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 2018

Planting dates: August 20 - September 30
Harvesting dates: June 15 - July 1

ITEM	PRICE	YIELD			TOTAL
GROSS RETURNS					
BARLEY	$6.12	35.00	CWT		$214.20
DIRECT PAYMENT	$0.00	35.00	CWT	0.85	$0.00
COUNTER CYCLICAL PAYMENT	$0.00	35.00	CWT	0.85	$0.00
GRAZING	$40.00				$40.00
TOTAL					$254.20

PURCHASED INPUTS	PRICE	QUANTITY		PURCHASED INPUTS	FIXED COST	TOTAL
SEED	$0.40	110	LBS	$44.00		$44.00
NITROGEN (N)	$0.31	150	LBS	$46.50		$46.50
INSECTICIDE (CUSTOM)	$0.00	1	X/ACRE	$0.00		$0.00
PUMP WATER*		28	AC. IN.			
CROP INSURANCE	$5.88			$5.88		$5.88
SUBTOTAL				$96.38		$96.38

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE		PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
PLOW	145 HP	0.48	HR		$3.46	$10.69	$4.29	$7.08	$25.51
DISC (2X)	145 HP	0.34	HR		$2.45	$7.57	$2.30	$4.17	$16.49
FERTILIZE	DEALER APPLIED								
DRILL	70 HP	0.21	HR		$1.51	$3.45	$0.42	$4.21	$9.60
IRRIGATE (4X)		1.00	HR		$7.50	$39.41	$0.00	$23.28	$70.19
SUBTOTAL		2.03	HR		$14.92	$61.13	$7.01	$38.74	$121.79
HARVEST OPERATIONS									
COMBINE (CUSTOM)				$17.91					$17.91
HAUL (CUSTOM)				$7.00					$7.00
SUBTOTAL				$24.91					$24.91
OVERHEAD EXPENSES									
DOWNTIME		0.00	HR		$0.00				$0.00
EMPLOYEE BENEFITS					$2.68				$2.68
INSURANCE				$0.01					$0.01
LAND TAXES								$1.78	$1.78
SUPERVISION AND MANAGEMENT					$17.88				$17.88
OTHER EXPENSES				$59.30					$59.30
SUBTOTAL		0.00	HR	$59.31	$20.56			$1.78	$81.66
TOTAL OPERATING EXPENSES		2.03	HR	$180.61	$35.48	$61.13	$7.01	$40.52	$324.74
NET OPERATING PROFIT									($70.54)
INTEREST ON OPERATING CAPITAL		($67.30	@	7.50%)					$5.05
INTEREST ON EQUIPMENT INVESTMENT									$11.90
RETURN TO LAND AND RISK									($87.49)

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

BUDGET SUMMARY

GROSS RETURN		$254.20	
VARIABLE OPERATING EXPENSES	$248.74		
RETURN OVER VARIABLE EXPENSES		$5.46	(GROSS MARGIN)
FIXED EXPENSES	$40.52		
NET FARM INCOME		($35.06)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	$35.48		
NET OPERATING PROFIT		($70.54)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	$16.95		
RETURN TO LAND AND RISK		($87.49)	

MICROCOMPUTER CROP COST AND RETURN GENERATOR

BUDGET AREA..... ARTESIA-LAKE ARTHUR ARE/ Projected 2018
FARM SIZE... ..... 500 ACRES
IRRIGATION TYPE..... SPRINKLER
NUMBER OF CROPS..... 6

VERSION 1.0

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TABLE 10. Cucumbers, sprinkler-irrigated, budgeted per above average management, Artesia-Lake A
Planting dates: April 1 - April 15
Harvesting dates: June 1 - July 31

ITEM	PRICE
GROSS RETURNS	
CUCUMBERS	5
TOTAL	

PURCHASED INPUTS	PRICE
SEED	40
FERTILIZER (18-27-12)	0.14
FERTILIZER (32-0-0)	0.11
HERBICIDE	7.872
INSECTICIDE (CUSTOM)	10.8928
PUMP WATER*	

SUBTOTAL

PREHARVEST OPERATIONS	POWER UNIT
DISC	126 HP
PLOW	126 HP
DISC (2X)	126 HP
FLOAT	70 HP
FERTILIZE (CUSTOM)	DEALER APP
PRE-IRRIGATE	
CULTIVATOR	65 HP
PLANTER	70 HP
CULTIVATOR (2X)	40 HP
THIN & HOE (2X)	
IRRIGATE (14X)	

SUBTOTAL

HARVEST OPERATIONS

HARVEST (CUSTOM)	
HAUL (TRAILER)	40 HP

SUBTOTAL

OVERHEAD EXPENSES

DOWNTIME
EMPLOYEE BENEFITS
INSURANCE
LAND TAXES
SUPERVISION AND MANAGEMENT
OTHER EXPENSES

SUBTOTAL

TOTAL OPERATING EXPENSES

NET OPERATING PROFIT

INTEREST ON OPERATING CAPITAL
INTEREST ON EQUIPMENT INVESTMENT

RETURN TO LAND AND RISK

* Pump water costs are shown under irrigation in the preh

GROSS RETURN
VARIABLE OPERATING EXPENSES
RETURN OVER VARIABLE EXPENSES
FIXED EXPENSES
NET FARM INCOME
LABOR AND MANAGEMENT COST
NET OPERATING PROFIT
CAPITAL COSTS
RETURN TO LAND AND RISK

r acre costs and returns for a 500 acre farm with
Arthur, 2003.

YIELD		TOTAL
180	CWT	900
		900.00

QUANTITY		PURCHASED INPUTS	TOTAL
5	LBS	200	200
150	LBS	21	21
150	LBS	16.5	16.5
1	X/ACRE	7.872	7.872
1	X/ACRE	10.8928	10.8928
24	AC. IN.		

				256.26					256.26
	ACCOMPLISHMENT RATE			PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
	0.17	HR			1.224	3.78634865	1.149387	2.0843539	8.244089552
	0.48	HR			3.456	10.6908668	4.286928	4.6030369	23.03683168
	0.34	HR			2.448	7.5726973	2.298774	4.16870781	16.4881791
	0.16	HR			1.152	2.6307072	0.153936	0.75035685	4.687000054
PLIED									
	0.05	HR			0.375	1.40391761	0	1.33041077	3.109328385
	0.21	HR			1.512	2.450448	1.573719	1.76774243	7.303909429
	0.26	HR			1.872	4.2748992	0.669786	5.86754866	12.68423386
	0.42	HR			3.024	3.76992	3.05697	4.8823189	14.7332089
				40					40
	3.5	HR			26.25	19.6548466	0	18.6257508	64.53059739
	5.42	HR		40.00	41.31	56.23	13.19	44.08	194.82
				585					585
	1	HR			3.25	8.976	#REF!	#REF!	#REF!
	1.00	HR		585.00	3.25	8.98	#REF!	#REF!	#REF!
	0	HR			0				0
					7.43634				7.43634
				0.02974536					0.02974536
								1.78166667	1.781666667
					#REF!				#REF!
				59.3029797					59.30297968
	0.00	HR		59.33	#REF!			1.78	#REF!
	6.42	HR		940.60	#REF!	65.21	#REF!	#REF!	#REF!
									#REF!
(	#REF!		@	0.075)					#REF!
									30.30545385
									#REF!

harvest operations section.

BUDGET SUMMARY

	900	
#REF!		
	#REF!	(GROSS MARGIN)
#REF!		
	#REF!	(RETURN TO CAPITAL, LABOR, LAND & RISK)
#REF!		
	#REF!	(RETURN TO CAPITAL, LAND & RISK)
#REF!		
	#REF!	

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

INPUT DATA

DELIVERY PSI:			DEPTH CHAR
SPRINKLER HEAD..	40		
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
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

TABLE 3. Equipment summary for a 50O acre sprinkler-irrigated farm with 2002.

EQUIPMENT ITEM & SIZE	ANNUAL HOURS OF USE	NUMBER
TRACTOR 40 HP	74.1	1
TRACTOR 65 HP	245.485	1
TRACTOR 70 HP	169.48	1
TRACTOR 96 HP	356.25	1
TRACTOR 145 HP	309.925	1
COTTON PICKER 4-ROW	60.68	1
COTTON STRIPPER MTD	36.89	1
SWATHER 16 FT	176.84	1
BALE WAGON S.P.	320.8	1
BALER PTO	401	2
PLANTER 4-ROW	36.79	1
CULTIVATOR 4-ROW	118.86	1
DISC 12 FT	106.845	1
DRILL 12 FT	27.405	1
PLANE 14 FT	32.49	1
FLOAT 14 FT	50	1
PLOW (MOLDBOARD) 4-16 IN	103.2	1
SHREDDER 4-ROW	19.81	1
COTTON TRAILER	126.625	5
RAKE 8 FT	74.1	1
SLED	21.225	1
NATURAL GAS BOOSTER PUMP	18553.4231	3
SIDE-ROLL SPRINKLER	18553.4231	13
NATURAL GAS WELL	18553.4231	11

area, 2002.

!ACTERISTICS:

STATIC...	.....	60
DRAW DOWN	.....	20
TOTAL HEAD.....		80
CASING...	.....	250

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:

wHr	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

above average management, Artesia-Lake Arthur area,

	VARIABLE COSTS				FIXED COSTS		
TOTAL VALUE	FUEL AND LUBRICANT	REPAIR	FUEL,LUBE PER HR	REPAIR PER HR	DEPRE-CIATION	TAXES	TOTAL PER HOUR
675	221.7072	15.1905	2.992	0.205	50	9.4	0.80161943
2050	1193.54807	275.43417	4.862	1.122	137.5	20.68	0.64435709
5600	657.717984	137.2788	3.8808	0.81	250	28.2	1.64149162
6560	2014.551	748.5525	5.65488	2.1012	343.333333	38.728	1.07245287
56165	2647.13916	649.447838	8.541225	2.0955	2794	262.636	9.86250222
104500	385.342272	2950.2616	6.3504	48.62	9350	703.12	165.674357
3860		118.7858		3.22	766.666667	43.24	21.9546399
19990	695.193408	2577.443	3.9312	14.575	2750	206.8	16.720199
20600	2486.8416	7159	7.752	22.3160848	2250	169.2	7.54114713
10500		1168.915		2.915	1100	82.72	2.94942643
3400		200.1376		5.44	680	25.568	19.178255
1500		101.6253		0.855	200	11.28	1.77755342
2250		137.028713		1.2825	300	16.92	2.96616594
2200		75.96666		2.772	440	16.544	16.6591498
2750		17.8695		0.55	366.666667	20.68	11.9220273
600		6.75		0.135	60	3.384	1.26768
4000		235.296		2.28	533.333333	30.08	5.45943152
2500		22.7815		1.15	333.333333	18.8	17.7755342
6000		27.351		0.216	800	45.12	6.67419546
3400		231.7848		3.128	340	25.568	4.9334413
375		6.2083125		0.2925	50	2.82	2.48857479
7500	9524.06041	3469.49011	0.51333171	0.187	1000	56.4	0.05693828
32500		872.010884		0.047	4333.33333	244.4	0.24673255
121000	15720.1257	3710.68461	0.84728978	0.2	11000	909.92	0.71307165
420,475	35,546	24,915			40,228	2,992	

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

INPUT DATA

DELIVERY PSI:			DEPTH CHARACTERISTICS:			DELIVERY PSI:
SPRINKLER HEAD..	40		STATIC...	60		BOOSTER PUMP..
			DRAW DOWN	20		
			TOTAL HEAD.....	80		
			CASING...	250		
GALLONS PER MINUTE (GPM)...	500					GALLONS PER MINUTE (GF
WORK HORSEPOWER.....	10.1010101					WORK HORSEPOWER.....
EFFICIENCY FACTOR:						EFFICIENCY FACTOR:
ELECTRICITY.	0.47					ELECTRICITY.
NATURAL GAS.	0.12					NATURAL GAS.
LP GAS.....	0.12					LP GAS.....
DIESEL.....	0.16					DIESEL.....
FUEL COST PER UNIT: :						FUEL COST PER HOUR:
ELECTRICITY.	6.84	CENTS/K	wHr			ELECTRICITY.
NATURAL GAS.	3.71	$/MCF				NATURAL GAS.
LP GAS.....	0.98	$/GAL				LP GAS.....
DIESEL.....	1.4	$/GAL				DIESEL.....

TOTAL FUEL COSTS: TOTAL FUEL COSTS (BOOS

ELECTRIC WELL:			ELECTRIC:
COST PER HOUR.....	.....$	1.12735818	COST PER HO
COST PER ACRE INCH.	.....$	1.02040947	COST PER AC
NATURAL GAS WELL:			NATURAL GAS:
COST PER HOUR.....	.....$	0.90130606	COST PER HO
COST PER ACRE INCH.	.....$	0.81580216	COST PER AC
LP GAS WELL:			LP GAS:
COST PER HOUR.....	.....$	2.31367272	COST PER HO
COST PER ACRE INCH.	.....$	2.0941823	COST PER AC
DIESEL WELL:			DIESEL:
COST PER HOUR.....	.....$	1.61182002	COST PER HO
COST PER ACRE INCH.	.....$	1.45891202	COST PER AC

TABLE 3. Equipment summary for a 50O acre sprinkler-irrigated farm with above average management, Artesia-Lake Arthur area, 2001.

EQUIPMENT					VARIABLE COSTS			
ITEM &	SIZE	ANNUAL HOURS OF USE	NUMBER	TOTAL VALUE	FUEL AND LUBRICANT	REPAIR	FUEL,LUBE PER HR	REPAIR PER HR
TRACTOR 40 HP		74.1	1	750	288.21936	15.1905	3.8896	0.205
TRACTOR 65 HP		245.485	1	2000	1551.61249	275.43417	6.3206	1.122
TRACTOR 70 HP		169.48	1	5365	876.957312	155.0742	5.1744	0.915
TRACTOR 96 HP		356.25	1	6800	2686.068	748.5525	7.53984	2.1012
TRACTOR 145 HP		309.925	1	26620	3918.50575	1024.94057	12.6434	3.30706
COTTON PICKER 4-ROW		60.68	1	84770	513.789696	3177.2048	8.4672	52.36
COTTON STRIPPER MTD		36.89	1	3800		118.7858		3.22
SWATHER 16 FT		176.84	1	15215	926.924544	0	5.2416	0
BALE WAGON S.P.		320.8	1	17200	3232.89408	7159	10.0776	22.3160848
BALER PTO		401	2	9440		0		0
PLANTER 4-ROW		36.79	1	3400		200.1376		5.44
CULTIVATOR 4-ROW		118.86	1	1500		99.8424		0.84
DISC 12 FT		106.845	1	2250		137.028713		1.2825
DRILL 12 FT		27.405	1	2200		85.61322		3.124
PLANE 14 FT		32.49	1	2750		17.8695		0.55
FLOAT 14 FT		50	1	600		7.2		0.144
PLOW (MOLDBOARD) 4-16 IN		103.2	1	4000		235.296		2.28
SHREDDER 4-ROW		19.81	1	2500		22.7815		1.15
COTTON TRAILER		126.625	5	6000		30.39		0.24
RAKE 8 FT		74.1	1	3400		241.8624		3.264
SLED		21.225	1	375		6.2083125		0.2925
NATURAL GAS BOOSTER PUMP		18553.4231	3	7500	10116.7372	3469.49011	0.54527605	0.187
SIDE-ROLL SPRINKLER		18553.4231	13	32500		872.010884		0.047
NATURAL GAS WELL		18553.4231	11	121000	16722.3126	3710.68461	0.90130606	0.2
				361,935	40,834	21,811		

PM)...	500	
.....	5.97348485	
.....	0.47	
.....	0.12	
.....	0.12	
.....	0.16	
.....	6.84	CENTS/K wHr
.....	3.71	$/MCF
.....	0.98	$/GAL
.....	1.4	$/GAL

STER PUMP):

OUR.....	.....$	0.67908436
CRE INCH	.....$	0.61466189
OUR.....	.....$	0.54527605
CRE INCH	.....$	0.49354753
OUR.....	.....$	1.3794858
CRE INCH	.....$	1.24861858
OUR.....	.....$	0.96218226
CRE INCH	.....$	0.87090324

FIXED COSTS

DEPRE-CIATION	TAXES	TOTAL PER HOUR
50	8.95	0.79554656
137.5	19.69	0.64032426
250	26.85	1.63352608
343.333333	36.874	1.06724865
2688.66667	144.3814	9.14107628
9350	669.46	165.119644
766.666667	41.17	21.8985272
2750	196.9	16.6642162
2250	161.1	7.51589776
1100	78.76	2.93955112
680	24.344	19.1449851
200	10.74	1.77301026
300	16.11	2.95858487
440	15.752	16.63025
366.666667	19.69	11.8915564
60	3.222	1.26444
533.333333	28.64	5.44547804
333.333333	17.9	17.7301026
800	42.96	6.65713722
340	24.344	4.91692308
50	2.685	2.48221437
1000	53.7	0.05679275
4333.33333	232.7	0.24610194
11000	866.36	0.71072384
40,123	2,743	

TABLE 1. Acreage Summary, Eddy County, Artesia Lake Arthur Area, Projected 2018

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

ACREAGE SUMMARY:	LAND USE (ACRES)	WATER USE AC.IN. PER AC.	WATER USE TOTAL AC.IN.
ALFALFA ESTABLISHMENT	57.00	42	2,394
ALFALFA	285.00	48	13,680
BARLEY	8.50	28	238
ARP	0.00		
FLEX IN PICKER COTTON	1.50	28	42
OAT HAY	8.00	28	224
PICKER COTTON	59.50	28	1,666
ARP	0.00		
FLEX IN PICKER COTTON	10.50	28	294
STRIPPER COTTON	59.50	28	1,666
ARP	0.00		
FLEX IN PICKER COTTON	10.50	28	294
TOTAL	500.00		20,498
ACRE FEE PER ACRE OF WATER RIGHTS			3.42

TABLE 2. Basic cost information for the Artesia-Lake Arthur area, Projected 2018

Item			
Labor Wage Rate:			
Equipment operators	$/hour		$7.20
General & Irrigators	$/hour		$7.50
Purchased Inputs:			
Fertilizer:			
Nitrogen (N)	$/pound		$0.31
Phosphate (P_2O_5)	$/pound		$0.24
Chemicals:			
Herbicide	$/acre		$0.00
Insecticide	$/acre		$0.00
Seed:			
Alfalfa	$/pound		$4.00
Cotton			
picker	$/pound		$7.55
stripper	$/pound		$7.55
Oats	$/pound		$0.44
Barley	$/pound		$0.40
Wire:	$/pound		$3.25
Natural gas	$/MCF		$4.00
(service charge)	$/month		$10.00
Diesel fuel	$/gallon		$2.70
Gasoline	$/gallon		$2.40
Electricity	cents/KwHr		8.32
LP Gas	$/gallon		$4.00
Employee Liability Insurance	$/$1,000 wages		$0.72
Employee Benefits	percent/wages		18.00%
Labor Downtime	percent		0.00%
Financial Rates:			
Operating Capital Interest Rate	percent		7.50%
Land Interest Rate	percent		7.00%
Equipment Interest Rate	percent		7.50%
Real Interest Rate	percent		4.00%
Land Taxes	$250.00	/acre (full value)	$1.78
Personal Property Tax Rate - NR	$/$1,000	(Assessed	$21.38
- R		Value)	$18.58
Supervision Factors			
Field Crop-Irrigation	$/labor hour		5.50%
Field Crop-Equipment & General	$/labor hour		3.00%
Vegetable Crop-Irrigation	$/labor hour		$0.00
Vegetable Crop-Equip. & General	$/labor hour		$0.00
Management Rate			
Field Crops	percent/GR		7.00%
Vegetable Crops	percent/TOE		0.00%

TABLE 3. Overhead cost information for the Artesia-Lake Arthur area, Projected 2018

Item					
Electricity (Domestic & Shop)			$248.92	per month	$2,987.04
Telephone			$124.46	per month	$1,493.52
Accounting & Legal					$1,727.20
Misc. Supplies & Hand Tools					$1,615.44
Pickup and Auto					
miles	25,400	@	$0.500	per mile	$12,700.00
Insurance					
- general liability (non-employee)					$1,929.13
- fire/theft					$1,727.20
Property Taxes					
- non-planted land					$0.00
- other than land & machinery					$0.00
Building repairs and maintenance					$1,457.96
Dues, fees, publications					$444.50
Farmstead Equipment					$189.23
				Total	$26,271.22
			Total Per Planted Acre		$59.30

TABLE 4 Pumping costs and data for irrigation wells. Arkinsa-Lake Arthur area
Projected 2004

INPUT DATA

DELIVERY PSI:
SPRINKLER HEAD..... 40

DEPTH CHARACTERISTICS:
STATIC..... 60
DRAW DOWN..... 20
TOTAL HEAD..... 80
CASING..... 200

GALLONS PER MINUTE (GPM) 500
WORK HORSEPOWER 10

EFFICIENCY FACTOR:
ELECTRICITY 0.47
NATURAL GAS 0.12
LP GAS 0.12
DIESEL 0.16

FUEL COST PER UNIT:
ELECTRICITY $ 02 Cents/Kwhr
NATURAL GAS $4.00 $/Mcf
LP GAS $4.00 $/GAL
DIESEL $2.70 $/GAL

TOTAL FUEL COSTS

ELECTRIC WELL:
COST PER HOUR $1.38
COST PER ACRE INCH $1.20

NATURAL GAS WELL:
COST PER HOUR $0.97
COST PER ACRE INCH $0.88

LP GAS WELL:
COST PER HOUR $9.35
COST PER ACRE INCH $8.48

DIESEL WELL:
COST PER HOUR $3.08
COST PER ACRE INCH $2.79

DELIVERY PSI:
BOOSTER PUMP..... 45

GALLONS PER MINUTE (GPM) 500
WORK HORSEPOWER 6

EFFICIENCY FACTOR:
ELECTRICITY 0.47
NATURAL GAS 0.12
LP GAS 0.12
DIESEL 0.16

FUEL COST PER HOUR:
ELECTRICITY $ 02 Cents/Kwhr
NATURAL GAS $4.00 $/Mcf
LP GAS $4.00 $/GAL
DIESEL $2.70 $/GAL

TOTAL FUEL COSTS (BOOSTER PUMP)

ELECTRIC:
COST PER HOUR $0.92
COST PER ACRE INCH $0.74

NATURAL GAS:
COST PER HOUR $0.59
COST PER ACRE INCH $0.53

LP GAS:
COST PER HOUR $5.54
COST PER ACRE INCH $5.01

DIESEL:
COST PER HOUR $1.83
COST PER ACRE INCH $1.65

TABLE 5 Equipment summary for a 500 acre sprinkler-irrigated farm with above-average management. Arkinsa-Lake Arthur area
Projected 2004

EQUIPMENT ITEM & SIZE	ANNUAL HOURS PER UNIT	NUMBER	TOTAL VALUE	VARIABLE COSTS FUEL, OIL & LUBRICA.	REPAIR	FUEL, OIL PER HR	REPAIR PER HR	FIXED COSTS DEPRECIATIO N	TAXES	TOTAL PER HR
TRACTOR 40 HP	79	1	$7 000	$665	$56	$8 96	$1 06	$560	$64	$9 72
TRACTOR 70 HP	149	1	$14 000	$1 260	$140	$8 46	$0 94	$1 400	$161	$10 67
TRACTOR 70 HP	149	1	$17 335	$2 787	$140	$18 44	$0 94	$525	$59	$21 43
TRACTOR 96 HP	356	1	$17 335	$5 667	$336	$16 44	$0 94	$525	$59	$23 13
COTTON PICKER 4 ROW	61	1	$339 317	$3 660	$1 000	$60 23	$17 14	$12 662	$703	$17 799
COTTON PICKER 4 ROW	61	1	$339 317	$991	$1 000	$60 23	$17 14	$12 662	$703	$17 799
COTTON STRIPPER M TO	37	1	$2 950	$34			$0 92	$707	$41	$21 89
BALER 16 P	121	1	$9 680	$1 788	$34	$10 11	$3 10	$1 291	$148	$17 63
BALE WAGON S P	101	1	$9 680	$1 668	$7 184	$16 90	$22 10	$1 291	$148	$17 63
BALER PTO	401	1	$3 900		$486		$0 22	$650	$39	$1 47
PLANTER 4 ROW	37	1	$5 400		$60		$1 63	$900	$54	$19 14
CULTIVATOR 4 ROW	119	1	$9 000		$737		$6 20	$667	$39	$8 91
DISC 12 FT	37	1	$2 200		$27		$0 73	$367	$22	$4 95
DRILL 12 FT	37	1	$2 200		$29		$1 06	$440	$18	$19 93
PLANE 14 FT	32	1	$2 750		$4		$0 11	$367	$22	$11 99
FLOAT 16 FT	32	1	$3 000		$37		$0 96	$400	$24	$1 32
PLOW (SKOLOMOWE) 4 W	103	1	$4 000		$512		$6 96	$533	$29	$5 48
SHREDDER 4 ROW	20	1	$2 500		$9		$0 40	$333	$18	$17 73
COTTON TRAILER	20	1	$1 500		$5		$0 23	$200	$11	$10 64
RAKE 9 FT	74	1	$1 500		$11		$0 43	$200	$11	$0 53
SLED 21	1	$375		$103		$0 47	$50	$3	$2 68	
NATURAL GAS BOOSTER PUMP	18 643	36	$85 000	$10 664	$0	$0 59	$0 00	$12 667	$677	$0 72
SIDE ROLL SPRINKLER	18 643	3	$7 500		$0		$0 00	$1 000	$53	$0 06
NATURAL GAS WELL 1000 PT	18 643	1	$21 500	$17 986	$0	$0 97	$0 00	$2 333	$247	$0 14
			$320 447	$56 673	$12 396			$45 956	$2 679	

EQUIPMENT LIST

ITEM	NEW VALUE	USED VALUE	YEARS LIFE	EQUIP CODE	MAX SALVA	FUEL GAL/HR	LUBE GAL/HR	ACCUM HOURS	INTEREST AGE	& SALVAG
TRACTOR 40 HP	17 875	7 000	10	1	800	3 43	0 10	1112	15	670 06
TRACTOR 70 HP	34 000	14 000	10	1	1600	6 57	0 10	3998	23	1680 00
TRACTOR 70 HP	34 726	17 335	10	1	800	6 54	0 10	3998	23	1680 00
TRACTOR 96 HP	74 726	17 335	10	1	800	9 54	0 10	8161	23	1680 00
TRACTOR 146 HP	69 165	30 917	25	1	600	7 90	0 10	5578	2 31	0 82
COTTON PICKER 4 ROW	214 237	39 317	15	5	300	9 50	0 00	364	0	8233 06
COTTON STRIPPER M TO	14 000	2 950	15	5	300	3 50	0 00	1000	0	0 00
SWATHER 16 FT	72 419	21 350	7	2	800	1 12	0 00	1351	0	0 00
BALE WAGON S P	45 000	9 990	20	5	600	6 46	0 20	1926	0	1687 50
BALER PTO	14 000	9 680	20	5	600			1926	0	1687 50
PLANTER 4 ROW	9 600	3 400	10	3	120			378	13	256 50
CULTIVATOR 4 ROW	19 000	9 000	15	3	500			1902	18	376 65
DISC 12 FT	4 400	2 200	10	3	120			1902	18	188 32
DRILL 12 FT	4 400	2 200	10	3	120			366	13	188 32
PLANE 14 FT	9 900	2 750	15	4	300			520	16	206 25
FLOAT 16 FT	900	600	25	4	300			760	15	35 75
PLOW (SKOLOMOWE) 4 W	9 000	4 000	15	5	300			1951	16	300 00
SHREDDER 4 ROW	4 000	2 500	15	5	300			1951	16	187 50
COTTON TRAILER	1 400	700	20	4	20			220	18	52 50
RAKE 9 FT	3 333	1 500	25	6	500			1112	15	116 25
SLED 21	1 000	375	25	6	500			1112	15	116 25
NATURAL GAS BOOSTER PUMP	9 000	2 500	15	0	0 742			7316	15	187 50
SIDE ROLL SPRINKLER	5 000	2 500	15	0	0 742			60767	15	187 50
NATURAL GAS WELL 1000 PT	17 500	30 500	25	0	0 742			60767	15	906 25

USAGE LIST

ALFALFA EST	ALFALFA HAY	BARLEY	CUCUMBE	OAT HAY	PICKER COTTON	STRIPPER COTTON	TOTAL
Hours per Acre							
0 05	0 25	0	1 42	0	0	0	1 72
0	0	0	0	0	0	0	0
0 9	0 21	0 42	0 71	0 55	1 17	0 65	
0	1 25	0	0	0	0	0	1 25
2 31	0 82	0 98	1 57	1 15	1 15	7 49	
0	0	0	0	0 74	0	0 74	
0	0	0	0	0	0	0	0
0 53	0 56	0	0 16	0	0	1 54	
0 6	1	0	0 2	0	0	1 8	
0 42	0	0	0	0 24	0	0 66	
0	0	0	0 36	0	0 24	0 76	
0	0	0	0 63	0	0 84	2 01	
0 42	0	0	0	0 24	0	0 66	
0	0 51	0	0 21	0	0	0 84	
0 97	0	0	0	0	0	0 97	
0 48	0	0	0 16	0	0 16	0 96	
0 48	0	0 48	0 48	0 48	0 48	2 88	
0	0	0	0	0	0	0	0
0	0	0	0	0	1	0 75	1 75
0 05	0 25	0	0	0	0	0	0 3
0	0	0	0	0	0	0	0
39 0246	43 4846	25 5437 33	21 7332	25 5437 33	25 5437 33	25 5437 33	204 5625
39 0246	43 4846	25 5437 33	21 7332	25 5437 33	25 5437 33	25 5437 33	204 5625

INTEREST PRORATION

SPRING ALFALFA	ALFALFA HAY	RILEY	CUCUMBE	OAT HAY	PICKER COTTON	STRIPPER COTTON
Dollars per acre						
0 4148833	2 27634998	0	12 507257	0	0	0
0	0	0	0 69179112	0	0 9514399	5 237568
3 1334449	0	0 73	1 4637313	0 73113715	1 9149883	4 5724756
0	2 07284572	0	0	0 5460284	0	0
18 499813	0	6 57	7 50052354	6 56870054	9 2364156	9 2364156
0	0	0	0	0	97 6512238	0
0	0	0	0	0	0	2 0478853
5 0671541	0 4852408	0	0	2 0847871	0	0
3 1643721	0 3602998783	0	0	0 0928756	0	0
0 7710657	1 3856079	0	0	0 2574998	0	0
0	0	0	1 9023201	0	0 9021263	1 9021263
0	0	0	0 9018893	0	0 9018893	0 9018893
0 9018893	0	0 56	0 9018893	0 53898256	0 9018893	0 9018893
2 9287884	0	1 26	0	0 2364782	0	0
0 9018893	0	0 56	0	0	0	0
0 334	0	0	0 108	0	0 108	0 108
1 3853888	0	1 4	1 3853888	1 3853888	1 3853888	1 3853888
0	0	0	0	0	0 0144531	0 0288751
0	0	0	0	0	0 0144531	0 0288751
0 0784613	0 3922596678	0	0	0	0	0
0	0	0	0	0	0 1987533	0 1987533
0 3603838	0 4359017226	0 26	0 2149158	0 2842239	0 2842239	0 2842239
0 3603838	0 4359017226	0 26	0 2149158	0 2842239	0 2842239	0 2842239
1 3436823	1 6307726241	0 9	0 7935574	0 8942382	0 8942382	0 8942389
43 86	22 14	####	32 53	17 47	125 27	89 77

ALFALFA ESTABLISHMENT ACRES: 57 PUMP WATER: 42

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT RATE	TOTAL	CUSTOM
DISC 145 HP	1	1	0 17	0 17	
PLOW 145 HP	1	1	0 18	0 18	
FLOAT 70 HP	1	1	0 16	0 16	
PLANE (24) 145 HP	3	1	0 19	0 57	
DISC (24) 145 HP	2	2	0 17	0 34	
DRILL (24) 70 HP	2	2	0 21	0 42	
DRILL (26) 70 HP	2	2	0 21	0 42	
IRRIGATE (60)	6	0 9001333		39 0266	

MACHINE	POWER UNIT	TIMES OVER	RATE	TOTAL	CUSTOM
SWATHER (30) 16 FT	3		0 11	0 33	
RAKE 40 HP	1		0 05	0 05	
BALER (30) 126 HP	3		0 25	0 75	
BALE WAGON (36) SP	3		0 2	0 6	

ANNUAL ALFALFA ACRES: 285 PUMP WATER: 49

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT RATE	TOTAL	CUSTOM
IRRIGATE (60)	6	0 9001333		43 6464	

MACHINE	POWER UNIT	TIMES OVER	RATE	TOTAL	CUSTOM
SWATHER (90) 16 FT SP	9		0 11	0 99	
RAKE (90) 40 HP	9		0 05	0 45	
BALER (90) 96 HP	9		0 25	2 25	
BALE WAGON (90) SP	9		0 2	1 8	

BARLEY ACRES: 6 5 PUMP WATER: 29

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT RATE	TOTAL	CUSTOM
PLOW 145 HP	1		0 18	0 18	
DISC (24) 145 HP	2		0 17	0 34	
HARV LAB DEALER AP	2				
DRILL 70 HP	1		0 21	0 21	
IRRIGATE (60)	4	0 9001333		25 3037 33	

COMBINE (CUSTOM) PER ACRE 14 68
PER CWT OVER 16 CWT 0 18
HAUL (CUSTOM) PER CWT 0 2

CUCUMBERS ACRES: 0 PUMP WATER: 24

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT RATE	TOTAL	CUSTOM
DISC 145 HP	1		0 17	0 17	
PLOW 145 HP	1		0 18	0 18	
DISC (24) 145 HP	2		0 17	0 34	
FLOAT 70 HP	1		0 16	0 16	
PLANT (24) LDE (CUSTOM) DEALER-APPLIED					
PRE-IRRIGATE	1	0 9003333		2 4687223	
CULTIVATOR 65 HP	1		0 21	0 21	
PLANTER 70 HP	1		0 29	0 29	
CULTIVATOR (24) 60 HP	2		0 21	0 42	
DISC (24)					40
IRRIGATE (120)	14	0 9027811		25 2728857	

MACHINE	POWER UNIT	TIMES OVER	RATE	TOTAL	CUSTOM
HARVEST (CUSTOM) [PER POUND]					0 0326
HAUL (VEG TRAILER) 40 HP	2		0 5	1	

OAT HAY ACRES: 8 PUMP WATER: 29

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT RATE	TOTAL	CUSTOM
PLOW 145 HP	1		0 18	0 18	
DISC (24) 145 HP	2		0 17	0 34	
DRILL 70 HP	1		0 25	0 25	
IRRIGATE (60)	4	0 9001333		25 3037 33	

MACHINE	POWER UNIT	TIMES OVER	RATE	TOTAL	CUSTOM
SWATHER 14 FT	1		0 16	0 16	
BALER 126 HP	1		0 25	0 25	
BALE WAGON 6 P	1		0 2	0 2	

UPLAND COTTON (PICKER) ACRES: 82 PUMP WATER: 28

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT RATE	TOTAL	CUSTOM
DISC 145 HP	1		0 17	0 17	
PLOW 145 HP	1		0 18	0 18	
DISC (24) 145 HP	2		0 17	0 34	
FLOAT 145 HP	1		0 16	0 16	
PRE-IRRIGATE	1	0 2563333		6 1884333	
CULTIVATOR 65 HP	1		0 21	0 21	
PLANT 6/R 70 HP	1		0 29	0 29	
SLED 70 HP	1		0 16	0 16	
HAND WATER (SX) 65 HP	3		0 25	0 82	
HAND HOE (CUST DW)					30
IRRIGATE (30)	3	0 67885		19 0276	

MACHINE	POWER UNIT	TIMES OVER	RATE	TOTAL	CUSTOM
COTTON PICKER (2X) 2-ROW	2		0 37	0 74	
HAUL (29) 65 HP	2		0 5	1	
GIN COTTON (CUSTOM) $/LINTR					0 148

SHRED DBR 70 HP 1 0 14 0 14

UPLAND COTTON (STRIPPER) ACRES: 68 9 PUMP WATER: 28

MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT RATE	TOTAL	CUSTOM
DISC 145 HP	1		0 17	0 17	
PLOW 145 HP	1		0 18	0 18	
DISC (24) 145 HP	2		0 17	0 34	
FLOAT 145 HP	1		0 16	0 16	
PRE-IRRIGATE	1	0 2563333		6 1884333	
CULTIVATOR 65 HP	1		0 21	0 21	
PLANT 6/R 70 HP	1		0 29	0 29	
SLED 70 HP	1		0 16	0 16	
HAND HOE (CUST DW) 60 HP	3		0 25	0 82	
IRRIGATE (30)	3	0 67885		19 0276	

MACHINE	POWER UNIT	TIMES OVER	RATE	TOTAL	CUSTOM
COTTON STRIPPER 70 HP	1		0 62	0 62	
HAUL 65 HP	1		0 75	0 75	
GIN COTTON (CUSTOM) $/LINTR					0 1927

SHRED DBR 70 HP 1 0 14 0 14

ANNUAL REPAIR COSTS AS A PERCENT OF NEW VALUE

Hours of Use	1	2	3	4	5	6	7	8	9
0	0 00006	0 00002	0 00002	0 00002	0 00006	0 00014	0 00004	0 00016	0 0002
50	0 00006	0 00002	0 00002	0 00002	0 00006	0 00014	0 00004	0 00016	0 0002
100	0 00006	0 00002	0 00002	0 00002	0 00006	0 00014	0 00004	0 00016	0 0002
200	0 00003	0 00003	0 00002	0 00004	0 00014	0 00026	0 00011	0 00051	0 00026
300	0 00003	0 00003	0 00003	0 00006	0 00023	0 00031	0 00014	0 00063	0 0004
400	0 00003	0 00003	0 00007	0 00009	0 00026	0 00034	0 00015	0 00071	0 00035
500	0 00003	0 00007	0 00009	0 0001	0 00028	0 00037	0 00017	0 0008	0 00063
600	0 00003	0 00007	0 00009	0 00011	0 00028	0 00037	0 00017	0 00086	0 00063
700	0 00003	0 0001	0 00009	0 00013	0 00032	0 00041	0 0002	0 00091	0 00069
800	0 00003	0 00011	0 00002	0 00015	0 00039	0 00043	0 00021	0 00098	0 00069
900	0 00003	0 00011	0 00002	0 00015	0 00039	0 00043	0 00021	0 00098	0 00069
1000	0 00009	0 00013	0 00001	0 00018	0 0004	0 00048	0 00023	0 00107	0 00063
1200	0 00016	0 00015	0 00006	0 00026	0 00045	0 00048	0 00026	0 00115	0 00071
1400	0 00016	0 00017	0 0003	0 00023	0 00049	0 00051	0 00032	0 00126	0 00076
1600	0 00016	0 00017	0 0003	0 00023	0 00049	0 00051	0 00032	0 00126	0 00076
1800	0 00016	0 00018	0 00026	0 00026	0 00049	0 00051	0 00032	0 00126	0 00076
2000	0 00076	0 00017	0 00026	0 00026	0 00049	0 00051	0 00026	0 00126	0 00076
2200	0 00011	0 00026	0 00028	0 00026	0 00026	0 00049	0 00026	0 00101	
2400	0 00011	0 00026	0 00028	0 00026	0 00026	0 00049	0 00026	0 00101	
2600	0 00007								
2800	0 00002								
3000	0 00002								
3200	0 00002								
3400	0 00026								
3600	0 00022								
3800	0 00026								
4000	0 00026								
4200	0 00022								
4400	0 00026								
4600	0 00026								
4800	0 00022								
5000	0 00026								
5200	0 00026								
5400	0 00022								
5600	0 00026								
5800	0 00026								
6000	0 00022								

* Based on unpublished data of D. R. Hunt. Department of Agricultural Engineering. University of Illinois

** Based on "Agricultural Machinery Data" in Agricultural Engineers Yearbook. 1966

Codes.

1 tractors
2 combines, cornbines. tillage harvesters. windrowers. pickups
3 rotary hoe discs. multidisked plows. chisels. field cultivators. row-cultivators. lister-planter
4 harrows. weigons. floats. mini-trucks. drag. slider. water furrow land-shapers
5 cultivators. cotton pickers. cotton strippers. corn pickers. corn heads. forage equipment. rotary mowers. cutts choppers. feed wagons. farm trucks
6 hay rakes. hay tedders
7 baler w/ engine. manure spreader
8 planters. drills. seeding equipment. mounted sprayers
9 fertilizer distributing equipment

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 2018

Planting dates: March 15 - April 30

ITEM	PRICE	YIELD	TOTAL
GROSS RETURNS			
ALFALFA HAY	$185.00	5.60 TONS (STACKED)	$1,036.00
TOTAL			$1,036.00

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	$4.00	20 LBS	$80.00		$80.00
FERTILIZER (16-20-0)	$0.22	200 LBS	$44.00		$44.00
HERBICIDE	$0.00	1 ACRE	$0.00		$0.00
PUMP WATER*		42 AC. IN.			
SUBTOTAL			$124.00		$124.00

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC	145 HP	0.17 HR		$1.22	$3.79	$1.15	$2.08	$8.24
PLOW	145 HP	0.48 HR		$3.46	$10.69	$4.29	$7.08	$25.51
FLOAT	70 HP	0.16 HR		$1.15	$2.63	$0.15	$0.75	$4.69
PLANE (3X)	145 HP	0.57 HR		$4.10	$12.70	$2.33	$12.08	$31.20
DISC (2X)	145 HP	0.34 HR		$2.45	$7.57	$2.30	$4.17	$16.49
FLOAT (2X)	70 HP	0.32 HR		$2.30	$5.26	$0.31	$1.50	$9.37
DRILL (2X)	70 HP	0.42 HR		$3.02	$6.91	$0.84	$8.42	$19.19
IRRIGATE (6X)		1.50 HR		$11.25	$59.11	$0.00	$34.92	$105.29
SUBTOTAL		3.96 HR		$28.96	$108.66	$11.36	$71.01	$219.99
HARVEST OPERATIONS								
SWATHER (3X)	16 FT	0.33 HR		$2.38	$3.34	$0.48	$7.24	$13.43
RAKE	40 HP	0.05 HR		$0.36	$0.45	$0.08	$0.40	$1.28
BALER (3X)	145 HP	0.75 HR		$5.40	$16.70	$3.14	$8.08	$33.33
BALEWAGON (3X)	SP	0.60 HR		$4.32	$11.16	$13.39	$4.51	$33.38
SUBTOTAL		1.73 HR		$12.46	$31.65	$17.09	$20.22	$81.42
OVERHEAD EXPENSES								
DOWNTIME		0.00 HR		$0.00				$0.00
EMPLOYEE BENEFITS				$7.46				$7.46
INSURANCE			$0.03					$0.03
SUPERVISION AND MANAGEMENT				$72.73				$72.73
SUBTOTAL		0.00 HR	$0.03	$80.18				$80.21
TOTAL OPERATING EXPENSES		5.69 HR	$124.03	$121.60	$140.31	$28.45	$91.23	$505.62
NET OPERATING PROFIT								$530.38
INTEREST ON EQUIPMENT INVESTMENT								$41.95
RETURN TO LAND AND RISK								$488.43

BUDGET SUMMARY

GROSS RETURN		$1,036.00	
VARIABLE OPERATING EXPENSES	$292.79		
RETURN OVER VARIABLE EXPENSES		$743.21	(GROSS MARGIN)
FIXED EXPENSES	$91.23		
NET FARM INCOME		$651.98	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	$121.60		
NET OPERATING PROFIT		$530.38	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	$41.95		
RETURN TO LAND AND RISK		$488.43	

TABLE 7. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for a 500 acre farm withabove average management, Artesia-Lake Arthur area, Projected 2018

Harvesting Dates: May 5 - November 1

ITEM	PRICE	YIELD		TOTAL
GROSS RETURNS				
ALFALFA HAY	$185.00	5.60	TONS (STACKED)	$1,036.00
GRAZING	$40.00			$40.00
TOTAL				$1,076.00

PURCHASED INPUTS	PRICE	QUANTITY		PURCHASED INPUTS	FIXED COST	TOTAL
INSECTICIDE (CUSTOM)	$0.00	2	X/ACRE	$0.00		$0.00
HERBICIDE (CUSTOM)	$0.00	1	X/ACRE	$0.00		$0.00
INSECT SCOUTING	$5.25	1	ACRE	$5.25		$5.25
FERTILIZER (5-26-30)	$0.31	200	LBS	$62.00		$62.00
WIRE	$3.25	48	LBS	$155.97		$155.97
DRYING AGENT (AGRI-DRY)	$8.26	1	/TON	$46.23		$46.23
ESTABLISHMENT: Principal		5	YEARS		$97.69	$97.69
: Interest					$18.73	$18.73
PUMP WATER*		48	AC. IN.			
SUBTOTAL				$269.46	$116.42	$385.88

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE		PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
IRRIGATE (6X)		1.50	HR		$11.25	$67.56	$0.00	$39.91	$118.72
SUBTOTAL		1.50	HR		$11.25	$67.56	$0.00	$39.91	$118.72
HARVEST OPERATIONS									
SWATHER (5X)	16 FT SP	0.55	HR		$3.96	$5.56	$0.80	$12.06	$22.38
RAKE (5X)	40 HP	0.25	HR		$1.80	$2.24	$0.38	$1.99	$6.41
BALER (5X)	96 HP	1.25	HR		$9.00	$20.55	$1.46	$3.87	$34.88
BALE WAGON (5X)	SP	1.00	HR		$7.20	$18.60	$22.32	$7.51	$55.63
SUBTOTAL		3.05	HR		$21.96	$46.96	$24.95	$25.44	$119.31
OVERHEAD EXPENSES									
DOWNTIME		0.00	HR		$0.00				$0.00
EMPLOYEE BENEFITS					$5.98				$5.98
INSURANCE				$0.02					$0.02
LAND TAXES								$1.78	$1.78
SUPERVISION AND MANAGEMENT					$75.49				$75.49
OTHER EXPENSES				$59.30					$59.30
SUBTOTAL		0.00	HR	$59.33	$81.47			$1.78	$142.58
TOTAL OPERATING EXPENSES		4.55	HR	$328.78	$114.68	$114.52	$24.95	$183.55	$766.49
NET OPERATING PROFIT									$309.51
INTEREST ON OPERATING CAPITAL		($157.61	@	7.50%)					$11.82
INTEREST ON EQUIPMENT INVESTMENT									$22.14
RETURN TO LAND AND RISK									$275.55

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

BUDGET SUMMARY

GROSS RETURN		$1,076.00	
VARIABLE OPERATING EXPENSES	$468.25		
RETURN OVER VARIABLE EXPENSES		$607.75	(GROSS MARGIN)
FIXED EXPENSES	$183.55		
NET FARM INCOME		$424.20	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	$114.68		
NET OPERATING PROFIT		$309.51	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	$33.96		
RETURN TO LAND AND RISK		$275.55	

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 2018
Planting dates: February 1 - February 28
Harvesting Dates: June 1 - June 30

ITEM	PRICE	YIELD		TOTAL
GROSS RETURNS				
OAT HAY	$150.00	3.50	TONS (STACKED)	$525.00
TOTAL				$525.00

PURCHASED INPUTS	PRICE	QUANTITY		PURCHASED INPUTS	FIXED COST	TOTAL
SEED	$0.44	100	LBS	$44.00		$44.00
FERTILIZER (16-20-0)	$0.24	150	LBS	$36.00		$36.00
PUMP WATER*		28	AC. IN.			
SUBTOTAL				$80.00		$80.00

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE		PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
PLOW	145 HP	0.48	HR		$3.46	$10.69	$4.29	$7.08	$25.51
DISC (2X)	145 HP	0.34	HR		$2.45	$7.57	$2.30	$4.17	$16.49
DRILL	70 HP	0.21	HR		$1.51	$3.45	$0.42	$4.21	$9.60
IRRIGATE (4X)		1.00	HR		$7.50	$39.41	$0.00	$23.28	$70.19
SUBTOTAL		2.03	HR		$14.92	$61.13	$7.01	$38.74	$121.79
HARVEST OPERATIONS									
SWATHER	14 FT	0.16	HR		$1.15	$1.62	$0.23	$3.51	$6.51
BALER	145 HP	0.25	HR		$1.80	$5.57	$1.05	$2.69	$11.11
BALE WAGON	S. P.	0.20	HR		$1.44	$3.72	$4.46	$1.50	$11.13
SUBTOTAL		0.61	HR		$4.39	$10.91	$5.74	$7.70	$28.75
OVERHEAD EXPENSES									
DOWNTIME		0.00	HR		$0.00				$0.00
EMPLOYEE BENEFITS					$3.48				$3.48
INSURANCE				$0.01					$0.01
LAND TAXES								$1.78	$1.78
SUPERVISION AND MANAGEMENT					$36.85				$36.85
OTHER EXPENSES				$59.30					$59.30
SUBTOTAL		0.00	HR	$59.32	$40.33			$1.78	$101.43
TOTAL OPERATING EXPENSES		2.64	HR	$139.32	$59.64	$72.03	$12.75	$48.23	$331.96
NET OPERATING PROFIT									$193.04
INTEREST ON OPERATING CAPITAL		($58.42	@	7.50%)					$4.38
INTEREST ON EQUIPMENT INVESTMENT									$17.67
RETURN TO LAND AND RISK									$170.99

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

BUDGET SUMMARY

GROSS RETURN		$525.00	
VARIABLE OPERATING EXPENSES	$224.10		
RETURN OVER VARIABLE EXPENSES		$300.90	(GROSS MARGIN)
FIXED EXPENSES	$48.23		
NET FARM INCOME		$252.68	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	$59.64		
NET OPERATING PROFIT		$193.04	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	$22.05		
RETURN TO LAND AND RISK		$170.99	

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 2018
Planting dates: April 15 - May 15
Harvesting dates: October 15 - January 15

ITEM	PRICE	YIELD		BASE	TOTAL
GROSS RETURNS					
COTTON LINT	$0.75	700	LBS		$525.00
COTTON SEED	$0.10	1,120.00	LBS		$109.20
DIRECT PAYMENT	$0.0000	700	LBS	0.85	$0.00
COUNTER CYCLICAL PAYMENT	$0.1373	700	LBS	0.85	$81.69
TOTAL					$715.89

PURCHASED INPUTS	PRICE	QUANTITY		PURCHASED INPUTS	FIXED COST	TOTAL
SEED	$7.55	15	LBS	$113.25		$113.25
FOLIAR FERTILIZER	$4.80	1	X/ACRE	$4.80		$4.80
INSECT SCOUTING	$5.25	1	ACRE	$5.25		$5.25
HERBICIDE (CUSTOM)	$0.00	1	X/ACRE	$0.00		$0.00
INSECTICIDE (CUSTOM)	$0.00	3	X/ACRE	$0.00		$0.00
CROP INSURANCE				$1.64		$1.64
PUMP WATER*		28	AC. IN.			
SUBTOTAL				$124.94		$124.94

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE		PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC	145 HP	0.17	HR		$1.22	$3.79	$1.15	$2.08	$8.24
PLOW	145 HP	0.48	HR		$3.46	$10.69	$4.29	$7.08	$25.51
DISC (2X)	145 HP	0.34	HR		$2.45	$7.57	$2.30	$4.17	$16.49
FLOAT	145 HP	0.16	HR		$1.15	$3.56	$0.64	$1.69	$7.04
PRE-IRRIGATE		0.25	HR		$1.88	$9.85	$0.00	$5.82	$17.55
CULTIVATOR	65 HP	0.21	HR		$1.51	$2.45	$1.57	$1.77	$7.30
PLANTER	70 HP	0.26	HR		$1.87	$4.27	$0.67	$5.87	$12.68
SLED	70 HP	0.15	HR		$1.08	$2.47	$0.21	$0.89	$4.64
CULTIVATIR (3X)	65 HP	0.63	HR		$4.54	$7.35	$4.72	$5.30	$21.91
HAND HOE (CUSTOM)				$20.00					$20.00
IRRIGATE (3X)		0.75	HR		$5.63	$29.56	$0.00	$17.46	$52.64
SUBTOTAL		3.40	HR	$20.00	$24.78	$81.57	$15.55	$52.13	$194.02
HARVEST OPERATIONS									
COTTON PICKER (2X)	2-ROW	0.74	HR		$5.33	$12.08	$12.68	$183.49	$213.58
HAUL (2X)	65 HP	1.00	HR		$7.20	$11.67	$1.32	$6.65	$26.85
GIN COTTON (CUSTOM)				$104.30					$104.30
SUBTOTAL		1.74	HR	$104.30	$12.53	$23.75	$14.00	$190.14	$344.73
POSTHARVEST OPERATIONS									
SHREDDER	70 HP	0.14	HR		$1.01	$2.30	$0.19	$2.96	$6.46
SUBTOTAL		0.14	HR		$1.01	$2.30	$0.19	$2.96	$6.46
OVERHEAD EXPENSES									
DOWNTIME		0.00	HR		$0.00				$0.00
EMPLOYEE BENEFITS					$6.90				$6.90
INSURANCE				$0.03					$0.03
LAND TAXES								$1.78	$1.78
SUPERVISION AND MANAGEMENT					$50.29				$50.29
OTHER EXPENSES				$59.30					$59.30
SUBTOTAL		0.00	HR	$59.33	$57.19			$1.78	$118.30
TOTAL OPERATING EXPENSES		5.28	HR	$308.57	$95.50	$107.62	$29.74	$247.01	$788.45
NET OPERATING PROFIT									($72.56)
INTEREST ON OPERATING CAPITAL		($90.52	@	7.50%)					$6.79
INTEREST ON EQUIPMENT INVESTMENT									$125.27
RETURN TO LAND AND RISK									($204.61)

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

BUDGET SUMMARY

GROSS RETURN		$715.89	
VARIABLE OPERATING EXPENSES	$445.93		
RETURN OVER VARIABLE EXPENSES		$269.96	(GROSS MARGIN)
FIXED EXPENSES	$247.01		
NET FARM INCOME		$22.95	(RETURN TO CAPITAL, LABOR, LAND & RISK)
aes	$95.50		
NET OPERATING PROFIT		($72.56)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	$132.06		
RETURN TO LAND AND RISK		($204.61)	

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 2018
Planting dates: April 15 - May 15
Harvesting dates: October 15 - January 15

ITEM	PRICE	YIELD		BASE	TOTAL
GROSS RETURNS					
COTTON LINT	$0.73	700	LBS		$511.00
COTTON SEED	$0.10	1,120	LBS		$109.20
DIRECT PAYMENT	$0.0000	700	LBS	0.85	$0.00
COUNTER CYCLICAL PAYMENT	$0.1373	700	LBS	0.85	$81.69
TOTAL					$701.89

PURCHASED INPUTS	PRICE	QUANTITY		PURCHASED INPUTS	FIXED COST	TOTAL
SEED	$7.55	20	LBS	$151.00		$151.00
FOLIAR FERTILIZER	$4.80	1	X/ACRE	$4.80		$4.80
INSECT SCOUTING	$5.25	1	ACRE	$5.25		$5.25
HERBICIDE (CUSTOM)	$0.00	1	X/ACRE	$0.00		$0.00
INSECTICIDE (CUSTOM)	$0.00	3	X/ACRE	$0.00		$0.00
CROP INSURANCE			FCIC	$1.19		$1.19
PUMP WATER*		28	AC. IN.			
SUBTOTAL				$162.24		$162.24

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE		PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DISC	145 HP	0.17	HR		$1.22	$3.79	$1.15	$2.08	$8.24
PLOW	145 HP	0.48	HR		$3.46	$10.69	$4.29	$7.08	$25.51
DISC (2X)	145 HP	0.34	HR		$2.45	$7.57	$2.30	$4.17	$16.49
FLOAT	145 HP	0.16	HR		$1.15	$3.56	$0.64	$1.69	$7.04
PRE-IRRIGATE		0.25	HR		$1.88	$9.85	$0.00	$5.82	$17.55
CULTIVATOR	65 HP	0.21	HR		$1.51	$2.45	$1.57	$1.77	$7.30
PLANTER	70 HP	0.26	HR		$1.87	$4.27	$0.67	$5.87	$12.68
SLED	70 HP	0.15	HR		$1.08	$2.47	$0.21	$0.89	$4.64
CULTIVATOR (3X)	65 HP	0.63	HR		$4.54	$7.35	$4.72	$5.30	$21.91
HAND HOE (CUSTOM)				$20.00					$20.00
IRRIGATE (3X)		0.75	HR		$5.63	$29.56	$0.00	$17.46	$52.64
SUBTOTAL		3.40	HR	$20.00	$24.78	$81.57	$15.55	$52.13	$194.02
HARVEST OPERATIONS									
COTTON STRIPPER	70 HP	0.62	HR		$4.46	$10.19	$1.16	$15.70	$31.51
HAUL	65 HP	0.75	HR		$5.40	$8.75	$0.99	$4.99	$20.13
GIN COTTON (CUSTOM)				$134.89					$134.89
SUBTOTAL		1.37	HR	$134.89	$9.86	$18.95	$2.15	$20.69	$186.54
POSTHARVEST OPERATIONS									
SHREDDER	70 HP	0.14	HR		$0.56	$2.30	$0.19	$2.96	$6.01
SUBTOTAL		0.14	HR		$0.56	$2.30	$0.19	$2.96	$6.01
OVERHEAD EXPENSES									
DOWNTIME		0.00	HR		$0.00				$0.00
EMPLOYEE BENEFITS					$6.34				$6.34
INSURANCE				$0.03					$0.03
LAND TAXES								$1.78	$1.78
SUPERVISION AND MANAGEMENT					$49.29				$49.29
OTHER EXPENSES				$59.30					$59.30
SUBTOTAL		0.00	HR	$59.33	$55.62			$1.78	$116.73
TOTAL OPERATING EXPENSES		4.91	HR	$376.46	$90.83	$102.81	$17.88	$77.56	$665.54
NET OPERATING PROFIT									$36.35
INTEREST ON OPERATING CAPITAL		($107.78	@	7.50%	)				$8.08
INTEREST ON EQUIPMENT INVESTMENT									$35.77
RETURN TO LAND AND RISK									($7.51)

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

BUDGET SUMMARY

GROSS RETURN		$701.89	
VARIABLE OPERATING EXPENSES	$497.16		
RETURN OVER VARIABLE EXPENSES		$204.74	(GROSS MARGIN)
FIXED EXPENSES	$77.56		
NET FARM INCOME		$127.18	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	$90.83		
NET OPERATING PROFIT		$36.35	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	$43.86		
RETURN TO LAND AND RISK		($7.51)	

TABLE 12. Summary of per acre costs and returns for a 500 acre farm with above average, Artesia-Lake Authur area, Projected 2018

	ALFALFA ESTABLISHMENT	ALFALFA HAY	BARLEY	OAT HAY	PICKER COTTON	STRIPPER COTTON
	TONS	TONS	CWT	TONS	LBS	LBS
PRIMARY YIELD	5.60	5.60	35.00	3.50	700.00	700.00
PRIMARY PRICE	$185.00	$185.00	$6.12	$150.00	$0.75	$0.73
GOVERNMENT PAYMENTS	$0.00	$0.00	$0.00	$0.00	$81.69	$81.69
SECOND INCOME	$0.00	$40.00	$40.00	$0.00	$109.20	$109.20
GROSS RETURN	$1,036.00	$1,076.00	$254.20	$525.00	$715.89	$701.89
CASH OPERATING EXPENSES						
SEED	$80.00		$44.00	$44.00	$113.25	$151.00
FERTILIZER	$44.00	$62.00	$46.50	$36.00	$4.80	$4.80
CHEMICALS	$0.00	$5.25	$0.00		$5.25	$5.25
CROP INSURANCE			$5.88		$1.64	$1.19
OTHER PURCHASED INPUTS		$202.21				
CANAL WATER						
FUEL, OIL & LUBRICANTS-EQUIPMENT	$81.20	$46.96	$21.72	$32.62	$68.21	$63.40
FUEL-IRRIGATION	$59.11	$67.56	$39.41	$39.41	$39.41	$39.41
REPAIRS	$28.45	$24.95	$7.01	$12.75	$29.74	$17.88
CUSTOM CHARGES			$24.91		$124.30	$154.89
LAND TAXES		$1.78	$1.78	$1.78	$1.78	$1.78
OTHER EXPENSES	$0.03	$59.33	$59.31	$59.32	$59.33	$59.33
TOTAL CASH EXPENSES	$292.79	$470.03	$250.52	$225.88	$447.71	$498.94
RETURN OVER CASH EXPENSES	$743.21	$605.97	$3.68	$299.12	$268.18	$202.96
FIXED EXPENSES	$91.23	$181.77	$38.74	$46.45	$245.23	$75.78
TOTAL EXPENSES	$384.02	$651.80	$289.26	$272.32	$692.95	$574.72
NET FARM INCOME	$651.98	$424.20	($35.06)	$252.68	$22.95	$127.18
LABOR AND MANAGEMENT COSTS	$121.60	$114.68	$35.48	$59.64	$95.50	$90.83
NET OPERATING PROFIT	$530.38	$309.51	($70.54)	$193.04	($72.56)	$36.35
CAPITAL COSTS						
INTEREST ON OPERATING CAPITAL		$11.82	$5.05	$4.38	$6.79	$8.08
INTEREST ON EQUIPMENT INVESTMENT	$41.95	$22.14	$11.90	$17.67	$125.27	$35.77
TOTAL CAPITAL COSTS	$41.95	$33.96	$16.95	$22.05	$132.06	$43.86
RETURN TO LAND AND RISK	$488.43	$275.55	($87.49)	$170.99	($204.61)	($7.51)
Flex Computation			-36.846761	235.10231	165.88608	104.04541

TABLE 13. Whole farm summary, Artesia-Lake Arthur area, Projected 2018

GROSS RETURNS					
ALFALFA HAY	342	ACRES	$365,712		
CROP			$11,400		
GRAZING					
BARLEY	8.5	ACRES	$1,821		
CROP			$0		
DIRECT PAYMENTS			$0		
COUNTER CYCLICAL PAYMENT			$340		
GRAZING					
OAT HAY	8	ACRES	$4,200		
CROP					
PICKER COTTON	82	ACRES	$43,050		
COTTON LINT			$8,954		
COTTON SEED			$0		
DIRECT PAYMENTS			$6,699		
COUNTER CYCLICAL PAYMENT					
STRIPPER COTTON	59.5	ACRES	$30,405		
COTTON LINT			$6,497		
COTTON SEED			$0		
DIRECT PAYMENTS			$4,861		
COUNTER CYCLICAL PAYMENT					
					$483,939
GROSS RETURN					
CASH OPERATING EXPENSES			$23,557		
SEED			$21,540		
FERTILIZER			$2,239		
CHEMICALS			$150		
CROP INSURANCE			$57,629		
OTHER PURCHASED INPUTS			$0		
CANAL WATER			$27,823		
FUEL, OIL & LUBRICANTS-EQUIPMENT			$28,850		
FUEL-IRRIGATION			$12,396		
REPAIRS			$19,620		
CUSTOM CHARGES			$789		
LAND TAXES			$26,284		
OTHER EXPENSES					
				$220,878	
TOTAL CASH EXPENSES					$263,060
RETURN OVER CASH EXPENSES			$54,483		
FIXED EXPENSES				$275,361	
TOTAL EXPENSES					$208,577
NET FARM INCOME			$53,630		
LABOR AND MANAGEMENT COSTS					$154,947
NET OPERATING PROFIT					
CAPITAL COSTS			$4,485		
INTEREST ON OPERATING CAPITAL			$21,345		
INTEREST ON EQUIPMENT INVESTMENT					
				$25,829	
TOTAL CAPITAL COSTS					
RETURN TO LAND AND RISK					$129,118

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
$1,000 /ACRE	$109,118	18.89%
$2,500 /ACRE	$79,118	9.87%
$4,000 /ACRE	$49,118	6.68%
$5,500 /ACRE	$19,118	5.05%

* 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)