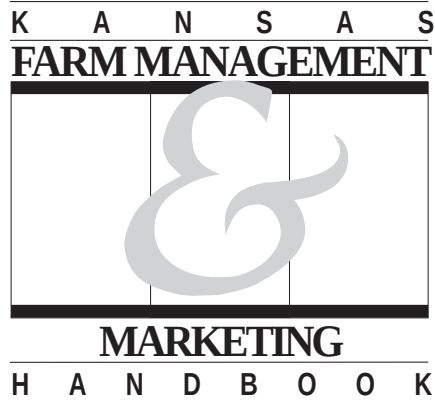




Center-Pivot-Irrigated Short-Season Corn Cost-Return Budget

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Irrigated short season corn (or early-corn) has gained acceptance in Kansas as an alternate crop to full season corn or grain sorghum. Reasons for planting short season corn vary among producers. Some factors include: profitability, cash-flow, marketing, crop rotation, insect problems, water availability, and labor.

Short season corn allows producers to rotate to wheat without leaving the land idle for a year. Rotational benefits affect weed and insect control, therefore improving profitability. Several insect problems can potentially be avoided with short season corn. Because of the earlier maturity, avoiding treating for European and Southwestern corn borers and spider mites may be possible. Recently identified bio-type and pesticide-resistant greenbugs pose problems for grain sorghum production that do not affect corn.

The chief factor dictating crop choice is water availability. Short season corn requires less water than full season corn, making it an attractive alternative for producers with low well capacities. Another important factor is labor. Because short season corn is harvested earlier than full season corn or grain sorghum, fall labor requirements can be reduced.

Producers should compare the cash-flow requirements and profitability of short season corn with alternate crops. Though early-corn early may be more profitable than other crops, a crop that has lower input costs might be a better choice if the required cash or operating credit is not available. Another factor to consider is marketing. Due to the earlier harvest, taking advantage of old-crop prices may be possible.

Expected Yields and Enterprise Returns

Cost per bushel and net returns in crop production are highly dependent on yields. The following estimated budget includes three different yield levels. The three yield levels are intended to represent expected yields of varying land quality for a given level of management. Land values, government payments, and various inputs vary as yield levels vary. Crop insurance was not included in this budget as an input expense because yields reflect an average of all years (good and bad). If crop insurance is included as an input expense, than an expected value for indemnity payments should be included in the returns section. Historically, MPCI indemnity payments have exceeded premiums due to government subsidies.

Budgeting for alternative expected yields can help producers compare the profitability of crop enterprises on farmland tracts with varying yield potentials. In customizing this budget to fit your farm, attention should be given to using land values representative of your farm's productive capacity. Projections of net percentage return on investment permit comparisons to be made among alternative enterprises or other investments.

Table 1. Factors Used for Cost-Return Budget

Item	Yield Level (bu)			
	132	145	157	
Water, 325 TDH	14 in	17 in	20 in	\$2.72/inch
Fertilizer:				
N (Anhy.)	150	180	200	\$0.11/lb
N (Dry)	0	0	0	\$0.20/lb
P	40	40	40	\$0.22/lb
K	0	0	0	\$0.14/lb
Lime	0	0	0	\$0.01/lb
Seed,				
seeds/acre	36,000	36,000	36,000	
Seed price,				
\$/1,000 seeds	\$1.21	\$1.21	\$1.21	
Labor hours	2.05	2.35	2.65	
Labor price/hour				\$10.80
Land value/acre	\$550	\$687	\$824	
Land interest rate				6.00%
Land real estate tax				0.50%
Machinery investment				\$236
Machinery life				10 yrs
Salvage value				35%
Well, pump and gearhead value				\$317.42
Well, pump and gearhead life				15 yrs
Power unit and meter value				\$41.27
Power unit and meter life				7 yrs
Irrigation system value				\$359.00
Irrigation system life				10 yrs
Interest rate on machinery and equipment				9.00%
Insurance rate on machinery and equipment				0.25%
Interest on variable costs				9.00%

	Yield Level (bu)			Your
	132	145	157	Farm
VARIABLE COSTS PER ACRE: ¹				
1. Labor	\$ 22.16	\$ 25.38	\$ 28.60	
2. Seed	43.56	43.56	43.56	
3. Herbicide	36.68	36.68	36.68	
4. Insecticide	13.01	13.01	13.01	
5. Fertilizer and Lime	25.30	28.60	30.80	
6. Fuel and Oil — Crop	8.87	10.16	11.45	
7. Fuel and Oil — Pumping ²	38.08	46.24	54.40	
8. Machinery and Equipment Repairs	21.83	25.00	28.18	
9. Irrigation Repairs and Maintenance	4.20	5.10	6.00	
10. Crop Insurance				
11. Drying	13.20	14.50	15.70	
12. Custom Hire ³				
13. Crop Consulting	6.50	6.50	6.50	
14. Miscellaneous	8.00	8.00	8.00	
15. Interest on 1/2 Variable Costs	10.86	11.82	12.73	
A. TOTAL VARIABLE COSTS	\$ 252.24	\$ 274.55	\$ 295.60	
FIXED COSTS PER ACRE: ¹				
16. Real Estate Taxes (including well)	4.34	5.02	5.71	
17. Interest on Land and Well ⁴	52.05	60.27	68.49	
18. Rent for Rented Land ⁵				
19. Depreciation on Crop Machinery	15.34	15.34	15.34	
20. Interest on Crop Machinery ⁶	14.34	14.34	14.34	
21. Depreciation on Irrigation Equipment and Well	62.96	62.96	62.96	
22. Interest on Irrigation Equipment ⁶	18.01	18.01	18.01	
23. Insurance on Machinery and Equipment	1.59	1.59	1.59	
B. TOTAL FIXED COSTS	\$ 168.62	\$ 177.52	\$ 186.43	
C. TOTAL COSTS (A + B)	\$ 420.86	\$ 452.07	\$ 482.03	
D. YIELD PER ACRE	132	145	157	
E. PRICE PER BUSHEL ⁷	\$ 2.48	\$ 2.48	\$ 2.48	
F. NET GOVERNMENT PAYMENT ⁷	\$ 10.72	\$ 11.65	\$ 12.58	
G. INDEMNITY PAYMENTS	\$	\$	\$	
H. MISCELLANEOUS INCOME	\$	\$	\$	
I. RETURNS PER ACRE [(D × E) + F + G + H]	\$ 338.08	\$ 371.25	\$ 401.94	
J. RETURNS OVER VARIABLE COSTS (I – A)	\$ 85.84	\$ 96.70	\$ 106.34	
K. RETURNS OVER TOTAL COSTS (I – C)	\$ -82.78	\$ -80.82	\$ -80.09	
L. VARIABLE COSTS PER BUSHEL (A ÷ D)	\$ 1.91	\$ 1.89	\$ 1.88	
M. TOTAL COSTS PER BUSHEL (C ÷ D)	\$ 3.19	\$ 3.12	\$ 3.07	
N. NET RETURN ON INVESTMENT				
[(K+15+17+20+22) ÷ INVESTMENT] ⁸	0.83%	1.44%	1.88%	

¹Totals were derived using information listed in Table 1. ²See MF-836, "Irrigation Capital Requirements and Energy Costs." ³If using custom hire, adjust lines 6, 8, 19, and 20. ⁴Assumes interest rate shown in Table 1. ⁵If cash rented, insert zero in lines 16 and 17. ⁶Assumes one-half the average investment [(initial investment + salvage value) ÷ 2] at the interest rate shown in Table 1. ⁷See MF-1013 "Prices for Crop and Livestock Cost-Return Budgets" and MF-2236 "Government Program Payments for Crop Cost Return Budgets" for additional information on crop prices and program payments. ⁸Investment equals total value of all fixed assets shown in Table 1.

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