

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... DRY CIMARRON AREA, UNION COUN Projected 2001
FARM SIZE..... 80.00 ACRES
IRRIGATION TYPE..... FLOOD
NUMBER OF CROPS..... 2

VERSION 1.0

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TABLE 1. Acreage Summary, Union County,
Projected 2006.

BUDGET AREA..... DRY CIMARRON AREA, UNION COUNTY			
FARM SIZE..... 80 ACRES			
IRRIGATION TYPE..... FLOOD			
NUMBER OF CROPS... 2			
WATER USE			
ACREAGE SUMMARY:	LAND USE (ACRES)	AC.IN. PER AC.	TOTAL AC.IN.
ALFALFA ESTABLISHMENT	4	4.5	18
ALFALFA	40	24	960
NATIVE GRASS	40	18	720
TOTAL	84		1,698
ACRE FEET PER ACRE OF WATER RIGHTS			1.68

TABLE 2. Basic cost information for Dry Cimarron area, Union County,
Projected 2006.

Item			
Labor Wage Rate:			
Equipment operators		\$/hour	\$7.45
General & Irrigators		\$/hour	\$6.60
Purchased Inputs:			
Seed:			
Alfalfa		\$/pound	\$3.20
Natural gas		\$/MCF	\$3.28
Diesel fuel		\$/gallon	\$2.10
Gasoline		\$/gallon	\$2.00
Electricity		cents/KwHr	6.78
LP Gas		\$/gallon	\$1.95
Baling Wire		\$/pound	\$0.50
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	8.00%
Land Interest Rate		percent	8.00%
Equipment Interest Rate		percent	8.00%
Real Interest Rate		percent	3.00%
Land Taxes		\$27.00 /acre (full value)	\$0.24
Personal Property Tax Rate	-NR - R	\$/1,000 (Assessed Value)	\$26.53 \$23.93
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 the Dry Cimarron area,
Projected 2006.

Item			
Electricity (Domestic & Shop)		\$106.00 per month	\$1,272
Telephone		\$84.80 per month	\$1,018
Accounting & Legal			\$477
Misc. Supplies & Hand Tools			\$784
Pickup and Auto			
miles	10,918	@ \$0.415 per mile	\$4,531
Insurance			
- general liability (non-employee)			\$1,018
- fire/theft			\$663
Property Taxes			
- other than land & machinery			\$6,010
Building repairs and maintenance			\$504
Dues, fees, publications			\$254
Farmstead Equipment			\$80
Total			\$16,609
Total per planted acre			\$207.62

TABLE 6. Alfalfa establishment, flood-irrigated, budgeted per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County,
 Projected 2006.
 Planting dates: August 15 - September 15

ITEM	PRICE	QUANTITY	PURCHASED INPUTS					TOTAL
PURCHASED INPUTS								
SEED	\$3.20	18 LBS		\$57.60				\$57.60
CANAL WATER		5 AC. IN.						
SUBTOTAL				\$57.60				\$57.60
PREHARVEST OPERATIONS								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
CHISEL	40 HP	0.20 HR		\$1.49	\$1.57	\$0.22	\$0.62	\$3.89
DISC	40 HP	0.17 HR		\$1.27	\$1.34	\$0.18	\$0.52	\$3.31
DRILL	40 HP	0.25 HR		\$1.86	\$1.96	\$0.27	\$0.77	\$4.87
DITCH MAINTENANCE		0.50 HR		\$3.73				\$3.73
IRRIGATE (1X)		0.75 HR		\$4.95				\$4.95
SUBTOTAL		1.87 HR		\$13.29	\$4.87	\$0.67	\$1.91	\$20.74
OVERHEAD EXPENSES								
DOWNTIME		0.16 HR		\$1.15				\$1.15
EMPLOYEE BENEFITS				\$2.39				\$2.39
INSURANCE			\$0.27					\$0.27
SUPERVISION AND MANAGEMENT				\$6.54				\$6.54
SUBTOTAL		0.16 HR	\$0.27	\$10.09				\$10.36
TOTAL OPERATING EXPENSES		2.03 HR	\$57.87	\$23.39	\$4.87	\$0.67	\$1.91	\$88.70

TABLE 7. Alfalfa hay, flood-irrigated, budgeted per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County, Projected 2006.
Harvesting dates: May 15 - September 15

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
ALFALF FA HAY	\$130.00	4.00 TONS (STACKED)						\$520.00
GRAZING	\$15.00	1.00 ACRE						\$15.00
TOTAL							\$535.00	
PURCHASED INPUTS								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
LIVESTOCK FAC & EQUIP ESTABLISHMENT: Principal		10.00 YEARS					\$4.00	\$4.00
Interest							\$8.87	\$8.87
BALING WIRE	\$0.50	34.28 LBS	\$17.14				\$4.26	\$4.26
CANAL WATER		16.00 AC. IN.	\$5.00					\$17.14
PUMP WATER*		8.00 AC. IN.						\$5.00
SUBTOTAL			\$22.14				\$17.13	\$39.27
PREHARVEST OPERATIONS								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DITCH MAINTENANCE		0.50 HR		\$3.73				\$3.73
IRRIGATE (8X)		4.00 HR		\$26.40	\$5.69	\$0.00	\$14.59	\$46.68
SUBTOTAL		4.50 HR		\$30.13	\$5.69	\$0.00	\$14.59	\$50.41
HARVEST OPERATIONS								
MOWER (3X)	40 HP	1.11 HR		\$8.27	\$8.72	\$1.60	\$5.54	\$24.13
RAKE (3X)	40 HP	0.36 HR		\$2.68	\$2.83	\$0.54	\$3.64	\$9.69
BALER (3X)	40 HP	0.63 HR		\$4.69	\$4.95	\$0.78	\$8.23	\$18.64
HAUL (3X)	1 TON TRUCK	4.50 HR		\$33.53	\$60.03	\$37.46	\$55.19	\$186.21
SUBTOTAL		6.60 HR		\$49.17	\$76.52	\$40.38	\$72.60	\$238.67
OVERHEAD EXPENSES								
DOWNTIME		1.65 HR		\$12.29				\$12.29
EMPLOYEE BENEFITS				\$14.27				\$14.27
INSURANCE			\$1.59					\$1.59
LAND TAXES							\$0.24	\$0.24
SUPERVISION AND MANAGEMENT				\$44.75				\$44.75
OTHER EXPENSES			\$207.62					\$207.62
SUBTOTAL		1.65 HR	\$209.20	\$71.32			\$0.24	\$280.76
TOTAL OPERATING EXPENSES		12.75 HR	\$231.34	\$150.61	\$82.21	\$40.38	\$104.56	\$609.11
NET OPERATING PROFIT							(\$74.11)	
INTEREST ON OPERATING CAPITAL (\$22.23 @ 8.00%)							\$1.78	
INTEREST ON EQUIPMENT INVESTMENT							\$3.13	
RETURN TO LAND AND RISK							(\$79.02)	

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

BUDGET SUMMARY

GROSS RETURN		\$535.00	
VARIABLE OPERATING EXPENSES	\$353.94		
RETURN OVER VARIABLE EXPENSES		\$181.06	(GROSS MARGIN)
FIXED EXPENSES	\$104.56		
NET FARM INCOME		\$76.50	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$150.61		
NET OPERATING PROFIT		(\$74.11)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$4.91		
RETURN TO LAND AND RISK		(\$79.02)	

TABLE 8. Native grass hay, flood-irrigated, budgeted per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County, Projected 2006.
Harvesting dates: July 20 - September 15

ITEM	PRICE	YIELD		TOTAL	
GROSS RETURNS					
HAY	\$115.00	1.50	TONS (STACKED)		\$172.50
GRAZING	\$13.00	1.00	ACRE		\$13.00
TOTAL					\$185.50

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS		FIXED COST	TOTAL
LIVESTOCK FAC & EQUIP					\$4.00	\$4.00
BALING WIRE	\$0.50	13 LBS	\$6.43			\$6.43
CANAL WATER		12 AC. IN.	\$5.00			\$5.00
PUMP WATER*		6 AC. IN.				
SUBTOTAL			\$11.43		\$4.00	\$15.43

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DITCH MAINTENANCE		0.50 HR		\$3.73				\$3.73
IRRIGATE (5X)		2.50 HR		\$18.63	\$4.27	\$0.00	\$10.95	\$33.84
SUBTOTAL		3.00 HR		\$22.35	\$4.27	\$0.00	\$10.95	\$37.56

HARVEST OPERATIONS								
MOWER (2X)	40 HP	0.74 HR		\$5.51	\$5.81	\$1.07	\$3.69	\$16.09
RAKE (2X)	40 HP	0.24 HR		\$1.79	\$1.88	\$0.36	\$2.43	\$6.46
BALER, 1-TON (2X)	40 HP	0.42 HR		\$3.13	\$3.30	\$0.52	\$5.48	\$12.43
HAUL (2X)	TRUCK	1.60 HR		\$11.92	\$21.34	\$13.32	\$19.62	\$66.21
SUBTOTAL		3.00 HR	\$0.00	\$22.35	\$32.34	\$15.27	\$31.23	\$101.19

OVERHEAD EXPENSES								
DOWNTIME		0.75 HR		\$5.59				\$5.59
EMPLOYEE BENEFITS				\$8.05				\$8.05
INSURANCE			\$0.89					\$0.89
LAND TAXES							\$0.24	\$0.24
SUPERVISION AND MANAGEMENT				\$14.49				\$14.49
OTHER EXPENSES			\$207.62					\$207.62
SUBTOTAL		0.75 HR	\$208.51	\$28.12			\$0.24	\$236.87

TOTAL OPERATING EXPENSES		3.75 HR	\$219.94	\$72.82	\$36.61	\$15.27	\$46.41	\$391.05
NET OPERATING PROFIT								(\$205.55)
INTEREST ON OPERATING CAPITAL		(\$10.75 @	8.00%)				\$0.86
INTEREST ON EQUIPMENT INVESTMENT								\$30.44
RETURN TO LAND AND RISK								(\$236.85)

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

BUDGET SUMMARY

GROSS RETURN		\$185.50	
VARIABLE OPERATING EXPENSES	\$271.82		
RETURN OVER VARIABLE EXPENSES		(\$86.32)	(GROSS MARGIN)
FIXED EXPENSES	\$46.41		
NET FARM INCOME		(\$132.73)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$72.82		
NET OPERATING PROFIT		(\$205.55)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$31.30		
RETURN TO LAND AND RISK		(\$236.85)	

TABLE 9. Summary of per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County
Projected 2006.

	ALFALFA ESTABLISHMENT	ALFALFA HAY	NATIVE GRASS HAY
		TONS	TONS
PRIMARY YIELD		4.00	1.50
PRIMARY PRICE		\$130.00	\$115.00
GOVERNMENT PAYMENTS		\$0.00	\$0.00
SECOND INCOME		\$15.00	\$13.00
GROSS RETURN		\$535.00	\$185.50
CASH OPERATING EXPENSES			
SEED	\$57.60		
FERTILIZER			
CHEMICALS			
CROP INSURANCE			
OTHER PURCHASED INPUTS		\$17.14	\$6.43
CANAL WATER		\$5.00	\$5.00
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$4.87	\$76.52	\$32.34
FUEL-IRRIGATION		\$5.69	\$4.27
REPAIRS	\$0.67	\$40.38	\$15.27
CUSTOM CHARGES			
LAND TAXES		\$0.24	\$0.24
OTHER EXPENSES	\$0.27	\$209.20	\$208.51
TOTAL CASH EXPENSES	\$63.40	\$354.18	\$272.05
RETURN OVER CASH EXPENSES	(\$63.40)	\$180.82	(\$86.55)
FIXED EXPENSES	\$1.91	\$104.32	\$46.17
TOTAL EXPENSES	\$65.31	\$458.50	\$318.23
NET FARM INCOME	(\$65.31)	\$76.50	(\$132.73)
LABOR AND MANAGEMENT COSTS	\$23.39	\$150.61	\$72.82
NET OPERATING PROFIT	(\$88.70)	(\$74.11)	(\$205.55)
CAPITAL COSTS			
INTEREST ON OPERATING CAPITAL		\$1.78	\$0.86
INTEREST ON EQUIPMENT INVESTMENT		\$3.13	\$30.44
TOTAL CAPITAL COSTS	\$0.00	\$4.91	\$31.30
RETURN TO LAND AND RISK	(\$88.70)	(\$79.02)	(\$236.85)

TABLE 10. Whole farm summary, Union County,
Projected 2006.

GROSS RETURNS		
ALFALFA HAY	40 ACRES	
CROP		\$20,800
GRAZING		\$600
NATIVE GRASS HAY	40 ACRES	
CROP		\$6,900
GRAZING		\$520
GROSS RETURN		<u>\$28,820</u>
CASH OPERATING EXPENSES		
SEED		\$230
FERTILIZER		\$0
CHEMICALS		\$0
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$943
CANAL WATER		\$400
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$4,374
FUEL-IRRIGATION		\$398
REPAIRS		\$2,229
CUSTOM CHARGES		\$0
LAND TAXES		\$19
OTHER EXPENSES		\$16,710
TOTAL CASH EXPENSES		<u>\$25,303</u>
RETURN OVER CASH EXPENSES		\$3,517
FIXED EXPENSES		\$5,673
TOTAL EXPENSES		\$30,975
NET FARM INCOME		(\$2,155)
LABOR AND MANAGEMENT COSTS		\$9,031
NET OPERATING PROFIT		(\$11,186)
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$106
INTEREST ON EQUIPMENT INVESTMENT		\$1,343
TOTAL CAPITAL COSTS		<u>\$1,448</u>
RETURN TO LAND AND RISK		<u>(\$12,634)</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$200 /ACRE	(\$13,114)	-20.41%
\$350 /ACRE	(\$13,474)	-16.74%
\$500 /ACRE	(\$13,834)	-14.19%

* 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)