

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... CURRY COUNTY, Projected 2010.
FARM SIZE..... 1,600.00 ACRES
IRRIGATION TYPE..... DRYLAND
NUMBER OF CROPS..... 2

VERSION 1.0

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TABLE 1. Acreage Summary, Curry County,
Projected 2010.

BUDGET AREA.....	CURRY COUNTY
FARM SIZE.....	1600 ACRES
IRRIGATION TYPE.....	DRYLAND
NUMBER OF CROPS...	2

ACREAGE SUMMARY:	LAND USE (ACRES)
WHEAT	450.50
ARP	0.00
FLEX IN WHEAT	79.50
GRAIN SORGHUM	450.50
ARP	0.00
FLEX IN WHEAT	79.50
FALLOW	530.00
ROADS, HOMESTEAD	10.00
TOTAL	1,600.00

TABLE 2. Basic cost information for Curry County,
Projected 2010.

Item			
Labor Wage Rate:			
Equipment operators	\$/hour		\$9.00
General & Irrigators	\$/hour		\$9.00
Purchased Inputs:			
Fertilizer:			
Anhydrous Ammonia	\$/ton		\$700.00
Seed:			
Wheat	\$/pound		\$0.35
Grain Sorghum	\$/pound		\$1.00
Diesel fuel	\$/gallon		\$4.85
Gasoline	\$/gallon		\$4.25
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	\$40.00 /acre (full value)		\$40.00
Personal Property Tax Rate	- NR - R	\$/ \$1,000 (Assessed Value)	\$22.04 \$19.86
Supervision Factors			
Field Crop-Equipment & General	\$/labor hour		\$1.00
Management Rate	percent		7.00%

TABLE 3. Overhead cost information for Curry County,
Projected 2010.

Item			
Electricity (Domestic & Shop)		\$236.00 per month	\$2,832
Telephone		\$118.00 per month	\$1,416
Accounting & Legal			\$1,729
Misc. Supplies & Hand Tools			\$2,620
Pickup and Auto			
miles	35,400	@ \$0.415 per mile	\$14,691
Insurance			
- general liability (non-employee)			\$2,331
- fire/theft			\$1,864
Property Taxes			
- non-planted land			\$0
- other than land & machinery			\$0
Building repairs and maintenance			\$1,534
Dues, fees, publications			\$425
Farmstead Equipment			\$177
		Total	\$29,618
		Total Per Planted Acre	\$18.63

TABLE 4. Equipment summary for a 1,600 acre dryland farm with above average management, Curry County, Projected 2010.

EQUIPMENT	ITEM & SIZE	ANNUAL HOURS OF USE	NUMBER	VARIABLE COSTS				FIXED COSTS			
				TOTAL VALUE	FUEL, OIL, LUBRICANT	REPAIR	FUEL, OIL PER HR	REPAIR PER HR	DEPRECIATION	TAXES	TOTAL PER HR
TRACTOR	155 HP	180	1	\$46,981	\$7,836	\$971	\$43.49	\$5.39	\$5,985	\$330	\$35.04
TRACTOR	330 HP	189	1	\$79,548	\$14,683	\$1,706	\$77.49	\$9.00	\$10,005	\$551	\$55.71
DRILL	40 FT	53	1	\$7,750	\$197	\$87		\$3.72	\$1,550	\$57	\$30.32
SWEEPS	45 FT	106	1	\$6,750	\$887			\$8.37	\$900	\$50	\$8.96
ROTARY HOE	24 FT	23	1	\$1,900	\$53			\$2.36	\$253	\$14	\$11.87
ROD WEEDER	40 FT	53	1	\$1,200	\$79			\$1.49	\$160	\$9	\$3.19
CULTIVATOR	6 ROW	59	1	\$5,000	\$363			\$6.20	\$667	\$37	\$12.01
FERT SPREADER	DEALER FURNISHED	77									
TOTAL				\$149,129	\$22,519	\$4,256			\$19,520	\$1,047	

EQUIPMENT LIST

ITEM	NEW VALUE	USED VALUE	YEARS LIFE	EQUIP CODE	MAX HOURS	FUEL UNIT/HR	LUBE COEF	ACCUM HOURS	AGE	INTEREST EXPENSE
TRACTOR	155 HP	89,775	46,981	15	1	800	8.15	0.10	1982.20	11 3,366.56
TRACTOR	330 HP	150,071	79,548	15	1	800	14.53	0.10	757.90	4 5,627.66
DRILL	40 FT	15,500	7,750	10	8	100			688.00	13 561.25
SWEEPS	45 FT	13,500	6,750	15	3	200			1696.00	16 596.25
ROTARY HOE	24 FT	3,800	1,900	15	3	300			337.88	15 142.50
ROD WEEDER	40 FT	2,400	1,200	15	3	300			795.00	15 90.00
CULTIVATOR	6 ROW	10,000	5,000	15	3	500			937.04	16 375.00
FERT SPREADER	DEALER FURNISHED					300			1301.95	17 0.00

INTEREST PRORATION

GRAIN WHEAT/GHUM	
0.00	7.47
5.94	4.46
0.55	0.55
0.48	0.48
0.00	0.32
0.08	0.08
0.00	0.83
7.05	14.19

USAGE LIST

WHEAT	GRAIN PER ACRE	
	WHEAT	SORGHUM
hours per acre	0.40	0.40
	0.20	0.15
	0.05	0.05
	0.10	0.10
	0.00	0.05
	0.05	0.05
	0.00	0.13
	0.00	0.17

WHEAT ACRES: 609.5

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT		CUSTOM
			RATE	TOTAL	
SWEEP (ZX)	300 HP	2.00	0.05	0.10	
ROD WEEDER	300 HP	1.00	0.05	0.05	
DRILL	300 HP	1.00	0.05	0.05	

COMBINE GRAIN (CUSTOM) BASE RATE 8.25
 EXTRA CHARGE PER BUSHEL OVER 0.18
 HAUL (CUSTOM) PER BUSHEL 0.16

GRAIN SORGHUM ACRES: 450.5

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT		CUSTOM
			RATE	TOTAL	
SWEEP (ZX)	300 HP	2.00	0.05	0.10	
ROD WEEDER	300 HP	1.00	0.05	0.05	
ANHYDROUS APPL	155 HP	1.00	0.17	0.17	
DRILL	155 HP	1.00	0.05	0.05	
ROTARY HOE	155 HP	1.00	0.05	0.05	
CULTIVATOR	155 HP	1.00	0.13	0.13	

COMBINE (CUSTOM) BASE RATE 9.67
 EXTRA CHARGE PER CWT OVER 0.28
 HAUL (CUSTOM) PER CWT 0.19

ANNUAL REPAIR COSTS AS A PERCENT OF NEW VALUE

Hours of Use	1	2	3	4	5	6	7	8	9
0	0.000060	0.000020	0.000620	0.000020	0.000080	0.000140	0.000040	0.000240	0.000200
50	0.000080	0.000020	0.000620	0.000020	0.000080	0.000140	0.000040	0.000240	0.000200
100	0.000060	0.000020	0.000500	0.000020	0.000140	0.000220	0.000100	0.000380	0.000300
200	0.000030	0.000030	0.000430	0.000040	0.000180	0.000260	0.000110	0.000510	0.000280
300	0.000030	0.000050	0.000390	0.000060	0.000230	0.000310	0.000140	0.000630	0.000400
400	0.000030	0.000060	0.000360	0.000070	0.000260	0.000340	0.000150	0.000710	0.000450
500	0.000030	0.000070	0.000360	0.000100	0.000280	0.000370	0.000170	0.000800	0.000630
600	0.000030	0.000090	0.000340	0.000120	0.000310	0.000390	0.000190	0.000860	0.000630
700	0.000030	0.000100	0.000340	0.000130	0.000330	0.000410	0.000200	0.000910	0.000650
800	0.000030	0.000110	0.000320	0.000150	0.000350	0.000430	0.000210	0.000980	0.000650
900	0.000030	0.000120	0.000320	0.000160	0.000370	0.000450	0.000230	0.001020	0.000600
1000	0.000090	0.000130	0.000310	0.000180	0.000380	0.000460	0.000230	0.001070	0.000630
1200	0.000045	0.000145	0.000305	0.000205	0.000425	0.000480	0.000245	0.001135	0.000710
1400	0.000045	0.000170	0.000300	0.000230	0.000435	0.000510	0.000410	0.001260	0.000765
1500	0.000150	0.000170	0.000300	0.000230	0.000435	0.000510	0.000410	0.001260	0.000765
1600	0.000150	0.000190	0.000285	0.000255	0.000465	0.000525	0.000135	0.001235	0.000805
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

TABLE 5. Wheat, dryland, budgeted per acre costs and returns for a 1,600 acre farm with above average management, Curry County, Projected 2010.
Planting Dates: September 1 - October 15
Harvesting Dates: June 15 - July 15

ITEM	PRICE	YIELD	Base	TOTAL
GROSS RETURNS				
WHEAT	\$6.00	18.00 BUSHEL		\$108.00
DIRECT PAYMENT	\$0.00	18.00 BUSHE	0.85	\$0.00
COUNTER CYCLICAL PAYMENT	\$0.00			\$0.00
GRAZING	\$12.00	1.00 ACRE		\$12.00
TOTAL				\$120.00

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	\$0.35	30 LBS	\$10.50		\$10.50
HERBICIDE	\$7.05	1 ACRE	\$7.05		\$7.05
CROP INSURANCE	\$0.08		\$0.08		\$0.08
SUBTOTAL			\$17.63		\$17.63

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SWEEP (2X)	300 HP	0.10 HR		\$0.90	\$7.75	\$1.74	\$6.47	\$16.85
ROD WEEDER	300 HP	0.05 HR		\$0.45	\$3.87	\$0.52	\$2.94	\$7.79
DRILL	300 HP	0.05 HR		\$0.45	\$3.87	\$0.64	\$4.30	\$9.26
SUBTOTAL		0.20 HR		\$1.80	\$15.50	\$2.90	\$13.71	\$33.91

HARVEST OPERATIONS

COMBINE (CUSTOM)			\$9.25					\$9.25
HAUL (CUSTOM)			\$2.88					\$2.88
SUBTOTAL			\$12.13					\$12.13

OVERHEAD EXPENSES

DOWNTIME		0.05 HR		\$0.45				\$0.45
EMPLOYEE BENEFITS				\$0.32				\$0.32
INSURANCE				\$0.04				\$0.04
LAND TAXES							\$40.00	\$40.00
SUPERVISION AND MANAGEMENT				\$8.60				\$8.60
OTHER EXPENSES				\$18.63				\$18.63
SUBTOTAL		0.05 HR		\$18.66	\$9.37		\$40.00	\$68.04

TOTAL OPERATING EXPENSES 0.25 HR \$48.43 \$11.17 \$15.50 \$2.90 \$53.71 \$131.71

NET OPERATING PROFIT (\$11.71)

INTEREST ON OPERATING CAPITAL (\$10.86 @ 7.50%) \$0.81
INTEREST ON EQUIPMENT INVESTMENT \$7.05

RETURN TO LAND AND RISK (\$19.58)

BUDGET SUMMARY

GROSS RETURN		\$120.00	
VARIABLE OPERATING EXPENSES	\$66.82		
RETURN OVER VARIABLE EXPENSES	\$53.18	(GROSS MARGIN)	
FIXED EXPENSES	\$53.71		
NET FARM INCOME		(\$0.54)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$11.17		
NET OPERATING PROFIT		(\$11.71)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$7.87		
RETURN TO LAND AND RISK		(\$19.58)	

TABLE 6. Grain sorghum, dryland, budgeted per acre costs and returns for a 1,600 acre farm with aboveaverage management, Curry County, Projected 2010.
Planting Dates: May 15 - June 20
Harvesting Dates: October 15 - November 15

ITEM	PRICE	YIELD	BASE	TOTAL
GROSS RETURNS				
GRAIN SORGHUM	\$7.70	18.00 CWT		\$138.60
DIRECT PAYMENT	\$0.00	18.00 CWT	0.85	\$0.00
COUNTER CYCLICAL PAYMENT	\$0.00	0.00 CWT		\$0.00
GRAZING	\$4.00	1.00 ACRE		\$4.00
TOTAL				\$142.60

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	\$1.00	2 LBS	\$1.50		\$1.50
ANHYDROUS	\$0.35	50 LBS	\$17.50		\$17.50
HERBICIDE	\$13.22	1 X/ACRE	\$13.22		\$13.22
INSECTICIDE	\$13.22	1 X/ACRE	\$13.22		\$13.22
CROP INSURANCE	\$0.11		\$0.11		\$0.11
SUBTOTAL			\$45.56		\$45.56

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SWEEP (2X)	300 HP	0.10 HR		\$0.90	\$7.75	\$1.74	\$6.47	\$16.85
ROD WEEDER	300 HP	0.05 HR		\$0.45	\$3.87	\$0.52	\$2.94	\$7.79
ANHYDROUS APPL	155 HP	0.17 HR		\$1.53	\$7.39	\$0.92	\$5.96	\$15.80
DRILL	155 HP	0.05 HR		\$0.45	\$2.17	\$0.46	\$3.27	\$6.35
ROTARY HOE	155 HP	0.05 HR		\$0.45	\$2.17	\$0.39	\$2.35	\$5.36
CULTIVATOR	155 HP	0.13 HR		\$1.17	\$5.65	\$1.51	\$6.12	\$14.45
SUBTOTAL		0.55 HR		\$4.95	\$29.02	\$5.53	\$27.10	\$66.59

HARVEST OPERATIONS								
COMBINE (CUSTOM)				\$9.67				\$9.67
HAUL (CUSTOM)				\$3.42				\$3.42
SUBTOTAL				\$13.09				\$13.09

OVERHEAD EXPENSES								
DOWNTIME		0.10 HR		\$0.90				\$0.90
EMPLOYEE BENEFITS				\$0.89				\$0.89
INSURANCE			\$0.10				\$0.10	\$0.10
LAND TAXES						\$40.00		\$40.00
SUPERVISION AND MANAGEMENT				\$10.53				\$10.53
OTHER EXPENSES			\$18.63					\$18.63
SUBTOTAL		0.10 HR	\$18.73	\$12.32		\$40.00		\$71.05

TOTAL OPERATING EXPENSES		0.65 HR	\$77.37	\$17.27	\$29.02	\$5.53	\$67.10	\$196.29
NET OPERATING PROFIT								(\$53.69)
INTEREST ON OPERATING CAPITAL	(\$32.50	@	7.50%)			\$2.44
INTEREST ON EQUIPMENT INVESTMENT								\$14.19
RETURN TO LAND AND RISK								(\$70.32)

BUDGET SUMMARY			
GROSS RETURN		\$142.60	
VARIABLE OPERATING EXPENSES	\$111.92		
RETURN OVER VARIABLE EXPENSES		\$30.68	(GROSS MARGIN)
FIXED EXPENSES	\$67.10		
NET FARM INCOME		(\$36.42)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$17.27		
NET OPERATING PROFIT		(\$53.69)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$16.63		
RETURN TO LAND AND RISK		(\$70.32)	

TABLE 7. Summary of per acre costs and returns for a 1,600 acre farm with above average management, Curry County, Projected 2010.

	WHEAT	GRAIN SORGHUM
	BUSHELS	CWT
PRIMARY YIELD	18.00	18.00
PRIMARY PRICE	\$6.00	\$7.70
GOVERNMENT PAYMENTS	\$0.00	\$0.00
SECOND INCOME	\$12.00 ACRE	\$4.00 ACRE
GROSS RETURN	\$120.00	\$142.60
CASH OPERATING EXPENSES		
SEED	\$10.50	\$1.50
FERTILIZER		\$17.50
CHEMICALS	\$7.05	\$26.44
CROP INSURANCE	\$0.08	\$0.11
OTHER PURCHASED INPUTS		
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$15.50	\$29.02
REPAIRS	\$2.90	\$5.53
CUSTOM CHARGES	\$12.13	\$13.09
LAND TAXES	\$40.00	\$40.00
OTHER EXPENSES	\$18.66	\$18.73
TOTAL CASH EXPENSES	\$106.82	\$151.92
RETURN OVER CASH EXPENSES	\$13.18	(\$9.32)
FIXED EXPENSES	\$13.71	\$27.10
TOTAL EXPENSES	\$120.54	\$179.02
NET FARM INCOME	(\$0.54)	(\$36.42)
LABOR AND MANAGEMENT COSTS	\$11.17	\$17.27
NET OPERATING PROFIT	(\$11.71)	(\$53.69)
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL	\$0.81	\$2.44
INTEREST ON EQUIPMENT INVESTMENT	\$7.05	\$14.19
TOTAL CAPITAL COSTS	\$7.87	\$16.63
RETURN TO LAND AND RISK	<u>(\$19.58)</u>	<u>(\$70.32)</u>
Flex Computation	1.19	-29.03

TABLE 8. Whole farm summary, Curry County,
Projected 2010.

GROSS RETURNS		
WHEAT	530 acres	
CROP		\$57,240
GRAZING		\$6,360
DIRECT PAYMENT		\$0
COUNTER CYCLICAL PAYMENT		\$0
GRAIN SORGHUM	530 acres	
CROP		\$73,458
GRAZING		\$2,120
DIRECT PAYMENT		\$0
COUNTER CYCLICAL PAYMENT		\$0
GROSS RETURN		<u>\$139,178</u>
CASH OPERATING EXPENSES		
SEED		\$7,076
FERTILIZER		\$7,884
CHEMICALS		\$16,212
CROP INSURANCE		\$100
OTHER PURCHASED INPUTS		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$22,519
REPAIRS		\$4,256
CUSTOM CHARGES		\$13,290
LAND TAXES		\$42,400
OTHER EXPENSES		\$19,812
TOTAL CASH EXPENSES		<u>\$133,549</u>
RETURN OVER CASH EXPENSES		\$5,629
FIXED EXPENSES		\$20,567
TOTAL EXPENSES		\$154,115
NET FARM INCOME		(\$14,937)
LABOR AND MANAGEMENT COSTS		\$14,592
NET OPERATING PROFIT		(\$29,529)
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$1,595
INTEREST ON EQUIPMENT INVESTMENT		\$10,689
TOTAL CAPITAL COSTS		<u>\$12,284</u>
RETURN TO LAND AND RISK		<u><u>(\$41,813)</u></u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$150 /ACRE	(\$49,013)	-7.59%
\$200 /ACRE	(\$51,413)	-6.29%
\$250 /ACRE	(\$53,813)	-5.38%
\$300 /ACRE	(\$56,213)	-4.69%

* 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)