

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... OTERO COUNTY Projected 2006  
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 2006

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	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 2006

Item			
<b>Labor Wage Rate:</b>			
Equipment operators		\$/hour	\$6.65
General & Irrigators		\$/hour	\$6.35
<b>Purchased Inputs:</b>			
<b>Fertilizer:</b>			
Nitrogen (N)		\$/pound	\$0.40
<b>Seed:</b>			
Alfalfa		\$/pound	\$2.88
Oats for Hay		\$/pound	\$0.27
Natural Gas (Gas NM) (service charge)		\$/MCF \$/month	\$3.29 \$10.00
Diesel fuel		\$/gallon	\$2.10
Gasoline		\$/gallon	\$2.00
Electricity (Otero Coop)		cents/KwHr	8.15
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	7.00%
Land Interest Rate		percent	7.00%
Equipment Interest Rate		percent	7.00%
Expected Inflation Rate		percent	3.00%
Land Taxes		\$300.00 /acre (full value)	\$2.99
Personal Property Tax Rate	- NR - R	\$/ \$1,000 (Assessed Value)	\$29.85 \$23.77
<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 2006

Item			
Electricity (Domestic & Shop)		\$66.95 per month	\$803
Telephone		\$72.10 per month	\$865
Accounting & Legal			\$155
Misc. Supplies & Hand Tools			\$536
Pickup and Auto			
miles	5,305	@ \$0.415 per mile	\$2,201
<b>Insurance</b>			
- general liability (non-employee)			\$247
- fire/theft			\$165
<b>Property Taxes</b>			
- non-planted land			\$0
- other than land & machinery			\$6,010
Building repairs and maintenance			\$247
Dues, fees, publications			\$134
Farmstead Equipment			\$165
Total			\$11,528
Total per planted acre			\$256.18



TABLE 6. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, Projected 2006  
Planting dates: September 1 - November 1

ITEM	PRICE	QUANTITY	PURCHASED INPUTS						TOTAL
<u>PURCHASED INPUTS</u>									
ALFALFA SEED	\$2.88	30 LBS	\$86.40						\$86.40
PUMP WATER*		8 AC. IN.							
SUBTOTAL			\$86.40						\$86.40
<u>PREHARVEST OPERATIONS</u>									
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
DISC	50 HP	0.39 HR		\$2.59	\$2.92	\$0.42	\$3.21	\$9.14	
PLOW	50 HP	1.05 HR		\$6.98	\$7.85	\$1.46	\$17.46	\$33.76	
DISC (2X)	50 HP	0.78 HR		\$5.19	\$5.83	\$1.52	\$12.59	\$25.13	
FLOAT (2X)	50 HP	0.64 HR		\$4.26	\$4.79	\$0.70	\$8.26	\$18.00	
DRILL	50 HP	0.21 HR		\$1.40	\$1.57	\$0.45	\$34.69	\$38.11	
IRRIGATE (4X)		2.00 HR		\$12.70	\$15.50	\$0.00	\$6.59	\$34.79	
SUBTOTAL		5.07 HR		\$33.12	\$38.47	\$4.54	\$82.80	\$158.92	
<u>OVERHEAD EXPENSES</u>									
DOWNTIME		0.77 HR		\$5.10					\$5.10
EMPLOYEE BENEFITS				\$3.97					\$3.97
FARM INSURANCE			\$0.40					\$0.40	
SUPERVISION AND MANAGEMENT				\$13.35					\$13.35
SUBTOTAL		0.77 HR	\$0.40	\$22.43					\$22.82
<u>TOTAL OPERATING EXPENSES</u>		5.84 HR	\$86.80	\$55.54	\$38.47	\$4.54	\$82.80	\$268.14	

TABLE 7. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for a 50 acre part-time farm, Tularosa Basin, Otero County, Projected 2006  
Harvesting dates: May 10 - October 15

ITEM	PRICE	YIELD						TOTAL	
<b>GROSS RETURNS</b>									
ALFALFA HAY	\$130.00	6.00 TONS (STACKED)						\$780.00	
<b>TOTAL</b>								<b>\$780.00</b>	
<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					\$26.81	\$26.81	
: Interest							\$7.85	\$7.85	
PUMP WATER*		45 AC. IN.							
<b>SUBTOTAL</b>			<b>\$84.13</b>				<b>\$34.67</b>	<b>\$118.80</b>	
<b>PREHARVEST OPERATIONS</b>									
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
IRRIGATE (11X)		5.50 HR		\$34.93	\$87.20	\$0.00	\$37.08	\$159.20	
<b>SUBTOTAL</b>		5.50 HR		\$34.93	\$87.20	\$0.00	\$37.08	\$159.20	
<b>HARVEST OPERATIONS</b>									
SWATHER (5X)	14 FT	0.80 HR		\$5.32	\$0.00	\$0.22	\$17.90	\$23.44	
BALER, PTO (5X)	50 HP	1.05 HR		\$6.98	\$7.85	\$1.29	\$18.35	\$34.48	
BALEWAGON, PTO (5X)	50 HP	1.00 HR		\$6.65	\$7.48	\$2.36	\$28.56	\$45.05	
<b>SUBTOTAL</b>		2.85 HR		\$18.95	\$15.33	\$3.88	\$64.81	\$102.97	
<b>OVERHEAD EXPENSES</b>									
DOWNTIME		0.71 HR		\$4.74				\$4.74	
EMPLOYEE BENEFITS				\$6.47				\$6.47	
FARM INSURANCE			\$0.65					\$0.65	
LAND TAXES						\$2.99		\$2.99	
SUPERVISION AND MANAGEMENT				\$38.13				\$38.13	
OTHER EXPENSES			\$256.18					\$256.18	
<b>SUBTOTAL</b>		0.71 HR		\$256.82	\$49.33		\$2.99	\$309.14	
<b>TOTAL OPERATING EXPENSES</b>		9.06 HR		\$340.96	\$103.21	\$102.53	\$3.88	\$139.54	\$690.11
<b>NET OPERATING PROFIT</b>								<b>\$89.89</b>	
INTEREST ON OPERATING CAPITAL		( \$65.47 @ 7.00%						\$4.58	
INTEREST ON EQUIPMENT INVESTMENT								\$65.68	
<b>RETURN TO LAND AND RISK</b>								<b>\$19.62</b>	

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

**BUDGET SUMMARY**

GROSS RETURN		\$780.00	
VARIABLE OPERATING EXPENSES	\$451.95		
RETURN OVER VARIABLE EXPENSES	\$328.05		(GROSS MARGINS)
FIXED EXPENSES	\$139.54		
NET FARM INCOME	\$188.51		(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$103.21		
NET OPERATING PROFIT	\$85.31		(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$65.68		
RETURN TO LAND AND RISK	\$19.62		

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 2006  
 Planting dates: September 1 - November 1  
 Harvesting dates: April 15 - May 15

ITEM	PRICE	YIELD						TOTAL
<b>GROSS RETURNS</b>								
OATS FOR HAY	\$90.00	3.00 TONS (STACKED)						\$270.00
<b>TOTAL</b>								\$270.00
<hr/>								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
OAT SEED	\$0.27	100 LBS	\$27.00					\$27.00
NITROGEN (N)	\$0.40	100 LBS	\$40.00					\$40.00
PUMP WATER*		18 AC. IN.						
<b>SUBTOTAL</b>			\$67.00					\$67.00
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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		\$2.59	\$2.92	\$0.76	\$6.29	\$12.56
PLOW	50 HP	1.05 HR		\$6.98	\$7.85	\$1.46	\$17.46	\$33.76
DISC (2X)	50 HP	0.78 HR		\$5.19	\$5.83	\$1.52	\$12.59	\$25.13
FLOAT (2X)	50 HP	0.64 HR		\$4.26	\$4.79	\$0.70	\$8.26	\$18.00
DRILL	50 HP	0.21 HR		\$1.40	\$1.57	\$0.45	\$34.69	\$38.11
IRRIGATE (4X)		2.00 HR		\$12.70	\$34.88	\$0.00	\$14.83	\$62.41
<b>SUBTOTAL</b>		5.07 HR		\$33.12	\$57.84	\$4.88	\$94.12	\$189.96
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<b>HARVEST OPERATIONS</b>								
SWATHER	14 FT	0.16 HR		\$1.06	\$0.00	\$0.04	\$3.58	\$4.69
BALER, PTO	50 HP	0.21 HR		\$1.40	\$1.57	\$0.26	\$3.67	\$6.90
BALE WAGON	50 HP	0.20 HR		\$1.33	\$1.50	\$0.47	\$5.71	\$9.01
<b>SUBTOTAL</b>		0.57 HR		\$3.79	\$3.07	\$0.78	\$12.96	\$20.59
<hr/>								
<b>OVERHEAD EXPENSES</b>								
DOWNTIME		0.91 HR		\$6.05				\$6.05
EMPLOYEE BENEFITS				\$4.43				\$4.43
FARM INSURANCE			\$0.44					\$0.44
LAND TAXES							\$1.49	\$1.49
SUPERVISION AND MANAGEMENT				\$14.62				\$14.62
OTHER EXPENSES			\$128.09					\$128.09
<b>SUBTOTAL</b>		0.91 HR	\$128.53	\$25.10			\$1.49	\$155.12
<b>TOTAL OPERATING EXPENSES</b>		6.55 HR	\$195.53	\$62.01	\$60.91	\$5.66	\$108.58	\$432.68
<b>NET OPERATING PROFIT</b>								(\$162.68)
INTEREST ON OPERATING CAPITAL								\$3.47
INTEREST ON EQUIPMENT INVESTMENT								\$50.95
<b>RETURN TO LAND AND RISK</b>								(\$217.10)

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

**BUDGET SUMMARY**

GROSS RETURN		\$270.00	
VARIABLE OPERATING EXPENSES	\$265.56		
RETURN OVER VARIABLE EXPENSES	\$4.44	(GROSS MARGINS)	
FIXED EXPENSES	\$108.58		
NET FARM INCOME	(\$104.14)	(RETURNS TO CAPITAL, LABOR, LAND & RISK)	
LABOR AND MANAGEMENT COST	\$62.01		
NET OPERATING PROFIT	(\$166.15)	(RETURNS TO CAPITAL, LAND & RISK)	
CAPITAL COSTS	\$50.95		
RETURN TO LAND AND RISK	(\$217.10)		

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 2006  
 Planting dates: May 1 - June 1  
 Harvesting dates: June 1 - August 1

ITEM	PRICE	YIELD						TOTAL
<b>GROSS RETURNS</b>								
SORGHUM/SUDAN HAY	\$110.00	5.00 TONS (STACKED)						\$550.00
<b>TOTAL</b>							<b>\$550.00</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)	\$0.40	100 LBS	\$40.00				\$40.00	
PUMP WATER*		16 AC. IN.						
<b>SUBTOTAL</b>			<b>\$92.00</b>				<b>\$92.00</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		\$2.59	\$2.92	\$0.76	\$6.29	\$12.56
FLOAT (2X)	50 HP	0.64 HR		\$4.26	\$4.79	\$0.70	\$8.26	\$18.00
DRILL	50 HP	0.21 HR		\$1.40	\$1.57	\$0.45	\$34.69	\$38.11
IRRIGATE (4X)		2.00 HR		\$12.70	\$31.00	\$0.00	\$13.18	\$56.89
<b>SUBTOTAL</b>		<b>3.24 HR</b>		<b>\$20.95</b>	<b>\$40.28</b>	<b>\$1.91</b>	<b>\$62.43</b>	<b>\$125.56</b>
<b>HARVEST OPERATIONS</b>								
SWATHER (2X)	14 FT	0.32 HR		\$2.13	\$0.00	\$0.09	\$7.16	\$9.38
BALER, PTO (2X)	50 HP	0.42 HR		\$2.79	\$3.14	\$0.52	\$7.34	\$13.79
BALE WAGON (2X)	50 HP	0.40 HR		\$2.66	\$2.99	\$0.94	\$11.42	\$18.02
<b>SUBTOTAL</b>		<b>1.14 HR</b>		<b>\$7.58</b>	<b>\$6.13</b>	<b>\$1.55</b>	<b>\$25.92</b>	<b>\$41.19</b>
<b>OVERHEAD EXPENSES</b>								
DOWNTIME		0.60 HR		\$3.96				\$3.96
EMPLOYEE BENEFITS				\$3.42				\$3.42
FARM INSURANCE			\$0.34					\$0.34
LAND TAXES						\$1.49		\$1.49
SUPERVISION AND MANAGEMENT				\$25.19				\$25.19
OTHER EXPENSES			\$128.09					\$128.09
<b>SUBTOTAL</b>		<b>0.60 HR</b>	<b>\$128.43</b>	<b>\$32.57</b>			<b>\$1.49</b>	<b>\$162.49</b>
<b>TOTAL OPERATING EXPENSES</b>		<b>4.98 HR</b>	<b>\$220.43</b>	<b>\$61.10</b>	<b>\$46.41</b>	<b>\$3.46</b>	<b>\$89.84</b>	<b>\$421.24</b>
<b>NET OPERATING PROFIT</b>							<b>\$128.76</b>	
INTEREST ON OPERATING CAPITAL		( \$57.19 @ 7.00%						\$4.00
INTEREST ON EQUIPMENT INVESTMENT								\$45.62
<b>RETURN TO LAND AND RISK</b>							<b>\$79.14</b>	

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

**BUDGET SUMMARY**

GROSS RETURN		\$550.00	
VARIABLE OPERATING EXPENSES	\$274.30		
RETURN OVER VARIABLE EXPENSES		\$275.70	(GROSS MARGINS)
FIXED EXPENSES	\$89.84		
NET FARM INCOME		\$185.86	(RETURNS TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$61.10		
NET OPERATING PROFIT		\$124.76	(RETURNS TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$45.62		
RETURN TO LAND AND RISK		\$79.14	

TABLE 10. Summary of per acre costs and returns, 50-acre part-time farm, Tularosa Basin, Otero County,  
Projected 2006

	ALFALFA ESTABLISHMENT	ALFALFA HAY	OATS FOR HAY	SORGHUM SUDAY HAY
		TONS	TONS	TONS
PRIMARY YIELD		6.00	3.00	5.00
PRIMARY PRICE		\$130.00	\$90.00	\$110.00
GOVERNMENT PAYMENTS		\$0.00	\$0.00	\$0.00
SECOND INCOME		\$0.00	\$0.00	\$0.00
GROSS RETURN		\$780.00	\$270.00	\$550.00
CASH OPERATING EXPENSES				
SEED	\$86.40		\$27.00	\$52.00
FERTILIZER		\$40.00	\$40.00	\$40.00
CHEMICALS		\$23.97		
CROP INSURANCE				
OTHER PURCHASED INPUTS		\$20.16		
CANAL WATER				
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$22.96	\$15.33	\$26.03	\$15.41
FUEL-IRRIGATION	\$15.50	\$87.20	\$34.88	\$31.00
REPAIRS	\$4.54	\$3.88	\$5.66	\$3.46
CUSTOM CHARGES				
LAND TAXES		\$2.99	\$1.49	\$1.49
OTHER EXPENSES	\$0.40	\$256.82	\$128.53	\$128.43
TOTAL CASH EXPENSES	\$129.81	\$450.35	\$263.59	\$271.79
RETURN OVER CASH EXPENSES	(\$129.81)	\$329.65	\$6.41	\$278.21
FIXED EXPENSES	\$82.80	\$136.56	\$107.08	\$88.35
TOTAL EXPENSES	\$212.60	\$586.91	\$370.67	\$360.14
NET FARM INCOME	(\$212.60)	\$193.09	(\$100.67)	\$189.86
LABOR AND MANAGEMENT COSTS	\$55.54	\$103.21	\$62.01	\$61.10
NET OPERATING PROFIT	(\$268.14)	\$89.89	(\$162.68)	\$128.76
CAPITAL COSTS				
INTEREST ON OPERATING CAPITAL		\$4.58	\$3.47	\$4.00
INTEREST ON EQUIPMENT INVESTMENT		\$65.68	\$50.95	\$45.62
TOTAL CAPITAL COSTS	\$0.00	\$70.27	\$54.41	\$49.62
RETURN TO LAND AND RISK	(\$268.14)	\$19.62	(\$217.10)	\$79.14



TABLE 11. Whole farm summary, Tularosa Basin, Otero County,  
Projected 2006

GROSS RETURNS		
ALFALFA HAY	40.00 ACRES	
CROP		\$31,200
OATS FOR HAY	5.00 ACRES	
CROP		\$1,350
SORGHUM/SUDAN	5.00 ACRES	
CROP		\$2,750
GROSS RETURN		<u>\$35,300</u>
CASH OPERATING EXPENSES		
SEED		\$741
FERTILIZER		\$2,000
CHEMICALS		\$959
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$806
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$912
FUEL-IRRIGATION		\$3,879
REPAIRS		\$219
CUSTOM CHARGES		\$0
LAND TAXES		\$134
OTHER EXPENSES		\$11,559
TOTAL CASH EXPENSES		<u>\$21,210</u>
RETURN OVER CASH EXPENSES		\$14,090
FIXED EXPENSES		\$5,256
TOTAL EXPENSES		\$26,466
NET FARM INCOME		\$8,834
LABOR AND MANAGEMENT COSTS		\$4,966
NET OPERATING PROFIT		\$3,868
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$221
INTEREST ON EQUIPMENT INVESTMENT		\$3,110
TOTAL CAPITAL COSTS		<u>\$3,331</u>
RETURN TO LAND AND RISK		<u>\$537</u>

LAND VALUE	RETURNS TO RISK*	RETURN ON INVESTMENT**
\$700 /ACRE	(\$513)	5.78%
\$900 /ACRE	(\$813)	5.03%
\$1,100 /ACRE	(\$1,113)	4.45%
\$1,300 /ACRE	(\$1,413)	3.99%
\$1,500 /ACRE	(\$1,713)	3.62%
\$1,700 /ACRE	(\$2,013)	3.31%
\$1,900 /ACRE	(\$2,313)	3.05%
\$2,100 /ACRE	(\$2,613)	2.83%

\* 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)