

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... DRY CIMARRON AREA, UNION COUN Projected 201:
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 2013.

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 2013.

Item			
Labor Wage Rate:			
Equipment operators	\$/hour		\$8.55
General & Irrigators	\$/hour		\$7.50
Purchased Inputs:			
Seed:			
Alfalfa	\$/pound		\$6.50
Natural gas	\$/MCF		\$4.00
Diesel fuel	\$/gallon		\$3.00
Gasoline	\$/gallon		\$3.80
Electricity	cents/KwHr		7.94
LP Gas	\$/gallon		\$2.80
Baling Wire	\$/pound		\$0.91
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		5.00%
Land Interest Rate	percent		5.00%
Equipment Interest Rate	percent		5.00%
Real Interest Rate	percent		3.00%
Land Taxes	\$27.00 /acre (full value)		\$0.23
Personal Property Tax Rate	-NR - R	\$/ \$1,000 (Assessed Value)	\$25.02 \$28.63
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 2013.

Item			
Electricity (Domestic & Shop)		\$121.00 per month	\$1,452
Telephone		\$96.80 per month	\$1,162
Accounting & Legal			\$545
Misc. Supplies & Hand Tools			\$895
Pickup and Auto			
miles	12,463	@ \$0.500 per mile	\$6,232
Insurance			
- general liability (non-employee)			\$1,162
- fire/theft			\$756
Property Taxes			
- other than land & machinery			\$6,010
Building repairs and maintenance			\$575
Dues, fees, publications			\$290
Farmstead Equipment			\$91
		Total	\$19,169
		Total per planted acre	\$239.61

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 2013.
Planting dates: August 15 - September 15

ITEM	PRICE	QUANTITY	PURCHASED INPUTS					TOTAL
<u>PURCHASED INPUTS</u>								
SEED	\$6.50	18 LBS	\$117.00					\$117.00
CANAL WATER		5 AC. IN.						
SUBTOTAL			\$117.00					\$117.00
<u>PREHARVEST OPERATIONS</u>								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
CHISEL	40 HP	0.20 HR		\$1.71	\$2.24	\$0.22	\$0.61	\$4.78
DISC	40 HP	0.17 HR		\$1.45	\$1.91	\$0.18	\$0.52	\$4.06
DRILL	40 HP	0.25 HR		\$2.14	\$2.81	\$0.27	\$0.76	\$5.97
DITCH MAINTENANCE		0.50 HR		\$4.28				\$4.28
IRRIGATE (1X)		0.75 HR		\$5.63				\$5.63
SUBTOTAL		1.87 HR		\$15.20	\$6.96	\$0.67	\$1.89	\$24.72
<u>OVERHEAD EXPENSES</u>								
DOWNTIME		0.16 HR		\$1.33				\$1.33
EMPLOYEE BENEFITS				\$2.74				\$2.74
INSURANCE			\$0.30					\$0.30
SUPERVISION AND MANAGEMENT				\$10.98				\$10.98
SUBTOTAL		0.16 HR	\$0.30	\$15.04				\$15.35
<u>TOTAL OPERATING EXPENSES</u>		2.03 HR	\$117.30	\$30.24	\$6.96	\$0.67	\$1.89	\$157.06

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 2013.
Harvesting dates: May 15 - September 15

ITEM	PRICE	YIELD						TOTAL
GROSS RETURNS								
ALFALFA HAY	\$245.00	4.00 TONS (STACKED)						\$980.00
GRAZING	\$15.00	1.00 ACRE						\$15.00
TOTAL								\$995.00
PURCHASED INPUTS								
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL
LIVESTOCK FAC & EQUIP ESTABLISHMENT: Principal		10.00 YEARS					\$4.00	\$4.00
: Interest							\$15.71	\$15.71
BALING WIRE	\$0.91	34.28 LBS	\$31.19				\$4.58	\$4.58
CANAL WATER		16.00 AC. IN.	\$5.00					\$31.19
PUMP WATER*		8.00 AC. IN.						\$5.00
SUBTOTAL			\$36.19				\$24.28	\$60.48
PREHARVEST OPERATIONS								
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DITCH MAINTENANCE		0.50 HR		\$4.28				\$4.28
IRRIGATE (8X)		4.00 HR		\$30.00	\$6.64	\$0.00	\$14.51	\$51.15
SUBTOTAL			4.50 HR	\$34.28	\$6.64	\$0.00	\$14.51	\$55.43
HARVEST OPERATIONS								
MOWER (3X)	40 HP	1.11 HR		\$9.49	\$12.45	\$1.60	\$5.50	\$29.04
RAKE (3X)	40 HP	0.36 HR		\$3.08	\$4.04	\$0.54	\$3.62	\$11.28
BALER (3X)	40 HP	0.63 HR		\$5.39	\$7.07	\$0.78	\$8.18	\$21.41
HAUL (3X)	1 TON TRUCK	4.50 HR		\$38.48	\$85.76	\$37.46	\$56.97	\$218.66
SUBTOTAL			6.60 HR	\$56.43	\$109.32	\$40.38	\$74.26	\$280.39
OVERHEAD EXPENSES								
DOWNTIME		1.65 HR		\$14.11				\$14.11
EMPLOYEE BENEFITS				\$16.33				\$16.33
INSURANCE			\$1.81					\$1.81
LAND TAXES							\$0.23	\$0.23
SUPERVISION AND MANAGEMENT				\$76.95				\$76.95
OTHER EXPENSES			\$239.61					\$239.61
SUBTOTAL			1.65 HR	\$241.42	\$107.38		\$0.23	\$349.03
TOTAL OPERATING EXPENSES			12.75 HR	\$277.62	\$198.09	\$115.96	\$40.38	\$745.33
NET OPERATING PROFIT								\$249.67
INTEREST ON OPERATING CAPITAL		(\$32.23 @ 5.00%)						\$1.61
INTEREST ON EQUIPMENT INVESTMENT								\$1.96
RETURN TO LAND AND RISK								\$246.10

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

BUDGET SUMMARY

GROSS RETURN		\$995.00	
VARIABLE OPERATING EXPENSES	\$433.96		
RETURN OVER VARIABLE EXPENSES		\$561.04	(GROSS MARGIN)
FIXED EXPENSES	\$113.28		
NET FARM INCOME		\$447.76	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$198.09		
NET OPERATING PROFIT		\$249.67	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$3.57		
RETURN TO LAND AND RISK		\$246.10	

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 2013.
Harvesting dates: July 20 - September 15

ITEM	PRICE	YIELD						TOTAL	
GROSS RETURNS									
HAY	\$220.00	1.50 TONS (STACKED)						\$330.00	
GRAZING	\$13.00	1.00 ACRE						\$13.00	
TOTAL								\$343.00	
PURCHASED INPUTS									
PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS				FIXED COST	TOTAL	
LIVESTOCK FAC & EQUIP							\$4.00	\$4.00	
BALING WIRE	\$0.91	13 LBS	\$11.70					\$11.70	
CANAL WATER		12 AC. IN.	\$5.00					\$5.00	
PUMP WATER*		6 AC. IN.							
SUBTOTAL			\$16.70				\$4.00	\$20.70	
PREHARVEST OPERATIONS									
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL	
DITCH MAINTENANCE		0.50 HR		\$4.28				\$4.28	
IRRIGATE (5X)		2.50 HR		\$21.38	\$4.98	\$0.00	\$10.88	\$37.24	
SUBTOTAL		3.00 HR		\$25.65	\$4.98	\$0.00	\$10.88	\$41.52	
HARVEST OPERATIONS									
MOWER (2X)	40 HP	0.74 HR		\$6.33	\$8.30	\$1.07	\$3.66	\$19.36	
RAKE (2X)	40 HP	0.24 HR		\$2.05	\$2.69	\$0.36	\$2.41	\$7.52	
BALER, 1-TON (2X)	40 HP	0.42 HR		\$3.59	\$4.71	\$0.52	\$5.45	\$14.27	
HAUL (2X)	TRUCK	1.60 HR		\$13.68	\$30.49	\$13.32	\$20.25	\$77.75	
SUBTOTAL		3.00 HR	\$0.00	\$25.65	\$46.20	\$15.27	\$31.78	\$118.90	
OVERHEAD EXPENSES									
DOWNTIME		0.75 HR		\$6.41				\$6.41	
EMPLOYEE BENEFITS				\$9.23				\$9.23	
INSURANCE			\$1.03					\$1.03	
LAND TAXES							\$0.23	\$0.23	
SUPERVISION AND MANAGEMENT				\$25.51				\$25.51	
OTHER EXPENSES			\$239.61					\$239.61	
SUBTOTAL		0.75 HR	\$240.64	\$41.16			\$0.23	\$282.02	
TOTAL OPERATING EXPENSES		3.75 HR	\$257.33	\$92.46	\$51.18	\$15.27	\$46.89	\$463.13	
NET OPERATING PROFIT								(\$120.13)	
INTEREST ON OPERATING CAPITAL		(\$14.72	@	5.00%)		\$0.74	
INTEREST ON EQUIPMENT INVESTMENT									\$19.19
RETURN TO LAND AND RISK								(\$140.06)	

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

BUDGET SUMMARY

GROSS RETURN		\$343.00	
VARIABLE OPERATING EXPENSES	\$323.78		
RETURN OVER VARIABLE EXPENSES		\$19.22	(GROSS MARGIN)
FIXED EXPENSES	\$46.89		
NET FARM INCOME		(\$27.67)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$92.46		
NET OPERATING PROFIT		(\$120.13)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$19.92		
RETURN TO LAND AND RISK		(\$140.06)	

TABLE 9. Summary of per acre costs and returns for an 80 acre part-time farm, Dry Cimarron area, Union County, Projected 2013.

	ALFALFA ESTABLISHMENT	ALFALFA HAY	NATIVE GRASS HAY
		TONS	TONS
PRIMARY YIELD		4.00	1.50
PRIMARY PRICE		\$245.00	\$220.00
GOVERNMENT PAYMENTS		\$0.00	\$0.00
SECOND INCOME		\$15.00	\$13.00
GROSS RETURN		\$995.00	\$343.00
CASH OPERATING EXPENSES			
SEED	\$117.00		
FERTILIZER			
CHEMICALS			
CROP INSURANCE			
OTHER PURCHASED INPUTS		\$31.19	\$11.70
CANAL WATER		\$5.00	\$5.00
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$6.96	\$109.32	\$46.20
FUEL-IRRIGATION		\$6.64	\$4.98
REPAIRS	\$0.67	\$40.38	\$15.27
CUSTOM CHARGES			
LAND TAXES		\$0.23	\$0.23
OTHER EXPENSES	\$0.30	\$241.42	\$240.64
TOTAL CASH EXPENSES	\$124.93	\$434.19	\$324.01
RETURN OVER CASH EXPENSES	(\$124.93)	\$560.81	\$18.99
FIXED EXPENSES	\$1.89	\$113.05	\$46.67
TOTAL EXPENSES	\$126.82	\$547.24	\$370.67
NET FARM INCOME	(\$126.82)	\$447.76	(\$27.67)
LABOR AND MANAGEMENT COSTS	\$30.24	\$198.09	\$92.46
NET OPERATING PROFIT	(\$157.06)	\$249.67	(\$120.13)
CAPITAL COSTS			
INTEREST ON OPERATING CAPITAL		\$1.61	\$0.74
INTEREST ON EQUIPMENT INVESTMENT		\$1.96	\$19.19
TOTAL CAPITAL COSTS	\$0.00	\$3.57	\$19.92
RETURN TO LAND AND RISK	(\$157.06)	\$246.10	(\$140.06)

TABLE 10. Whole farm summary, Union County,
Projected 2013.

GROSS RETURNS		
ALFALFA HAY	40 ACRES	
CROP		\$39,200
GRAZING		\$600
NATIVE GRASS HAY	40 ACRES	
CROP		\$13,200
GRAZING		\$520
GROSS RETURN		<u>\$53,520</u>
CASH OPERATING EXPENSES		
SEED		\$468
FERTILIZER		\$0
CHEMICALS		\$0
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$1,716
CANAL WATER		\$400
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$6,249
FUEL-IRRIGATION		\$465
REPAIRS		\$2,229
CUSTOM CHARGES		\$0
LAND TAXES		\$18
OTHER EXPENSES		\$19,284
TOTAL CASH EXPENSES		<u>\$30,828</u>
RETURN OVER CASH EXPENSES		\$22,692
FIXED EXPENSES		\$5,768
TOTAL EXPENSES		\$36,596
NET FARM INCOME		\$16,924
LABOR AND MANAGEMENT COSTS		\$11,743
NET OPERATING PROFIT		\$5,181
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$94
INTEREST ON EQUIPMENT INVESTMENT		\$846
TOTAL CAPITAL COSTS		<u>\$940</u>
RETURN TO LAND AND RISK		<u>\$4,242</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$200 /ACRE	\$3,762	9.42%
\$350 /ACRE	\$3,402	7.73%
\$500 /ACRE	\$3,042	6.56%

* 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)