

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... SOUTHERN QUAY COUNT Projected 2006.  
FARM SIZE..... 1,000.00 ACRES  
IRRIGATION TYPE..... SPRINKLER/DRYLAND  
NUMBER OF CROPS..... 2

VERSION 1.0

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TABLE 1. Acreage Summary, Quay County, Projected 2006.

BUDGET AREA.....	SOUTHERN QUAY COUNTY		
FARM SIZE.....	1,000 ACRES		
IRRIGATION TYPE.....	SPRINKLER/DRYLAND		
NUMBER OF CROPS.....	2		

  

ACREAGE SUMMARY:	LAND USE (ACRES)	WATER USE	
		AC.IN. PER AC.	TOTAL AC.IN.
WHEAT	607.75	0	0
ARP	0.00		
FLEX IN GRAIN SORGHUM	107.25	0	0
GRAIN SORGHUM	212.50	12	2,550
ARP	0.00		
FLEX IN GRAIN SORGHUM	37.50	12	450
ROADS, HOMESTEAD, FALLOW	35.00		
<b>TOTAL</b>	<b>1,000.00</b>		<b>3,000</b>

TABLE 2. Basic cost information for Southern Quay County, Projected 2006.

Item		
<b>Labor Wage Rate:</b>		
Equipment operators	\$/hour	\$7.45
General & Irrigators	\$/hour	\$6.65
<b>Purchased Inputs:</b>		
<b>Fertilizer:</b>		
Nitrogen (N)	\$/pound	\$0.52
Phosphate (P205)	\$/pound	\$0.40
<b>Seed:</b>		
Wheat	\$/pound	\$0.28
Grain Sorghum	\$/pound	\$1.22
<b>Energy Costs:</b>		
Diesel fuel	\$/gallon	\$2.10
Gasoline	\$/gallon	\$2.00
Electricity (Farmers Elec Coop)	cents/KwHr	7.25
LP Gas	\$/gallon	\$2.00
Employee Liability Insurance	\$/1,000 wages	\$20.00
Employee Benefits	percent/wages	18.00%
Labor Downtime	percent	25.00%
<b>Financial Rates:</b>		
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%
<b>Land Taxes</b>		
Irrigated	\$96.00 /acre (full value)	\$0.78
Dryland	\$38.00 /acre (full value)	\$0.31
Personal Property Tax Rate	- NR - R	\$/1,000 (Assessed Value) \$22.84
<b>Supervision Factors</b>		
Field Crop-Irrigation	\$/acre	\$1.00
Field Crop-Equipment & General	\$/acre	\$0.50
Management Rate	percent	7.00%

TABLE 3. Overhead cost information for Southern Quay County, Projected 2006.

Item		
Electricity (Domestic & Shop)	\$212.00 per month	\$2,544
Telephone	\$106.00 per month	\$1,272
Accounting & Legal		\$1,558
Misc. Supplies & Hand Tools		\$2,337
Pickup and Auto		
miles	21,836 @ \$0.415 per mile	\$9,062
<b>Insurance</b>		
- general liability (non-employee)		\$1,675
- fire/theft		\$1,325
<b>Property Taxes</b>		
- non-planted land		\$0
- other than land & machinery		\$6,010
Building repairs and maintenance		\$1,272
Dues, fees, publications		\$382
Farmstead Equipment		\$159
<b>Total</b>		<b>\$27,596</b>
	Total per planted acre	\$28.60
	Total per dryland acre	\$15.45



TABLE 6. Wheat, dryland, budgeted per acre costs and returns for a 1,000 acre farm with above average management, Southern Quay County, Projected 2006.  
Planting dates: August 20 - September 1st  
Harvesting dates: June 15 - July 1st

ITEM	PRICE	YIELD	BASE					TOTAL
<b>GROSS RETURNS</b>								
WHEAT	\$3.75	20.00 BUSHEL						\$75.00
DIRECT PAYMENT	\$0.00	20.00 BUSHEL	0.85					\$0.00
COUNTER CYCLICAL PAYMENT	\$0.00							\$0.00
GRAZING	\$5.00	1.00 ACRE						\$5.00
<b>TOTAL</b>								<b>\$80.00</b>
<b>PURCHASED INPUTS</b>								
	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
SEED	\$0.28	25 LBS	\$7.00					\$7.00
CROP INSURANCE	\$0.08		\$0.08					\$0.08
<b>SUBTOTAL</b>			<b>\$7.08</b>					<b>\$7.08</b>
<b>PREHARVEST OPERATIONS</b>								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SWEEP (2X)	185 HP	0.16 HR		\$1.19	\$3.48	\$1.79	\$3.81	\$10.27
STUBBLE MULCHER	185 HP	0.08 HR		\$0.60	\$1.74	\$1.22	\$3.30	\$6.85
RODWEED (2X)	126 HP	0.16 HR		\$1.19	\$2.77	\$0.76	\$1.73	\$6.45
DRILL	126 HP	0.12 HR		\$0.89	\$2.08	\$0.79	\$3.11	\$6.88
<b>SUBTOTAL</b>		<b>0.52 HR</b>		<b>\$3.87</b>	<b>\$10.07</b>	<b>\$4.56</b>	<b>\$11.95</b>	<b>\$30.46</b>
<b>HARVEST OPERATIONS</b>								
COMBINE	22 FT	0.14 HR		\$1.04	\$2.43	\$0.58	\$3.40	\$7.44
HAUL	2 TON	0.14 HR		\$1.04	\$1.87	\$0.86	\$4.51	\$8.28
<b>SUBTOTAL</b>		<b>0.28 HR</b>		<b>\$2.09</b>	<b>\$4.29</b>	<b>\$1.44</b>	<b>\$7.90</b>	<b>\$15.72</b>
<b>OVERHEAD EXPENSES</b>								
DOWNTIME		0.20 HR		\$1.49				\$1.49
EMPLOYEE BENEFITS				\$1.07				\$1.07
INSURANCE			\$0.12					\$0.12
LAND TAXES							\$0.31	\$0.31
SUPERVISION AND MANAGEMENT				\$6.60				\$6.60
OTHER EXPENSES			\$15.45					\$15.45
<b>SUBTOTAL</b>		<b>0.20 HR</b>	<b>\$15.57</b>	<b>\$9.16</b>			<b>\$0.31</b>	<b>\$25.04</b>
<b>TOTAL OPERATING EXPENSES</b>		<b>1.00 HR</b>	<b>\$22.65</b>	<b>\$15.12</b>	<b>\$14.36</b>	<b>\$6.00</b>	<b>\$20.17</b>	<b>\$78.31</b>
<b>NET OPERATING PROFIT</b>								<b>\$1.69</b>
INTEREST ON OPERATING CAPITAL		( \$7.68 @	8.00%	)				\$0.61
INTEREST ON EQUIPMENT INVESTMENT								\$12.03
<b>RETURN TO LAND AND RISK</b>								<b>(\$10.95)</b>

BUDGET SUMMARY			
GROSS RETURN		\$80.00	
VARIABLE OPERATING EXPENSES	\$43.02		
RETURN OVER VARIABLE EXPENSES		\$36.98	(GROSS MARGIN)
FIXED EXPENSES	\$20.17		
NET FARM INCOME		\$16.82	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$15.12		
NET OPERATING PROFIT		\$1.69	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$12.65		
<b>RETURN TO LAND AND RISK</b>		<b>(\$10.95)</b>	

TABLE 7. Grain sorghum, sprinkler-irrigated, budgeted per acre costs and returns for a 1,000 acre farm with above average management, Southern Quay County  
 Projected 2006.  
 Planting dates: June 15 - July 1<sup>st</sup>  
 Harvesting dates: September 20 - October 30

ITEM	PRICE	YIELD	BASE	TOTAL
<b>GROSS RETURNS</b>				
GRAIN SORGHUM	\$3.70	50.00 CWT		\$184.82
COUNTER CYCLICAL PAYMENT	\$0.00	0.00 CWT		\$0.00
DIRECT PAYMENT	\$0.00	50.00 CWT	0.85	\$0.00
<b>TOTAL</b>				<b>\$184.82</b>

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	\$1.22	5 LBS	\$6.10		\$6.10
NITROGEN (N)	\$0.52	80 LBS	\$41.60		\$41.60
PHOSPHATE (P205)	\$0.40	40 LBS	\$16.00		\$16.00
HERBICIDE	\$16.99	1 ACRE	\$16.99		\$16.99
PUMP WATER		12 AC. IN.			
CROP INSURANCE	\$0.14		\$0.14		\$0.14
<b>SUBTOTAL</b>			<b>\$80.83</b>		<b>\$80.83</b>

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SWEEP	185 HP	0.08 HR		\$0.60	\$1.74	\$0.89	\$1.91	\$5.14
DISC (2X)	185 HP	0.22 HR		\$1.64	\$4.79	\$3.32	\$7.14	\$16.88
SPRAYER	126 HP	0.06 HR		\$0.45	\$1.04	\$0.28	\$1.17	\$2.93
LISTER	185 HP	0.12 HR		\$0.89	\$2.61	\$1.01	\$3.12	\$7.64
ROD WEED & PLANTER	185 HP	0.18 HR		\$1.34	\$3.92	\$1.55	\$5.98	\$12.79
CULTIVATOR (2X)	126 HP	0.26 HR		\$1.94	\$4.50	\$2.00	\$3.85	\$12.30
IRRIGATE (12X)		1.20 HR		\$7.98	\$43.87	\$0.00	\$10.29	\$62.14
<b>SUBTOTAL</b>		<b>2.12 HR</b>		<b>\$14.83</b>	<b>\$62.47</b>	<b>\$9.05</b>	<b>\$33.46</b>	<b>\$119.82</b>

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
COMBINE	22 FT	0.16		\$1.19	\$2.77	\$0.66	\$3.88	\$8.50
HAUL	2 TON	0.16		\$1.19	\$2.13	\$0.99	\$5.15	\$9.46
<b>SUBTOTAL</b>		<b>0.32 HR</b>		<b>\$2.38</b>	<b>\$4.91</b>	<b>\$1.65</b>	<b>\$9.03</b>	<b>\$17.97</b>

OVERHEAD EXPENSES	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DOWNTIME	0.61 HR			\$4.54			\$4.54
EMPLOYEE BENEFITS				\$3.10			\$3.10
INSURANCE		\$0.34					\$0.34
LAND TAXES						\$0.78	\$0.78
SUPERVISION AND MANAGEMENT			\$13.94				\$13.94
OTHER EXPENSES		\$28.60					\$28.60
<b>SUBTOTAL</b>	<b>0.61 HR</b>	<b>\$28.94</b>	<b>\$21.58</b>			<b>\$0.78</b>	<b>\$51.31</b>

TOTAL OPERATING EXPENSES 2.73 HR \$109.77 \$38.80 \$67.37 \$10.70 \$43.28 \$269.92

NET OPERATING PROFIT (\$85.10)

INTEREST ON OPERATING CAPITAL ( \$58.84 @ 8.00% ) \$4.71  
 INTEREST ON EQUIPMENT INVESTMENT \$26.07

RETURN TO LAND AND RISK (\$115.87)

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

GROSS RETURN		\$184.82	
VARIABLE OPERATING EXPENSES	\$187.84		
RETURN OVER VARIABLE EXPENSES		(\$3.02)	(GROSS MARGIN)
FIXED EXPENSES	\$43.28		
NET FARM INCOME		(\$46.30)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$38.80		
NET OPERATING PROFIT		(\$85.10)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$30.78		
RETURN TO LAND AND RISK		(\$115.87)	

TABLE 8. Summary of per acre costs and returns for a 1,000 acre farm, Southern Quay County, Projected 2006.

	WHEAT (Dryland)	GRAIN SORGHUM (Sprinkler)
	BU	CWT
PRIMARY YIELD	20.00	50.00
PRIMARY PRICE	\$3.75	\$3.70
GOVERNMENT PAYMENTS	\$0.00	\$0.00
SECOND INCOME	\$5.00	\$0.00
GROSS RETURN	\$80.00	\$184.82
CASH OPERATING EXPENSES		
SEED	\$7.00	\$6.10
FERTILIZER		\$57.60
CHEMICALS		\$16.99
CROP INSURANCE	\$0.08	\$0.14
OTHER PURCHASED INPUTS		
CANAL WATER		
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$14.36	\$23.50
FUEL-IRRIGATION		\$43.87
REPAIRS	\$6.00	\$10.70
CUSTOM CHARGES		
LAND TAXES	\$0.31	\$0.78
OTHER EXPENSES	\$15.57	\$28.94
TOTAL CASH EXPENSES	\$43.33	\$188.62
RETURN OVER CASH EXPENSES	\$36.67	(\$3.80)
FIXED EXPENSES	\$19.86	\$42.50
TOTAL EXPENSES	\$63.18	\$231.12
NET FARM INCOME	\$16.82	(\$46.30)
LABOR AND MANAGEMENT COSTS	\$15.12	\$38.80
NET OPERATING PROFIT	\$1.69	(\$85.10)
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL	\$0.61	\$4.71
INTEREST ON EQUIPMENT INVESTMENT	\$12.03	\$26.07
TOTAL CAPITAL COSTS	\$12.65	\$30.78
RETURN TO LAND AND RISK	(\$10.95)	(\$115.87)

TABLE 9. Whole farm summary, Southern Quay County,  
Projected 2006.

GROSS RETURNS		
WHEAT	607.75 ACRES	
CROP		\$45,581
GRAZING		\$3,039
DIRECT PAYMENT		\$0
COUNTER CYCLICAL PAYMENT		\$0
GRAIN SORGHUM	357.25 ACRES	
CROP		\$66,027
COUNTER CYCLICAL PAYMENT		\$0
DIRECT PAYMENT		\$0
GROSS RETURN		<u>\$114,647</u>
CASH OPERATING EXPENSES		
SEED		\$6,433
FERTILIZER		\$20,578
CHEMICALS		\$6,068
CROP INSURANCE		\$100
OTHER PURCHASED INPUTS		\$0
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$17,126
FUEL-IRRIGATION		\$15,673
REPAIRS		\$7,470
CUSTOM CHARGES		\$0
LAND TAXES		\$469
OTHER EXPENSES		\$19,801
TOTAL CASH EXPENSES		<u>\$93,717</u>
RETURN OVER CASH EXPENSES		\$20,930
FIXED EXPENSES		\$27,249
TOTAL EXPENSES		\$120,966
NET FARM INCOME		(\$6,319)
LABOR AND MANAGEMENT COSTS		\$23,052
NET OPERATING PROFIT		(\$29,371)
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$2,055
INTEREST ON EQUIPMENT INVESTMENT		\$16,626
TOTAL CAPITAL COSTS		<u>\$18,681</u>
RETURN TO LAND AND RISK		<u>(\$48,052)</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$150 /ACRE	(\$52,552)	-8.78%
\$300 /ACRE	(\$57,052)	-6.06%
\$450 /ACRE	(\$61,552)	-4.63%
\$600 /ACRE	(\$66,052)	-3.74%
\$750 /ACRE	(\$70,552)	-3.14%
\$900 /ACRE	(\$75,052)	-2.71%

\* 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)