

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... ESTANCIA BASIN, TORRANCE AND SANTA FE COUN Projected 2001
FARM SIZE..... 160.00 ACRES
IRRIGATION TYPE..... FLOOD
NUMBER OF CROPS..... 3

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TABLE 1. Acreage Summary, Torrance and Santa Fe Counties, Projected 2006.

BUDGET AREA..... ESTANCIA BASIN, TORRANCE AND SANTA FE COUNTIES			
FARM SIZE.....	160 ACRES		
IRRIGATION TYPE.....	FLOOD		
NUMBER OF CROPS....	3		
		WATER USE	
ACREAGE SUMMARY:	LAND USE (ACRES)	AC.IN. PER AC.	TOTAL AC.IN.
ALFALFA ESTABLISHMENT	8.00 *	6	48
ALFALFA	40.00	42	1,680
CORN FOR GRAIN	51.00	36	1,836
ARP	0.00		
FLEX IN PINTO BEANS	9.00	36	324
PINTO BEANS	50.00	18	900
IDLE, ROADS, HOMESTEAD	10.00		
TOTAL	160.00		4,788
ACRE FEET PER ACRE OF WATER RIGHTS			2.49

* DOUBLE-CROPPED

TABLE 2. Basic cost information for the Estancia Basin, Projected 2006.

Item			
Labor Wage Rate:			
Equipment operators	\$/hour		\$6.65
General & Irrigators	\$/hour		\$6.35
Purchased Inputs:			
Fertilizer:			
Anhydrous Ammonia (NH3)	\$/ton		\$525.00
Nitrogen (N)	\$/pound		\$0.52
Phosphate (P205)	\$/pound		\$0.40
Seed:			
Alfalfa	\$/pound		\$3.20
Corn	\$/bag		\$100.00
Pinto Beans	\$/pound		\$0.65
Natural gas			
(service charge)	\$/MCF		\$3.29
Diesel fuel	\$/month		\$10.00
Diesel fuel	\$/gallon		\$2.10
Gasoline	\$/gallon		\$2.00
Electricity	cents/KwHr		7.75
LP Gas	\$/Gal		\$2.00
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		8.00%
Equipment Interest Rate	percent		8.00%
Real Interest Rate	percent		3.00%
Land Taxes	\$100.00 /acre (full value)		\$0.84
Personal Property Tax Rate	- NR	\$/ \$1,000 (Assessed Value)	\$25.28
	- R		\$25.21
Supervision Factors			
Field Crop-Irrigation	\$/labor hour		\$1.00
Field Crop-Equipment & General	\$/labor hour		\$0.50
Management Rate	percent		4.00%

TABLE 3. Overhead cost information for the Estancia Basin, Projected 2006.

Item			
Electricity (Domestic & Shop)		\$111.30 per month	\$1,336
Telephone		\$79.50 per month	\$954
Accounting & Legal			\$472
Misc. Supplies & Hand Tools			\$784
Pickup and Auto			
miles	10,918	@ \$0.415 per mile	\$4,531
Insurance			
- general liability (non-employee)			\$1,018
- fire/theft			\$673
Property Taxes			
- non-planted land			\$0
- other than land & machinery			\$6,010
Building repairs and maintenance			\$509
Dues, fees, publications			\$260
Farmstead Equipment			\$159
Total			\$16,705
Total Per Planted Acre			\$111.37

TABLE 6. Alfalfa establishment, flood-irrigated, budgeted per acre costs and returns for a 160 acre part-time farm, Estancia Basin, Projected 2006.
Planting dates: August 1 - September 15

ITEM	PRICE	QUANTITY	PURCHASED INPUTS					TOTAL
PURCHASED INPUTS								
SEED	\$3.20	20 LBS		\$64.00				\$64.00
PUMP WATER*		6 AC. IN.						
SUBTOTAL				\$64.00				\$64.00
PREHARVEST OPERATIONS								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC (2X)	96 HP	0.34 HR		\$2.26	\$4.35	\$2.98	\$10.78	\$20.37
CHISEL	96 HP	0.20 HR		\$1.33	\$2.56	\$0.71	\$4.72	\$9.32
FLOAT	65 HP	0.19 HR		\$1.26	\$1.85	\$0.25	\$8.18	\$11.54
LISTER	96 HP	0.18 HR		\$1.20	\$2.30	\$0.73	\$3.58	\$7.81
FERT SPREADER	65 HP	0.05 HR		\$0.33	\$0.49	\$0.06	\$0.29	\$1.17
DRILL	65 HP	0.21 HR		\$1.40	\$2.04	\$0.49	\$58.53	\$62.46
IRRIGATE		0.75 HR		\$4.76	\$8.34	\$0.00	\$1.16	\$14.26
SUBTOTAL		1.92 HR		\$12.54	\$21.92	\$5.23	\$87.24	\$126.93
OVERHEAD EXPENSES								
DOWNTIME		0.48 HR		\$3.19				\$3.19
EMPLOYEE BENEFITS				\$1.51				\$1.51
INSURANCE			\$0.15					\$0.15
SUPERVISION AND MANAGEMENT				\$8.97				\$8.97
SUBTOTAL		0.48 HR	\$0.15	\$13.67				\$13.82
TOTAL OPERATING EXPENSES		2.40 HR	\$64.15	\$26.21	\$21.92	\$5.23	\$87.24	\$204.75

TABLE 7. Alfalfa hay, flood-irrigated, budgeted per acre costs and returns for a 160 acre part-time farm, Estancia Basin, Projected 2006.
Harvesting dates: June 15 - October 15

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
ALFALFA HAY	\$120.00	4.00 TONS (IN FIELD)						\$480.00
GRAZING	\$10.00	1.00 ACRE						\$10.00
TOTAL							\$490.00	
PURCHASED INPUTS								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
NITROGEN (N)	\$0.52	22 LBS	\$11.44					\$11.44
PHOSPHATE (P205)	\$0.40	123 LBS	\$49.20					\$49.20
INSECTICIDE (CUSTOM)	\$23.14	1 ACRE	\$23.14					\$23.14
LIVESTOCK FAC & EQUIP							\$5.00	\$5.00
WIRE	\$0.37	34 LBS	\$12.74					\$12.74
ESTABLISHMENT: Principal		5 YEARS					\$40.95	\$40.95
: Interest							\$5.93	\$5.93
PUMP WATER*		42 AC. IN.						
SUBTOTAL			\$96.52				\$51.88	\$148.40
PREHARVEST OPERATIONS								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
FERT SPREADER	65 HP	0.05 HR		\$0.33	\$0.49	\$0.06	\$0.29	\$1.17
IRRIGATE (7X)		3.50 HR		\$22.23	\$58.36	\$0.00	\$8.11	\$88.70
SUBTOTAL		3.55 HR		\$22.56	\$58.85	\$0.06	\$8.40	\$89.87
HARVEST OPERATIONS								
SWATHER (3X)	96 HP	0.48 HR		\$3.19	\$6.14	\$1.13	\$23.39	\$33.85
BALER (3X)	96 HP	0.63 HR		\$4.19	\$8.06	\$1.40	\$16.23	\$29.88
SUBTOTAL		1.11 HR		\$7.38	\$14.19	\$2.53	\$39.63	\$63.74
OVERHEAD EXPENSES								
DOWNTIME		0.29 HR		\$1.93				\$1.93
EMPLOYEE BENEFITS				\$3.59				\$3.59
INSURANCE			\$0.36					\$0.36
LAND TAXES							\$0.84	\$0.84
SUPERVISION AND MANAGEMENT				\$23.68				\$23.68
OTHER EXPENSES			\$111.37					\$111.37
SUBTOTAL		0.29 HR	\$111.73	\$29.20			\$0.84	\$141.77
TOTAL OPERATING EXPENSES		4.95 HR	\$208.24	\$59.14	\$73.04	\$2.60	\$100.75	\$443.77
NET OPERATING PROFIT								\$46.23
INTEREST ON OPERATING CAPITAL		(\$67.35 @ 8.00%)						\$5.39
INTEREST ON EQUIPMENT INVESTMENT								\$39.33
RETURN TO LAND AND RISK							\$1.51	

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

GROSS RETURN		\$490.00	
VARIABLE OPERATING EXPENSES	\$283.88		
RETURN OVER VARIABLE EXPENSES		\$206.12	(GROSS MARGIN)
FIXED EXPENSES	\$100.75		
NET FARM INCOME		\$105.37	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$59.14		
NET OPERATING PROFIT		\$46.23	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$44.72		
RETURN TO LAND AND RISK		\$1.51	

TABLE 8. Corn for grain, flood-irrigated, budgeted per acre costs and returns for a 160 acre part-time farm, Estancia Basin, Projected 2006.
 Planting dates: May 1 - May 20
 Harvesting dates: November 1 - November 30

ITEM	PRICE	YIELD	BASE	TOTAL
GROSS RETURN				
CORN FOR GRAIN	\$2.25	120.00 BUSHELS		\$270.00
DIRECT PAYMENT	\$0.00	120.00 BUSHELS	0.85	\$0.00
COUNTER CYCLICAL PAYMENT	\$0.00	0.00 BUSHELS		\$0.00
GRAZING	\$12.00	1.00 ACRE		\$12.00
TOTAL				\$282.00

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	\$1.25	25 000	\$31.25		\$31.25
ANHYDROUS AMMONIA (NH3)	\$0.26	200 LBS	\$52.50		\$52.50
NITROGEN (N)	\$0.52	20 LBS	\$10.40		\$10.40
PHOSPHATE (P205)	\$0.40	44 LBS	\$17.60		\$17.60
INSECTICIDE	\$16.99	1 ACRE	\$16.99		\$16.99
HERBICIDE	\$16.99	1 ACRE	\$16.99		\$16.99
LIVESTOCK FAC & EQUIP				\$5.00	\$5.00
PUMP WATER*		36 AC. IN.			
CROP INSURANCE	\$0.98				\$0.98
SUBTOTAL			\$145.72	\$5.00	\$151.70

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC (2X)	96 HP	0.22 HR		\$1.46	\$2.81	\$1.93	\$6.98	\$13.18
CHISEL	96 HP	0.20 HR		\$1.33	\$2.56	\$0.71	\$4.72	\$9.32
FERT SPREADER	65 HP	0.05 HR		\$0.33	\$0.49	\$0.06	\$0.29	\$1.17
LISTER	96 HP	0.18 HR		\$1.20	\$2.30	\$0.73	\$3.58	\$7.81
PRE IRRIGATE		0.75 HR		\$4.76	\$8.34	\$0.00	\$1.16	\$14.26
PLANTER	65 HP	0.26 HR		\$1.73	\$2.53	\$0.76	\$7.94	\$12.96
CULTIVATOR (2X)	65 HP	0.42 HR		\$2.79	\$4.08	\$1.59	\$4.45	\$12.91
IRRIGATE (5X)		2.50 HR		\$15.88	\$41.69	\$0.00	\$5.80	\$63.36
SUBTOTAL		4.58 HR		\$29.48	\$64.79	\$5.78	\$34.91	\$134.97

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
COMBINE	4-ROW	0.35 HR		\$2.33	\$8.70	\$0.72	\$30.36	\$42.11
HAUL	1-TON	0.50 HR		\$3.33	\$9.08	\$2.80	\$55.59	\$70.79
SUBTOTAL		0.85 HR		\$5.65	\$17.77	\$3.52	\$85.95	\$112.90

OVERHEAD EXPENSES	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DOWNTIME	0.55 HR		\$3.62				\$3.62
EMPLOYEE BENEFITS			\$4.22				\$4.22
INSURANCE		\$0.42					\$0.42
LAND TAXES						\$0.84	\$0.84
SUPERVISION AND MANAGEMENT			\$17.75				\$17.75
OTHER EXPENSES		\$111.37					\$111.37
SUBTOTAL	0.55 HR	\$111.79	\$25.59			\$0.84	\$138.22

TOTAL OPERATING EXPENSES 5.98 HR \$257.51 \$60.72 \$82.57 \$9.31 \$126.70 \$537.79

NET OPERATING PROFIT (\$255.79)

INTEREST ON OPERATING CAPITAL (\$92.77 @ 8.00%) \$7.42
 INTEREST ON EQUIPMENT INVESTMENT \$94.40

RETURN TO LAND AND RISK (\$357.61)

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

BUDGET SUMMARY

GROSS RETURN		\$282.00	
VARIABLE OPERATING EXPENSES	\$349.38		
RETURN OVER VARIABLE EXPENSES		(\$67.38)	(GROSS MARGIN)
FIXED EXPENSES	\$126.70		
NET FARM INCOME		(\$194.09)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$60.72		
NET OPERATING PROFIT		(\$254.81)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$101.82		
RETURN TO LAND AND RISK		(\$356.63)	

TABLE 9. Pinto beans, flood-irrigated, budgeted per acre costs and returns for a 160 acre part-time farm, Estancia Basin, Projected 2006.
 Planting dates: May 15 - June 10
 Harvesting dates: September 1 - October 31

ITEM	PRICE	YIELD	TOTAL
GROSS RETURNS			
PINTO BEANS	\$16.00	20.00 CWT (BAGGED, CLEANED)	\$320.00
TOTAL			\$320.00

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	\$0.65	60 LBS	\$39.00		\$39.00
INSECTICIDE (FLY-ON)	\$11.85	1 ACRE	\$11.85		\$11.85
HERBICIDE	\$16.99	1 ACRE	\$16.99		\$16.99
PUMP WATER*		18 AC. IN.			
SUBTOTAL			\$67.84		\$67.84

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC (2X)	96 HP	0.34 HR		\$2.26	\$4.35	\$2.98	\$10.78	\$20.37
LISTER	96 HP	0.18 HR		\$1.20	\$2.30	\$0.73	\$3.58	\$7.81
PRE-IRRIGATE		0.75 HR		\$4.76	\$8.34	\$0.00	\$1.16	\$14.26
PLANTER	65 HP	0.26 HR		\$1.73	\$2.53	\$0.76	\$7.94	\$12.96
CULTIVATOR (3X)	65 HP	0.63 HR		\$4.00	\$6.13	\$2.38	\$6.67	\$19.18
IRRIGATE (2X)		1.00 HR		\$6.35	\$16.67	\$0.00	\$2.32	\$25.34
SUBTOTAL		3.16 HR		\$20.30	\$40.32	\$6.85	\$32.45	\$99.92

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
CUT	96 HP	0.50 HR		\$3.33	\$6.39	\$1.53	\$6.52	\$17.78
RAKE	65 HP	0.24 HR		\$1.60	\$2.33	\$0.36	\$2.76	\$7.05
COMBINE		0.31 HR		\$2.06	\$7.70	\$0.64	\$26.46	\$36.86
CLEANING & BAGGING			\$60.00					\$60.00
SUBTOTAL		1.05 HR	\$60.00	\$6.98	\$16.43	\$2.53	\$35.75	\$121.69

OVERHEAD EXPENSES	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DOWNTIME	0.62 HR		\$4.09				\$4.09
EMPLOYEE BENEFITS			\$3.27				\$3.27
INSURANCE		\$0.33					\$0.33
LAND TAXES						\$0.84	\$0.84
SUPERVISION AND MANAGEMENT			\$15.93				\$15.93
OTHER EXPENSES		\$111.37					\$111.37
SUBTOTAL	0.62 HR	\$111.69	\$23.29			\$0.84	\$135.83

TOTAL OPERATING EXPENSES	4.83 HR	\$239.53	\$50.58	\$56.75	\$9.38	\$69.04	\$425.27
NET OPERATING PROFIT							(\$105.27)
INTEREST ON OPERATING CAPITAL	(\$52.29	@	8.00%)		\$4.18
INTEREST ON EQUIPMENT INVESTMENT							\$65.70
RETURN TO LAND AND RISK							(\$175.15)

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

BUDGET SUMMARY

GROSS RETURN		\$320.00	
VARIABLE OPERATING EXPENSES	\$305.66		
RETURN OVER VARIABLE EXPENSES		\$14.34	(GROSS MARGIN)
FIXED EXPENSES	\$69.04		
NET FARM INCOME		(\$54.70)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$50.58		
NET OPERATING PROFIT		(\$105.27)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$69.88		
RETURN TO LAND AND RISK		(\$175.15)	

TABLE 10. Summary of per acre costs and returns for a 160 acre part-time, flood-irrigated farm, Estancia Basin, New Mexico
Projected 2006.

	ALFALFA ESTABLISHMENT	ALFALFA HAY	CORN FOR GRAIN	PINTO BEANS
		TONS	BU	CWT
PRIMARY YIELD		4.00	120.00	20.00
PRIMARY PRICE		\$120.00	\$2.25	\$16.00
GOVERNMENT PAYMENTS		\$0.00	\$0.00	\$0.00
SECOND INCOME		\$10.00	\$12.00	\$0.00
GROSS RETURN		\$490.00	\$282.00	\$320.00
CASH OPERATING EXPENSES				
SEED	\$64.00		\$31.25	\$39.00
FERTILIZER		\$60.64	\$80.50	
CHEMICALS		\$23.14	\$33.97	\$28.84
CROP INSURANCE			\$0.98	
OTHER PURCHASED INPUTS		\$12.74		
CANAL WATER				
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$13.58	\$14.68	\$32.54	\$31.73
FUEL-IRRIGATION	\$8.34	\$58.36	\$50.02	\$25.01
REPAIRS	\$5.23	\$2.60	\$9.31	\$9.38
CUSTOM CHARGES				\$60.00
LAND TAXES		\$0.84	\$0.84	\$0.84
OTHER EXPENSES	\$0.15	\$111.73	\$111.79	\$111.69
TOTAL CASH EXPENSES	\$91.30	\$284.72	\$351.20	\$306.50
RETURN OVER CASH EXPENSES	(\$91.30)	\$205.28	(\$69.20)	\$13.50
FIXED EXPENSES	\$87.24	\$99.91	\$125.86	\$68.20
TOTAL EXPENSES	\$178.54	\$384.63	\$477.07	\$374.70
NET FARM INCOME	(\$178.54)	\$105.37	(\$195.07)	(\$54.70)
LABOR AND MANAGEMENT COSTS	\$26.21	\$59.14	\$60.72	\$50.58
NET OPERATING PROFIT	(\$204.75)	\$46.23	(\$255.79)	(\$105.27)
CAPITAL COSTS				
INTEREST ON OPERATING CAPITAL		\$5.39	\$7.42	\$4.18
INTEREST ON EQUIPMENT INVESTMENT		\$39.33	\$94.40	\$65.70
TOTAL CAPITAL COSTS	\$0.00	\$44.72	\$101.82	\$69.88
RETURN TO LAND AND RISK	(\$204.75)	\$1.51	(\$357.61)	(\$175.15)
Flex Computation			-137.35	-41.26

TABLE 11. Whole farm summary, Estancia Basin,
Projected 2006.

GROSS RETURNS		
ALFALFA HAY	40.00 ACRES	
CROP		\$19,200
GRAZING		\$400
CORN FOR GRAIN	51.00 ACRES	
CROP		\$13,770
GRAZING		\$612
DIRECT PAYMENT		\$0
PINTO BEANS	59.00 ACRES	
CROP		\$18,880
GROSS RETURN		<u>\$52,862</u>
CASH OPERATING EXPENSES		
SEED		\$4,407
FERTILIZER		\$6,531
CHEMICALS		\$4,360
CROP INSURANCE		\$50
OTHER PURCHASED INPUTS		\$509
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$4,228
FUEL-IRRIGATION		\$6,428
REPAIRS		\$1,174
CUSTOM CHARGES		\$3,540
LAND TAXES		\$126
OTHER EXPENSES		\$16,761
TOTAL CASH EXPENSES		<u>\$48,114</u>
RETURN OVER CASH EXPENSES		\$4,748
FIXED EXPENSES		\$13,499
TOTAL EXPENSES		\$61,613
NET FARM INCOME		(\$8,751)
LABOR AND MANAGEMENT COSTS		\$8,656
NET OPERATING PROFIT		(\$17,407)
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$841
INTEREST ON EQUIPMENT INVESTMENT		\$10,264
TOTAL CAPITAL COSTS		<u>\$11,104</u>
RETURN TO LAND AND RISK		<u>(\$28,512)</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$750 /ACRE	(\$32,112)	-8.56%
\$1,000 /ACRE	(\$33,312)	-7.15%
\$1,250 /ACRE	(\$34,512)	-6.14%
\$1,500 /ACRE	(\$35,712)	-5.38%

* 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)