

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... OTERO COUNTY Projected 2010.  
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 2010.

BUDGET AREA.....	TULAROSA BASIN, OTERO COUNTY		
FARM SIZE.....	50 ACRES		
IRRIGATION TYPE.....	SPRINKLER		
NUMBER OF CROPS...	3		
	WATER USE		
ACREAGE SUMMARY:	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		2,002
	ACRE FEET PER ACRE OF WATER RIGHTS		3.34

\* DOUBLE-CROPPED

TABLE 2. Basic cost information for Tularosa Basin, Otero County, Projected 2010.

Item		
<b>Labor Wage Rate:</b>		
Equipment operators	\$/hour	\$7.25
General & Irrigators	\$/hour	\$7.25
<b>Purchased Inputs:</b>		
<b>Fertilizer:</b>		
Nitrogen (N)	\$/pound	\$0.58
<b>Seed:</b>		
Alfalfa	\$/pound	\$3.75
Oats for Hay	\$/pound	\$0.32
Natural Gas (Gas NM) (service charge)	\$/MCF \$/month	\$5.90 \$10.00
Diesel fuel	\$/gallon	\$2.80
Gasoline	\$/gallon	\$2.50
Electricity (Otero Coop)	cents/KwHr	6.25
Employee Liability Insurance	\$/ \$1,000 wages	\$12.00
Employee Benefits	percent/wages	12.00%
Labor Downtime	percent	25.00%
<b>Financial Rates:</b>		
Operating Capital Interest Rate	percent	7.50%
Land Interest Rate	percent	7.00%
Equipment Interest Rate	percent	7.50%
Expected Inflation Rate	percent	3.00%
Land Taxes	\$300.00 /acre (full value)	\$2.69
Personal Property Tax Rate	- NR - R	\$/ \$1,000 (Assessed Value) \$21.60
<b>Supervision Factors</b>		
Field Crop-Irrigation	\$/acre	\$1.00
Field Crop-Equipment & General	\$/acre	\$0.50
<b>Management Rate</b>	percent	4.00%

TABLE 3. Overhead cost information for Tularosa Basin, Otero County, Projected 2010.

Item		
Electricity (Domestic & Shop)		\$76.70 per month
Telephone		\$82.60 per month
Accounting & Legal		\$177
Misc. Supplies & Hand Tools		\$614
Pickup and Auto		
miles	6,077 @	\$0.415 per mile
Insurance		
- general liability (non-employee)		\$283
- fire/theft		\$189
Property Taxes		
- non-planted land		\$0
- other than land & machinery		\$6,010
Building repairs and maintenance		\$283
Dues, fees, publications		\$153
Farmstead Equipment		\$189
	Total	\$12,332
	Total per planted acre	\$274.03



TABLE 6. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, Projected 2010.

Planting dates: September 1 - November 1

ITEM	PRICE	QUANTITY	PURCHASED INPUTS						TOTAL
<u>PURCHASED INPUTS</u>									
ALFALFA SEED	\$3.75	30 LBS	\$112.50						\$112.50
PUMP WATER*		8 AC. IN.							
SUBTOTAL			\$112.50						\$112.50
<u>PREHARVEST OPERATIONS</u>									
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
DISC	50 HP	0.39 HR		\$2.83	\$3.65	\$0.42	\$3.18	\$10.07	
PLOW	50 HP	1.05 HR		\$7.61	\$9.82	\$1.46	\$17.32	\$36.21	
DISC (2X)	50 HP	0.78 HR		\$5.66	\$7.29	\$1.52	\$12.49	\$26.95	
FLOAT (2X)	50 HP	0.64 HR		\$4.64	\$5.98	\$0.70	\$8.19	\$19.51	
DRILL	50 HP	0.21 HR		\$1.52	\$1.96	\$0.45	\$34.52	\$38.46	
IRRIGATE (4X)		2.00 HR		\$14.50	\$27.51	\$0.00	\$6.53	\$48.54	
SUBTOTAL		5.07 HR		\$36.76	\$56.22	\$4.54	\$82.23	\$179.74	
<u>OVERHEAD EXPENSES</u>									
DOWNTIME		0.77 HR		\$5.56					\$5.56
EMPLOYEE BENEFITS				\$4.41					\$4.41
FARM INSURANCE			\$0.44					\$0.44	
SUPERVISION AND MANAGEMENT				\$15.22					\$15.22
SUBTOTAL		0.77 HR	\$0.44	\$25.20					\$25.64
<u>TOTAL OPERATING EXPENSES</u>									
		5.84 HR	\$112.94	\$61.96	\$56.22	\$4.54	\$82.23	\$317.88	

TABLE 7. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, Projected 2010.  
Harvesting dates: May 10 - October 15

ITEM	PRICE	YIELD	TOTAL
GROSS RETURNS			
ALFALFA HAY	\$140.00	6.00 TONS (STACKED)	\$840.00
TOTAL			\$840.00

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		\$31.79	\$31.79
: Interest				\$10.77	\$10.77
PUMP WATER*		45 AC. IN.			
SUBTOTAL			\$84.13	\$42.55	\$126.69

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
IRRIGATE (11X)		5.50 HR		\$39.88	\$154.76	\$0.00	\$36.73	\$231.36
SUBTOTAL		5.50 HR		\$39.88	\$154.76	\$0.00	\$36.73	\$231.36

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SWATHER (5X)	14 FT	0.80 HR		\$5.80	\$0.00	\$0.22	\$17.74	\$23.76
BALER, PTO (5X)	50 HP	1.05 HR		\$7.61	\$9.82	\$1.29	\$18.18	\$36.91
BALEWAGON, PTO (5X)	50 HP	1.00 HR		\$7.25	\$9.35	\$2.36	\$28.30	\$47.26
SUBTOTAL		2.85 HR		\$20.66	\$19.17	\$3.88	\$64.22	\$107.93

OVERHEAD EXPENSES	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DOWNTIME	0.71 HR		\$5.17				\$5.17
EMPLOYEE BENEFITS			\$7.26				\$7.26
FARM INSURANCE		\$0.73					\$0.73
LAND TAXES						\$2.69	\$2.69
SUPERVISION AND MANAGEMENT			\$40.53				\$40.53
OTHER EXPENSES		\$274.03					\$274.03
SUBTOTAL	0.71 HR	\$274.76	\$52.96			\$2.69	\$330.40

TOTAL OPERATING EXPENSES	9.06 HR	\$358.90	\$113.49	\$173.92	\$3.88	\$146.20	\$796.38
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NET OPERATING PROFIT							\$43.62
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INTEREST ON OPERATING CAPITAL	(	\$82.68	@	7.50%	)		\$6.20
INTEREST ON EQUIPMENT INVESTMENT							\$70.38

RETURN TO LAND AND RISK							(\$32.96)
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\* Pump water costs are shown under irrigation in the preharvest operations section.

BUDGET SUMMARY

GROSS RETURN		\$840.00	
VARIABLE OPERATING EXPENSES	\$542.90		
RETURN OVER VARIABLE EXPENSES	\$297.10		(GROSS MARGINS)
FIXED EXPENSES	\$146.20		
NET FARM INCOME	\$150.91		(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$113.49		
NET OPERATING PROFIT	\$37.42		(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$70.38		
RETURN TO LAND AND RISK	(\$32.96)		

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 2010.  
Planting dates: September 1 - November 1  
Harvesting dates: April 15 - May 15

ITEM	PRICE	YIELD						TOTAL
<b>GROSS RETURNS</b>								
OATS FOR HAY	\$100.00	3.00 TONS (STACKED)						\$300.00
<b>TOTAL</b>								\$300.00
<hr/>								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
OAT SEED	\$0.32	100 LBS	\$32.00					\$32.00
NITROGEN (N)	\$0.58	100 LBS	\$58.00					\$58.00
PUMP WATER*		18 AC. IN.						
<b>SUBTOTAL</b>			\$90.00					\$90.00
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PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC	50 HP	0.39 HR		\$2.83	\$3.65	\$0.76	\$6.24	\$13.48
PLOW	50 HP	1.05 HR		\$7.61	\$9.82	\$1.46	\$17.32	\$36.21
DISC (2X)	50 HP	0.78 HR		\$5.66	\$7.29	\$1.52	\$12.49	\$26.95
FLOAT (2X)	50 HP	0.64 HR		\$4.64	\$5.98	\$0.70	\$8.19	\$19.51
DRILL	50 HP	0.21 HR		\$1.52	\$1.96	\$0.45	\$34.52	\$38.46
IRRIGATE (4X)		2.00 HR		\$14.50	\$61.90	\$0.00	\$14.69	\$91.10
<b>SUBTOTAL</b>		5.07 HR		\$36.76	\$90.61	\$4.88	\$93.46	\$225.70
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<b>HARVEST OPERATIONS</b>								
SWATHER	14 FT	0.16 HR		\$1.16	\$0.00	\$0.04	\$3.55	\$4.75
BALER, PTO	50 HP	0.21 HR		\$1.52	\$1.96	\$0.26	\$3.64	\$7.38
BALE WAGON	50 HP	0.20 HR		\$1.45	\$1.87	\$0.47	\$5.66	\$9.45
<b>SUBTOTAL</b>		0.57 HR		\$4.13	\$3.83	\$0.78	\$12.84	\$21.59
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<b>OVERHEAD EXPENSES</b>								
DOWNTIME		0.91 HR		\$6.60				\$6.60
EMPLOYEE BENEFITS				\$4.91				\$4.91
FARM INSURANCE			\$0.49					\$0.49
LAND TAXES							\$1.34	\$1.34
SUPERVISION AND MANAGEMENT				\$15.82				\$15.82
OTHER EXPENSES			\$137.02					\$137.02
<b>SUBTOTAL</b>		0.91 HR	\$137.51	\$27.32			\$1.34	\$166.18
<b>TOTAL OPERATING EXPENSES</b>		6.55 HR	\$227.51	\$68.21	\$94.44	\$5.66	\$107.64	\$503.46
<b>NET OPERATING PROFIT</b>								(\$203.46)
INTEREST ON OPERATING CAPITAL		(	\$69.26	@	7.50%	)		\$5.19
INTEREST ON EQUIPMENT INVESTMENT								\$54.59
<b>RETURN TO LAND AND RISK</b>								(\$263.25)

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

**BUDGET SUMMARY**

GROSS RETURN		\$300.00	
VARIABLE OPERATING EXPENSES	\$332.80		
RETURN OVER VARIABLE EXPENSES	(\$32.80)	(GROSS MARGINS)	
FIXED EXPENSES	\$107.64		
NET FARM INCOME	(\$140.44)	(RETURNS TO CAPITAL, LABOR, LAND & RISK)	
LABOR AND MANAGEMENT COST	\$68.21		
NET OPERATING PROFIT	(\$208.66)	(RETURNS TO CAPITAL, LAND & RISK)	
CAPITAL COSTS	\$54.59		
RETURN TO LAND AND RISK	(\$263.25)		

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 2010.  
Planting dates: May 1 - June 1  
Harvesting dates: June 1 - August 1

ITEM	PRICE	YIELD						TOTAL
<b>GROSS RETURNS</b>								
SORGHUM/SUDAN HAY	\$120.00	5.00 TONS (STACKED)						\$600.00
<b>TOTAL</b>							<b>\$600.00</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)	\$0.58	100 LBS	\$58.00					\$58.00
PUMP WATER*		16 AC. IN.						
<b>SUBTOTAL</b>			<b>\$110.00</b>					<b>\$110.00</b>
<b>PREHARVEST OPERATIONS</b>								
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC	50 HP	0.39 HR		\$2.83	\$3.65	\$0.76	\$6.24	\$13.48
FLOAT (2X)	50 HP	0.64 HR		\$4.64	\$5.98	\$0.70	\$8.19	\$19.51
DRILL	50 HP	0.21 HR		\$1.52	\$1.96	\$0.45	\$34.52	\$38.46
IRRIGATE (4X)		2.00 HR		\$14.50	\$55.02	\$0.00	\$13.06	\$82.59
<b>SUBTOTAL</b>		<b>3.24 HR</b>		<b>\$23.49</b>	<b>\$66.62</b>	<b>\$1.91</b>	<b>\$62.01</b>	<b>\$154.03</b>
<b>HARVEST OPERATIONS</b>								
SWATHER (2X)	14 FT	0.32 HR		\$2.32	\$0.00	\$0.09	\$7.09	\$9.50
BALER, PTO (2X)	50 HP	0.42 HR		\$3.05	\$3.93	\$0.52	\$7.27	\$14.76
BALE WAGON (2X)	50 HP	0.40 HR		\$2.90	\$3.74	\$0.94	\$11.32	\$18.90
<b>SUBTOTAL</b>		<b>1.14 HR</b>		<b>\$8.27</b>	<b>\$7.67</b>	<b>\$1.55</b>	<b>\$25.69</b>	<b>\$43.17</b>
<b>OVERHEAD EXPENSES</b>								
DOWNTIME		0.60 HR		\$4.31				\$4.31
EMPLOYEE BENEFITS				\$3.81				\$3.81
FARM INSURANCE			\$0.38					\$0.38
LAND TAXES						\$1.34		\$1.34
SUPERVISION AND MANAGEMENT				\$27.19				\$27.19
OTHER EXPENSES			\$137.02					\$137.02
<b>SUBTOTAL</b>		<b>0.60 HR</b>	<b>\$137.40</b>	<b>\$35.31</b>			<b>\$1.34</b>	<b>\$174.06</b>
<b>TOTAL OPERATING EXPENSES</b>		<b>4.98 HR</b>	<b>\$247.40</b>	<b>\$67.07</b>	<b>\$74.29</b>	<b>\$3.46</b>	<b>\$89.05</b>	<b>\$481.25</b>
<b>NET OPERATING PROFIT</b>							<b>\$118.75</b>	
INTEREST ON OPERATING CAPITAL		( \$72.90 @ 7.50% )						\$5.47
INTEREST ON EQUIPMENT INVESTMENT								\$48.87
<b>RETURN TO LAND AND RISK</b>							<b>\$64.41</b>	

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

**BUDGET SUMMARY**

GROSS RETURN		\$600.00	
VARIABLE OPERATING EXPENSES	\$330.61		
RETURN OVER VARIABLE EXPENSES		\$269.39	(GROSS MARGINS)
FIXED EXPENSES	\$89.05		
NET FARM INCOME		\$180.35	(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$67.07		
NET OPERATING PROFIT		\$113.28	(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$48.87		
RETURN TO LAND AND RISK		\$64.41	

TABLE 10. Summary of per acre costs and returns, 50-acre part-time farm, Tularosa Basin, Otero County, Projected 2010.

	ALFALFA ESTABLISHMENT	ALFALFA HAY	OATS FOR HAY	SORGHUM SUDAY HAY
		TONS	TONS	TONS
PRIMARY YIELD		6.00	3.00	5.00
PRIMARY PRICE		\$140.00	\$100.00	\$120.00
GOVERNMENT PAYMENTS		\$0.00	\$0.00	\$0.00
SECOND INCOME		\$0.00	\$0.00	\$0.00
GROSS RETURN		\$840.00	\$300.00	\$600.00
CASH OPERATING EXPENSES				
SEED	\$112.50		\$32.00	\$52.00
FERTILIZER		\$40.00	\$58.00	\$58.00
CHEMICALS		\$23.97		
CROP INSURANCE				
OTHER PURCHASED INPUTS		\$20.16		
CANAL WATER				
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$28.70	\$19.17	\$32.54	\$19.26
FUEL-IRRIGATION	\$27.51	\$154.76	\$61.90	\$55.02
REPAIRS	\$4.54	\$3.88	\$5.66	\$3.46
CUSTOM CHARGES				
LAND TAXES		\$2.69	\$1.34	\$1.34
OTHER EXPENSES	\$0.44	\$274.76	\$137.51	\$137.40
TOTAL CASH EXPENSES	\$173.70	\$539.38	\$328.95	\$326.48
RETURN OVER CASH EXPENSES	(\$173.70)	\$300.62	(\$28.95)	\$273.52
FIXED EXPENSES	\$82.23	\$143.51	\$106.30	\$87.70
TOTAL EXPENSES	\$255.93	\$682.89	\$435.25	\$414.18
NET FARM INCOME	(\$255.93)	\$157.11	(\$135.25)	\$185.82
LABOR AND MANAGEMENT COSTS	\$61.96	\$113.49	\$68.21	\$67.07
NET OPERATING PROFIT	(\$317.88)	\$43.62	(\$203.46)	\$118.75
CAPITAL COSTS				
INTEREST ON OPERATING CAPITAL		\$6.20	\$5.19	\$5.47
INTEREST ON EQUIPMENT INVESTMENT		\$70.38	\$54.59	\$48.87
TOTAL CAPITAL COSTS	\$0.00	\$76.58	\$59.78	\$54.34
RETURN TO LAND AND RISK	(\$317.88)	(\$32.96)	(\$263.25)	\$64.41



TABLE 11. Whole farm summary, Tularosa Basin, Otero County,  
Projected 2010.

GROSS RETURNS		
ALFALFA HAY	40.00 ACRES	
CROP		\$33,600
OATS FOR HAY	5.00 ACRES	
CROP		\$1,500
SORGHUM/SUDAN	5.00 ACRES	
CROP		\$3,000
GROSS RETURN		<u>\$38,100</u>
CASH OPERATING EXPENSES		
SEED		\$870
FERTILIZER		\$2,180
CHEMICALS		\$959
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$806
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$1,141
FUEL-IRRIGATION		\$6,885
REPAIRS		\$219
CUSTOM CHARGES		\$0
LAND TAXES		\$121
OTHER EXPENSES		\$12,367
TOTAL CASH EXPENSES		<u>\$25,547</u>
RETURN OVER CASH EXPENSES		\$12,553
FIXED EXPENSES		\$5,329
TOTAL EXPENSES		\$30,876
NET FARM INCOME		\$7,224
LABOR AND MANAGEMENT COSTS		\$5,464
NET OPERATING PROFIT		\$1,760
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$301
INTEREST ON EQUIPMENT INVESTMENT		\$3,332
TOTAL CAPITAL COSTS		<u>\$3,634</u>
RETURN TO LAND AND RISK		<u>(\$1,874)</u>

LAND VALUE	RETURNS TO RISK*	RETURN ON INVESTMENT**
\$700 /ACRE	(\$2,924)	2.67%
\$900 /ACRE	(\$3,224)	2.32%
\$1,100 /ACRE	(\$3,524)	2.05%
\$1,300 /ACRE	(\$3,824)	1.84%
\$1,500 /ACRE	(\$4,124)	1.66%
\$1,700 /ACRE	(\$4,424)	1.52%
\$1,900 /ACRE	(\$4,724)	1.40%
\$2,100 /ACRE	(\$5,024)	1.30%

\* 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)