

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... SOUTHEASTERN QUAY COUNTY, Projected 2008.
FARM SIZE..... 1,920.00 ACRES
IRRIGATION TYPE... DRYLAND
NUMBER OF CROPS... 1

VERSION 1.0

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* YOU MAY ENTER DATA IN ANY INPUT TABLE WITH
HIGHLIGHTED CELLS OR YOU MAY STRIKE
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WHEAT ACRES: 1280 PUMP WATER:

Equip. Interest
Expense
(Wheat)
--\$/acre--

1.05
2.92
4.03
0.23
1.33
0.07
0.33
0.46
0.41

10.83

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT		
			RATE	TOTAL	CUSTOM
SWEEP	185 HP	2.00	0.05	0.10	
STUBBLE MULCHER	185 HP	1.00	0.05	0.05	
RODWEED	96 HP	2.00	0.05	0.10	
DRILL	185 HP	1.00	0.05	0.05	
COMBINE	22 FT	1.00	0.14	0.14	
HAUL	2 TON	1.00	0.14	0.14	

PER ACRE
WHEAT TOTALS

--hours per acre--
0.10 0.10
0.20 0.20
0.14 0.14
0.14 0.14
0.14 0.14
0.10 0.10
0.05 0.05
0.05 0.05
0.10 0.10

ANNUAL REPAIR COSTS AS A PERCENT OF NEW VALUE

Hours of Use	1	2	3	4	5	6	7	8
	*	*	*	*	**	**	**	**
0	0.000060	0.000020	0.000620	0.000020	0.000080	0.000140	0.000040	0.000240
50	0.000060	0.000020	0.000620	0.000020	0.000080	0.000140	0.000040	0.000240
100	0.000060	0.000020	0.000500	0.000020	0.000140	0.000220	0.000100	0.000380
200	0.000030	0.000030	0.000430	0.000040	0.000180	0.000260	0.000110	0.000510
300	0.000030	0.000050	0.000390	0.000060	0.000230	0.000310	0.000140	0.000630
400	0.000030	0.000060	0.000370	0.000090	0.000260	0.000340	0.000150	0.000710
500	0.000030	0.000070	0.000360	0.000100	0.000280	0.000370	0.000170	0.000800
600	0.000030	0.000090	0.000340	0.000120	0.000310	0.000390	0.000190	0.000860
700	0.000030	0.000100	0.000340	0.000130	0.000330	0.000410	0.000200	0.000910
800	0.000030	0.000110	0.000320	0.000150	0.000350	0.000430	0.000210	0.000980
900	0.000030	0.000120	0.000320	0.000160	0.000370	0.000450	0.000230	0.001020
1000	0.000090	0.000130	0.000310	0.000180	0.000380	0.000460	0.000230	0.001070
1200	0.000045	0.000145	0.000305	0.000205	0.000405	0.000480	0.000245	0.001135
1400	0.000045	0.000170	0.000300	0.000230	0.000435	0.000510	0.000410	0.001260
1500	0.000150	0.000170	0.000300	0.000230	0.000435	0.000510	0.000410	0.001260
1600	0.000150	0.000190	0.000285	0.000255	0.000465	0.000525	0.000135	0.001235
1800	0.000075	0.000170	0.000285	0.000285	0.000485	0.000550	0.000295	
2000	0.000110	0.000265	0.000280	0.000305	0.000505	0.000565	0.000310	
2500	0.000056							
3000	0.000070							
3500	0.000082							
4000	0.000096							
4500	0.000108							
5000	0.000122							
5500	0.000136							
6000	0.000148							
6500	0.000162							
7000	0.000176							
7500	0.000188							
8000	0.000204							

* Based on unpublished data of D. R. Hunt, Department of Agricultural Engineering, University of Illinois.

** Based on "Agricultural Machinery Data" in Agricultural Engineers Yearbook, 1983.

Codes

-
- 1 tractors
 - 2 balers, combines, forage harvesters, windrowers, pickups
 - 3 rotary hoe, disks, moldboard plows, chisels, field cultivators
row cultivators, laser plane
 - 4 harrows, wagons, floats, roto buck, drag, roller, water furrow,
bed shaper
 - 5 balewagons, cotton pickers, cotton strippers, corn pickers
corn heads, forage equipment, rotary mowers, stalk choppers,
feed wagons, farm trucks
 - 6 rakes, cutterbar mower
 - 7 baler w/ engine, manure spreader
 - 8 planters, drills, seeding equipment, mounted sprayers
 - 9 fertilizer distributing equipment

**

0.000200
0.000200
0.000300
0.000260
0.000400
0.000450
0.000630
0.000530
0.000560
0.000590
0.000600
0.000630
0.000710
0.000765
0.000765
0.000805

TABLE 1. Acreage Summary, Southeastern Quay County,
Projected 2008.

BUDGET AREA.....	SOUTHEASTERN QUAY COUNTY	
FARM SIZE.....	1920 ACRES	
IRRIGATION TYPE...	DRYLAND	
NUMBER OF CROPS...	1	
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ACREAGE SUMMARY:	LAND USE (ACRES)	
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WHEAT	1,088.00	
ARP	0.00	
FLEX IN WHEAT	192.00	
FALLOW	620.00	
ROADS, HOMESTEAD	20.00	
TOTAL	1,920.00	

TABLE 2. Basic cost information for Southeastern Quay County,
Projected 2008.

Item		
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Labor Wage Rate:		
Equipment operators	\$/hour	\$7.45
General & Irrigators	\$/hour	\$6.65
Purchased Inputs:		
Seed:		
Wheat	\$/pound	\$0.28
Energy:		
Diesel fuel	\$/gallon	\$3.05
Gasoline	\$/gallon	\$2.80
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	7.75%
Land Interest Rate	percent	7.75%
Equipment Interest Rate	percent	7.75%
Real Interest Rate	percent	3.00%
Land Taxes	\$38.00 /acre (full value)	\$0.31
Personal Property Tax Rate - NR	\$/(\$1,000 (Assessed	\$24.18
- R	Value)	\$16.59
Supervision Factor	\$/labor hour	\$1.00
Management Rate	percent	7.00%

TABLE 3. Overhead cost information for Southeastern Quay County,
Projected 2008.

Item		
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Electricity (Domestic & Shop)	\$224.00 per month	\$2,688
Telephone	\$173.60 per month	\$2,083
Accounting & Legal		\$1,618
Misc. Supplies & Hand Tools		\$2,408
Pickup and Auto		
miles	34,720 @ \$0.415 per mile	\$14,409
Insurance		
- general liability (non-employee)		\$1,736
- fire/theft		\$1,372
Property Taxes		
- non-planted land		\$0
- other than land & machinery		\$6,010
Building repairs and maintenance		\$1,322
Dues, fees, publications		\$398
Farmstead Equipment		\$168
Total		\$34,212
Total per planted acre		\$26.73

TABLE 4. Equipment summary for a 1,920 acre dryland farm, Southeastern Quay County, Projected 2008.

ITEM & SIZE	ANNUAL HOURS OF USE	NUMBER	TOTAL VALUE	VARIABLE COSTS					FIXED COSTS		
				FUEL, OIL, LUBRICANT	REPAIR	FUEL, OIL PER HR	REPAIR PER HR	DEPRECIATION	TAXES	TOTAL PER HR	
TRACTOR 93 HP	128	1	\$16,534	\$2,377	\$265	\$18.57	\$2.07	\$987	\$139	\$8.80	
TRACTOR 185 HP	256	1	\$39,214	\$8,088	\$1,481	\$31.59	\$5.79	\$6,428	\$389	\$26.63	
COMBINE 145 HP	179	1	\$63,415	\$4,565	\$477	\$25.47	\$2.66	\$8,864	\$536	\$52.45	
GRAIN HEAL 22 FT	179	1	\$3,600		\$27		\$0.15	\$501	\$30	\$2.97	
TRUCK 2T 20 FT	179	1	\$22,000	\$3,472	\$3,893	\$19.38	\$21.72	\$4,400	\$177	\$25.54	
ROD WEED 40 FT	128	1	\$1,200		\$190		\$1.49	\$160	\$10	\$1.33	
CRUSTBUS 40 FT	64	1	\$5,500		\$169		\$2.64	\$1,100	\$44	\$17.88	
STUB. MULC 25 FT	64	1	\$7,650		\$607		\$9.49	\$1,020	\$62	\$16.90	
SWEEP 40 FT	128	1	\$6,750		\$1,071		\$8.37	\$900	\$54	\$7.46	
			\$165,863	\$18,502	\$8,181			\$24,360	\$1,441		

EQUIPMENT LIST

ITEM		NEW VALUE	USED VALUE	YEARS LIFE	EQUIP CODE	MAX HOURS	FUEL UNIT/HR	LUBE COEF	ACCUM HOURS	AGE	INTEREST EXPENSE
TRACTOR	93 HP	34550.00	16534.00	35.00	1.00	800.00	5.54	0.10	2944.00	23.00	1338.81
TRACTOR	185 HP	96420.00	39214.00	15.00	1.00	800.00	9.42	0.10	2816.00	11.00	3736.28
COMBINE	145 HP	132955.00	63415.00	15.00	2.00	300.00	6.96	0.20	2329.60	13.00	5152.01
GRAIN HEAL	22 FT	7520.00	3600.00	15.00	2.00	300.00			2329.60	13.00	291.40
TRUCK 2T	20 FT	44000.00	22000.00	10.00	6.00	800.00	6.05	0.05	2329.60	13.00	1705.00
ROD WEED	40 FT	2400.00	1200.00	15.00	3.00	300.00			1920.00	15.00	93.00
CRUSTBUS	40 FT	11000.00	5500.00	10.00	8.00	100.00			832.00	13.00	426.25
STUB. MULC	25 FT	15300.00	7650.00	15.00	3.00	300.00			960.00	15.00	592.88
SWEEP	40 FT	13500.00	6750.00	15.00	3.00	300.00			2048.00	16.00	523.13

TABLE 5. Wheat, dryland, budgeted per acre costs and returns for a 1,920 acre farm with above average management, Southeastern Quay County, Projected 2008.
 Planting dates: August 20 - September 15
 Harvesting dates: June 15 - July 10

ITEM	PRICE	YIELD	BASEBASEBASEBASEBASEBASEBASEBASEBASEBASEBASE					TOTAL
GROSS RETURNS								
WHEAT	\$9.50	14.00 BUSHELS						\$133.00
DIRECT PAYMENT	\$0.00	14.00 BUSHELS	0.85					\$0.00
COUNTER CYCLICAL PAYMENT	\$0.00							\$0.00
GRAZING	\$5.00	1.00 ACRE						\$5.00
TOTAL								\$138.00
PURCHASED INPUTS								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				TOTAL	
SEED	\$0.28	25 LBS						\$7.00
CROP INSURANCE	\$0.04							\$0.04
SUBTOTAL								\$7.04
PREHARVEST OPERATIONS								
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SWEEP (2X)	185 HP	0.10 HR		\$0.75	\$3.16	\$1.42	\$3.41	\$8.73
STUBBLE MULCHER	185 HP	0.05 HR		\$0.37	\$1.58	\$0.76	\$2.18	\$4.89
RODWEED (2X)	96 HP	0.10 HR		\$0.75	\$1.86	\$0.36	\$1.01	\$3.97
DRILL	185 HP	0.05 HR		\$0.37	\$1.58	\$0.42	\$2.23	\$4.60
SUBTOTAL		0.30 HR		\$2.24	\$8.18	\$2.96	\$8.82	\$22.19
HARVEST OPERATIONS								
COMBINE	22 FT	0.14 HR		\$1.04	\$3.57	\$0.39	\$7.76	\$12.76
HAUL	2 TON	0.14 HR		\$1.04	\$2.71	\$3.04	\$3.58	\$10.37
SUBTOTAL		0.28 HR		\$2.09	\$6.28	\$3.43	\$11.33	\$23.13
OVERHEAD EXPENSES								
DOWNTIME		0.15 HR		\$0.54				\$0.54
EMPLOYEE BENEFITS				\$0.65				\$0.65
INSURANCE			\$0.09					\$0.09
LAND TAXES						\$0.31		\$0.31
SUPERVISION AND MANAGEMENT				\$6.90				\$6.90
OTHER EXPENSES			\$26.73					\$26.73
SUBTOTAL		0.15 HR	\$26.81	\$8.09		\$0.31		\$35.21
TOTAL OPERATING EXPENSES		0.73 HR	\$33.81	\$12.41	\$14.45	\$6.39	\$20.46	\$87.54
NET OPERATING PROFIT								\$50.46
INTEREST ON OPERATING CAPITAL		(\$7.11 @	0.08)					\$0.55
INTEREST ON EQUIPMENT INVESTMENT								\$10.83
RETURN TO LAND AND RISK								\$39.09

BUDGET SUMMARY

GROSS RETURN		\$138.00	
VARIABLE OPERATING EXPENSES	\$54.66		
RETURN OVER VARIABLE EXPENSES	\$83.34		(GROSS MARGIN)
FIXED EXPENSES	\$20.46		
NET FARM INCOME	\$62.88		(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$12.41		
NET OPERATING PROFIT	\$50.46		(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$11.38		
RETURN TO LAND AND RISK		\$39.09	

TABLE 6. Summary of per acre costs and returns for a 1,920 acre farm with above average management, Southeastern Quay County, Projected 2008.

	WHEAT -DRYLAND-
	BU
PRIMARY YIELD	14.00
PRIMARY PRICE	\$9.50
GOVERNMENT PAYMENTS	\$0.00
SECOND INCOME	\$5.00
GROSS RETURN	\$138.00
CASH OPERATING EXPENSES	
SEED	\$7.00
FERTILIZER	
CHEMICALS	
CROP INSURANCE	\$0.04
OTHER PURCHASED INPUTS	\$0.09
CANAL WATER	
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$14.45
FUEL-IRRIGATION	
REPAIRS	\$6.39
CUSTOM CHARGES	
LAND TAXES	\$0.31
OTHER EXPENSES	\$26.73
TOTAL CASH EXPENSES	\$55.01
RETURN OVER CASH EXPENSES	\$82.99
FIXED EXPENSES	\$20.16
TOTAL EXPENSES	\$75.16
NET FARM INCOME	\$62.84
LABOR AND MANAGEMENT COSTS	\$12.41
NET OPERATING PROFIT	\$50.43
CAPITAL COSTS	
INTEREST ON OPERATING CAPITAL	\$0.55
INTEREST ON EQUIPMENT INVESTMENT	\$10.83
TOTAL CAPITAL COSTS	\$11.38
RETURN TO LAND AND RISK	\$39.05

TABLE 7. Whole farm summary, Southeastern Quay County,
Projected 2008.

GROSS RETURNS		
WHEAT	1,280 ACRES	
CROP		\$170,240
GRAZING		\$6,400
DIRECT PAYMENT		\$0
COUNTER CYCLICAL PAYMENT		\$0
GROSS RETURN		<u>\$176,640</u>
CASH OPERATING EXPENSES		
SEED		\$8,960
FERTILIZER		\$0
CHEMICALS		\$0
CROP INSURANCE		\$50
OTHER PURCHASED INPUTS		\$111
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$18,502
FUEL-IRRIGATION		\$0
REPAIRS		\$8,181
CUSTOM CHARGES		\$0
LAND TAXES		\$392
OTHER EXPENSES		\$34,212
TOTAL CASH EXPENSES		<u>\$70,407</u>
RETURN OVER CASH EXPENSES		\$106,233
FIXED EXPENSES		\$25,801
TOTAL EXPENSES		\$96,209
NET FARM INCOME		\$80,431
LABOR AND MANAGEMENT COSTS		\$15,887
NET OPERATING PROFIT		\$64,545
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$706
INTEREST ON EQUIPMENT INVESTMENT		\$13,859
TOTAL CAPITAL COSTS		<u>\$14,564</u>
RETURN TO LAND AND RISK		<u>\$49,980</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$150 /ACRE	\$41,340	14.22%
\$300 /ACRE	\$32,700	8.70%
\$450 /ACRE	\$24,060	6.27%
\$600 /ACRE	\$15,420	4.90%
\$750 /ACRE	\$6,780	4.02%
\$900 /ACRE	(\$1,860)	3.41%

* 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)