

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... SOUTHERN QUAY COUNTProjected 2009.  
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 2009.

BUDGET AREA..... SOUTHERN QUAY COUNTY			
FARM SIZE.....	1,000 ACRES		
IRRIGATION TYPE.....	SPRINKLER/DRYLAND		
NUMBER OF CROPS.....	2		
		WATER USE	
ACREAGE SUMMARY:	LAND USE (ACRES)	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 2009.

Item		
<b>Labor Wage Rate:</b>		
Equipment operators	\$/hour	\$8.55
General & Irrigators	\$/hour	\$7.25
<b>Purchased Inputs:</b>		
<b>Fertilizer:</b>		
Nitrogen (N)	\$/pound	\$0.62
Phosphate (P205)	\$/pound	\$0.58
<b>Seed:</b>		
Wheat	\$/pound	\$0.26
Grain Sorghum	\$/pound	\$1.69
<b>Energy Costs:</b>		
Diesel fuel	\$/gallon	\$2.80
Gasoline	\$/gallon	\$2.50
Electricity (Farmers Elec Coop)	cents/KwHr	7.26
LP Gas	\$/gallon	\$2.55
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	7.50%
Land Interest Rate	percent	7.25%
Equipment Interest Rate	percent	7.50%
Real Interest Rate	percent	3.00%
<b>Land Taxes</b>		
Irrigated	\$96.00 /acre (full value)	\$0.79
Dryland	\$38.00 /acre (full value)	\$0.31
Personal Property Tax Rate	- NR - R	\$/1,000 (Assessed Value)
		\$24.65 \$17.65
<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 2009.

Item		
Electricity (Domestic & Shop)		\$232.00 per month
Telephone		\$116.00 per month
Accounting & Legal		\$1,705
Misc. Supplies & Hand Tools		\$2,558
Pickup and Auto		
miles	23,896	@ \$0.415 per mile
Insurance		
- general liability (non-employee)		\$1,833
- fire/theft		\$1,450
Property Taxes		
- non-planted land		\$0
- other than land & machinery		\$6,010
Building repairs and maintenance		\$1,392
Dues, fees, publications		\$418
Farmstead Equipment		\$174
		<b>Total</b>
		<b>\$29,632</b>
		Total per planted acre
		\$30.71
		Total per dryland acre
		\$16.59



TABLE 6. Wheat, dryland, budgeted per acre costs and returns for a 1,000 acre farm with above average management, Southern Quay County, Projected 2009.  
Planting dates: August 20 - September 15  
Harvesting dates: June 15 - July 10

ITEM	PRICE	YIELD	BASE	TOTAL
<b>GROSS RETURNS</b>				
WHEAT	\$6.00	20.00 BUSHEL		\$120.00
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>\$125.00</b>

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	\$0.26	25 LBS	\$6.50		\$6.50
CROP INSURANCE	\$0.08		\$0.08		\$0.08
<b>SUBTOTAL</b>			<b>\$6.58</b>		<b>\$6.58</b>

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SWEEP (2X)	185 HP	0.16 HR		\$1.37	\$4.64	\$1.79	\$3.81	\$11.61
STUBBLE MULCHER	185 HP	0.08 HR		\$0.68	\$2.32	\$1.22	\$3.30	\$7.52
RODWEED (2X)	126 HP	0.16 HR		\$1.37	\$3.70	\$0.76	\$1.73	\$7.55
DRILL	126 HP	0.12 HR		\$1.03	\$2.77	\$0.79	\$3.12	\$7.71
<b>SUBTOTAL</b>		<b>0.52 HR</b>		<b>\$4.45</b>	<b>\$13.43</b>	<b>\$4.56</b>	<b>\$11.96</b>	<b>\$34.39</b>

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
COMBINE	22 FT	0.14 HR		\$1.20	\$3.23	\$0.58	\$3.40	\$8.40
HAUL	2 TON	0.14 HR		\$1.20	\$2.49	\$0.86	\$4.51	\$9.06
<b>SUBTOTAL</b>		<b>0.28 HR</b>		<b>\$2.39</b>	<b>\$5.72</b>	<b>\$1.44</b>	<b>\$7.91</b>	<b>\$17.46</b>

OVERHEAD EXPENSES	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DOWNTIME	0.20 HR		\$1.71				\$1.71
EMPLOYEE BENEFITS			\$1.23				\$1.23
INSURANCE		\$0.14					\$0.14
LAND TAXES						\$0.31	\$0.31
SUPERVISION AND MANAGEMENT			\$9.75				\$9.75
OTHER EXPENSES		\$16.59					\$16.59
<b>SUBTOTAL</b>	<b>0.20 HR</b>	<b>\$16.73</b>	<b>\$12.69</b>			<b>\$0.31</b>	<b>\$29.73</b>

<b>TOTAL OPERATING EXPENSES</b>	<b>1.00 HR</b>	<b>\$23.31</b>	<b>\$19.53</b>	<b>\$19.15</b>	<b>\$6.00</b>	<b>\$20.17</b>	<b>\$88.17</b>
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<b>NET OPERATING PROFIT</b>							<b>\$36.83</b>
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INTEREST ON OPERATING CAPITAL	(	\$8.39	@	7.50%	)		\$0.63
INTEREST ON EQUIPMENT INVESTMENT							\$11.28

<b>RETURN TO LAND AND RISK</b>							<b>\$24.92</b>
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**BUDGET SUMMARY**

GROSS RETURN		\$125.00	
VARIABLE OPERATING EXPENSES	\$48.46		
RETURN OVER VARIABLE EXPENSES		\$76.54	(GROSS MARGIN)
FIXED EXPENSES	\$20.17		
NET FARM INCOME		\$56.36	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$19.53		
NET OPERATING PROFIT		\$36.83	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$11.91		
RETURN TO LAND AND RISK		\$24.92	

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 2009.  
 Planting dates: June 15 - July 15  
 Harvesting dates: September 20 - October 30

ITEM	PRICE	YIELD	BASE	TOTAL
<b>GROSS RETURNS</b>				
GRAIN SORGHUM	\$7.70	50.00 CWT		\$385.00
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>\$385.00</b>

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	\$1.69	5 LBS	\$8.45		\$8.45
NITROGEN (N)	\$0.62	80 LBS	\$49.60		\$49.60
PHOSPHATE (P205)	\$0.58	40 LBS	\$23.20		\$23.20
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>\$98.38</b>		<b>\$98.38</b>

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SWEEP	185 HP	0.08 HR		\$0.68	\$2.32	\$0.89	\$1.91	\$5.81
DISC (2X)	185 HP	0.22 HR		\$1.88	\$6.38	\$3.32	\$7.14	\$18.72
SPRAYER	126 HP	0.06 HR		\$0.51	\$1.39	\$0.28	\$1.17	\$3.35
LISTER	185 HP	0.12 HR		\$1.03	\$3.48	\$1.01	\$3.13	\$8.65
ROD WEED & PLANTER	185 HP	0.18 HR		\$1.54	\$5.22	\$1.55	\$5.99	\$14.29
CULTIVATOR (2X)	126 HP	0.26 HR		\$2.22	\$6.01	\$2.00	\$3.86	\$14.08
IRRIGATE (12X)		1.20 HR		\$8.70	\$43.93	\$0.00	\$10.29	\$62.92
<b>SUBTOTAL</b>		<b>2.12 HR</b>		<b>\$16.57</b>	<b>\$68.72</b>	<b>\$9.05</b>	<b>\$33.48</b>	<b>\$127.82</b>

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
COMBINE	22 FT	0.16		\$1.37	\$3.70	\$0.66	\$3.88	\$9.61
HAUL	2 TON	0.16		\$1.37	\$2.85	\$0.99	\$5.15	\$10.35
<b>SUBTOTAL</b>		<b>0.32 HR</b>		<b>\$2.74</b>	<b>\$6.54</b>	<b>\$1.65</b>	<b>\$9.03</b>	<b>\$19.96</b>

OVERHEAD EXPENSES	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DOWNTIME	0.61 HR		\$5.22				\$5.22
EMPLOYEE BENEFITS			\$3.47				\$3.47
INSURANCE		\$0.39					\$0.39
LAND TAXES						\$0.79	\$0.79
SUPERVISION AND MANAGEMENT			\$27.95				\$27.95
OTHER EXPENSES		\$30.71					\$30.71
<b>SUBTOTAL</b>	<b>0.61 HR</b>	<b>\$31.09</b>	<b>\$36.64</b>			<b>\$0.79</b>	<b>\$68.52</b>

<b>TOTAL OPERATING EXPENSES</b>	<b>2.73 HR</b>	<b>\$129.47</b>	<b>\$55.94</b>	<b>\$75.27</b>	<b>\$10.70</b>	<b>\$43.30</b>	<b>\$314.68</b>
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<b>NET OPERATING PROFIT</b>							<b>\$70.32</b>
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INTEREST ON OPERATING CAPITAL	(	\$69.31	@	7.50%	)		\$5.20
INTEREST ON EQUIPMENT INVESTMENT							\$24.44

<b>RETURN TO LAND AND RISK</b>							<b>\$40.68</b>
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\* Pump water costs are shown under irrigation in the preharvest operations section.

**BUDGET SUMMARY**

GROSS RETURN		\$385.00	
VARIABLE OPERATING EXPENSES	\$215.43		
RETURN OVER VARIABLE EXPENSES		\$169.57	(GROSS MARGIN)
FIXED EXPENSES	\$43.30		
NET FARM INCOME		\$126.27	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$55.94		
NET OPERATING PROFIT		\$70.32	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$29.64		
RETURN TO LAND AND RISK		\$40.68	

TABLE 8. Summary of per acre costs and returns for a 1,000 acre farm, Southern Quay County, Projected 2009.

	WHEAT (Dryland)	GRAIN SORGHUM (Sprinkler)
	BU	CWT
PRIMARY YIELD	20.00	50.00
PRIMARY PRICE	\$6.00	\$7.70
GOVERNMENT PAYMENTS	\$0.00	\$0.00
SECOND INCOME	\$5.00	\$0.00
GROSS RETURN	\$125.00	\$385.00
CASH OPERATING EXPENSES		
SEED	\$6.50	\$8.45
FERTILIZER		\$72.80
CHEMICALS		\$16.99
CROP INSURANCE	\$0.08	\$0.14
OTHER PURCHASED INPUTS		
CANAL WATER		
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$19.15	\$31.34
FUEL-IRRIGATION		\$43.93
REPAIRS	\$6.00	\$10.70
CUSTOM CHARGES		
LAND TAXES	\$0.31	\$0.79
OTHER EXPENSES	\$16.73	\$31.09
TOTAL CASH EXPENSES	\$48.78	\$216.22
RETURN OVER CASH EXPENSES	\$76.22	\$168.78
FIXED EXPENSES	\$19.86	\$42.51
TOTAL EXPENSES	\$68.64	\$258.73
NET FARM INCOME	\$56.36	\$126.27
LABOR AND MANAGEMENT COSTS	\$19.53	\$55.94
NET OPERATING PROFIT	\$36.83	\$70.32
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL	\$0.63	\$5.20
INTEREST ON EQUIPMENT INVESTMENT	\$11.28	\$24.44
TOTAL CAPITAL COSTS	\$11.91	\$29.64
RETURN TO LAND AND RISK	\$24.92	\$40.68

TABLE 9. Whole farm summary, Southern Quay County,  
Projected 2009.

GROSS RETURNS		
WHEAT	607.75 ACRES	
CROP		\$72,930
GRAZING		\$3,039
DIRECT PAYMENT		\$0
COUNTER CYCLICAL PAYMENT		\$0
GRAIN SORGHUM	357.25 ACRES	
CROP		\$137,541
COUNTER CYCLICAL PAYMENT		\$0
DIRECT PAYMENT		\$0
GROSS RETURN		<u>\$213,510</u>
CASH OPERATING EXPENSES		
SEED		\$6,969
FERTILIZER		\$26,008
CHEMICALS		\$6,068
CROP INSURANCE		\$100
OTHER PURCHASED INPUTS		\$0
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$22,834
FUEL-IRRIGATION		\$15,694
REPAIRS		\$7,470
CUSTOM CHARGES		\$0
LAND TAXES		\$472
OTHER EXPENSES		\$21,273
TOTAL CASH EXPENSES		<u>\$106,888</u>
RETURN OVER CASH EXPENSES		\$106,622
FIXED EXPENSES		\$27,258
TOTAL EXPENSES		\$134,147
NET FARM INCOME		\$79,363
LABOR AND MANAGEMENT COSTS		\$31,855
NET OPERATING PROFIT		\$47,508
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$2,239
INTEREST ON EQUIPMENT INVESTMENT		\$15,587
TOTAL CAPITAL COSTS		<u>\$17,827</u>
RETURN TO LAND AND RISK		<u>\$29,681</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$150 /ACRE	\$25,181	13.18%
\$300 /ACRE	\$20,681	9.30%
\$450 /ACRE	\$16,181	7.19%
\$600 /ACRE	\$11,681	5.86%
\$750 /ACRE	\$7,181	4.95%
\$900 /ACRE	\$2,681	4.28%

\* 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)