

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... SOUTHERN QUAY COUNTY, Projected 2010.
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 2010.

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

ACREAGE SUMMARY:	WATER USE		
	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		
TOTAL	1,000.00		3,000

TABLE 2. Basic cost information for Southern Quay County, Projected 2010.

Item		
Labor Wage Rate:		
Equipment operators	\$/hour	\$8.55
General & Irrigators	\$/hour	\$7.25
Purchased Inputs:		
Fertilizer:		
Nitrogen (N)	\$/pound	\$0.58
Phosphate (P205)	\$/pound	\$0.51
Seed:		
Wheat	\$/pound	\$0.26
Grain Sorghum	\$/pound	\$2.10
Energy Costs:		
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%
Financial Rates:		
Operating Capital Interest Rate	percent	7.50%
Land Interest Rate	percent	7.00%
Equipment Interest Rate	percent	7.50%
Real Interest Rate	percent	3.00%
Land Taxes		
Irrigated	\$96.00 /acre (full value)	\$0.80
Dryland	\$38.00 /acre (full value)	\$0.32
Personal Property Tax Rate	- NR - R	\$/1,000 (Assessed Value) \$25.05 \$18.64
Supervision Factors		
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 2010.

Item		
Electricity (Domestic & Shop)	\$236.00 per month	\$2,832
Telephone	\$118.00 per month	\$1,416
Accounting & Legal		\$1,735
Misc. Supplies & Hand Tools		\$2,602
Pickup and Auto	miles 24,308 @ \$0.415 per mile	\$10,088
Insurance		
- general liability (non-employee)		\$1,864
- fire/theft		\$1,475
Property Taxes		
- non-planted land		\$0
- other than land & machinery		\$6,010
Building repairs and maintenance		\$1,416
Dues, fees, publications		\$425
Farmstead Equipment		\$177
Total		\$30,040
	Total per planted acre	\$31.13
	Total per dryland acre	\$16.82

TABLE 6. Wheat, dryland, budgeted per acre costs and returns for a 1,000 acre farm with above average management, Southern Quay County, Projected 2010.
 Planting dates: August 20 - September 15
 Harvesting dates: June 15 - July 10

ITEM	PRICE	YIELD	BASE	TOTAL
GROSS RETURNS				
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
TOTAL				\$125.00

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
SUBTOTAL			\$6.58		\$6.58

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	\$3.82	\$11.62
STUBBLE MULCHER	185 HP	0.08 HR		\$0.68	\$2.32	\$1.22	\$3.30	\$7.53
RODWEED (2X)	126 HP	0.16 HR		\$1.37	\$3.70	\$0.76	\$1.73	\$7.56
DRILL	126 HP	0.12 HR		\$1.03	\$2.77	\$0.79	\$3.12	\$7.71
SUBTOTAL		0.52 HR		\$4.45	\$13.43	\$4.56	\$11.97	\$34.41

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	\$8.41
HAUL	2 TON	0.14 HR		\$1.20	\$2.49	\$0.86	\$4.51	\$9.06
SUBTOTAL		0.28 HR		\$2.39	\$5.72	\$1.44	\$7.91	\$17.47

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						\$0.32	\$0.32
SUPERVISION AND MANAGEMENT			\$9.75				\$9.75
OTHER EXPENSES		\$16.82					\$16.82
SUBTOTAL	0.20 HR	\$16.95	\$12.69			\$0.32	\$29.96

TOTAL OPERATING EXPENSES 1.00 HR \$23.54 \$19.53 \$19.15 \$6.00 \$20.20 \$88.42

NET OPERATING PROFIT \$36.58

INTEREST ON OPERATING CAPITAL (\$8.39 @ 7.50%) \$0.63
 INTEREST ON EQUIPMENT INVESTMENT \$11.28

RETURN TO LAND AND RISK \$24.67

BUDGET SUMMARY

GROSS RETURN		\$125.00	
VARIABLE OPERATING EXPENSES	\$48.69		
RETURN OVER VARIABLE EXPENSES		\$76.31	(GROSS MARGIN)
FIXED EXPENSES	\$20.20		
NET FARM INCOME		\$56.11	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$19.53		
NET OPERATING PROFIT		\$36.58	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$11.91		
RETURN TO LAND AND RISK		\$24.67	

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 2010.
 Planting dates: June 15 - July 15
 Harvesting dates: September 20 - October 30

ITEM	PRICE	YIELD	BASE	TOTAL
GROSS RETURNS				
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
TOTAL				\$385.00

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	\$2.10	5 LBS	\$10.50		\$10.50
NITROGEN (N)	\$0.58	80 LBS	\$46.40		\$46.40
PHOSPHATE (P205)	\$0.51	40 LBS	\$20.40		\$20.40
HERBICIDE	\$16.99	1 ACRE	\$16.99		\$16.99
PUMP WATER		12 AC. IN.			
CROP INSURANCE	\$0.14		\$0.14		\$0.14
SUBTOTAL			\$94.43		\$94.43

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	\$7.15	\$18.73
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	\$14.30
CULTIVATOR (2X)	126 HP	0.26 HR		\$2.22	\$6.01	\$2.00	\$3.86	\$14.09
IRRIGATE (12X)		1.20 HR		\$8.70	\$43.93	\$0.00	\$10.30	\$62.93
SUBTOTAL		2.12 HR		\$16.57	\$68.72	\$9.05	\$33.51	\$127.86

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	\$3.89	\$9.61
HAUL	2 TON	0.16		\$1.37	\$2.85	\$0.99	\$5.16	\$10.36
SUBTOTAL		0.32 HR		\$2.74	\$6.54	\$1.65	\$9.04	\$19.97

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						\$0.80	\$0.80
SUPERVISION AND MANAGEMENT			\$27.95				\$27.95
OTHER EXPENSES		\$31.13					\$31.13
SUBTOTAL	0.61 HR	\$31.52	\$36.64			\$0.80	\$68.96

TOTAL OPERATING EXPENSES 2.73 HR \$125.94 \$55.94 \$75.27 \$10.70 \$43.36 \$311.20

NET OPERATING PROFIT \$73.80

INTEREST ON OPERATING CAPITAL (\$67.34 @ 7.50%) \$5.05
 INTEREST ON EQUIPMENT INVESTMENT \$24.44

RETURN TO LAND AND RISK \$44.30

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

BUDGET SUMMARY

GROSS RETURN		\$385.00	
VARIABLE OPERATING EXPENSES	\$211.91		
RETURN OVER VARIABLE EXPENSES	\$173.09		(GROSS MARGIN)
FIXED EXPENSES	\$43.36		
NET FARM INCOME	\$129.74		(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$55.94		
NET OPERATING PROFIT	\$73.80		(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$29.49		
RETURN TO LAND AND RISK		\$44.30	

TABLE 8. Summary of per acre costs and returns for a 1,000 acre farm, Southern Quay County, Projected 2010.

	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	\$10.50
FERTILIZER		\$66.80
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	\$0.32	\$0.80
OTHER EXPENSES	\$16.95	\$31.52
TOTAL CASH EXPENSES	\$49.01	\$212.71
RETURN OVER CASH EXPENSES	\$75.99	\$172.29
FIXED EXPENSES	\$19.88	\$42.55
TOTAL EXPENSES	\$68.89	\$255.26
NET FARM INCOME	\$56.11	\$129.74
LABOR AND MANAGEMENT COSTS	\$19.53	\$55.94
NET OPERATING PROFIT	\$36.58	\$73.80
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL	\$0.63	\$5.05
INTEREST ON EQUIPMENT INVESTMENT	\$11.28	\$24.44
TOTAL CAPITAL COSTS	\$11.91	\$29.49
RETURN TO LAND AND RISK	\$24.67	\$44.30

TABLE 9. Whole farm summary, Southern Quay County,
Projected 2010.

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		\$7,702
FERTILIZER		\$23,864
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		\$479
OTHER EXPENSES		\$21,562
TOTAL CASH EXPENSES		<u>\$105,774</u>
RETURN OVER CASH EXPENSES		\$107,736
FIXED EXPENSES		\$27,286
TOTAL EXPENSES		\$133,060
NET FARM INCOME		\$80,450
LABOR AND MANAGEMENT COSTS		\$31,855
NET OPERATING PROFIT		\$48,594
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$2,187
INTEREST ON EQUIPMENT INVESTMENT		\$15,587
TOTAL CAPITAL COSTS		<u>\$17,774</u>
RETURN TO LAND AND RISK		<u>\$30,821</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$150 /ACRE	\$26,321	13.78%
\$300 /ACRE	\$21,821	9.67%
\$450 /ACRE	\$17,321	7.45%
\$600 /ACRE	\$12,821	6.05%
\$750 /ACRE	\$8,321	5.10%
\$900 /ACRE	\$3,821	4.41%

* 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)