

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

6.8 inches of water for LOW yields

8.0 inches of water for MIDDLE yields

9.2 inches of water for HIGH yields

TABLE 1. RETURNS OVER DIRECT COSTS

		Prices					
		\$0.72	\$0.76	\$0.80	\$0.84	\$0.88	
Yields	1275.0 lb	\$651	\$715	\$779	\$842	\$906	Low yield
	1500.0 lb	\$554	\$630	\$705	\$780	\$855	Middle yield
	1725.0 lb	\$975	\$1062	\$1148	\$1235	\$1321	High yield

TABLE 2. RETURNS OVER TOTAL COSTS

		Prices					
		\$0.72	\$0.76	\$0.80	\$0.84	\$0.88	
Yields	1275.0 lb	\$127	\$191	\$255	\$319	\$383	Low yield
	1500.0 lb	\$31	\$106	\$181	\$256	\$331	Middle yield
	1725.0 lb	\$452	\$538	\$625	\$711	\$797	High yield

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

-----South Central Kansas - MIDDLE YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, Stewart Duncan, and Lucas Haag

Budget abstract

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
INCOME						
Product						
Cotton - Southeast KS	lb	\$0.80	1500.00	\$1,200.00	\$1,503.75	_____

--TOTAL INCOME--					\$1,503.75	_____
DIRECT EXPENSES						
Additional labor					\$4.16	_____
Crop consulting					\$11.65	_____
Crop insurance					\$57.86	_____
Custom Operations					\$248.76	_____
Diesel					\$26.78	_____
Fertilizers					\$122.12	_____
Herbicides					\$40.57	_____
Insecticides					\$7.10	_____
Irrigation energy (NG)					\$12.22	_____
Irrigation labor					\$5.44	_____
Miscellaneous					\$70.16	_____
Operator labor					\$9.11	_____
Repair & Maintenance					\$34.12	_____
Seeds					\$118.25	_____
Interest on operating capital		8% percent on direct expenses			\$30.73	_____

--TOTAL DIRECT EXPENSES--					\$799.03	_____
-----Total direct expenses per lb					\$.23	
FIXED EXPENSES						
Cash rent					\$195.00	_____
Capital recovery (depreciation + interest)					\$328.78	_____

--TOTAL FIXED EXPENSES--					\$523.78	_____
-----Total expenses per lb					\$.38	
RETURNS ABOVE DIRECT EXPENSES					=====	
					\$704.72	
RETURNS ABOVE TOTAL SPECIFIED EXPENSES						
					\$180.94	

8 acre-inches of water applied
 150 foot well depth
 \$ 1.53 fuel cost per acre-inch of water applied
 .4 Mcf of natural gas per acre-inch of water applied
 \$ 3.78 per Mcf for cost of natural gas
 3.23 Mcf of fuel used in total

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

-----South Central Kansas - MIDDLE YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, Stewart Duncan, and Lucas Haag

Summary page(s)

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
INCOME						
Product						
Cotton - Southeast KS	lb	\$0.80	1500.00	\$1,200.00	\$1,503.75	_____

--TOTAL INCOME--					\$1,503.75	_____
DIRECT EXPENSES						
Irrigation						_____
Additional labor						
Fertilizer application				\$0.14		
Harvesting				\$2.58		
Planting				\$0.74		
Spraying				\$0.69	\$4.16	_____
Crop consulting						
-----				\$11.65	\$11.65	_____
Crop insurance						
-----				\$57.86	\$57.86	_____
Custom Operations						
Fertilizer application				\$18.18		
Harvesting				\$230.58	\$248.76	_____
Diesel						
Fertilizer application				\$0.84		
Harvesting				\$17.52		
Planting				\$1.92		
Spraying				\$4.70		
Tillage				\$1.80	\$26.78	_____
Fertilizers						
Nitrogen	lbs	\$0.50	136.00	\$68.26		
Phosphorus	lbs	\$0.64	44.00	\$28.11		
Potassium	lbs	\$0.43	60.00	\$25.75		
Lime	lbs	\$0.00	0.00	\$0.00	\$122.12	_____
Herbicides						
-----				\$40.57	\$40.57	_____
Insecticides						
-----				\$7.10	\$7.10	_____
Irrigation energy (NG)						
Irrigation				\$12.22	\$12.22	_____
Irrigation labor						
Irrigation				\$5.44	\$5.44	_____
Miscellaneous						
-----				\$70.16	\$70.16	_____
Operator labor						
Fertilizer application				\$0.44		
Harvesting				\$4.14		
Planting				\$1.19		
Spraying				\$2.22		
Tillage				\$1.12	\$9.11	_____

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

-----South Central Kansas - MIDDLE YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, Stewart Duncan, and Lucas Haag

Summary page(s)

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
Repair & Maintenance						
Fertilizer application				\$1.43		
Harvesting				\$25.23		
Irrigation				\$2.88		
Planting				\$2.07		
Spraying				\$1.45		
Tillage				\$1.07	\$34.12	
Seeds						
				\$118.25	\$118.25	
Interest on operating capital		8% percent on direct expenses		\$30.73	\$30.73	
--TOTAL DIRECT EXPENSES--					\$799.03	
-----Total direct expenses per lb \$.23						
FIXED EXPENSES						
Cash rent						
				\$195.00	\$195.00	
Capital recovery (depreciation + interest)						
Fertilizer application				\$3.68		
Harvesting				\$117.71		
Irrigation				\$182.82		
Planting				\$6.94		
Spraying				\$11.26		
Tillage				\$6.38	\$328.78	
--TOTAL FIXED EXPENSES--					\$523.78	
-----Total expenses per lb \$.38						
RETURNS ABOVE DIRECT EXPENSES					\$704.72	
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$180.94	

8 acre-inches of water applied
 150 foot well depth
 \$ 1.53 fuel cost per acre-inch of water applied
 .4 Mcf of natural gas per acre-inch of water applied
 \$ 3.78 per Mcf for cost of natural gas
 3.23 Mcf of fuel used in total

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

-----South Central Kansas - MIDDLE YIELDS

Detailed budget page(s)

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, Stewart Duncan, and Lucas Haag

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
INCOME						
Product						
Cotton - Southeast KS	lb	\$0.80	1500.00	\$1,200.00		
Cotton Seed - Southeast KS	lb	\$0.15	2025.00	\$303.75	\$1,503.75	_____
Other						
Govt payments, indemnity payments, etc.						_____
--TOTAL INCOME--					\$1,503.75	_____
DIRECT EXPENSES						
Irrigation						
	hour		?			_____
Additional labor						
Fertilizer application						
Nutrient applicator_60 ft with Tractor(200-249hp)CB	hour	\$15.00	0.01	\$0.14		
Harvesting						
Cotton Picker/Module_6R-38(500) with Cotton	hour	\$15.00	0.17	\$2.58		
Planting						
Plant - Folding_12R-38 with Tractor(180-199hp)CB	hour	\$15.00	0.05	\$0.74		
Spraying						
Sprayer 800gal_80' 250hp with Sprayer 800gal	hour	\$15.00	0.05	\$0.69	\$4.16	_____
Crop consulting						

Cotton_SW_Dry	acre	\$11.65	1.00	\$11.65	\$11.65	_____
Crop insurance						

Cotton_SW_Irr	acre	\$57.86	1.00	\$57.86	\$57.86	_____
Custom Operations						
Fertilizer application						
Application of Anhydrous Ammonia	acre	\$18.18	1.00	\$18.18		
Harvesting						
Ginning	lb	\$0.15	1500.00	\$230.58	\$248.76	_____
Diesel						
Fertilizer application						
Nutrient applicator_60 ft with Tractor(200-249hp)CB	gal	\$3.95	0.21	\$0.84		
Harvesting						
Cotton Picker/Module_6R-38(500) with Cotton	gal	\$3.95	4.43	\$17.52		
Planting						
Plant - Folding_12R-38 with Tractor(180-199hp)CB	gal	\$3.95	0.49	\$1.92		
Spraying						
Sprayer 800gal_80' 250hp with Sprayer 800gal	gal	\$3.95	1.19	\$4.70		
Tillage						
Field Cultivate Fld_32' with Tractor(180-199hp)CB	gal	\$3.95	0.46	\$1.80	\$26.78	_____
Fertilizers						

Anhydrous	lb	\$0.41	154.00	\$62.37		
MAP (11-52-0)	lb	\$0.40	85.00	\$34.00		
Potash	lb	\$0.26	100.00	\$25.75	\$122.12	_____
- - - ACTUAL POUNDS - 136 lb - N, 44 lb - P, 60 lb - K						
Herbicides						

Cotton herbicides - additional	ac	\$40.57	1.00	\$40.57	\$40.57	_____

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-----South Central Kansas - MIDDLE YIELDS

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Detailed budget page(s)

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
Insecticides						

Orthene	lb	\$11.83	0.60	\$7.10	\$7.10	_____
Irrigation energy (NG)						
Irrigation						
Well, pump, and gearhead	ac-in	\$1.53	8.00	\$12.22	\$12.22	_____
Irrigation labor						
Irrigation						
Well, pump, and gearhead	hour	\$17.00	0.32	\$5.44	\$5.44	_____
Miscellaneous						

Cotton_SC_Dry	acre	\$30.84	1.00	\$30.84		
Growth regulator	acre	\$13.31	0.50	\$6.65		
Harvest aid	acre	\$16.33	2.00	\$32.66	\$70.16	_____
Operator labor						
Fertilizer application						
Nutrient applicator_60 ft with Tractor(200-249hp)CB	hour	\$20.00	0.02	\$0.44		
Harvesting						
Cotton Picker/Module_6R-38(500) with Cotton	hour	\$20.00	0.21	\$4.14		
Planting						
Plant - Folding_12R-38 with Tractor(180-199hp)CB	hour	\$20.00	0.06	\$1.19		
Spraying						
Sprayer 800gal_80' 250hp with Sprayer 800gal	hour	\$20.00	0.11	\$2.22		
Tillage						
Field Cultivate Fld_32' with Tractor(180-199hp)CB	hour	\$20.00	0.06	\$1.12	\$9.11	_____
Repair & Maintenance						
Fertilizer application						
Nutrient applicator_60 ft with Tractor(200-249hp)CB	Hour	\$77.85	0.02	\$1.43		
Harvesting						
Cotton Picker/Module_6R-38(500) with Cotton	Hour	\$146.41	0.17	\$25.23		
Irrigation						
Well, pump, and gearhead	ac-in	?	8.00			
Well, pump, and gearhead	ac-in	\$0.36	8.00	\$2.88		
Planting						
Plant - Folding_12R-38 with Tractor(180-199hp)CB	Hour	\$41.77	0.05	\$2.07		
Spraying						
Sprayer 800gal_80' 250hp with Sprayer 800gal	Hour	\$109.50	0.01	\$1.45		
Tillage						
Field Cultivate Fld_32' with Tractor(180-199hp)CB	Hour	\$22.87	0.05	\$1.07	\$34.12	_____
Seeds						

Cotton - Roundup Ready	1K seeds	\$2.15	55.00	\$118.25	\$118.25	_____
Interest on operating capital						
				8% percent on direct expenses	\$30.73	_____
--TOTAL DIRECT EXPENSES--						
-----Total direct expenses per lb \$.23						
FIXED EXPENSES						
Cash rent						

All crops_SC_Irr	acre	\$195.00	1.00	\$195.00	\$195.00	_____
Capital recovery (depreciation + interest)						

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

-----South Central Kansas - MIDDLE YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, Stewart Duncan, and Lucas Haag

Detailed budget page(s)

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
Fertilizer application						
Nutrient applicator_60 ft with Tractor(200-249hp)CB	Hour	\$200.66	0.02	\$3.68		
Harvesting						
Cotton Picker/Module_6R-38(500) with Cotton	Hour	\$683.12	0.17	\$117.71		
Irrigation						
Irrigation - Center Pivot	acre	\$89.25	1.00	\$89.25		
Power unit	acre	\$17.67	1.00	\$17.67		
Well, pump, and gearhead	acre	\$75.90	1.00	\$75.90		
Planting						
Plant - Folding_12R-38 with Tractor(180-199hp)CB	Hour	\$139.81	0.05	\$6.94		
Spraying						
Sprayer 800gal_80' 250hp with Sprayer 800gal	Hour	\$851.53	0.01	\$11.26		
Tillage						
Field Cultivate Fld_32' with Tractor(180-199hp)CB	Hour	\$136.80	0.05	\$6.38	\$328.78	_____

--TOTAL FIXED EXPENSES--					\$523.78	
-----Total expenses per lb \$.38						
					=====	
RETURNS ABOVE DIRECT EXPENSES					\$704.72	
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$180.94	

8 acre-inches of water applied
 150 foot well depth
 \$ 1.53 fuel cost per acre-inch of water applied
 .4 Mcf of natural gas per acre-inch of water applied
 \$ 3.78 per Mcf for cost of natural gas
 3.23 Mcf of fuel used in total

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

-----South Central Kansas - LOW YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, Stewart Duncan, and Lucas Haag

Budget abstract

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
INCOME						
Product						
Cotton - Southeast KS	lb	\$0.80	1275.00	\$1,020.00	\$1,278.15	_____

--TOTAL INCOME--					\$1,278.15	_____
DIRECT EXPENSES						
Additional labor					\$4.16	_____
Crop consulting					\$11.65	_____
Crop insurance					\$57.86	_____
Custom Operations					\$0.00	_____
Diesel					\$26.78	_____
Fertilizers					\$103.80	_____
Herbicides					\$40.57	_____
Insecticides					\$7.10	_____
Irrigation energy (NG)					\$10.39	_____
Irrigation labor					\$4.62	_____
Miscellaneous					\$70.16	_____
Operator labor					\$9.11	_____
Repair & Maintenance					\$33.69	_____
Seeds					\$100.51	_____
Interest on operating capital		8% percent on direct expenses			\$19.22	_____

--TOTAL DIRECT EXPENSES--					\$499.62	_____
-----Total direct expenses per lb		\$.17				
FIXED EXPENSES						
Cash rent					\$195.00	_____
Capital recovery (depreciation + interest)					\$328.78	_____

--TOTAL FIXED EXPENSES--					\$523.78	_____
-----Total expenses per lb		\$.34				
RETURNS ABOVE DIRECT EXPENSES					\$778.53	=====
RETURNS ABOVE TOTAL SPECIFIED EXPENSES					\$254.75	

6.8 acre-inches of water applied
 150 foot well depth
 \$ 1.53 fuel cost per acre-inch of water applied
 .4 Mcf of natural gas per acre-inch of water applied
 \$ 3.78 per Mcf for cost of natural gas
 2.75 Mcf of fuel used in total

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

-----South Central Kansas - HIGH YIELDS

Gregg Ibendahl, Daniel O'Brien, Sarah Lancaster, Stewart Duncan, and Lucas Haag

Budget abstract

Date: Nov-01-2023

item	unit	price	quantity	amount	Sub-total	your farm
INCOME						
Product						
Cotton - Southeast KS	lb	\$0.80	1725.00	\$1,380.00	\$1,729.35	_____

--TOTAL INCOME--					\$1,729.35	_____
DIRECT EXPENSES						
Additional labor					\$4.16	_____
Crop consulting					\$11.65	_____
Crop insurance					\$57.86	_____
Custom Operations					\$0.00	_____
Diesel					\$26.78	_____
Fertilizers					\$140.44	_____
Herbicides					\$40.57	_____
Insecticides					\$7.10	_____
Irrigation energy (NG)					\$14.06	_____
Irrigation labor					\$6.26	_____
Miscellaneous					\$70.16	_____
Operator labor					\$9.11	_____
Repair & Maintenance					\$34.55	_____
Seeds					\$135.99	_____
Interest on operating capital		8% percent on direct expenses			\$22.35	_____

--TOTAL DIRECT EXPENSES--					\$581.02	_____
-----Total direct expenses per lb					\$.14	
FIXED EXPENSES						
Cash rent					\$195.00	_____
Capital recovery (depreciation + interest)					\$328.78	_____

--TOTAL FIXED EXPENSES--					\$523.78	_____
-----Total expenses per lb					\$.27	
RETURNS ABOVE DIRECT EXPENSES					=====	
					\$1,148.33	
RETURNS ABOVE TOTAL SPECIFIED EXPENSES						
					\$624.55	

9.2 acre-inches of water applied
 150 foot well depth
 \$ 1.53 fuel cost per acre-inch of water applied
 .4 Mcf of natural gas per acre-inch of water applied
 \$ 3.78 per Mcf for cost of natural gas
 3.72 Mcf of fuel used in total