

TABLE 1. Basic cost information for Southern Quay County, 2003.

Item			
Labor Wage Rate:			
Equipment operators	\$/hour		\$7.55
General & Irrigators	\$/hour		\$6.75
Purchased Inputs:			
Fertilizer:			
Nitrogen (N)	\$/pound		\$0.36
Phosphate (P205)	\$/pound		\$0.33
Seed:			
Wheat	\$/pound		\$0.13
Grain Sorghum	\$/pound		\$1.20
Energy Costs:			
Diesel fuel	\$/gallon		\$1.30
Gasoline	\$/gallon		\$1.35
Electricity (Farmers Elec Coop)	cents/KwHr		6.13
LP Gas	\$/gallon		\$1.21
Employee Liability Insurance	\$/ \$1,000 wages		\$20.00
Employee Benefits	percent/w ages		18.00%
Labor Downtime	percent		25.00%
Financial Rates:			
Operating Capital Interest Rate	percent		8.00%
Land Interest Rate	percent		7.00%
Equipment Interest Rate	percent		8.00%
Real Interest Rate	percent		4.00%
Land Taxes			
Irrigated	\$96.00 /acre (full value)		\$0.84
Dryland	\$38.00 /acre (full value)		\$0.33
Personal Property Tax Rate - NR	\$/ \$1,000 (Assessed Value)		\$26.29
- R			\$25.01
Supervision Factors			
Field Crop-Irrigation	\$/acre		\$1.00
Field Crop-Equipment & General	\$/acre		\$0.50
Management Rate	percent		7.00%

BUDGET AREA..... SOUTHERN QUAY COUNTY, 2003.
 FARM SIZE 1000 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		
TOTAL	1,000.00		3,000

TABLE 1a. Overhead cost information for Southern Quay County, 2003.

ITEM			
Electricity (Domestic & Shop)		\$215.00 per month	\$2,580
Telephone		\$115.00 per month	\$1,380
Accounting & Legal			\$1,610
Misc. Supplies & Hand Tools			\$2,410
Pickup and Auto			
miles	20,600	@ \$0.365 per mile	\$7,519
Insurance			
- general liability (non-employee)			\$1,725
- fire/theft			\$1,370
Property Taxes			
- non-planted land			\$8
- other than land & machinery			\$610
Building repairs and maintenance			\$1,310
Dues, fees, publications			\$390
Farmstead Equipment			\$165
		Total	\$21,078
		Total per planted acre	\$21.84
		Total per dryland acre	\$11.80

TABLE 2. Pumping costs and data for irrigation wells, Southern Quay County, 2003.

INPUT DATA

DELIVERY PSI:		DEPTH CHARACTERISTICS:	
SPRINKLER...	35	STATIC.....	200
		DRAW DOV.....	35
		TOTAL HEAD.....	235
		CASING.....	400
GALLONS PER MINUTE (GPM)...	350		
WORK HORSEPOWER	28		
EFFICIENCY FACTOR:			
ELECTRICITY.....	0.540		
LP GAS.....	0.154		
DIESEL.....	0.160		
FUEL COST PER HOUR:			
ELECTRICITY.....	6.13	CENTS/K wHr	
LP GAS.....	\$1.21	\$/GAL	
DIESEL.....	\$1.30	\$/GAL	

PUMPING COSTS

ELECTRIC WELL:		
COST PER HOUR.....	\$	\$2.40
COST PER ACRE INCH.....	\$	\$3.10
LP GAS WELL:		
COST PER HOUR.....	\$	\$6.11
COST PER ACRE INCH.....	\$	\$7.89
DIESEL WELL:		
COST PER HOUR.....	\$	\$4.10
COST PER ACRE INCH.....	\$	\$5.30

TABLE 3. Equipment summary for a 1,000 acre dryland/sprinkler-irrigated farm with above average management, Southern Quay County, 2003.

EQUIPMENT	ANNUAL		VARIABLE COSTS					FIXED COSTS		
	HOURS OF USE	NUMBER	TOTAL VALUE	FUEL, OIL LUBRICANT	REPAIR	FUEL, OIL PER HR	REPAIR PER HR	DEPRECIATION	TAXES	TOTAL PER HOUR
TRACTOR 126 HP	284	1	\$31,240	\$2,616	\$1,364	\$9.19	\$4.79	\$2,740	\$300	\$10.68
TRACTOR 185 HP	360	1	\$40,700	\$4,863	\$3,563	\$13.50	\$9.89	\$5,995	\$394	\$17.74
COMBINE 145 HP	142	1	\$38,150	\$1,544	\$0	\$10.86	\$0.00	\$7,600	\$500	\$56.94
GRAIN HEAD 22 FT	142	1	\$3,100		\$0		\$0.00	\$501	\$33	\$3.76
TRUCK 2 TON	142	1	\$22,000	\$1,175	\$0	\$8.26	\$0.00	\$4,400	\$193	\$32.29
PLANTER 6-ROW	64	1	\$4,250		\$585		\$9.10	\$850	\$37	\$13.80
RODWEEDER 23 FT	162	1	\$625		\$0		\$0.00	\$83	\$5	\$0.55
SWEEPS 23 FT	126	1	\$4,350		\$306		\$2.44	\$580	\$38	\$4.91
CULTIVATOR 6-ROW	93	1	\$2,500		\$139		\$1.50	\$333	\$22	\$3.82
DISC 18 FT OFFSET	79	1	\$5,400		\$259		\$3.29	\$720	\$47	\$9.76
CRUSBUSTER 28 FT	73	1	\$5,500		\$858		\$11.77	\$1,100	\$48	\$15.74
LISTER 6-ROW	43	1	\$2,150		\$63		\$1.46	\$287	\$19	\$7.13
STUBBLE MULCHER 25 FT	49	1	\$7,650		\$238		\$4.90	\$1,020	\$67	\$22.36
SPRAYER (MTD) 16 FT	21	1	\$1,400		\$38		\$1.76	\$187	\$12	\$9.28
PIVOT SPRINKLER (MOVEABLE)	5543	1	\$17,250	\$2,772	\$887	\$0.50	\$0.16	\$2,300	\$151	\$0.44
ELECTRIC WELL	5543	2	\$36,000	\$13,277	\$502	\$2.40	\$0.09	\$4,800	\$315	\$0.92
			\$222,265	\$26,247	\$8,802			\$33,496	\$2,182	

TABLE 4. Wheat, dryland, budgeted per acre costs and returns for a 1,000 acre farm with above average management, Southern Quay County, 2003.
 Planting dates: August 20 - September 15
 Harvesting dates: June 15 - July 10

ITEM	PRICE	YIELD							TOTAL
GROSS RETURNS									
WHEAT	\$4.50	20.00	BUSHEL						\$90.00
DIRECT PAYMENT	\$0.52	20.00	BUSHEL						\$10.40
COUNTER CYCLICAL PAYMENT	\$0.00								\$0.00
GRAZING	\$5.00	1.00	ACRE						\$5.00
TOTAL									\$105.40
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY		PURCHASED INPUTS					TOTAL
SEED	\$0.13	25	LBS	\$3.25					\$3.25
CROP INSURANCE	\$0.08			\$0.08					\$0.08
SUBTOTAL				\$3.33					\$3.33
PREHARVEST OPERATIONS									
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE		PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL
SWEEP (2X)	185 HP	0.16	HR		\$1.21	\$2.16	\$1.97	\$3.62	\$8.96
STUBBLE MULCHER	185 HP	0.08	HR		\$0.60	\$1.08	\$1.18	\$3.21	\$6.07
RODWEED (2X)	126 HP	0.16	HR		\$1.21	\$1.47	\$0.77	\$1.80	\$5.24
DRILL	126 HP	0.12	HR		\$0.91	\$1.10	\$1.99	\$3.17	\$7.17
SUBTOTAL		0.52	HR		\$3.93	\$5.81	\$5.91	\$11.80	\$27.45
HARVEST OPERATIONS									
COMBINE	22 FT	0.14	HR		\$1.06	\$1.52	\$0.00	\$8.50	\$11.07
HAUL	2 TON	0.14	HR		\$1.06	\$1.16	\$0.00	\$4.52	\$6.73
SUBTOTAL		0.28	HR		\$2.11	\$2.68	\$0.00	\$13.02	\$17.81
OVERHEAD EXPENSES									
DOWNTIME		0.20	HR		\$1.51				\$1.51
EMPLOYEE BENEFITS					\$1.09				\$1.09
INSURANCE				\$0.12				\$0.12	
LAND TAXES							\$0.33	\$0.33	
SUPERVISION AND MANAGEMENT					\$8.38				\$8.38
OTHER EXPENSES				\$11.80				\$11.80	
SUBTOTAL		0.20	HR		\$11.92	\$10.98		\$0.33	\$23.23
TOTAL OPERATING EXPENSES		1.00	HR		\$15.25	\$17.02	\$8.49	\$5.91	\$25.15
NET OPERATING PROFIT									\$33.58
INTEREST ON OPERATING CAPITAL	(\$4.82	@	8.00%)	\$0.39
INTEREST ON EQUIPMENT INVESTMENT									\$13.83
RETURN TO LAND AND RISK									\$19.36

BUDGET SUMMARY

GROSS RETURN		\$105.40	
VARIABLE OPERATING EXPENSES	\$29.65		
RETURN OVER VARIABLE EXPENSES	\$75.75	(GROSS MARGIN)	
FIXED EXPENSES	\$25.15		
NET FARM INCOME	\$50.59	(RETURN TO CAPITAL, LABOR, LAND & RISK)	
LABOR AND MANAGEMENT COST	\$17.02		
NET OPERATING PROFIT	\$33.58	(RETURN TO CAPITAL, LAND & RISK)	
CAPITAL COSTS	\$14.22		
RETURN TO LAND AND RISK	\$19.36		

TABLE 5. Grain sorghum, sprinkler-irrigated, budgeted per acre costs and returns for a 1,000 acre farm with above average management, Southern Quay County, 2003.
 Planting dates: June 15 - July 15
 Harvesting dates: September 20 - October 30

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
GRAIN SORGHUM	\$3.95	50.00	CWT					\$197.50
COUNTER CYCLICAL PAYMENT	\$0.00	0.00	CWT					\$0.00
DIRECT PAYMENT	\$0.625	50.00	CWT					\$31.25
TOTAL								\$228.75
PURCHASED INPUTS								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS					TOTAL
SEED	\$1.20	5 LBS	\$6.00					\$6.00
NITROGEN (N)	\$0.36	80 LBS	\$28.80					\$28.80
PHOSPHATE (P205)	\$0.33	40 LBS	\$13.20					\$13.20
HERBICIDE	\$16.99	1 ACRE	\$16.99					\$16.99
PUMP WATER		12 AC. IN.						
CROP INSURANCE	\$0.14		\$0.14					\$0.14
SUBTOTAL								\$65.13
PREHARVEST OPERATIONS								
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & OIL	REPAIRS	FIXED COST	TOTAL
SWEEP	185 HP	0.08 HR		\$0.60	\$1.08	\$0.99	\$1.81	\$4.48
DISC (2X)	185 HP	0.22 HR		\$1.66	\$2.97	\$2.90	\$6.05	\$13.58
SPRAYER	126 HP	0.06 HR		\$0.45	\$0.55	\$0.39	\$1.20	\$2.60
LISTER	185 HP	0.12 HR		\$0.91	\$1.62	\$1.36	\$2.98	\$6.87
ROD WEED & PLANTER	185 HP	0.18 HR		\$1.36	\$2.43	\$3.42	\$5.77	\$12.98
CULTIVATOR (2X)	126 HP	0.26 HR		\$1.96	\$2.39	\$1.64	\$3.77	\$9.76
IRRIGATE (12X)		1.20 HR		\$8.10	\$44.92	\$3.89	\$21.18	\$78.09
SUBTOTAL								\$128.37
HARVEST OPERATIONS								
COMBINE	22 FT	0.16		\$1.21	\$1.74	\$0.00	\$9.71	\$12.66
HAUL	2 TON	0.16		\$1.21	\$1.32	\$0.00	\$5.17	\$7.70
SUBTOTAL								\$20.35
OVERHEAD EXPENSES								
DOWNTIME		0.61 HR		\$4.61				\$4.61
EMPLOYEE BENEFITS				\$3.14				\$3.14
INSURANCE				\$0.35				\$0.35
LAND TAXES							\$0.84	\$0.84
SUPERVISION AND MANAGEMENT				\$17.01				\$17.01
OTHER EXPENSES				\$21.84				\$21.84
SUBTOTAL								\$47.79
TOTAL OPERATING EXPENSES								\$261.64
NET OPERATING PROFIT								(\$32.89)
INTEREST ON OPERATING CAPITAL	(\$50.46	@	8.00%)			\$4.04
INTEREST ON EQUIPMENT INVESTMENT								\$28.21
RETURN TO LAND AND RISK								(\$65.13)

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

BUDGET SUMMARY

GROSS RETURN		\$228.75	
VARIABLE OPERATING EXPENSES	\$160.92		
RETURN OVER VARIABLE EXPENSES		\$67.83	(GROSS MARGIN)
FIXED EXPENSES	\$58.49		
NET FARM INCOME		\$9.34	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$42.22		
NET OPERATING PROFIT		(\$32.89)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$32.24		
RETURN TO LAND AND RISK		(\$65.13)	

TABLE 6. Summary of per acre costs and returns for a 1,000 acre farm with above average management, Southern Quay County, 2003.

	GRAIN	
	WHEAT DRYLAND	SORGHUM SPRINKLER
	BU	CWT
PRIMARY YIELD	20.00	50.00
PRIMARY PRICE	4.50	3.95
GOVERNMENT PAYMENTS	10.40	31.25
SECOND INCOME	5.00	0.00
GROSS RETURN	\$105.40	\$228.75
CASH OPERATING EXPENSES		
SEED	\$3.25	\$6.00
FERTILIZER		\$42.00
CHEMICALS		\$16.99
CROP INSURANCE	\$0.08	\$0.14
OTHER PURCHASED INPUTS		
CANAL WATER		
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$8.49	\$14.10
FUEL-IRRIGATION		\$44.92
REPAIRS	\$5.91	\$14.58
CUSTOM CHARGES		
LAND TAXES	\$0.33	\$0.84
OTHER EXPENSES	\$11.92	\$22.19
TOTAL CASH EXPENSES	\$29.99	\$161.77
RETURN OVER CASH EXPENSES	\$75.41	\$66.98
FIXED EXPENSES	\$24.82	\$57.65
TOTAL EXPENSES	\$54.81	\$219.41
NET FARM INCOME	\$50.59	\$9.34
LABOR AND MANAGEMENT COSTS	\$17.02	\$42.22
NET OPERATING PROFIT	\$33.58	(\$32.89)
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL	\$0.39	\$4.04
INTEREST ON EQUIPMENT INVESTMENT	\$13.83	\$28.21
TOTAL CAPITAL COSTS	\$14.22	\$32.24
RETURN TO LAND AND RISK	\$19.36	(\$65.13)
Flex Computation	\$58.01	\$20.72

TABLE 7. Whole farm summary, Southern Quay County, 2003.

GROSS RETURNS		
WHEAT	608 ACRES	
CROP		\$54,698
GRAZING		\$3,039
DIRECT PAYMENT		\$6,321
COUNTER CYCLICAL PAYMENT		\$0
GRAIN SORGHUM	357 ACRES	
CROP		\$70,557
COUNTER CYCLICAL PAYMENT		\$0
DIRECT PAYMENT		\$6,641
GROSS RETURN		<u>\$141,254</u>
CASH OPERATING EXPENSES		
SEED		\$4,119
FERTILIZER		\$15,005
CHEMICALS		\$6,068
CROP INSURANCE		\$100
OTHER PURCHASED INPUTS		\$0
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$10,198
FUEL-IRRIGATION		\$16,049
REPAIRS		\$8,802
CUSTOM CHARGES		\$0
LAND TAXES		\$503
OTHER EXPENSES		\$15,173
TOTAL CASH EXPENSES		<u>\$76,015</u>
RETURN OVER CASH EXPENSES		\$65,239
FIXED EXPENSES		\$35,678
TOTAL EXPENSES		\$111,694
NET FARM INCOME		\$29,561
LABOR AND MANAGEMENT COSTS		\$25,425
NET OPERATING PROFIT		\$4,135
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$1,676
INTEREST ON EQUIPMENT INVESTMENT		\$18,483
TOTAL CAPITAL COSTS		<u>\$20,160</u>
RETURN TO LAND AND RISK		<u>(\$16,024)</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$150 /ACRE	(\$22,024)	1.11%
\$300 /ACRE	(\$28,024)	0.79%
\$450 /ACRE	(\$34,024)	0.62%
\$600 /ACRE	(\$40,024)	0.50%
\$750 /ACRE	(\$46,024)	0.43%
\$900 /ACRE	(\$52,024)	0.37%

* RETURN TO LAND AND RISK MINUS (INTEREST RATE TIMES LAND VALUE TIMES ACREAGE

** NET OPERATING PROFIT DIVIDED BY (MACHINERY AND EQUIPMENT VALUE PLUS LAND V.