

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... ARTESIA-LAKE ARTHUR ARE/ Projected 2014
FARM SIZE... .. 500 ACRES
IRRIGATION TYPE..... SPRINKLER
NUMBER OF CROPS..... 6

VERSION 1.0

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* YOU MAY ENTER DATA IN ANY INPUT TABLE WITH
HIGHLIGHTED CELLS OR YOU MAY STRIKE
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(GROSS MARGIN)

(RETURN TO CAPITAL, LABOR, LAND & RISK)

(RETURN TO CAPITAL, LAND & RISK)

TABLE 2. Pumping costs and data for irrigation wells, Artesia-Lake Arthur area, 2002.

INPUT DATA		DEPTH CHARACTERISTICS:	
DELIVERY PSI:		STATIC...	.....
SPRINKLER HEAD..	40	DRAW DOWN .....	.....
		TOTAL HEAD.....	.....
		CASING... .....	.....
GALLONS PER MINUTE (GPM)...	500		
WORK HORSEPOWER.....	10.1010101		
EFFICIENCY FACTOR:			
ELECTRICITY.	0.47		
NATURAL GAS.	0.12		
LP GAS.....	0.12		
DIESEL.....	0.16		
FUEL COST PER UNIT:			
ELECTRICITY.	5.6	CENTS/K	wHr
NATURAL GAS.	3.48	\$/MCF	
LP GAS.....	0.84	\$/GAL	
DIESEL.....	1.05	\$/GAL	
TOTAL FUEL COSTS:			
ELECTRIC WELL:			
COST PER HOUR.....	.....\$	0.92842191	
COST PER ACRE INCH. ....	.....\$	0.84034561	
NATURAL GAS WELL:			
COST PER HOUR.....	.....\$	0.84728978	
COST PER ACRE INCH. ....	.....\$	0.76691022	
LP GAS WELL:			
COST PER HOUR.....	.....\$	1.98743376	
COST PER ACRE INCH. ....	.....\$	1.79889254	
DIESEL WELL:			
COST PER HOUR.....	.....\$	1.21636501	
COST PER ACRE INCH. ....	.....\$	1.10097252	

DELIVERY PSI:		BOOSTER PUMP..		45		
GALLONS PER MINUTE (GPM)...						500
WORK HORSEPOWER.....						5.97348485
EFFICIENCY FACTOR:						
ELECTRICITY.						0.47
NATURAL GAS.						0.12
LP GAS.....						0.12
DIESEL.....						0.16
FUEL COST PER HOUR:						
ELECTRICITY.						5.6 CENTS/K wHr
NATURAL GAS.						3.48 \$/MCF
LP GAS.....						0.84 \$/GAL
DIESEL.....						1.05 \$/GAL
TOTAL FUEL COSTS (BOOSTER PUMP):						
ELECTRIC:						
COST PER HOUR.....						.....\$ 0.56141409
COST PER ACRE INCH .....						.....\$ 0.50815461
NATURAL GAS:						
COST PER HOUR.....						.....\$ 0.51333171
COST PER ACRE INCH .....						.....\$ 0.46463364
LP GAS:						
COST PER HOUR.....						.....\$ 1.18670211
COST PER ACRE INCH .....						.....\$ 1.07412364
DIESEL:						
COST PER HOUR.....						.....\$ 0.7291367
COST PER ACRE INCH .....						.....\$ 0.65996593

TABLE 3. Equipment summary for a 500 acre sprinkler-irrigated farm with above average management, Artesia-Lake Arthur area, 2002.

EQUIPMENT		ANNUAL HOURS OF USE		VARIABLE		FIXED COSTS		TOTAL PER HOUR		
ITEM & SIZE	NUMBER	VALUE	FUEL AND LUBRICANT	REPAIR PER HR	REPAIR PER HR	DEPRECIATION	TAXES			
			15.1905	2.992	0.205	50	9.4	0.80161943		
			275.43417	4.862	1.122	137.5	20.68	0.64435709		
			137.2788	3.8808	0.81	250	28.2	1.64149162		
			748.5525	5.65488	2.1012	343.333333	38.728	1.07245287		
			649.447838	8.541225	2.0955	2794	262.636	9.86250222		
			2950.2616	6.3504	48.62	9350	703.12	165.674357		
			118.7858		3.22	766.666667	43.24	21.9546399		
TRACTOR 40 HP	74.1	1	675	221.7072	2577.443	3.9312	14.575	2750	206.8	16.720199
TRACTOR 65 HP	245.485	1	2050	1193.54807	7159	7.752	22.31608479	2250	169.2	7.54114713
TRACTOR 70 HP	169.48	1	5600	657.717984	1168.915		2.915	1100	82.72	2.94942643
TRACTOR 96 HP	356.25	1	6560	2014.551	200.1376		5.44	680	25.568	19.178255
TRACTOR 145 HP	309.925	1	56165	2647.13916	101.6253		0.855	200	11.28	1.77755342
COTTON PICKER 4-ROW	60.68	1	104500	385.342272	137.028713		1.2825	300	16.92	2.96616594
COTTON STRIPPER MTD	36.89	1	3860		75.96666		2.772	440	16.544	16.6591498
SWATHER 16 FT	176.84	1	19990	695.193408	17.8695		0.55	366.666667	20.68	11.9220273
BALE WAGON S.P.	320.8	1	20600	2486.8416	6.75		0.135	60	3.384	1.26768
BALER PTO	401	2	10500		235.296		2.28	533.333333	30.08	5.45943152
PLANTER 4-ROW	36.79	1	3400		22.7815		1.15	333.333333	18.8	17.7755342
CULTIVATOR 4-ROW	118.86	1	1500		27.351		0.216	800	45.12	6.67419546
DISC 12 FT	106.845	1	2250		231.7848		3.128	340	25.568	4.9334413
DRILL 12 FT	27.405	1	2200		6.2083125		0.2925	50	2.82	2.48857479
PLANE 14 FT	32.49	1	2750		3469.49011	0.51333171	0.187	1000	56.4	0.05693828
FLOAT 14 FT	50	1	600		872.010884		0.047	433.333333	244.4	0.24673255
PLOW (MOLDBOARD) 4-16 IN	103.2	1	4000		3710.68461	0.84728978	0.2	11000	909.92	0.71307165
SHREDDER 4-ROW	19.81	1	2500							
COTTON TRAILER	126.625	5	6000		24,915			40,228	2,992	
RAKE 8 FT	74.1	1	3400							
SLED	21.225	1	375							
NATURAL GAS BOOSTER PUMP	18553.4231	3	7500	9524.06041						
SIDE-ROLL SPRINKLER	18553.4231	13	32500							
NATURAL GAS WELL	18553.4231	11	121000	15720.1257						
				420,475	35,546					

TABLE 2. Pumping costs and data for irrigation wells, Artesia-Lake Arthur area, 2002.

INPUT DATA

DELIVERY PSI: SPRINKLER HEAD..	40	DEPTH CHARACTERISTICS: STATIC.....	60	DELIVERY PSI: BOOSTER PUMP..	45	
		DRAW DOWN	20			
		TOTAL HEAD.....	80			
		CASING.....	250			
GALLONS PER MINUTE (GPM)...	500			GALLONS PER MINUTE (GPM)...	500	
WORK HORSEPOWER.....	10.1010101			WORK HORSEPOWER.....	5.973484848	
EFFICIENCY FACTOR:				EFFICIENCY FACTOR:		
ELECTRICITY.....	0.47			ELECTRICITY.....	0.47	
NATURAL GAS.....	0.12			NATURAL GAS.....	0.12	
LP GAS.....	0.12			LP GAS.....	0.12	
DIESEL.....	0.16			DIESEL.....	0.16	
FUEL COST PER UNIT:	:			FUEL COST PER HOUR:		
ELECTRICITY.....	6.84 CENTS/K	wHr		ELECTRICITY.....	6.84 CENTS/K	
NATURAL GAS.....	3.71 \$/MCF			NATURAL GAS.....	3.71 \$/MCF	
LP GAS.....	0.98 \$/GAL			LP GAS.....	0.98 \$/GAL	
DIESEL.....	1.4 \$/GAL			DIESEL.....	1.4 \$/GAL	
TOTAL FUEL COSTS:				TOTAL FUEL COSTS (BOOSTER PUMP):		
ELECTRIC WELL:				ELECTRIC:		
COST PER HOUR.....\$	1.12735818		COST PER HOUR.....\$	0.679084356
COST PER ACRE INCH.\$	1.02040947		COST PER ACRE INCH\$	0.614661887
NATURAL GAS WELL:				NATURAL GAS:		
COST PER HOUR.....\$	0.90130606		COST PER HOUR.....\$	0.545276048
COST PER ACRE INCH.\$	0.81580216		COST PER ACRE INCH\$	0.493547527
LP GAS WELL:				LP GAS:		
COST PER HOUR.....\$	2.31367272		COST PER HOUR.....\$	1.379485799
COST PER ACRE INCH.\$	2.0941823		COST PER ACRE INCH\$	1.24861858
DIESEL WELL:				DIESEL:		
COST PER HOUR.....\$	1.61182002		COST PER HOUR.....\$	0.962182263
COST PER ACRE INCH.\$	1.45891202		COST PER ACRE INCH\$	0.870903239

TABLE 3. Equipment summary for a 500 acre sprinkler-irrigated farm with above average management, Artesia-Lake Arthur area, 2001.

EQUIPMENT		VARIABLE COSTS							FIXED COSTS		
ITEM &	SIZE	ANNUAL HOURS OF USE	NUMBER	TOTAL VALUE	FUEL AND LUBRICANT	REPAIR	FUEL,LUBE PER HR	REPAIR PER HR	DEPRECIATION	TAXES	TOTAL PER HOUR
TRACTOR 40 HP		74.1	1	750	288.21936	15.1905	3.8896	0.205	50	8.95	0.795546559
TRACTOR 65 HP		245.485	1	2000	1551.61249	275.43417	6.3206	1.122	137.5	19.69	0.640324256
TRACTOR 70 HP		169.48	1	5365	876.957312	155.0742	5.1744	0.915	250	26.85	1.63352608
TRACTOR 96 HP		356.25	1	6800	2686.068	748.5525	7.53984	2.1012	343.333333	36.874	1.067248655
TRACTOR 145 HP		309.925	1	26620	3918.50575	1024.94057	12.6434	3.30706	2688.66667	144.3814	9.141076282
COTTON PICKER 4-ROW		60.68	1	84770	513.789696	3177.2048	8.4672	52.36	9350	669.46	165.119644
COTTON STRIPPER MTD		36.89	1	3800		118.7858		3.22	766.66667	41.17	21.89852715
SWATHER 16 FT		176.84	1	15215	926.924544	0	5.2416	0	2750	196.9	16.66421624
BALE WAGON S.P.		320.8	1	17200	3232.89408	7159	10.0776	22.3160848	2250	161.1	7.515897756
BALER PTO		401	2	9440		0		0	1100	78.76	2.939551122
PLANTER 4-ROW		36.79	1	3400		200.1376		5.44	680	24.344	19.14498505
CULTIVATOR 4-ROW		118.86	1	1500		99.8424		0.84	200	10.74	1.773010264
DISC 12 FT		106.845	1	2250		137.028713		1.2825	300	16.11	2.958584866
DRILL 12 FT		27.405	1	2200		85.61322		3.124	440	15.752	16.63024995
PLANE 14 FT		32.49	1	2750		17.8695		0.55	366.66667	19.69	11.89155638
FLOAT 14 FT		50	1	600		7.2		0.144	60	3.222	1.26444
PLOW (MOLDBOARD) 4-16 IN		103.2	1	4000		235.296		2.28	533.333333	28.64	5.445478036
SHREDDER 4-ROW		19.81	1	2500		22.7815		1.15	333.333333	17.9	17.73010264
COTTON TRAILER		126.625	5	6000		30.39		0.24	800	42.96	6.657137216
RAKE 8 FT		74.1	1	3400		241.8624		3.264	340	24.344	4.916923077
SLED		21.225	1	375		6.2083125		0.2925	50	2.685	2.48221437
NATURAL GAS BOOSTER PUMP		18553.4231	3	7500	10116.7372	3469.49011	0.54527605	0.187	1000	53.7	0.056792754
SIDE-ROLL SPRINKLER		18553.4231	13	32500	16722.3126	3710.68461	0.90130606	0.047	4333.33333	232.7	0.246101936
NATURAL GAS WELL		18553.4231	11	121000				0.2	11000	866.36	0.710723835
				361,935	40,834	21,811			40,123	2,743	

wHr

TABLE 1. Acreage Summary, Eddy County, Artesia Lake Arthur Area,
Projected 2014

BUDGET AREA..... ARTESIA-LAKE ARTHUR AREA	
FARM SIZE.....	500 ACRES
IRRIGATION TYPE.....	SPRINKLER
NUMBER OF CROPS.....	6

ACREAGE SUMMARY:	WATER USE	
	LAND USE (ACRES)	AC.IN. PER AC.
ALFALFA ESTABLISHMENT	57.00	#REF!
ALFALFA	285.00	48
BARLEY	8.50	28
ARP	0.00	
FLEX IN PICKER COTTON	1.50	28
OAT HAY	8.00	28
PICKER COTTON	59.50	28
ARP	0.00	
FLEX IN PICKER COTTON	10.50	28
STRIPPER COTTON	59.50	28
ARP	0.00	
FLEX IN PICKER COTTON	10.50	28
TOTAL	500.00	

ACRE FEE PER ACRE OF WATER RIGHTS

TABLE 4. Pumping costs and data for irrigation wells, Artesia-Lake Arthur area, Projected 2014

INPUT DATA

DELIVERY PSI:		DEPTH CHARACTERISTICS:
SPRINKLER HEAD.....	40	STATIC.....
		DRAW DOWN.....
		TOTAL HEAD.....
		CASING.....
GALLONS PER MINUTE (GPM)	500	
WORK HORSEPOWER.	#REF!	
EFFICIENCY FACTOR:		
ELECTRICITY	0.47	
NATURAL GAS	0.12	
LP GAS	0.12	
DIESEL	0.16	
FUEL COST PER UNIT:		
ELECTRICITY	#REF!	Cents/KwHr
NATURAL GAS	#REF!	\$/MCF
LP GAS	#REF!	\$/GAL
DIESEL	#REF!	\$/GAL

TOTAL FUEL COSTS:

ELECTRIC WELL:		
COST PER HOUR		#REF!
COST PER ACRE INCH		#REF!
NATURAL GAS WELL:		
COST PER HOUR		#REF!
COST PER ACRE INCH		#REF!
LP GAS WELL:		
COST PER HOUR		#REF!
COST PER ACRE INCH		#REF!
DIESEL WELL:		
COST PER HOUR		#REF!
COST PER ACRE INCH		#REF!

TABLE 5. Equipment summary for a 500 acre sprinkler-irrigated farm with above average management, Artesia-Lake Arthur area, Projected 2014

EQUIPMENT		ANNUAL HOURS OF USE	NUMBER	TOTAL VALUE
ITEM & SIZE				
TRACTOR	40 HP	#REF!	#REF!	#REF!
TRACTOR	65 HP	#REF!	#REF!	#REF!
TRACTOR	70 HP	#REF!	#REF!	#REF!
TRACTOR	96 HP	#REF!	#REF!	#REF!
TRACTOR	145 HP	#REF!	#REF!	#REF!
COTTON PICKER	4 ROW	#REF!	#REF!	#REF!
COTTON STRIPPER MTD		#REF!	#REF!	#REF!
SWATHER	16 FT	#REF!	#REF!	#REF!
BALE WAGON S.P.		#REF!	#REF!	#REF!
BALER PTO		#REF!	#REF!	#REF!
PLANTER	4 ROW	#REF!	#REF!	#REF!
CULTIVATOR	4 ROW	#REF!	#REF!	#REF!
DISC	12 FT	#REF!	#REF!	#REF!
DRILL	12 FT	#REF!	#REF!	#REF!
PLANE	14 FT	#REF!	#REF!	#REF!
FLOAT	14 FT	#REF!	#REF!	#REF!
PLOW (MOLDBOARD)	4-16 IN	#REF!	#REF!	#REF!
SHREDDER	4 ROW	#REF!	#REF!	#REF!
COTTON TRAILER		#REF!	#REF!	#REF!
RAKE	8 FT	#REF!	#REF!	#REF!
SLED		#REF!	#REF!	#REF!
NATURAL GAS BOOSTER PUMP		#REF!	#REF!	#REF!
SIDE-ROLL SPRINKLER		#REF!	#REF!	#REF!
NATURAL GAS WELL		#REF!	#REF!	#REF!
				#REF!

EQUIPMENT LIST

NEW USED YEARS

1.25	0	0	0	0	0	1.25
0	#REF!	#REF!	1.07	1.15	1.15	#REF!
0	0	0	0	0.74	0	0.74
0	0	0	0	0	0.62	0.62
0.55	0	0	0.16	0	0	0.71
1	0	0	0.2	0	0	1.2
1.25	0	0	0.25	0	0	1.5
0	0	#REF!	0	0.26	0.26	#REF!
0	0	#REF!	0	0.84	0.84	#REF!
0	#REF!	#REF!	0.34	0.51	0.51	#REF!
0	#REF!	0	0.21	0	0	#REF!
0	0	0	0	0	0	0
0	0	#REF!	0	0.16	0.16	#REF!
0	#REF!	#REF!	0.48	0.48	0.48	#REF!
0	0	0	0	0.14	0.14	0.28
0	0	0	0	1	0.75	1.75

PLOW	145 HP	1	0.48	0.48
FLOAT	70 HP	1	0.16	0.16
PLANE (3X)	145 HP	3	0.19	0.57
DISC (2X)	145 HP	2	0.17	0.34
FLOAT (2X)	70 HP	2	0.16	0.32
DRILL (2X)	70 HP	2	0.21	0.42
IRRIGATE (6X)		6	0.9051333	#REF!
SWATHER (3X)	16 FT	3	0.11	0.33
RAKE	40 HP	1	0.05	0.05
BALEWAGON (3X)	126 HP	3	0.25	0.75
SP		3	0.2	0.6

0.25	0	0	0	0	0	0.25
0	0	0	0	0.15	0.15	0.3
43.4464	#REF!	#REF!	25.343733	25.343733	25.343733	#REF!
43.4464	#REF!	#REF!	25.343733	25.343733	25.343733	#REF!
43.4464	#REF!	#REF!	25.343733	25.343733	25.343733	#REF!

ANNUAL ALFALFA ACRES: 285 PUMP WATER:

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT	
			RATE	TOTAL
IRRIGATE (6X)		6	0.9051333	43.4464
SWATHER (5X)	16 FT SP	5	0.11	0.55
RAKE (5X)	40 HP	5	0.05	0.25
BALER (5X)	96 HP	5	0.25	1.25
BALE WAGON (5X)	SP	5	0.2	1

BARLEY ACRES: 8.5 PUMP WATER:

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLI RATE	0.42 #REF!
DISC (2X)	145 HP	2	0.17	
FERTI LIZE	DEALER AP			
DRILL	70 HP	1	0.21	
IRRIGATE (4X)		4	0.9051333	

COMBINE (CUSTOM) PER ACRE
PER CWT OVER 18 CWT
HAUL (CUSTOM) PER CWT

				TOTAL
				0.48
CUCUMBERS	ACRES:	0	PUMP V	0.34
				0.21
				25.343733
MACHINE	POWER UNIT	TIMES OVER	ACCOMPLI RATE	
DISC	145 HP	1	0.17	
PLOW	145 HP	1	0.48	
DISC (2X)	145 HP	2	0.17	0.16
FLOAT	70 HP	1	0.16	0.25
FERTI LIZE (CUSTOM)	DEALER APPLIED			0.2
PRE-IRRIGATE		1	0.0603422	
CULTIVATOR	65 HP	1	0.21	
PLANTER	70 HP	1	0.26	
CULTIVATOR (2X)	40 HP	2	0.21	
THIN & HOE (2X)				
IRRIGATE (14X)		14	0.8447911	
				TOTAL
				0.17
				0.48
HARVEST (CUSTOM)		[PER POUND]		0.34
HAUL (VEG. TRAILER)	40 HP	2	0.5	0.16
				6.3359333
				0.21
				0.26

OAT HAY ACRES: 8 PUMP V

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT	
			RATE	TOTAL
PLOW	145 HP	1	0.48	0.74
DISC (2X)	145 HP	2	0.17	1
DRILL	70 HP	1	0.21	
IRRIGATE (4X)		4	0.9051333	

SWATHER 14 FT 1 0.16
BALER 126 HP 1 0.25
BALE WAGON S. P. 1 0.2

UPLAND COTTON (PICKER) ACRES: 82 PUMP V

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLI	
			RATE	TOTAL
DISC	145 HP	1	0.17	0.16
PLOW	145 HP	1	0.48	6.3359333
DISC (2X)	145 HP	2	0.17	0.21
FLOAT	145 HP	1	0.16	0.26
PRE-IRRIGATE		1	0.2262833	0.15
CULTIVATOR	65 HP	1	0.21	0.63
PLANT ER	70 HP	1	0.26	
SLED	70 HP	1	0.15	19.0078
CULTI VATOR (3X)	65 HP	3	0.21	
HAND HOE (CUST OM)				
IRRIGATE (3X)		3	0.67885	
COTTON PICKER (2X)	2-ROW	2	0.37	0.62

HAUL (2X) 65 HP 2 0.5 0.75
GIN COTTON (CUSTOM) \$/LINT#

SHRED DER 70 HP 1 0.14 0.14

UPLAND COTTON (STRIPPER) ACRES: 59.5 PUMP WATER:

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLI RATE	6
DISC	145 HP	1	0.17	**
PLOW	145 HP	1	0.48	0.00014
DISC (2X)	145 HP	2	0.17	0.00014
FLOAT	145 HP	1	0.16	0.00022
PRE-IRRIGATE		1	0.2262833	0.00026
CULTIVATOR	65 HP	1	0.21	0.00031
PLANT ER	70 HP	1	0.26	0.00034
SLED	70 HP	1	0.15	0.00037
CULTI VATOR (3X)	65 HP	3	0.21	0.00039
HAND HOE (CUST OM)				0.00041
IRRIGATE (3X)		3	0.67885	0.00043
				0.00045
				0.00046
				0.00048
				0.00051
COTTON STRIPPER	70 HP	1	0.62	0.000525
HAUL	65 HP	1	0.75	0.00055
GIN COTTON (CUSTOM) \$/LINT#				0.000565

SHRED DER 70 HP 1 0.14

ANNUAL REPAIR COSTS AS A PERCENT OF NEW

Hours of Use	1	2	3	4	5
0	0.00006	0.00002	0.00062	0.00002	0.00008
50	0.00006	0.00002	0.00062	0.00002	0.00008
100	0.00006	0.00002	0.0005	0.00002	0.00014
200	0.00003	0.00003	0.00043	0.00004	0.00018
300	0.00003	0.00005	0.00039	0.00006	0.00023
400	0.00003	0.00006	0.00037	0.00009	0.00026
500	0.00003	0.00007	0.00036	0.0001	0.00028
600	0.00003	0.00009	0.00034	0.00012	0.00031
700	0.00003	0.0001	0.00034	0.00013	0.00033
800	0.00003	0.00011	0.00032	0.00015	0.00035
900	0.00003	0.00012	0.00032	0.00016	0.00037
1000	0.00009	0.00013	0.00031	0.00018	0.00038
1200	0.000045	0.000145	0.000305	0.000205	0.000405
1400	0.000045	0.00017	0.0003	0.00023	0.000435
1500	0.00015	0.00017	0.0003	0.00023	0.000435
1600	0.00015	0.00019	0.000285	0.000255	0.000465
1800	0.000075	0.00017	0.000285	0.000285	0.000485
2000	0.00011	0.000265	0.00028	0.000305	0.000505
2500	0.000056				
3000	0.00007				
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

48

CUSTOM

28

40

0.0325

28

CUSTOM

28

CUSTOM

20

0.149

28

CUSTOM

20

TABLE 6. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for a 500 acre farm with above average management, Artesia-Lake Arthur area, Projected 2014
Planting dates: March 15 - April 30

ITEM	PRICE	YIELD	
GROSS RETURNS			
ALFALFA HAY	\$245.00	6.50 TONS (STACKED)	
TOTAL			
<hr/>			
PURCHASED INPUTS	PRICE	QUANTITY	
SEED	#REF!	20 LBS	
FERTILIZER (16-20-0)	\$0.41	200 LBS	
HERBICIDE	#REF!	1 ACRE	
PUMP WATER*	#REF!	#REF! AC. IN.	
SUBTOTAL			
<hr/>			
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	
DISC	145 HP	#REF!	HR
FLOW	145 HP	0.48 HR	
FLOAT	70 HP	0.16 HR	
PLANE (3X)	145 HP	0.57 HR	
DISC (2X)	145 HP	0.34 HR	
FLOAT (2X)	70 HP	0.32 HR	
DRILL (2X)	70 HP	0.42 HR	
IRRIGATE (6X)		1.50 HR	
SUBTOTAL		#REF!	HR
<hr/>			
HARVEST OPERATIONS			
SWATHER (3X)	16 FT	0.33 HR	
RAKE	40 HP	0.05 HR	
BALER (3X)	145 HP	0.75 HR	
BALEWAGON (3X)	SP	0.60 HR	
SUBTOTAL		1.73 HR	
<hr/>			
OVERHEAD EXPENSES			
DOWNTIME		#REF!	HR
EMPLOYEE BENEFITS			
INSURANCE			
SUPERVISION AND MANAGEMENT			
SUBTOTAL		#REF!	HR
<hr/>			
TOTAL OPERATING EXPENSES		#REF!	HR
<hr/>			
NET OPERATING PROFIT			
INTEREST ON EQUIPMENT INVESTMENT			
<hr/>			
RETURN TO LAND AND RISK			
<hr/>			
BUDGET SUMMARY			
GROSS RETURN		#REF!	
VARIABLE OPERATING EXPENSES	#REF!	#REF!	
RETURN OVER VARIABLE EXPENSES		#REF!	(GROSS MARGIN)
FIXED EXPENSES	#REF!		
NET FARM INCOME		#REF!	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	#REF!		
NET OPERATING PROFIT		#REF!	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	#REF!		
RETURN TO LAND AND RISK		#REF!	

TABLE 7. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for a 500 acre farm with above average management, Artesia-Lake Arthur area, Projected 2014
Harvesting Dates: May 5 - November 1

ITEM	PRICE	YIELD
GROSS RETURNS		
ALFALFA HAY	\$245.00	6.50 TONS (STACKED)
GRAZING	\$40.00	
TOTAL		

PURCHASED INPUTS	PRICE	QUANTITY
INSECTICIDE (CUSTOM)	#REF!	2 X/ACRE
HERBICIDE (CUSTOM)	#REF!	1 X/ACRE
INSECT SCOUTING	\$5.25	1 ACRE
FERTILIZER (5-26-30)	#REF!	200 LBS
WIRE	#REF!	56 LBS
DRYING AGENT (AGRI-DRY)	\$8.26	1 /TON
ESTABLISHMENT: Principal : Interest		5 YEARS
PUMP WATER*		48 AC. IN.
SUBTOTAL		

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE
IRRIGATE (6X)		1.50 HR
SUBTOTAL		1.50 HR

HARVEST OPERATIONS		
SWATHER (5X)	16 FT SP	0.55 HR
RAKE (5X)	40 HP	0.25 HR
BALER (5X)	96 HP	1.25 HR
BALE WAGON (5X)	SP	1.00 HR
SUBTOTAL		3.05 HR

OVERHEAD EXPENSES		
DOWNTIME		#REF! HR
EMPLOYEE BENEFITS		
INSURANCE		
LAND TAXES		
SUPERVISION AND MANAGEMENT		
OTHER EXPENSES		
SUBTOTAL		#REF! HR
TOTAL OPERATING EXPENSES		#REF! HR

NET OPERATING PROFIT		
INTEREST ON OPERATING CAPITAL	(	#REF! @
INTEREST ON EQUIPMENT INVESTMENT		

RETURN TO LAND AND RISK

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

BUDGET SUMMARY

GROSS RETURN		#REF!	
VARIABLE OPERATING EXPENSES	#REF!		
RETURN OVER VARIABLE EXPENSES		#REF!	(GROSS MARGIN)
FIXED EXPENSES	#REF!		
NET FARM INCOME		#REF!	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	#REF!		
NET OPERATING PROFIT		#REF!	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	#REF!		
RETURN TO LAND AND RISK		#REF!	

TABLE 8. Barley, sprinkler-irrigated, budgeted per acre costs and returns for a 500 acre farm with above average management, Artesia-Lake Arthur area, Projected 2014
 Planting dates: August 20 - September 30
 Harvesting dates: June 15 - July 1

ITEM	PRICE	YIELD
GROSS RETURNS		
BARLEY	\$6.12	35.00 CWT
DIRECT PAYMENT	\$0.00	35.00 CWT
COUNTER CYCLICAL PAYMENT	\$0.00	35.00 CWT
GRAZING	\$40.00	
TOTAL		

PURCHASED INPUTS	PRICE	QUANTITY
SEED	\$0.47	110 LBS
NITROGEN (N)	#REF!	150 LBS
INSECTICIDE (CUSTOM)	#REF!	1 X/ACRE
PUMP WATER*		28 AC. IN.
CROP INSURANCE	\$5.88	
SUBTOTAL		

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE
PLOW	145 HP	#REF! HR
DISC (2X)	145 HP	#REF! HR
FERTILIZE	DEALER APPLIED	
DRILL	70 HP	#REF! HR
IRRIGATE (4X)		1.00 HR
SUBTOTAL		#REF! HR

HARVEST OPERATIONS		
COMBINE (CUSTOM)		
HAUL (CUSTOM)		
SUBTOTAL		

OVERHEAD EXPENSES		
DOWNTIME		#REF! HR
EMPLOYEE BENEFITS		
INSURANCE		
LAND TAXES		
SUPERVISION AND MANAGEMENT		
OTHER EXPENSES		
SUBTOTAL		#REF! HR

TOTAL OPERATING EXPENSES	#REF!	HR
--------------------------	-------	----

NET OPERATING PROFIT			
INTEREST ON OPERATING CAPITAL		#REF!	@
INTEREST ON EQUIPMENT INVESTMENT			

RETURN TO LAND AND RISK

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

GROSS RETURN		#REF!	
VARIABLE OPERATING EXPENSES	#REF!		
RETURN OVER VARIABLE EXPENSES		#REF!	(GROSS MARGIN)
FIXED EXPENSES	#REF!		
NET FARM INCOME		#REF!	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	#REF!		
NET OPERATING PROFIT		#REF!	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	#REF!		
RETURN TO LAND AND RISK		#REF!	

TABLE 9. Oat hay, sprinkler-irrigated, budgeted per acre costs and returns for a 500 acre farm with above average management, Artesia-Lake Arthur area,
 Projected 2014
 Planting dates: February 1 - February 28
 Harvesting Dates: June 1 - June 30

ITEM	PRICE	YIELD	
GROSS RETURNS			
OAT HAY	\$195.00	3.50 TONS (STACKED)	
TOTAL			
<hr/>			
PURCHASED INPUTS	PRICE	QUANTITY	
SEED	#REF!	100 LBS	
FERTILIZER (16-20-0)	#REF!	150 LBS	
PUMP WATER*		28 AC. IN.	
SUBTOTAL			
<hr/>			
PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	
PLOW	145 HP	0.48 HR	
DISC (2X)	145 HP	0.34 HR	
DRILL	70 HP	0.21 HR	
IRRIGATE (4X)		1.00 HR	
SUBTOTAL		2.03 HR	
<hr/>			
HARVEST OPERATIONS			
SWATHER	14 FT	0.16 HR	
BALER	145 HP	0.25 HR	
BALE WAGON	S. P.	0.20 HR	
SUBTOTAL		0.61 HR	
<hr/>			
OVERHEAD EXPENSES			
DOWNTIME		#REF!	HR
EMPLOYEE BENEFITS			
INSURANCE			
LAND TAXES			
SUPERVISION AND MANAGEMENT			
OTHER EXPENSES			
SUBTOTAL		#REF!	HR
TOTAL OPERATING EXPENSES		#REF!	HR
<hr/>			
NET OPERATING PROFIT			
INTEREST ON OPERATING CAPITAL		(#REF!	@
INTEREST ON EQUIPMENT INVESTMENT			
<hr/>			
RETURN TO LAND AND RISK			
* Pump water costs are shown under irrigation in the preharvest operations section.			
BUDGET SUMMARY			
GROSS RETURN		#REF!	
VARIABLE OPERATING EXPENSES	#REF!	#REF!	
RETURN OVER VARIABLE EXPENSES		#REF!	(GROSS MARGIN)
FIXED EXPENSES	#REF!		
NET FARM INCOME		#REF!	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	#REF!		
NET OPERATING PROFIT		#REF!	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	#REF!		
RETURN TO LAND AND RISK		#REF!	

TABLE 10. Upland cotton (picker), sprinkler-irrigated, budgeted per acre costs and returns for a 500 acre farm with above average management, Artesia-Lake Arthur area, Projected 2014
 Planting dates: April 15 - May 15
 Harvesting dates: October 15 - January 15

ITEM	PRICE	YIELD
GROSS RETURNS		
COTTON LINT	\$0.90	700 LBS
COTTON SEED	\$0.09	1,120.00 LBS
DIRECT PAYMENT	\$0.0000	700 LBS
COUNTER CYCLICAL PAYMENT	\$0.1373	700 LBS
TOTAL		

PURCHASED INPUTS	PRICE	QUANTITY
SEED	#REF!	15 LBS
FOLIAR FERTILIZER	\$4.80	1 X/ACRE
INSECT SCOUTING	\$5.25	1 ACRE
HERBICIDE (CUSTOM)	#REF!	1 X/ACRE
INSECTICIDE (CUSTOM)	#REF!	3 X/ACRE
CROP INSURANCE		
PUMP WATER*		28 AC. IN.
SUBTOTAL		

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE
DISC	145 HP	0.17 HR
PLOW	145 HP	0.48 HR
DISC (2X)	145 HP	0.34 HR
FLOAT	145 HP	0.16 HR
PRE-IRRIGATE		0.25 HR
CULTIVATOR	65 HP	0.21 HR
PLANTER	70 HP	0.26 HR
SLED	70 HP	0.15 HR
CULTIVATOR (3X)	65 HP	0.63 HR
HAND HOE (CUSTOM)		
IRRIGATE (3X)		0.75 HR
SUBTOTAL		3.40 HR

HARVEST OPERATIONS		
COTTON PICKER (2X)	2-ROW	0.74 HR
HAUL (2X)	65 HP	1.00 HR
GIN COTTON (CUSTOM)		
SUBTOTAL		1.74 HR

POSTHARVEST OPERATIONS		
SHREDDER	70 HP	0.14 HR
SUBTOTAL		0.14 HR

OVERHEAD EXPENSES		
DOWNTIME		#REF! HR
EMPLOYEE BENEFITS		
INSURANCE		
LAND TAXES		
SUPERVISION AND MANAGEMENT		
OTHER EXPENSES		
SUBTOTAL		#REF! HR

TOTAL OPERATING EXPENSES		#REF! HR
---------------------------------	--	-----------------

NET OPERATING PROFIT		
INTEREST ON OPERATING CAPITAL	(#REF!	@
INTEREST ON EQUIPMENT INVESTMENT		

RETURN TO LAND AND RISK

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

BUDGET SUMMARY

GROSS RETURN		#REF!	
VARIABLE OPERATING EXPENSES	#REF!		
RETURN OVER VARIABLE EXPENSES		#REF!	(GROSS MARGIN)
FIXED EXPENSES	#REF!		
NET FARM INCOME		#REF!	(RETURN TO CAPITAL, LABOR, LAND & RISK)
aes	#REF!		
NET OPERATING PROFIT		#REF!	(RETURN TO CAPITAL, LAND & RISK)

TABLE 11. Upland cotton (stripper), sprinkler-irrigated, budgeted per acre costs and returns for a 500 acre farm with above average management, Artesia-Lake Arthur area, Projected 2014
 Planting dates: April 15 - May 15
 Harvesting dates: October 15 - January 15

ITEM	PRICE	YIELD
GROSS RETURNS		
COTTON LINT	\$0.85	700 LBS
COTTON SEED	\$0.09	1,120 LBS
DIRECT PAYMENT	\$0.0000	700 LBS
COUNTER CYCLICAL PAYMENT	\$0.1373	700 LBS
TOTAL		

PURCHASED INPUTS	PRICE	QUANTITY
SEED	#REF!	20 LBS
FOLIAR FERTILIZER	\$4.80	1 X/ACRE
INSECT SCOUTING	\$5.25	1 ACRE
HERBICIDE (CUSTOM)	#REF!	1 X/ACRE
INSECTICIDE (CUSTOM)	#REF!	3 X/ACRE
CROP INSURANCE		FCIC
PUMP WATER*		28 AC. IN.
SUBTOTAL		

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE
DISC	145 HP	0.17 HR
PLOW	145 HP	0.48 HR
DISC (2X)	145 HP	0.34 HR
FLOAT	145 HP	0.16 HR
PRE-IRRIGATE		0.25 HR
CULTIVATOR	65 HP	0.21 HR
PLANTER	70 HP	0.26 HR
SLED	70 HP	0.15 HR
CULTIVATOR (3X)	65 HP	0.63 HR
HAND HOE (CUSTOM)		
IRRIGATE (3X)		0.75 HR
SUBTOTAL		3.40 HR

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE
COTTON STRIPPER	70 HP	0.62 HR
HAUL	65 HP	0.75 HR
GIN COTTON (CUSTOM)		
SUBTOTAL		1.37 HR

POSTHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE
SHREDDER	70 HP	0.14 HR
SUBTOTAL		0.14 HR

OVERHEAD EXPENSES		
DOWNTIME		#REF! HR
EMPLOYEE BENEFITS		
INSURANCE		
LAND TAXES		
SUPERVISION AND MANAGEMENT		
OTHER EXPENSES		
SUBTOTAL		#REF! HR

TOTAL OPERATING EXPENSES #REF! HR

NET OPERATING PROFIT

INTEREST ON OPERATING CAPITAL (#REF! @
 INTEREST ON EQUIPMENT INVESTMENT

RETURN TO LAND AND RISK

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

BUDGET SUMMARY

GROSS RETURN	#REF!	#REF!
VARIABLE OPERATING EXPENSES	#REF!	
RETURN OVER VARIABLE EXPENSES	#REF!	(GROSS MARGIN)
FIXED EXPENSES	#REF!	
NET FARM INCOME	#REF!	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	#REF!	
NET OPERATING PROFIT	#REF!	(RETURN TO CAPITAL, LAND & RISK)

TABLE 12. Summary of per acre costs and returns for a 500 acre farm with above average, Artesia-Lake Authur area, Projected 2014

	ALFALFA ESTABLISHMENT	ALFALFA HAY
	TONS	TONS
PRIMARY YIELD	#REF!	6.50
PRIMARY PRICE	#REF!	\$245.00
GOVERNMENT PAYMENTS	\$0.00	\$0.00
SECOND INCOME	\$0.00	#REF!
GROSS RETURN	#REF!	#REF!
CASH OPERATING EXPENSES		
SEED	#REF!	
FERTILIZER	#REF!	#REF!
CHEMICALS	#REF!	#REF!
CROP INSURANCE		
OTHER PURCHASED INPUTS		#REF!
CANAL WATER		
FUEL, OIL & LUBRICANTS-EQUIPMENT	#REF!	#REF!
FUEL-IRRIGATION	#REF!	#REF!
REPAIRS	#REF!	#REF!
CUSTOM CHARGES		
LAND TAXES		#REF!
OTHER EXPENSES	#REF!	#REF!
TOTAL CASH EXPENSES	#REF!	#REF!
RETURN OVER CASH EXPENSES	#REF!	#REF!
FIXED EXPENSES	#REF!	#REF!
TOTAL EXPENSES	#REF!	#REF!
NET FARM INCOME	#REF!	#REF!
LABOR AND MANAGEMENT COSTS	#REF!	#REF!
NET OPERATING PROFIT	#REF!	#REF!
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		#REF!
INTEREST ON EQUIPMENT INVESTMENT	#REF!	#REF!
TOTAL CAPITAL COSTS	#REF!	#REF!
RETURN TO LAND AND RISK	#REF!	#REF!

Flex Computation

TABLE 13. Whole farm summary, Artesia-Lake Arthur area,
Projected 2014

GROSS RETURNS			
ALFALFA HAY	#REF!	ACRES	#REF!
CROP			#REF!
GRAZING			
BARLEY	8.5	ACRES	#REF!
CROP			#REF!
DIRECT PAYMENTS			#REF!
COUNTER CYCLICAL PAYMENT			#REF!
GRAZING			
OAT HAY	8	ACRES	#REF!
CROP			
PICKER COTTON	82	ACRES	#REF!
COTTON LINT			#REF!
COTTON SEED			#REF!
DIRECT PAYMENTS			#REF!
COUNTER CYCLICAL PAYMENT			
STRIPPER COTTON	59.5	ACRES	#REF!
COTTON LINT			#REF!
COTTON SEED			#REF!
DIRECT PAYMENTS			#REF!
COUNTER CYCLICAL PAYMENT			
GROSS RETURN			
CASH OPERATING EXPENSES			
SEED			#REF!
FERTILIZER			#REF!
CHEMICALS			\$150
CROP INSURANCE			#REF!
OTHER PURCHASED INPUTS			#REF!
CANAL WATER			#REF!
FUEL, OIL & LUBRICANTS-EQUIPMENT			#REF!
FUEL-IRRIGATION			#REF!
REPAIRS			#REF!
CUSTOM CHARGES			#REF!
LAND TAXES			#REF!
OTHER EXPENSES			
TOTAL CASH EXPENSES			#REF!
RETURN OVER CASH EXPENSES			
			#REF!
FIXED EXPENSES			
			#REF!
TOTAL EXPENSES			
NET FARM INCOME			
			#REF!
LABOR AND MANAGEMENT COSTS			
NET OPERATING PROFIT			
CAPITAL COSTS			
INTEREST ON OPERATING CAPITAL			#REF!
INTEREST ON EQUIPMENT INVESTMENT			#REF!
TOTAL CAPITAL COSTS			#REF!
RETURN TO LAND AND RISK			
LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**	
\$1,000 /ACRE	#REF!	#REF!	
\$2,500 /ACRE	#REF!	#REF!	
\$4,000 /ACRE	#REF!	#REF!	
\$5,500 /ACRE	#REF!	#REF!	

* 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)