### MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... SOUTHERN HIGH PLAINS, LEA COUIProjected 2009.

FARM SIZE...... 1,600.00 ACRES

IRRIGATION TYPE..... DRYLAND

NUMBER OF CROPS...... 2

## VERSION 1.0

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TABLE 1. Acreage Summary, Lea County,

Projected 2009.

BUDGET AREA.....SOUTHERN HIGH PLAINS, LEA COUNTY

ACREAGE SUMMARY: (ACRES)

WHEAT 680.00
ARP 0.00
FLEX IN WHEAT 120.00
GRAIN SORGHUM 646.00
ARP 0.00
FLEX IN WHEAT 114.00
FALLOW 0.00
ROADS, HOMESTEAD 40.00

1,600.00

TABLE 2. Basic cost information for Lea County, Projected 2009.

Projected 2009.				
Item				
Labor Wage Rate:				
Equipment operators		\$/hour		\$8.55
General & Irrigators		\$/hour		\$7.25
Conordi di Illigatoro		φ/110α.		Ų <u>.</u>
Purchased Inputs:				
Fertilizer:				
Nitrogen (N)		\$/pound		\$0.62
Phosphate (P205)		\$/pound		\$0.58
,		•		
Seed:				
Wheat		\$/pound		\$0.26
Grain Sorghum		\$/pound		\$1.69
Fuel:				
Diesel fuel		\$/gallon		\$2.80
Gasoline		\$/gallon		\$2.50
Employee Liability Insurance		\$/\$1,000 wa	ges	\$20.00
Employee Benefits		noroont/woo	100	18.00%
Employee Benefits		percent/wag	62	10.00%
Labor Downtime		percent		25.00%
East. Semiano		porcont		20.0070
Financial Rates:				
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%
		•		
Land Taxes	\$40.00	/acre (full va	lue)	\$0.30
Personal Property Tax Rate	- NR	\$/\$1,000	(Assessed	\$22.17
	- R		Value)	\$25.78
Supervision Factor		\$/labor hour		\$0.50
				7.000/
Management Rate		percent		7.00%

TABLE 3. Overhead cost information for Lea County, Projected 2009.

Item				
Electricity (Domestic 8	k Shop)		\$232.00 per month	\$2,784
Telephone			\$116.00 per month	\$1,392
Accounting & Legal				\$1,694
Misc. Supplies & Hand	d Tools			\$2,546
Pickup and Auto				
miles	35,960	@	\$0.415 per mile	\$14,923
Insurance - general liability (nor - fire/theft Property Taxes - non-planted land - other than land & m Building repairs and m Dues, fees, publication	nachinery naintenance			\$1,781 \$1,409 \$0 \$6,010 \$1,351 \$406
Farmstead Equipment				\$174
			Total	\$34,471
			Total per planted acre	\$22.10

TABLE 4. Equipment summary for a 1600 acre dryland farm with above average management, Lea County, Projected 2009.

EQUIPMEN	т					VARIABLE	COSTS		FIXI	ED COSTS	
ITEM & SIZ	E	ANNUAL HOURS OF USE	NUMBER	TOTAL VALUE	FUEL, OIL, LUBRICANT	REPAIR	FUEL, OIL PER HR	REPAIR PER HR	DEPRECIATION	TAXES	TOTAL PER HR
TRACTOR	226 HP	344	1	\$69,925	\$10,854	\$2,690	\$31.57	\$7.83	\$8,694	\$482	\$26.69
TRUCK	2 TON	218	1	\$22,000	\$3,885	\$1,759	\$17.79	\$8.05	\$4,400	\$163	\$20.89
COMBINE	145 HP	218	1	\$57,074	\$5,107	\$5,392	\$23.39	\$24.69	\$8,864	\$491	\$42.83
GRAIN HEAD	22 FT	218	1	\$3,600		\$513		\$2.35	\$501	\$28	\$2.42
CULTIVATOR	12 ROW	78	1	\$5,000		\$481		\$6.20	\$667	\$37	\$9.08
CHISEL	40 FT	91	1	\$6,750		\$761		\$8.37	\$900	\$50	\$10.45
SPRAYER	12 ROW	45	1	\$2,250		\$49		\$1.08	\$300	\$17	\$7.00
PLANTER	12 ROW	52	1	\$8,500		\$211		\$4.08	\$1,700	\$63	\$34.11
DRILL 40 FT	40 FT	46	1	\$7,750		\$170		\$3.72	\$1,550	\$57	\$35.17
FERT SPREADER	DEALER FURNISHE	E 78	1								
			-	\$182,849	\$19,846	\$12,026			\$27,576	\$1,387	

#### EQUIPMENT LIST

ITEM		NEW VALUE	USED VALUE	YEARS LIFE	EQUIP CODE	MAX HOURS	FUEL UNIT/HR	LUBE	ACCUM HOURS	AGE	INTEREST EXPENSE
TRACTOR	226 HP	130,417	69,925	15	1	800	10.25	0.10	2062.92	6	4,890.64
TRUCK	2 TON	44,000	22,000	10 15	6	800	6.05	0.05	2839.20	13	1,650.00
COMBINE GRAIN HEAD	145 HP 22 FT	132,955 7.520	57,074 3.600	15	2	300 300	6.96	0.20	2839.20 2839.20	13	4,985.81
CULTIVATOR	12 ROW	10,000	5,000	15	3	500			1240.32	16	375.00
CHISEL	40 FT	13,500	6,750	15	3	300			1363.80	15	506.25
SPRAYER	12 ROW	4,500	2,250	15	8	250			678.30	15	168.75
PLANTER	12 ROW	17,000	8,500	10	8	250			671.84	13	637.50
DRILL 40 FT	40 FT	15,500	7,750	10	8	100			594.10	13	581.25
FERT SPREADER	DEALER FURNISHE	D				100			1404.00	18	

USAGE LIST		
WHEAT	MILO	PER ACRE TOTALS
hours per acr	e	
0.15	0.32	0.47
0.14	0.14	0.28
0.14	0.14	0.28
0.14	0.14	0.28
0.00	0.12	0.12
0.05	0.07	0.12
0.00	0.07	0.07
0.00	0.08	0.08
0.05	0.00	0.05
0.05	0.05	0.10

INTEREST PRORATION

WHEAT	MILO
2.13	er acre-
1.06 3.20 0.18	1.06 3.20 0.18
0.00 0.28 0.00	
0.00 0.64	0.99
7.48	11 20
7.40	11.20

	WHEAT	ACRES:	914	PUMP WATER	Ċ	
	MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHME 	NT TOTAL	CUSTOM
-	CHISEL DRILL FERT SPREADER	225 HP 225 HP 225 HP	1.00 1.00 1.00	0.05 0.05 0.05	0.05 0.05 0.05	
	COMBINE HAUL	2 TON	1.00 1.00	0.14 0.14	0.14 0.14	

RAIN SORGHUM	ACRES:	646	PUMP WA	TER:	
	POWER		ACCOMPLISH	IMENT	
MACHINE	UNIT	OVER	RATE	TOTAL	CUSTO
FERT SPREADER	225 HP	1.00	0.05	0.05	
CHISEL & SPRAY	225 HP	1.00	0.07	0.07	
PLANTER	225 HP	1.00	0.08	0.08	
CULTIVATOR (2X)	225 HP	2.00	0.06	0.12	
COMBINE		1.00	0.14	0.14	
HAUL	2 TON	1.00	0.14	0.14	

## ANNUAL REPAIR COSTS AS A PERCENT OF NEW VALUE

9	8	7	6	5	4	3	2	1	Hours of Use
	**			••		•			
0.000200	0.000240	0.000040	0.000140	0.000080	0.000020	0.000620	0.000020	0.000060	0
0.000200	0.000240	0.000040	0.000140	0.000080	0.000020	0.000620	0.000020	0.000060	50
0.000300	0.000380	0.000100	0.000220	0.000140	0.000020	0.000500	0.000020	0.000060	100
0.000260	0.000510	0.000110	0.000260	0.000180	0.000040	0.000430	0.000030	0.000030	200
0.000400	0.000630	0.000140	0.000310	0.000230	0.000060	0.000390	0.000050	0.000030	300
0.000450	0.000710	0.000150	0.000340	0.000260	0.000090	0.000370	0.000060	0.000030	400
0.000630	0.000800	0.000170	0.000370	0.000280	0.000100	0.000360	0.000070	0.000030	500
0.000530	0.000860	0.000190	0.000390	0.000310	0.000120	0.000340	0.000090	0.000030	600
0.000560	0.000910	0.000200	0.000410	0.000330	0.000130	0.000340	0.000100	0.000030	700
0.000590	0.000980	0.000210	0.000430	0.000350	0.000150	0.000320	0.000110	0.000030	800
0.000600	0.001020	0.000230	0.000450	0.000370	0.000160	0.000320	0.000120	0.000030	900
0.000630	0.001070	0.000230	0.000460	0.000380	0.000180	0.000310	0.000130	0.000090	1000
0.000710	0.001135	0.000245	0.000480	0.000405	0.000205	0.000305	0.000145	0.000045	1200
0.000765	0.001260	0.000410	0.000510	0.000435	0.000230	0.000300	0.000170	0.000045	1400
0.000765	0.001260	0.000410	0.000510	0.000435	0.000230	0.000300	0.000170	0.000150	1500
0.000805	0.001235	0.000135	0.000525	0.000465	0.000255	0.000285	0.000190	0.000150	1600
		0.000295	0.000550	0.000485	0.000285	0.000285	0.000170	0.000075	1800
		0.000310	0.000565	0.000505	0.000305	0.000280	0.000265	0.000110	2000
								0.000056	2500
								0.000070	3000
								0.000082	3500
								0.000096	4000
								0.000108	4500
								0.000122	5000
								0.000136	5500
								0.000148	6000
								0.000162	6500
								0.000176	7000
								0.000188	7500
								0.000204	8000

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.

Engineers Yearbook, 1983.

Codes

1 tractors
2 balers, combines, forage harvesters, windrowers, pickups
3 rotary hoe, disks, middboard plows, chiests, feld cultivators
own cuthwidors, lased plane
4 harvoxs, wagons, floats, rota bud, drag, rotler, water furrow,
5 balewagons, cotton pickers, cotton stirpoers, corn pickers
corn heads, forage equipment, rotary mowers, stakk choppers,
feed wagons, further mucks
0 rakes, cutterber mower
5 practices, cutterber mower
6 planetss, drifts, seeding equipment, mourted sprayers
9 fertilizer distributing equipment

TABLE 5. Wheat, dryland, budgeted per acre costs and returns for a 1600 acre farm with above average management, Lea County, Projected 2009.

Planting dates: August 15 - September 30
Harvest dates: June 15 - July 5

Tial vest dates, Julie 13 - July 3										
ITEM	PRICE		YIEL	D	BASE					TOTAL
GROSS RETURNS WHEAT DIRECT PAYMENT COUNTER CYCLICAL PAYMENT	\$6.00 \$0.00 \$0.00			BUSHELS BUSHELS						\$120.00 \$0.00 \$0.00
TOTAL										\$120.00
PURCHASED INPUTS	PRICE		QUANT	TTY	PURCHASED INPUTS				FIXED COST	TOTAL
SEED NITROGEN (N) PHOSPHATE (P205) INSECTICIDE CROP INSURANCE SUBTOTAL	\$0.26 \$0.62 \$0.58 \$16.99 \$0.05		16 20	LBS LBS LBS X/ACRE	\$7.80 \$9.92 \$11.60 \$16.99 \$0.05				-	\$7.80 \$9.92 \$11.60 \$16.99 \$0.05 \$46.36
PREHARVEST OPERATIONS	POWER UNIT		ACCOMPLIS RAT		PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
CHISEL DRILL FERT SPREADER	225 HP 225 HP 225 HP		0.05 0.05 0.05	HR		\$0.43 \$0.43 \$0.43	\$1.58 \$1.58 \$1.58	\$0.81 \$0.58 \$0.39	\$1.86 \$3.09 \$1.33	\$4.67 \$5.68 \$3.73
SUBTOTAL		-	0.15	HR	\$0.00	\$1.28	\$4.74	\$1.78	\$6.28	\$14.08
HARVEST OPERATIONS										
COMBINE HAUL	2 TON		0.14 0.14			\$1.20 \$1.20	\$3.27 \$2.49	\$3.56 \$0.96	\$6.34 \$2.92	\$14.37 \$7.57
SUBTOTAL		-	0.28	HR	\$0.00	\$2.39	\$5.76	\$4.52	\$9.26	\$21.94
OVERHEAD EXPENSES										
DOWNTIME EMPLOYEE BENEFITS INSURANCE LAND TAXES SUPERVISION AND MANAGEMENT OTHER EXPENSES			0.11	HR	\$0.07 \$22.10	\$0.92 \$0.66 \$11.52			\$0.30	\$0.92 \$0.66 \$0.07 \$0.30 \$11.52 \$22.10
SUBTOTAL		-	0.11	HR	\$22.17	\$13.10			\$0.30	\$35.56
TOTAL OPERATING EXPENSES		-	0.54	HR	\$68.53	\$16.77	\$10.50	\$6.30	\$15.84	\$117.94
NET OPERATING PROFIT										\$2.06
INTEREST ON OPERATING CAPITAL INTEREST ON EQUIPMENT INVESTMEN	ī	(	\$25.67	@	7.50%	)				\$1.92 \$7.48
RETURN TO LAND AND RISK										(\$7.35)
		BUDGET S	SUMMARY							
GROSS RETURN VARIABLE OPERATING EXPENSES RETURN OVER VARIABLE EXPENSES FIXED EXPENSES NET FARM INCOME LABOR AND MANAGEMENT COST		\$85.33 \$15.84 \$16.77	\$120.00 \$34.67 \$18.83		S MARGIN) EN TO CAPITAL, L	_ABOR, LAN	D & RISK)			
NET OPERATING PROFIT CAPITAL COSTS RETURN TO LAND AND RISK		\$9.41	\$2.06 (\$7.35)	(RETUR	N TO CAPITAL, I	_AND & RISK	()			

TABLE 6. Grain sorghum, dryland, budgeted per acre costs and returns for a 1,600 acre farm with above average management, Lea County, Projected 2009.

Planting dates: May 15 - June 10

Harvest dates: October 15 - November 15

ITEM	PRICE		YIEL	D	BASE					TOTAL
GROSS RETURNS GRAIN SORGHUM	\$7.70		12.00	CWT						\$92.40
COUNTER CYCLICAL PAYMENT	\$0.00		0.00							\$0.00
DIRECT PAYMENT	\$0.00		12.00	CWT	0.85					\$0.00
TOTAL									-	\$92.40
PURCHASED INPUTS	PRICE		QUANT	TTY	PURCHASED INPUTS				FIXED COST	TOTAL
SEED	\$1.69		3	LBS	\$5.07					\$5.07
NITROGEN (N)	\$0.62		16	LBS	\$9.92					\$9.92
PHOSPHATE (P205)	\$0.58			LBS	\$11.60					\$11.60
HERBICIDE CROP INSURANCE	\$18.82 \$0.08		1 .	X/ACRE	\$18.82 \$0.08					\$18.82 \$0.08
SUBTOTAL	ψυ.σσ				\$45.48				-	\$45.48
	POWER		ACCOMPLIS	SHMENT	PURCHASED		FUEL &		FIXED	
PREHARVEST OPERATIONS	UNIT		RATE		INPUTS	LABOR	LUBE	REPAIRS	COST	TOTAL
FERT SPREADER	225 HP		0.05	HR		\$0.43	\$1.58	\$0.39	\$1.33	\$3.73
CHISEL & SPRAY	225 HP		0.07			\$0.60	\$2.21	\$1.21	\$3.09	\$7.11
PLANTER CULTIVATOR (2X)	225 HP 225 HP		0.08 0.12			\$0.68 \$1.03	\$2.53 \$3.79	\$0.95 \$1.68	\$4.86 \$4.29	\$9.03 \$10.79
, ,	223111	_								
SUBTOTAL			0.32	нк		\$2.74	\$10.10	\$4.24	\$13.58	\$30.65
HARVEST OPERATIONS										
COMBINE			0.14			\$1.20	\$3.27	\$3.89	\$6.34	\$14.70
HAUL	2 TON		0.14	HR		\$1.20	\$2.49	\$1.09	\$2.92	\$7.70
SUBTOTAL			0.28	HR		\$2.39	\$5.76	\$4.98	\$9.26	\$22.40
OVERHEAD EXPENSES										
DOWNTIME			0.15	HR		\$1.28				\$1.28
EMPLOYEE BENEFITS					00.40	\$0.92				\$0.92
INSURANCE LAND TAXES					\$0.10				\$0.30	\$0.10 \$0.30
SUPERVISION AND MANAGEMENT						\$10.82			ψ0.00	\$10.82
OTHER EXPENSES					\$22.10					\$22.10
SUBTOTAL		_	0.15	HR	\$22.20	\$13.02			\$0.30	\$35.52
TOTAL OPERATING EXPENSES		-	0.75	HR	\$67.68	\$18.15	\$15.87	\$9.22	\$23.14	\$134.05
NET OPERATING PROFIT										(\$41.65)
INTEREST ON OPERATING CAPITAL INTEREST ON EQUIPMENT INVESTMEN	NT	(	\$27.22	@	7.50%	)				\$2.04 \$11.20
RETURN TO LAND AND RISK										(\$54.90)
		BUDGET S	SUMMARY							
GROSS RETURN			\$92.40							
VARIABLE OPERATING EXPENSES		\$92.76								
RETURN OVER VARIABLE EXPENSES		¢22 4 4	(\$0.36)	(GROS	S MARGIN)					
FIXED EXPENSES NET FARM INCOME		\$23.14	(\$23.50)	(RETUF	RN TO CAPITAL, L	ABOR, LANI	0 & RISK)			
LABOR AND MANAGEMENT COST		\$18.15	, ,	•			,			
NET OPERATING PROFIT CAPITAL COSTS		\$13.25	(\$41.65)	(KETUF	RN TO CAPITAL, L	AND & RISK	)			
RETURN TO LAND AND RISK			(\$54.90)							

TABLE 7. Summary of per acre costs and returns for a 1,600 acre farm with above average management, Lea County, Projected 2009.

1 10/00000 2000.	WHEAT	GRAIN SORGHUM	
	BU	CWT	
PRIMARY YIELD	20.00	12.00	
PRIMARY PRICE	\$6.00	\$7.70	
GOVERNMENT PAYMENTS	\$0.00	\$0.00	
SECOND INCOME	\$0.00	\$0.00	
GROSS RETURN	\$120.00	\$92.40	
VARIABLE OPERATING EXPENSES			
SEED	\$7.80	\$5.07	
FERTILIZER	\$21.52	\$21.52	
CHEMICALS	\$16.99	\$18.82	
CROP INSURANCE OTHER PURCHASED INPUTS CANAL WATER	\$0.05	\$0.08	
FUEL, OIL & LUBRICANTS-EQUIPMENT FUEL-IRRIGATION	\$10.50	\$15.87	
REPAIRS	\$6.30	\$9.22	
CUSTOM CHARGES	\$0.00	\$0.00	
LAND TAXES	\$0.30	\$0.30	
OTHER EXPENSES	\$22.17	\$22.20	
TOTAL VARIABLE EXPENSES	\$85.62	\$93.06	
RETURN OVER VARIABLE EXPENSES	\$34.38	(\$0.66)	
FIXED EXPENSES	\$15.54	\$22.84	
TOTAL EXPENSES	\$101.17	\$115.90	
RETURNS TO CAPITAL, LABOR, LAND & RISK	\$18.83	(\$23.50)	
LABOR AND MANAGEMENT COSTS	\$16.77	\$18.15	
RETURNS TO CAPITAL, LAND & RISK	\$2.06	(\$41.65)	
CAPITAL COSTS			
INTEREST ON OPERATING CAPITAL	\$1.92	\$2.04	
INTEREST ON EQUIPMENT INVESTMENT	\$7.48	\$11.20	
TOTAL CAPITAL COSTS	\$9.41	\$13.25	
RETURN TO LAND AND RISK	(\$7.35)	(\$54.90)	

TABLE 8. Whole farm summary, Lea County, Projected 2009.

FTOJECIEU 2009.				
GROSS RETURNS WHEAT CROP DIRECT PAYMENT COUNTER CYCLICAL PA GRAIN SORGHUM CROP DIRECT PAYMENT GROSS RETURN	914.00 ACRES  AYMENT 646.00 ACRES	\$109,680 \$0 \$0 \$59,690 \$0	-	\$169,370
VARIABLE OPERATING EXSEED FERTILIZER CHEMICALS CROP INSURANCE OTHER PURCHASED IN CANAL WATER FUEL, OIL & LUBRICAN FUEL-IRRIGATION REPAIRS CUSTOM CHARGES LAND TAXES OTHER EXPENSES	NPUTS	\$10,404 \$33,571 \$27,680 \$100 \$0 \$0 \$19,846 \$0 \$11,710 \$0 \$461 \$34,604		
TOTAL VARIABLE EXPENSES		-	\$138,377	
RETURN OVER VARIABLE	EXPENSES			\$30,993
FIXED EXPENSES		\$28,963		
TOTAL EXPENS	SES		\$167,340	
NET FARM INCOME				\$2,030
LABOR AND MANAGEMEN	NT COSTS	\$27,060		
NET OPERATING PROFIT				(\$25,030)
CAPITAL COSTS INTEREST ON OPERATING CAPITAL INTEREST ON EQUIPMENT INVESTMENT		\$3,078 \$14,077		
TOTAL CAPITAL COSTS		-	\$17,155	
RETURN TO LAND AND RISK			-	(\$42,185)

	DETUDN	DETUDNION
	RETURN	RETURN ON
LAND VALUE	TO RISK*	INVESTMENT**
\$150 /ACRE	(\$49,385)	-5.92%
\$200 /ACRE	(\$51,785)	-4.98%
\$250 /ACRE	(\$54,185)	-4.29%
\$300 /ACRE	(\$56,585)	-3.78%
\$350 /ACRE	(\$58,985)	-3.37%

 $<sup>^{\</sup>star}$  RETURN TO LAND AND RISK MINUS (INTEREST RATE TIMES LAND VALUE TIMES ACREAGE)  $^{\star\star}$  NET OPERATING PROFIT DIVIDED BY (MACHINERY AND EQUIPMENT VALUE PLUS LAND VALUE)