL		\$3.87	\$3.11	\$3.02
INTEREST ON EQUIPMENT INVESTMENT		\$51.61	\$40.03	\$35.84
TOTAL CAPITAL COSTS	\$0.00	\$55.48	\$43.14	\$38.86
RETURN TO LAND AND RISK	(\$318.14)	\$272.37	(\$81.70)	\$350.76

TABLE 11. Whole farm summary, Tularosa Basin, Otero County,  
Projected 2018

GROSS RETURNS		
ALFALFA HAY	40.00 ACRES	
CROP		\$44,400
OATS FOR HAY	5.00 ACRES	
CROP		\$2,250
SORGHUM/SUDAN	5.00 ACRES	
CROP		\$4,250
GROSS RETURN		<u>\$50,900</u>
CASH OPERATING EXPENSES		
SEED		\$960
FERTILIZER		\$1,910
CHEMICALS		\$959
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$806
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$1,095
FUEL-IRRIGATION		\$4,708
REPAIRS		\$219
CUSTOM CHARGES		\$0
LAND TAXES		\$144
OTHER EXPENSES		\$13,406
TOTAL CASH EXPENSES		<u>\$24,207</u>
RETURN OVER CASH EXPENSES		\$26,693
FIXED EXPENSES		\$5,280
TOTAL EXPENSES		\$29,488
NET FARM INCOME		\$21,412
LABOR AND MANAGEMENT COSTS		\$6,099
NET OPERATING PROFIT		\$15,313
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$185
INTEREST ON EQUIPMENT INVESTMENT		\$2,444
TOTAL CAPITAL COSTS		<u>\$2,629</u>
RETURN TO LAND AND RISK		<u>\$12,684</u>

LAND VALUE	RETURNS TO RISK*	RETURN ON INVESTMENT**
\$700 /ACRE	\$11,634	23.11%
\$900 /ACRE	\$11,334	20.08%
\$1,100 /ACRE	\$11,034	17.75%
\$1,300 /ACRE	\$10,734	15.91%
\$1,500 /ACRE	\$10,434	14.41%
\$1,700 /ACRE	\$10,134	13.17%
\$1,900 /ACRE	\$9,834	12.13%
\$2,100 /ACRE	\$9,534	11.24%

\* 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)