

TABLE 1. Acreage Summary, Curry County, Projected 2013.

BUDGET AREA.....	CURRY COUNTY		
FARM SIZE.....	640 ACRES		
IRRIGATION TYPE.....	SPRINKLER		
NUMBER OF CROPS..	1		
	WATER USE		
ACREAGE SUMMARY:	LAND USE (ACRES)	AC. IN. PER ACRE	TOTAL AC. IN.
ALFALFA ESTABLISHMEN	100	5	500
ALFALFA HAY	500	25	12,500
CORNERS, ROADS, HOMESTEAD	140		
TOTAL	640		13,000
ACRE FEET PER ACRE OF WATER RIGHTS			1.69

\* DOUBLE-CROPPED

TABLE 2. Basic cost information for Curry County, Projected 2013.

Item		
<b>Labor Wage Rate:</b>		
Equipment operators	\$/hour	\$7.75
General & Irrigators	\$/hour	\$7.50
<b>Purchased Inputs:</b>		
<b>Fertilizer:</b>		
Nitrogen (N)	\$/pound	\$0.61
Phosphate (P205)	\$/pound	\$0.60
<b>Seed:</b>		
Alfalfa	\$/pound	\$6.50
Diesel fuel	\$/gallon	\$3.00
Gasoline	\$/gallon	\$3.80
Electricity (SWPS)	cents/KwHr	7.74
LP Gas	\$/gallon	\$2.75
Natural Gas (Gas NM)	\$/MCF	\$4.00
Plastic Twine	\$/pound	\$0.64
Employee Liability Insurance	\$/ \$1,000 wages	\$20.00
Employee Benefits	percent/wages	18.00%
Labor Downtime	percent	25.00%
<b>Financial Rates:</b>		
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	\$109.00 /acre (full value)	\$0.79
Personal Property Tax Rate	- NR \$/ \$1,000 (Assessed Value) - R	\$21.61 \$22.31
<b>Supervision Factors</b>		
Field Crop-Irrigation	\$/labor hour	\$1.00
Field Crop-Equipment & General	\$/labor hour	\$0.50
Management Rate	percent	7.00%

TABLE 3. Overhead cost information for Curry County, Projected 2013.

Item		
Electricity (Domestic & Shop)	\$242.00 per month	\$2,904
Telephone	\$121.00 per month	\$1,452
Accounting & Legal		\$1,773
Misc. Supplies & Hand Tools		\$2,656
Pickup and Auto		
miles	24,200 @ \$0.500 per mile	\$12,100
<b>Insurance</b>		
- general liability (non-employee)		\$2,384
- fire/theft		\$1,912
<b>Property Taxes</b>		
- non-planted land		\$0
- other than land & machinery		\$0
Building repairs and maintenance		\$1,579
Dues, fees, publications		\$436
Farmstead Equipment		\$159
	Total	\$27,354
	Total Per Planted Acre	\$54.71

TABLE 4. Pumping costs and data for Curry County, Projected 2013.

INPUT DATA		DEPTH CHARACTERISTICS:	
DELIVERY PSI:		STATIC.....	300
SPRINKLER	40	DRAW DOWN.....	35
		TOTAL HEAD.....	335
		CASING.....	350
GALLONS PER MINUTE (GPM)	800		
WORK HORSEPOWER	96		
EFFICIENCY FACTOR:			
ELECTRICITY	0.592		
NATURAL GAS	0.156		
LP GAS	0.156		
DIESEL	0.160		
FUEL COST PER HOUR:			
ELECTRICITY	7.74	CENTS/Kwhr	
NATURAL GAS	\$4.00	\$/MCF	
LP GAS	\$2.75	\$/GAL	
DIESEL	\$3.00	\$/GAL	
PUMPING COSTS			
ELECTRIC WELL:			
COST PER HOUR	\$8.45		
COST PER ACRE INCH	\$4.78		
NATURAL GAS:			
COST PER HOUR	\$6.21		
COST PER ACRE INCH	\$3.51		
LP GAS WELL:			
COST PER HOUR	\$42.21		
COST PER ACRE INCH	\$23.88		
DIESEL WELL:			
COST PER HOUR	\$29.13		
COST PER ACRE INCH	\$16.48		

TABLE 5. Equipment summary for a 640 acre sprinkler-irrigated hay farm with above average management, Curry County, Projected 2013.

EQUIPMENT	ITEM & SIZE	ANNUAL HOURS OF USE	NUMBER	VARIABLE COSTS					FIXED COSTS		
				TOTAL VALUE	FUEL OIL LUBRICANT	REPAIR	FUEL OIL PER HR	REPAIR PER HR	DEPRECIATION	TAXES	TOTAL PER HR
TRACTOR	96 HP	300	1	\$17,335	\$5,481	\$263	\$18.27	\$3.84	\$525	\$57	\$1.84
TRACTOR	140 HP	282	1	\$38,357	\$6,611	\$1,227	\$23.44	\$4.35	\$4,834	\$261	\$18.07
TRACTOR	185 HP	159	1	\$43,057	\$4,941	\$899	\$31.08	\$5.66	\$6,284	\$340	\$41.66
SWATHER	16 FT	275	1	\$21,350	\$3,089	\$298	\$11.23	\$1.45	\$3,621	\$261	\$14.11
DISC	14 FT	14	1	\$3,000		\$52		\$3.72	\$400	\$22	\$39.12
FERT SPREADER DEALER FURNISHED		0									
CHSEL	7 FT	20	1	\$1,200		\$30		\$1.49	\$160	\$9	\$8.43
FLOAT	14 FT	32	1	\$600		\$1		\$0.02	\$60	\$3	\$1.98
BALER	1 TON	125	1	\$38,745		\$218		\$1.74	\$5,812	\$314	\$49.01
RAKE		300	1	\$1,550		\$130		\$0.43	\$155	\$11	\$0.55
FRONT END LOADER		250	1	\$2,550		\$791		\$3.16	\$255	\$18	\$1.09
SPRINKLER		7,354	1	\$15,000					\$2,000	\$108	\$0.29
ELECTRIC WELL		7,354	1	\$13,000	\$62,179		\$8.45		\$1,040	\$94	\$0.15
TOTAL				\$196,743	\$82,301	\$4,029			\$25,145	\$1,497	

EQUIPMENT LIST

ITEM	NEW VALUE	USED VALUE	YEARS LIFE	EQUIP CODE	MAX HOURS	FUEL LUBE COEF	ACCUM HOURS	AGE	INTEREST EXPENSE
TRACTOR 96 HP	15,735	17,335	30	1	800	5.54	0.10	6900.00	23 393.38
TRACTOR 140 HP	72,515	38,357	15	1	800	7.10	0.10	3666.00	13 1,812.88
TRACTOR 185 HP	94,265	43,057	15	1	800	9.42	0.10	1749.00	11 2,356.63
SWATHER 16 FT	72,410	21,350	20	2	800	3.12	0.20	1650.00	6 1,810.25
DISC 14 FT	6,000	3,000	15	3	300			224.00	16 150.00
FERT SPREADER DEALER FURNISHED									18 0.00
CHSEL 7-FT	2,400	1,200	15	3	300			320.00	16 60.00
FLOAT 14 FT	900	600	15	4	300			480.00	15 22.50
BALER 1-TON	87,175	38,745	15	2	500			250.00	2 2,178.38
RAKE	3,100	1,550	20	6	500			4500.00	15 77.50
FRONT END LOADER	5,100	2,550	20	3	300			3750.00	15 127.50
SPRINKLER	30,000	15,000	15	0	8,742			110313.13	15 750.00
ELECTRIC WELL	26,000	13,000	25	0	8,742			110313.13	15 650.00

USAGE LIST

ALFALFA EST.	ALFALFA HAY	PER ACRE TOTALS
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-----hours per acre-----

0.00	0.60	0.60
0.32	0.50	0.82
0.34	0.25	0.59
0.00	0.55	0.55
0.14	0.00	0.14
0.00	0.00	0.00
0.20	0.00	0.20
0.32	0	0.32
0.00	0.25	0.25
0.00	0.60	0.60
0.00	0.50	0.50
2.83	14.14	16.97
2.83	14.14	16.97

ALFALFA HAY

dollars/acre
0.79
3.21
3.71
3.62
0.00
0.00
0.00
4.36
0.16
0.26
1.44
1.25
18.79

ALFALFA ESTABLISHMENT ACRES: 100 PUMP WATER: 5.00

CROP	MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT		
				RATE	TOTAL	CUSTOM
CHSEL	185 HP	1.00	0.20	0.20		
DISC	185 HP	1.00	0.14	0.14		
FLOAT (2X)	140 HP	2	0.16	0.32		
PRE-IRRIGATE		1.00	0.08	0.40		
SEED (CUSTOM)						9.00
IRRIGATE (5X)		6.00	0.48	2.42		

ALFALFA HAY ACRES: 500 PUMP WATER: 25.00

CROP	MACHINE	POWER UNIT	TIMES OVER	ACCOMPLISHMENT		
				RATE	TOTAL	CUSTOM
IRRIGATE (20X)			20.00	0.57	14.14	
SWATHER (5X)	16 FT	5.00	0.11	0.55		
RAKE (5X)	96 HP	5.00	0.12	0.60		
BALER (5X)	185 HP	5.00	0.05	0.25		
FRONT END LOADER (5X)	140 HP	5.00	0.10	0.50		

ANNUAL REPAIR COSTS AS A PERCENT OF NEW VALUE

Hours of Use	1	2	3	4	5	6	7	8	9
0	0.00060	0.00020	0.00020	0.00020	0.00080	0.00140	0.00040	0.00240	0.00020
50	0.00060	0.00020	0.00020	0.00020	0.00080	0.00140	0.00040	0.00240	0.00020
100	0.00060	0.00020	0.00020	0.00020	0.00140	0.00220	0.00100	0.00380	0.00030
200	0.00030	0.00040	0.00040	0.00180	0.00260	0.00110	0.00510	0.00290	0.00060
300	0.00030	0.00060	0.00060	0.00060	0.00230	0.00310	0.00140	0.00630	0.00040
400	0.00030	0.00060	0.00070	0.00090	0.00260	0.00340	0.00150	0.00710	0.00040
500	0.00030	0.00070	0.00090	0.00120	0.00290	0.00370	0.00170	0.00800	0.00030
600	0.00030	0.00090	0.00120	0.00120	0.00310	0.00390	0.00190	0.00860	0.00030
700	0.00030	0.00100	0.00130	0.00130	0.00330	0.00410	0.00200	0.00910	0.00030
800	0.00030	0.00110	0.00150	0.00150	0.00350	0.00430	0.00210	0.00960	0.00030
900	0.00030	0.00120	0.00160	0.00160	0.00370	0.00450	0.00220	0.01020	0.00030
1000	0.00030	0.00130	0.00170	0.00180	0.00380	0.00460	0.00230	0.01070	0.00030
1200	0.00045	0.00145	0.00205	0.00205	0.00480	0.00525	0.001125	0.00710	0.00030
1400	0.00045	0.00170	0.00230	0.00230	0.00435	0.00510	0.00410	0.01260	0.00075
1500	0.000150	0.00170	0.00230	0.00230	0.00435	0.00510	0.00410	0.01260	0.00075
1600	0.000150	0.00180	0.00285	0.00285	0.00465	0.00525	0.001125	0.01235	0.00085
1800	0.00075	0.00170	0.00285	0.00285	0.00485	0.00550	0.00295		
2000	0.000110	0.00265	0.00280	0.00305	0.00505	0.00565	0.000310		
2500	0.00056								
3000	0.00070								
3500	0.00082								
4000	0.00096								
4500	0.00108								
5000	0.00122								
5500	0.00136								
6000	0.00148								
6500	0.00162								
7000	0.00176								
7500	0.00188								
8000	0.00204								

\* 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 belevagons, cotton pickers, cotton strippers, corn pickers
- corn heads, forage equipment, rotary mowers, stalk choppers, feed wagons, farm trucks
- 6 rakes, cutterbar mowers
- 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 640 acre farm with above average management, Curry County, Projected 2013.  
Planting Dates: August 1 - September 1

ITEM	PRICE	QUANTITY	PURCHASED INPUTS	TOTAL				
<b>PURCHASED INPUTS</b>								
SEED	\$6.50	30.00 LBS	\$195.00	\$195.00				
NITROGEN (N)	\$0.61	20.00 LBS	\$12.20	\$12.20				
PHOSPHATE (P2O5)	\$0.60	50.00 LBS	\$30.00	\$30.00				
PUMP WATER*		5.00 AC. IN.						
SUBTOTAL			\$237.20	\$237.20				
<b>PREHARVEST OPERATIONS</b>								
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
CHISEL	185 HP	0.20 HR		\$1.55	\$6.22	\$1.43	\$10.02	\$19.21
DISC	185 HP	0.14 HR		\$1.09	\$4.35	\$1.31	\$10.05	\$16.80
FLOAT (2X)	140 HP	0.32 HR		\$2.48	\$7.50	\$1.40	\$6.41	\$17.79
PRE-IRRIGATE		0.10 HR		\$0.78	\$3.42	\$0.00	\$0.18	\$4.37
SEED (CUSTOM)			\$9.00					\$9.00
IRRIGATE (6X)		0.60 HR		\$4.50	\$20.50	\$0.00	\$1.07	\$26.07
SUBTOTAL		1.36 HR	\$9.00	\$10.39	\$41.98	\$4.14	\$27.73	\$93.24
<b>OVERHEAD EXPENSES</b>								
DOWNTIME		0.09 HR		\$0.66				\$0.66
EMPLOYEE BENEFITS				\$1.87				\$1.87
INSURANCE			\$0.03					\$0.03
SUPERVISION AND MANAGEMENT				\$24.11				\$24.11
SUBTOTAL		0.09 HR	\$0.03	\$26.64				\$26.67
<b>TOTAL OPERATING EXPENSES</b>		1.45 HR	\$246.23	\$37.03	\$41.98	\$4.14	\$27.73	\$357.11

TABLE 7. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for a 640 acre farm with above average management, Curry County, Projected 2013.  
Harvesting Dates: May 15 - September 15

ITEM	PRICE	YIELD	TOTAL
GROSS RETURNS			
ALFALFA HAY	\$245.00	6.50 TONS (STACKED)	\$1,592.50
TOTAL			\$1,592.50

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
NITROGEN (N)	\$0.61	100 LBS	\$61.00		\$61.00
PHOSPHATE (P205)	\$0.60	200 LBS	\$120.00		\$120.00
TRACE ELEMENTS	\$14.25	1 ACRE	\$14.25		\$14.25
HERBICIDE (CUSTOM)	\$20.54	1 ACRE	\$20.54		\$20.54
INSECTICIDE (CUSTOM)	\$14.39	1 ACRE	\$14.39		\$14.39
PLASTIC TWINE	\$0.64	170 FT/TON	\$0.18		\$0.18
ESTABLISHMENT: Principal		6 YEARS		\$59.52	\$59.52
: Interest				\$10.00	\$10.00
PUMP WATER*		25 AC. IN.			
SUBTOTAL			\$230.35	\$69.51	\$299.87

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
IRRIGATE		2.00 HR		\$15.00	\$119.57	\$0.00	\$6.23	\$140.81
SUBTOTAL		2.00 HR		\$15.00	\$119.57	\$0.00	\$6.23	\$140.81

HARVEST OPERATIONS								
SWATHER (5X)	16 FT	0.55 HR		\$4.26	\$6.18	\$0.80	\$7.76	\$19.00
RAKE (5X)	96 HP	0.60 HR		\$4.65	\$10.96	\$0.83	\$1.49	\$17.93
BALER (5X)	185 HP	0.25 HR		\$1.94	\$7.77	\$1.85	\$22.67	\$34.22
FRONT END LOADER (5X)	140 HP	0.50 HR		\$3.88	\$11.72	\$3.76	\$9.58	\$28.93
SUBTOTAL		1.90 HR		\$14.73	\$36.63	\$7.23	\$41.50	\$100.09

OVERHEAD EXPENSES								
DOWNTIME		0.48 HR		\$3.68				\$3.68
EMPLOYEE BENEFITS				\$5.35				\$5.35
INSURANCE			\$0.59					\$0.59
LAND TAXES						\$0.79		\$0.79
SUPERVISION AND MANAGEMENT				\$114.43				\$114.43
OTHER EXPENSES			\$54.71					\$54.71
SUBTOTAL		0.48 HR	\$55.30	\$123.46		\$0.79		\$179.54

TOTAL OPERATING EXPENSES 4.38 HR \$285.66 \$153.18 \$156.20 \$7.23 \$118.04 \$720.31

NET OPERATING PROFIT \$872.19

INTEREST ON OPERATING CAPITAL ( \$153.72 @ 5.00% ) \$7.69  
INTEREST ON EQUIPMENT INVESTMENT \$18.79

RETURN TO LAND AND RISK \$845.71

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

BUDGET SUMMARY

GROSS RETURN		\$1,592.50	
VARIABLE OPERATING EXPENSES	\$449.09		
RETURN OVER VARIABLE EXPENSES		\$1,143.41	(GROSS MARGIN)
FIXED EXPENSES	\$118.04		
NET FARM INCOME		\$1,025.37	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$153.18		
NET OPERATING PROFIT		\$872.19	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$26.47		
RETURN TO LAND AND RISK		\$845.71	

TABLE 8. Summary of per acre costs and returns for a 640 acre farm with above average management, Curry County, Projected 2013.

	ALFALFA ESTABLISHMENT	ALFALFA HAY
		TONS
PRIMARY YIELD		6.50
PRIMARY PRICE		\$245.00
GOVERNMENT PAYMENTS		\$0.00
SECOND INCOME		\$0.00
GROSS RETURN		\$1,592.50
CASH OPERATING EXPENSES		
SEED	\$195.00	
FERTILIZER	\$42.20	\$195.25
CHEMICALS		\$34.93
CROP INSURANCE		
OTHER PURCHASED INPUTS		\$0.18
CANAL WATER		
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$18.07	\$36.63
FUEL-IRRIGATION	\$23.91	\$119.57
REPAIRS	\$4.14	\$7.23
CUSTOM CHARGES	\$9.00	\$0.00
LAND TAXES		\$0.79
OTHER EXPENSES	\$0.03	\$55.30
TOTAL CASH EXPENSES	\$292.35	\$449.88
RETURN OVER CASH EXPENSES	(\$292.35)	\$1,142.62
FIXED EXPENSES	\$27.73	\$117.25
TOTAL EXPENSES	\$320.08	\$567.13
NET FARM INCOME	(\$320.08)	\$1,025.37
LABOR AND MANAGEMENT COSTS	\$37.03	\$153.18
NET OPERATING PROFIT	(\$357.11)	\$872.19
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$7.69
INTEREST ON EQUIPMENT INVESTMENT		\$18.79
TOTAL CAPITAL COSTS	\$0.00	\$26.47
RETURN TO LAND AND RISK	(\$357.11)	\$845.71

TABLE 9. Whole farm summary, Curry County,  
Projected 2013.

GROSS RETURNS		
ALFALFA HAY	500 ACRES	
CROP		\$796,250
GROSS RETURN		<u>\$796,250</u>
CASH OPERATING EXPENSES		
		\$19,500
		\$101,843
CHEMICALS		\$17,466
CROP INSURANCE		\$0
OTHER PURCHASED INPUTS		\$88
CANAL WATER		\$0
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$20,122
FUEL-IRRIGATION		\$62,179
REPAIRS		\$4,029
CUSTOM CHARGES		\$900
LAND TAXES		\$393
OTHER EXPENSES		\$27,654
TOTAL CASH EXPENSES		<u>\$254,173</u>
RETURN OVER CASH EXPENSES		\$542,077
FIXED EXPENSES		\$31,641
TOTAL EXPENSES		\$285,814
NET FARM INCOME		\$510,436
LABOR AND MANAGEMENT COSTS		\$80,294
NET OPERATING PROFIT		\$430,143
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$3,843
INTEREST ON EQUIPMENT INVESTMENT		\$9,394
TOTAL CAPITAL COSTS		<u>\$13,237</u>
RETURN TO LAND AND RISK		<u>\$416,905</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$500 /ACRE	\$407,305	83.40%
\$1,000 /ACRE	\$397,705	51.47%
\$1,500 /ACRE	\$388,105	37.22%
\$2,000 /ACRE	\$378,505	29.15%
\$2,500 /ACRE	\$368,905	23.95%

\* 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)