

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... CURRY COUNTYProjected 2009.  
FARM SIZE..... 520 ACRES  
IRRIGATION TYPE..... FLOOD  
NUMBER OF CROPS..... 2

VERSION 1.0

COPYRIGHT (C) 1984 by NEW MEXICO STATE UNIVERSITY BOARD OF REGENTS

New Mexico State University is an equal opportunity employer. All programs are available to everyone regardless of race, color, religion, sex, age, handicap, or national origin. New Mexico State University and the U.S. Department of Agriculture Cooperating.

\* YOU MAY ENTER DATA IN ANY INPUT TABLE WITH  
HIGHLIGHTED CELLS OR YOU MAY STRIKE  
[ENTER] AND RETURN TO THE MENU

\*\* BE SURE PRINTER IS ON AND PAPER IS ALIGNED  
BEFORE YOU PRINT

TABLE 1. Acreage Summary, Curry County,  
Projected 2009.

BUDGET AREA..... CURRY COUNTY			
FARM SIZE..... 520 ACRES			
IRRIGATION TYPE..... FLOOD			
NUMBER OF CROPS.. 2			
ACREAGE SUMMARY:	LAND USE (ACRES)	WATER USE	
		AC.IN. PER AC.	TOTAL AC.IN.
WHEAT	255	15	3,825
ARP	0		
FLEX IN WHEAT	45	15	675
GRAIN SORGHUM	170	20	3,400
ARP	0		
FLEX IN WHEAT	30	15	450
ROADS, DITCHES			
HOMESTEAD	<u>20</u>		
TOTAL	520		8,350
ACRE FEET PER ACRE OF WATER RIGHTS			1.34

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

Item			
Labor Wage Rate:			
Equipment operators		\$/hour	\$7.45
General & Irrigators		\$/hour	\$7.25
Purchased Inputs:			
Fertilizer:			
Nitrogen (N)		\$/pound	\$0.62
Phosphate (P205)		\$/pound	\$0.58
Anhydrous (NH3)		\$/ton	\$755.00
Seed:			
Grain Sorghum		\$/pound	\$1.69
Wheat		\$/pound	\$0.26
Diesel fuel		\$/gallon	\$2.75
Gasoline		\$/gallon	\$2.50
Electricity (SWPS)		cents/KwHr	6.52
LP gas		\$/gallon	\$2.45
Natural Gas (Gas NM)		\$/MCF	\$5.89
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	7.25%
Equipment Interest Rate		percent	7.50%
Real Interest Rate		percent	3.00%
Land Taxes		\$109.00 /acre (full value)	\$0.79
Personal Propety Tax Rate	- NR	\$/1,000 (Assessed Value)	\$21.85
	- R		\$19.79
Supervision Factors			
Field Crop-Irrigation		\$/labor hour	\$1.00
Field Crop-Equipment & General		\$/labor hour	\$0.50
Management Rate		percent	7.00%

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

Item			
Electricity (Domestic & Shop)		\$232.00 per month	\$2,784
Telephone		\$116.00 per month	\$1,392
Accounting & Legal			\$1,711
Misc. Supplies & Hand Tools			\$2,558
Pickup and Auto			
miles	23,200	@ \$0.415 per mile	\$9,628
Insurance			
- general liability (non-employee)			\$2,285
- fire/theft			\$1,833
Property Taxes			
- non-planted land			\$0
- other than land & machinery			\$0
Building repairs and maintenance			\$1,514
Dues, fees, publications			\$418
Farmstead Equipment			\$174
Total			<u>\$24,296</u>
Total Per Planted Acre			\$57.17

TABLE 4. Pumping costs and data for Curry County, Projected 2009

Table with columns for GALLONS PER MINUTE (GPM), EFFICIENCY FACTOR, FUEL COST PER UNIT, FUEL PUMPING COSTS, and ELECTRIC/NATURAL GAS WELL costs. Rows include static/draw-down/head, pump horsepower, electricity/natural gas/LP gas costs, and well pumping costs for electric/natural gas/LP gas/diesel wells.

TABLE 5. Equipment summary for a 320 acre flood-irrigated wheat/grain sorghum farm with above average management, Curry County, Projected 2009

Table with columns for EQUIPMENT, ANNUAL HOURS OF USE, NUMBER, TOTAL VALUE, FUEL OIL, LUBRICANT, REPAIR, FUEL OIL PER HR, REPAIR PER HR, DEPRECIATION, TAXES, and TOTAL PER HR. Lists various pieces of farm machinery and their associated costs.

EQUIPMENT LIST

Table with columns for ITEM, NEW VALUE, USED VALUE, YEARS LIFE, EQUIP CODE, MAX HOURS, FUEL CONSUMPTION, LUBE COEF, ACCUM HOURS, AGE, and INTEREST EXPENSE. Provides detailed breakdown of equipment costs over time.

USAGE LIST

Table with columns for WHEAT, MILO, PER ACRE, and TITLES. Includes a sub-table for 'Hours per acre' with columns for TRACTOR, DISC, DRILL, FERT SPREADER, CHISEL, CULTIVATOR, LISTER, and ROD WEEDER.

INTEREST PRORATION

Table with columns for WHEAT, MILO, and values for 3.35, 4.49, 4.59, 1.35, 1.35, 0.92, 0.92, 0.00, 0.00, 0.00, 1.88, 0.00, 0.26, 1.23, 14.00, 20.74.

WHEAT ACRES: 330 PUMP WATER: 15.00

Table with columns for MACHINE, POWER UNIT, TIMES OVER, RATE, TOTAL, and CUSTOM. Lists machinery usage for 330 acres of wheat, including Disc (2x), Anhydrous Appl, Lister, Fert Spreader, Drill, and Irrigate (2x).

Table with columns for COMBINE (CUSTOM) BASE RATE, EXTRA CHARGE PER BUSHEL OVER, HALL (CUSTOM) PER BUSHEL. Values: 16.00, 0.19, 0.16.

MILO ACRES: 170 PUMP WATER: 20.00

Table with columns for MACHINE, POWER UNIT, TIMES OVER, RATE, TOTAL, and CUSTOM. Lists machinery usage for 170 acres of milo, including Disc, Chisel, Anhydrous Appl, Lister, Fert Spreader, Irrigate (4x), and Cultivator (2x).

Table with columns for COMBINE (CUSTOM) PER ACRE, EXTRA CHARGE PER CWT. OVER, HALL (CUSTOM) PER CWT. Values: 36.67, 20.60, 0.28, 0.19.

ANNUAL REPAIR COSTS AS A PERCENT OF NEW VALUE

Large table with columns for Hours of Use (1-9) and rows representing different equipment values from 0.00000 to 8000.00000.

\* Based on unpublished data of D. R. Hunt, Department of Agricultural Engineering, University of Illinois.
\*\* Based on "Agricultural Machinery Data" in Agricultural Engineers Yearbook, 1963.

- Codes:
1 tractors
2 balers, combines, forage harvesters, windrowers, pickups
3 relay hoes, disks, moldboard plows, chisels, field cultivators
4 row cultivators, laser plans
5 hammers, weathers, flats, rib buck, drag, roller, water barrow, bed shaper
6 wheel/pneum, cotton pickers, cotton strippers, corn pickers
7 corn heads, forage equipment, rotary mowers, stalk choppers, feed wagons, farm trucks
8 rakes, outbar mower
9 laser w engine, manure spreader
0 planters, drills, seeding equipment, mounted sprayers
1 fertilizer distributing equipment

TABLE 6. Wheat, flood-irrigated, budgeted per acre costs and returns for a 520 acre farm with above average management, Curry County, Projected 2009.  
Planting Dates: August 15 - September 15  
Harvesting Dates: June 15 - July 15

ITEM	PRICE	YIELD	BASE	TOTAL
<b>GROSS RETURNS</b>				
WHEAT	\$6.00	65.00 BUSHEL		\$390.00
DIRECT PAYMENT	\$0.00	65.00 BUSHEL	0.85	\$0.00
COUNTER CYCLICAL PAYMENT	\$0.00			\$0.00
GRAZING	\$40.00	1.00 ACRE		\$40.00
<b>TOTAL</b>				<b>\$430.00</b>

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	\$0.26	60 LBS	\$15.60		\$15.60
ANHYDROUS AMMONIA (NH3)	\$0.38	100 LBS	\$37.75		\$37.75
NITROGEN (N)	\$0.62	18 LBS	\$11.16		\$11.16
PHOSPHORUS (P205)	\$0.58	46 LBS	\$26.68		\$26.68
INSECTICIDE (CUSTOM)	\$9.59	1 ACRE	\$9.59		\$9.59
HERBICIDE (CUSTOM)	\$10.69	1 ACRE	\$10.69		\$10.69
PUMP WATER*		15 AC. IN.			
CROP INSURANCE	\$0.15		\$0.15		\$0.15
<b>SUBTOTAL</b>			<b>\$111.62</b>		<b>\$111.62</b>

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC (3X)	185 HP	0.33 HR		\$2.46	\$9.40	\$5.59	\$13.01	\$30.46
ANHYDROUS APPL	185 HP	0.17 HR		\$1.27	\$4.84	\$0.98	\$4.86	\$11.95
LISTER	185 HP	0.12 HR		\$0.89	\$3.42	\$1.01	\$4.28	\$9.61
FERT SPREADER	145 HP	0.05 HR		\$0.37	\$1.07	\$0.22	\$2.47	\$4.13
DRILL	145 HP	0.13 HR		\$0.97	\$2.79	\$0.79	\$9.31	\$13.87
IRRIGATE (3X)		1.50 HR		\$10.88	\$47.57	\$0.00	\$3.66	\$62.11
<b>SUBTOTAL</b>		<b>2.30 HR</b>		<b>\$16.84</b>	<b>\$69.10</b>	<b>\$8.60</b>	<b>\$37.60</b>	<b>\$132.13</b>

HARVEST OPERATIONS								
COMBINE (CUSTOM)			\$24.74					\$24.74
HAUL (CUSTOM)			\$10.40					\$10.40
<b>SUBTOTAL</b>			<b>\$35.14</b>					<b>\$35.14</b>

OVERHEAD EXPENSES								
DOWNTIME		0.20 HR		\$1.49				\$1.49
EMPLOYEE BENEFITS				\$3.03				\$3.03
INSURANCE			\$0.34					\$0.34
LAND TAXES						\$0.79		\$0.79
SUPERVISION AND MANAGEMENT				\$32.00				\$32.00
OTHER EXPENSES			\$57.17					\$57.17
<b>SUBTOTAL</b>		<b>0.20 HR</b>	<b>\$57.50</b>	<b>\$36.52</b>		<b>\$0.79</b>		<b>\$94.82</b>

TOTAL OPERATING EXPENSES 2.50 HR \$204.26 \$53.36 \$69.10 \$8.60 \$38.39 \$373.71

NET OPERATING PROFIT \$56.29

INTEREST ON OPERATING CAPITAL ( \$78.16 @ 7.50% ) \$5.86  
INTEREST ON EQUIPMENT INVESTMENT \$14.09

RETURN TO LAND AND RISK \$36.34

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

BUDGET SUMMARY

GROSS RETURN		\$430.00	
VARIABLE OPERATING EXPENSES	\$281.96		
RETURN OVER VARIABLE EXPENSES		\$148.04	(GROSS MARGIN)
FIXED EXPENSES	\$38.39		
NET FARM INCOME		\$109.65	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$53.36		
NET OPERATING PROFIT		\$56.29	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$19.95		
RETURN TO LAND AND RISK		\$36.34	

TABLE 7. Grain sorghum, flood-irrigated, budgeted per acre costs and returns for a 520 acre farm with above average management, Curry County, Projected 2009.  
 Planting Dates: May 15 - June 15  
 Harvesting Dates: October 15 - November 15

ITEM	PRICE	YIELD	BASE	TOTAL
<b>GROSS RETURNS</b>				
GRAIN SORGHUM	\$7.70	65.00 CWT		\$500.50
DIRECT PAYMENT	\$0.00	65.00 CWT	0.85	\$0.00
COUNTER CYCLICAL PAYMENT	\$0.00	0.00 CWT		\$0.00
GRAZING	\$9.00	1.00 ACRE		\$9.00
<b>TOTAL</b>				<b>\$509.50</b>

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	\$1.69	5 LBS	\$8.45		\$8.45
ANHYDROUS (NH3)	\$0.38	150 LBS	\$56.63		\$56.63
NITROGEN (N)	\$0.62	25 LBS	\$15.50		\$15.50
PHOSPHORUS (P205)	\$0.58	50 LBS	\$29.00		\$29.00
HERBICIDE (CUSTOM)	\$14.11	1 X/ACRE	\$14.11		\$14.11
INSECTICIDE (CUSTOM)	\$13.49	1 X/ACRE	\$13.49		\$13.49
TRACE ELEMENTS	\$13.89	1 ACRE	\$13.89		\$13.89
PUMP WATER*		20 AC. IN.			
CROP INSURANCE	\$0.29		\$0.29		\$0.29
<b>SUBTOTAL</b>			<b>\$151.35</b>		<b>\$151.35</b>

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC	185 HP	0.11 HR		\$0.82	\$3.13	\$1.86	\$4.34	\$10.15
CHISEL	185 HP	0.15 HR		\$1.12	\$4.27	\$1.17	\$6.22	\$12.78
DISC (2X)	185 HP	0.22 HR		\$1.64	\$6.27	\$3.73	\$8.67	\$20.31
ANHYDROUS APPL	185 HP	0.17 HR		\$1.27	\$4.84	\$0.98	\$4.86	\$11.95
LISTER	185 HP	0.12 HR		\$0.89	\$3.42	\$1.01	\$4.28	\$9.61
PRE-IRRIGATE		0.50 HR		\$3.73	\$12.69	\$0.00	\$0.98	\$17.39
ROD WEEDER	140 HP	0.08 HR		\$0.60	\$1.72	\$0.41	\$4.68	\$7.41
PLANTER	140 HP	0.17 HR		\$1.27	\$3.65	\$1.09	\$15.03	\$21.04
CULTIVATOR (2X)	140 HP	0.26 HR		\$1.94	\$5.59	\$2.74	\$18.68	\$28.95
IRRIGATE (4X)		2.00 HR		\$14.50	\$50.75	\$0.00	\$3.90	\$69.15
<b>SUBTOTAL</b>		<b>3.78 HR</b>		<b>\$27.76</b>	<b>\$96.33</b>	<b>\$13.00</b>	<b>\$71.64</b>	<b>\$208.74</b>

HARVEST OPERATIONS								
COMBINE (CUSTOM)			\$28.43					\$28.43
HAUL (CUSTOM)			\$12.35					\$12.35
<b>SUBTOTAL</b>			<b>\$40.78</b>					<b>\$40.78</b>

OVERHEAD EXPENSES								
DOWNTIME		0.32 HR		\$2.38				\$2.38
EMPLOYEE BENEFITS				\$5.00				\$5.00
INSURANCE			\$0.56					\$0.56
LAND TAXES							\$0.79	\$0.79
SUPERVISION AND MANAGEMENT				\$38.56				\$38.56
OTHER EXPENSES			\$57.17					\$57.17
<b>SUBTOTAL</b>		<b>0.32 HR</b>	<b>\$57.72</b>	<b>\$45.94</b>			<b>\$0.79</b>	<b>\$104.45</b>

TOTAL OPERATING EXPENSES 4.10 HR \$249.86 \$73.70 \$96.33 \$13.00 \$72.44 \$505.32

NET OPERATING PROFIT \$4.18

INTEREST ON OPERATING CAPITAL ( \$106.41 @ 7.50% ) \$7.98  
 INTEREST ON EQUIPMENT INVESTMENT \$26.74

RETURN TO LAND AND RISK (\$30.55)

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

GROSS RETURN		\$509.50		
VARIABLE OPERATING EXPENSES	\$359.19			
RETURN OVER VARIABLE EXPENSES		\$150.31	(GROSS MARGIN)	
FIXED EXPENSES	\$72.44			
NET FARM INCOME		\$77.87	(RETURN TO CAPITAL, LABOR, LAND & RISK)	
LABOR AND MANAGEMENT COST	\$73.70			
NET OPERATING PROFIT		\$4.18	(RETURN TO CAPITAL, LAND & RISK)	
CAPITAL COSTS	\$34.72			
RETURN TO LAND AND RISK		(\$30.55)		

TABLE 8. Summary of per acre costs and returns for a 520 acre farm with above average management, Curry County, Projected 2009.

	WHEAT	GRAIN SORGHUM
	BUSHEL	CWT
PRIMARY YIELD	65.00	65.00
PRIMARY PRICE	\$6.00	\$7.70
GOVERNMENT PAYMENTS	\$0.00	\$0.00
SECOND INCOME	\$40.00 ACRE	\$9.00 ACRE
GROSS RETURN	\$430.00	\$509.50
CASH OPERATING EXPENSES		
SEED	\$15.60	\$8.45
FERTILIZER	\$75.59	\$115.01
CHEMICALS	\$20.28	\$27.60
CROP INSURANCE	\$0.15	\$0.29
OTHER PURCHASED INPUTS		
CANAL WATER		
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$21.53	\$32.89
FUEL-IRRIGATION	\$47.57	\$63.43
REPAIRS	\$8.60	\$13.00
CUSTOM CHARGES	\$35.14	\$40.78
LAND TAXES	\$0.79	\$0.79
OTHER EXPENSES	\$57.50	\$57.72
TOTAL CASH EXPENSES	<u>\$282.76</u>	<u>\$359.98</u>
RETURN OVER CASH EXPENSES	\$147.24	\$149.52
FIXED EXPENSES	\$37.60	\$71.64
TOTAL EXPENSES	\$320.35	\$431.63
NET FARM INCOME	\$109.65	\$77.87
LABOR AND MANAGEMENT COSTS	\$53.36	\$73.70
NET OPERATING PROFIT	\$56.29	\$4.18
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL	\$5.86	\$7.98
INTEREST ON EQUIPMENT INVESTMENT	\$14.09	\$26.74
TOTAL CAPITAL COSTS	<u>\$19.95</u>	<u>\$34.72</u>
RETURN TO LAND AND RISK	<u>\$36.34</u>	<u>(\$30.55)</u>

Flex Computation

88.03

67.84

TABLE 9. Whole farm summary, Curry County,  
Projected 2009.

GROSS RETURNS		
WHEAT	330 ACRES	
CROP		\$128,700
GRAZING		\$13,200
DIRECT PAYMENT		\$0
COUNTER CYCLICAL PAYMENT		\$0
GRAIN SORGHUM	170 ACRES	
CROP		\$85,085
GRAZING		\$1,530
DIRECT PAYMENT		\$0
COUNTER CYCLICAL PAYMENT		\$0
GROSS RETURN		<u>\$228,515</u>
CASH OPERATING EXPENSES		
SEED		\$6,585
FERTILIZER		\$44,497
CHEMICALS		\$11,382
CROP INSURANCE		\$100
OTHER PURCHASED INPUTS		\$0
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$12,697
FUEL-IRRIGATION		\$26,483
REPAIRS		\$5,048
CUSTOM CHARGES		\$18,529
LAND TAXES		\$397
OTHER EXPENSES		\$28,789
TOTAL CASH EXPENSES		<u>\$154,507</u>
RETURN OVER CASH EXPENSES		\$74,008
FIXED EXPENSES		\$24,586
TOTAL EXPENSES		\$179,093
NET FARM INCOME		\$49,422
LABOR AND MANAGEMENT COSTS		\$30,136
NET OPERATING PROFIT		\$19,286
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$3,291
INTEREST ON EQUIPMENT INVESTMENT		\$9,194
TOTAL CAPITAL COSTS		<u>\$12,486</u>
RETURN TO LAND AND RISK		<u><u>\$6,801</u></u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$500 /ACRE	(\$999)	4.93%
\$1,000 /ACRE	(\$8,799)	2.96%
\$1,500 /ACRE	(\$16,599)	2.12%
\$2,000 /ACRE	(\$24,399)	1.65%
\$2,500 /ACRE	(\$32,199)	1.35%

\* 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)