

The following pages represent a single crop budget but at 3 levels of detail and for 3 planning yield levels

Abstract level budget - The most summarized version of a budget. (e.g., a single line represents all fertilizer costs)

Summary level budget - A more detailed crop budget. (e.g., Fertilizer is broken out into N, P, K)

Detailed level budget - All the detail for producing a crop. (e.g., The specific fertilizers are listed).

Middle yield - The basic crop budget for a region and crop.

A detailed, summary, and abstract level budget are included for the middle yield.

Low and High yield - Budgets based on the middle yield but with a lower/higher yield goal (and irrigation level).

These high and low yield level budgets only include the abstract level budgets.

The 2 tables below are sensitivity tables that show the returns over direct costs and the returns over total costs

The tables have the basic budget price in the middle column

On either side of the base price are potential prices 5% and 10% above and below this base price

For irrigated budgets the 3 yield levels are also associated with different irrigation levels

15.2 inches of water for LOW yields

19.0 inches of water for MIDDLE yields

22.8 inches of water for HIGH yields

TABLE 1. RETURNS OVER DIRECT COSTS

		Prices					
		\$213.75	\$225.63	\$237.50	\$249.38	\$261.25	
		=====					
Yields	4.4 ll	\$711	\$763	\$815	\$867	\$920	Low yield
	5.5 ll	\$725	\$790	\$856	\$921	\$986	Middle yield
	6.6 ll	\$1115	\$1194	\$1272	\$1350	\$1429	High yield

TABLE 2. RETURNS OVER TOTAL COSTS

		Prices					
		\$213.75	\$225.63	\$237.50	\$249.38	\$261.25	
		=====					
Yields	4.4 ll	\$284	\$336	\$388	\$440	\$493	Low yield
	5.5 ll	\$298	\$363	\$429	\$494	\$559	Middle yield
	6.6 ll	\$688	\$766	\$845	\$923	\$1002	High yield

2024 Irrigated Alfalfa (Center-Pivot) Cost-Return Budget

-----Western Kansas - MIDDLE YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, John Holman, and Lucas Haag

Budget abstract

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
INCOME						
Product						
Alfalfa - Western KS	ton	\$237.50	5.50	\$1,306.25	\$1,306.25	_____

--TOTAL INCOME--					\$1,306.25	_____
DIRECT EXPENSES						
Additional labor					\$1.23	_____
Crop consulting					\$7.57	_____
Crop insurance					\$28.00	_____
Custom Operations					\$180.57	_____
Diesel					\$5.86	_____
Fertilizers					\$60.80	_____
Herbicides					\$21.97	_____
Insecticides					\$10.54	_____
Irrigation energy (NG)					\$51.22	_____
Irrigation labor					\$12.92	_____
Miscellaneous					\$12.10	_____
Operator labor					\$3.38	_____
Repair & Maintenance					\$10.72	_____
Seeds					\$26.25	_____
Interest on operating capital		8% percent on direct expenses			\$17.32	_____

--TOTAL DIRECT EXPENSES--					\$450.44	_____
-----Total direct expenses per ton \$81.9						
FIXED EXPENSES						
Cash rent					\$178.00	_____
Capital recovery (depreciation + interest)					\$249.20	_____

--TOTAL FIXED EXPENSES--					\$427.20	_____
-----Total expenses per ton \$159.57						
					=====	
RETURNS ABOVE DIRECT EXPENSES					\$855.81	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$428.60	_____
<p>19 acre-inches of water applied 300 foot well depth \$ 2.7 fuel cost per acre-inch of water applied .71 Mcf of natural gas per acre-inch of water applied \$ 3.78 per Mcf for cost of natural gas 13.55 Mcf of fuel used in total</p>						

2024 Irrigated Alfalfa (Center-Pivot) Cost-Return Budget

-----Western Kansas - MIDDLE YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, John Holman, and Lucas Haag

Summary page(s)

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
INCOME						
Product						
Alfalfa - Western KS	ton	\$237.50	5.50	\$1,306.25	\$1,306.25	_____

--TOTAL INCOME--					\$1,306.25	_____
DIRECT EXPENSES						
Irrigation	-----					_____
Additional labor						
Fertilizer application	-----					\$0.63
Planting	-----					\$0.28
Spraying	-----					\$0.32
					\$1.23	_____
Crop consulting	-----					\$7.57
----					\$7.57	_____
Crop insurance	-----					\$28.00
----					\$28.00	_____
Custom Operations						
Hay	-----					\$180.57
					\$180.57	_____
Diesel						
Fertilizer application	-----					\$1.63
Planting	-----					\$0.65
Spraying	-----					\$1.94
Tillage	-----					\$1.64
					\$5.86	_____
Fertilizers						
Nitrogen	lbs	\$0.62	17.00	\$10.54		
Phosphorus	lbs	\$0.64	79.00	\$50.26		
Potassium	lbs	\$0.00	0.00	\$0.00		
Lime	lbs	\$0.00	0.00	\$0.00	\$60.80	_____
Herbicides	-----					\$21.97
----					\$21.97	_____
Insecticides	-----					\$10.54
----					\$10.54	_____
Irrigation energy (NG)						
Irrigation	-----					\$51.22
					\$51.22	_____
Irrigation labor						
Irrigation	-----					\$12.92
					\$12.92	_____
Miscellaneous	-----					\$12.10
----					\$12.10	_____
Operator labor						
Fertilizer application	-----					\$1.01
Planting	-----					\$0.45
Spraying	-----					\$1.02
Tillage	-----					\$0.90
					\$3.38	_____
Repair & Maintenance						
Fertilizer application	-----					\$0.68
Irrigation	-----					\$6.84
Planting	-----					\$0.45

2024 Irrigated Alfalfa (Center-Pivot) Cost-Return Budget

-----Western Kansas - MIDDLE YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, John Holman, and Lucas Haag

Summary page(s)

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
Spraying	-----			\$1.66		
Tillage	-----			\$1.09	\$10.72	_____
Seeds	-----			\$26.25	\$26.25	_____
Interest on operating capital	8% percent on direct expenses			\$17.32	\$17.32	_____
--TOTAL DIRECT EXPENSES--					\$450.44	
-----Total direct expenses per ton \$81.9						
FIXED EXPENSES						
Cash rent	-----			\$178.00	\$178.00	_____
Capital recovery (depreciation + interest)						
Fertilizer application	-----			\$3.40		
Irrigation	-----			\$234.04		
Planting	-----			\$1.74		
Spraying	-----			\$5.07		
Tillage	-----			\$4.96	\$249.20	_____
--TOTAL FIXED EXPENSES--					\$427.20	
-----Total expenses per ton \$159.57						
RETURNS ABOVE DIRECT EXPENSES					\$855.81	
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$428.60	

19 acre-inches of water applied
 300 foot well depth
 \$ 2.7 fuel cost per acre-inch of water applied
 .71 Mcf of natural gas per acre-inch of water applied
 \$ 3.78 per Mcf for cost of natural gas
 13.55 Mcf of fuel used in total

2024 Irrigated Alfalfa (Center-Pivot) Cost-Return Budget

-----Western Kansas - MIDDLE YIELDS

Detailed budget page(s)

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, John Holman, and Lucas Haag

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
INCOME						
Product						
Alfalfa - Western KS	ton	\$237.50	5.50	\$1,306.25	\$1,306.25	_____
Other						
Govt payments, indemnity payments, etc.						_____
--TOTAL INCOME--					\$1,306.25	_____
DIRECT EXPENSES						
Irrigation	hour		?			_____
Additional labor						
Fertilizer application						
Spin Spreader_5 ton with Tractor(180-199hp)CB	hour	\$15.00	0.04	\$0.63		
Planting						
Grain Drill_20' with Tractor(160-179hp)CB	hour	\$15.00	0.02	\$0.28		
Spraying						
Spray (Pull Type)_80' with Tractor(200-249hp)CB	hour	\$15.00	0.02	\$0.32	\$1.23	_____
Crop consulting						

Alfalfa_West_Irr	acre	\$7.57	1.00	\$7.57	\$7.57	_____
Crop insurance						

Alfalfa_West_Irr	acre	\$28.00	1.00	\$28.00	\$28.00	_____
Custom Operations						
Hay						
Baling - Large Round Bales, under 1,500 lb without net	bale	\$12.81	7.60	\$97.36		
Side Raking	acre	\$5.77	4.00	\$23.08		
Swathing and Conditioning	acre	\$15.03	4.00	\$60.14	\$180.57	_____
Diesel						
Fertilizer application						
Spin Spreader_5 ton with Tractor(180-199hp)CB	gal	\$3.95	0.41	\$1.63		
Planting						
Grain Drill_20' with Tractor(160-179hp)CB	gal	\$3.95	0.17	\$0.65		
Spraying						
Spray (Pull Type)_80' with Tractor(200-249hp)CB	gal	\$3.95	0.49	\$1.94		
Tillage						
Disk Harrow_28' with Tractor(200-249hp)CB	gal	\$3.95	0.32	\$1.28		
Field Cultivate Fld_32' with Tractor(180-199hp)CB	gal	\$3.95	0.09	\$0.36	\$5.86	_____
Fertilizers						

MAP (11-52-0)	lb	\$0.40	152.00	\$60.80	\$60.80	_____
--- ACTUAL POUNDS - 17 lb - N, 79 lb - P, 0 lb - K						
Herbicides						

Velpar L	oz	\$0.69	32.00	\$21.97	\$21.97	_____
Insecticides						

Warrior 1EC	oz	\$3.51	3.00	\$10.54	\$10.54	_____
Irrigation energy (NG)						

2024 Irrigated Alfalfa (Center-Pivot) Cost-Return Budget

-----Western Kansas - MIDDLE YIELDS

Detailed budget page(s)

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, John Holman, and Lucas Haag

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
Irrigation						
Well, pump, and gearhead	ac-in	\$2.70	19.00	\$51.22	\$51.22	_____
Irrigation labor						
Irrigation						
Well, pump, and gearhead	hour	\$17.00	0.76	\$12.92	\$12.92	_____
Miscellaneous						

Alfalfa_West_Irr	acre	\$12.10	1.00	\$12.10	\$12.10	_____
Operator labor						
Fertilizer application						
Spin Spreader_5 ton with Tractor(180-199hp)CB	hour	\$20.00	0.05	\$1.01		
Planting						
Grain Drill_20' with Tractor(160-179hp)CB	hour	\$20.00	0.02	\$0.45		
Spraying						
Spray (Pull Type)_80' with Tractor(200-249hp)CB	hour	\$20.00	0.05	\$1.02		
Tillage						
Disk Harrow_28' with Tractor(200-249hp)CB	hour	\$20.00	0.03	\$0.67		
Field Cultivate Fld_32' with Tractor(180-199hp)CB	hour	\$20.00	0.01	\$0.22	\$3.38	_____
Repair & Maintenance						
Fertilizer application						
Spin Spreader_5 ton with Tractor(180-199hp)CB	Hour	\$16.26	0.04	\$0.68		
Irrigation						
Well, pump, and gearhead	ac-in	?	19.00			
Well, pump, and gearhead	ac-in	\$0.36	19.00	\$6.84		
Planting						
Grain Drill_20' with Tractor(160-179hp)CB	Hour	\$4.80	0.09	\$0.45		
Spraying						
Spray (Pull Type)_80' with Tractor(200-249hp)CB	Hour	\$78.36	0.02	\$1.66		
Tillage						
Disk Harrow_28' with Tractor(200-249hp)CB	Hour	\$12.44	0.07	\$0.87		
Field Cultivate Fld_32' with Tractor(180-199hp)CB	Hour	\$4.57	0.05	\$0.21	\$10.72	_____
Seeds						

Alfalfa - Roundup Ready	lb	\$8.75	3.00	\$26.25	\$26.25	_____
Interest on operating capital						
				8% percent on direct expenses	\$17.32	\$17.32

--TOTAL DIRECT EXPENSES--						\$450.44
-----Total direct expenses per ton						\$81.9
FIXED EXPENSES						
Cash rent						

All crops_West_irr	acre	\$178.00	1.00	\$178.00	\$178.00	_____
Capital recovery (depreciation + interest)						
Fertilizer application						
Spin Spreader_5 ton with Tractor(180-199hp)CB	Hour	\$80.74	0.04	\$3.40		
Irrigation						
Irrigation - Center Pivot	acre	\$89.25	1.00	\$89.25		
Power unit	acre	\$31.29	1.00	\$31.29		
Well, pump, and gearhead	acre	\$113.49	1.00	\$113.49		
Planting						
Grain Drill_20' with Tractor(160-179hp)CB	Hour	\$18.47	0.09	\$1.74		
Spraying						
Spray (Pull Type)_80' with Tractor(200-249hp)CB	Hour	\$239.68	0.02	\$5.07		

2024 Irrigated Alfalfa (Center-Pivot) Cost-Return Budget

-----Western Kansas - MIDDLE YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, John Holman, and Lucas Haag

Detailed budget page(s)

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
Tillage						
Disk Harrow_28' with Tractor(200-249hp)CB	Hour	\$52.46	0.07	\$3.68		
Field Cultivate Fld_32' with Tractor(180-199hp)CB	Hour	\$27.36	0.05	\$1.28	\$249.20	_____
--TOTAL FIXED EXPENSES--					\$427.20	
-----Total expenses per ton \$159.57						
RETURNS ABOVE DIRECT EXPENSES					\$855.81	
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$428.60	

19 acre-inches of water applied
 300 foot well depth
 \$ 2.7 fuel cost per acre-inch of water applied
 .71 Mcf of natural gas per acre-inch of water applied
 \$ 3.78 per Mcf for cost of natural gas
 13.55 Mcf of fuel used in total

2024 Irrigated Alfalfa (Center-Pivot) Cost-Return Budget

-----Western Kansas - LOW YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, John Holman, and Lucas Haag

Budget abstract

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
INCOME						
Product						
Alfalfa - Western KS	ton	\$237.50	4.40	\$1,045.00	\$1,045.00	_____

--TOTAL INCOME--					\$1,045.00	_____
DIRECT EXPENSES						
Additional labor					\$1.23	_____
Crop consulting					\$7.57	_____
Crop insurance					\$28.00	_____
Custom Operations					\$0.00	_____
Diesel					\$5.86	_____
Fertilizers					\$48.64	_____
Herbicides					\$21.97	_____
Insecticides					\$10.54	_____
Irrigation energy (NG)					\$40.98	_____
Irrigation labor					\$10.34	_____
Miscellaneous					\$12.10	_____
Operator labor					\$3.38	_____
Repair & Maintenance					\$9.35	_____
Seeds					\$21.00	_____
Interest on operating capital		8% percent on direct expenses			\$8.84	_____

--TOTAL DIRECT EXPENSES--					\$229.78	_____
-----Total direct expenses per ton \$52.22						
FIXED EXPENSES						
Cash rent					\$178.00	_____
Capital recovery (depreciation + interest)					\$249.20	_____

--TOTAL FIXED EXPENSES--					\$427.20	_____
-----Total expenses per ton \$149.31						
RETURNS ABOVE DIRECT EXPENSES					\$815.22	=====
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$388.02	

15.2 acre-inches of water applied
 300 foot well depth
 \$ 2.7 fuel cost per acre-inch of water applied
 .71 Mcf of natural gas per acre-inch of water applied
 \$ 3.78 per Mcf for cost of natural gas
 10.84 Mcf of fuel used in total

2024 Irrigated Alfalfa (Center-Pivot) Cost-Return Budget

-----Western Kansas - HIGH YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, John Holman, and Lucas Haag

Budget abstract

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
INCOME						
Product						
Alfalfa - Western KS	ton	\$237.50	6.60	\$1,567.50	\$1,567.50	_____

--TOTAL INCOME--					\$1,567.50	_____
DIRECT EXPENSES						
Additional labor					\$1.23	_____
Crop consulting					\$7.57	_____
Crop insurance					\$28.00	_____
Custom Operations					\$0.00	_____
Diesel					\$5.86	_____
Fertilizers					\$72.96	_____
Herbicides					\$21.97	_____
Insecticides					\$10.54	_____
Irrigation energy (NG)					\$61.47	_____
Irrigation labor					\$15.50	_____
Miscellaneous					\$12.10	_____
Operator labor					\$3.38	_____
Repair & Maintenance					\$12.09	_____
Seeds					\$31.50	_____
Interest on operating capital		8% percent on direct expenses			\$11.37	_____

--TOTAL DIRECT EXPENSES--					\$295.52	_____
-----Total direct expenses per ton \$44.78						
FIXED EXPENSES						
Cash rent					\$178.00	_____
Capital recovery (depreciation + interest)					\$249.20	_____

--TOTAL FIXED EXPENSES--					\$427.20	_____
-----Total expenses per ton \$109.5						
					=====	
RETURNS ABOVE DIRECT EXPENSES					\$1,271.98	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$844.78	_____

22.8 acre-inches of water applied
 300 foot well depth
 \$ 2.7 fuel cost per acre-inch of water applied
 .71 Mcf of natural gas per acre-inch of water applied
 \$ 3.78 per Mcf for cost of natural gas
 16.26 Mcf of fuel used in total