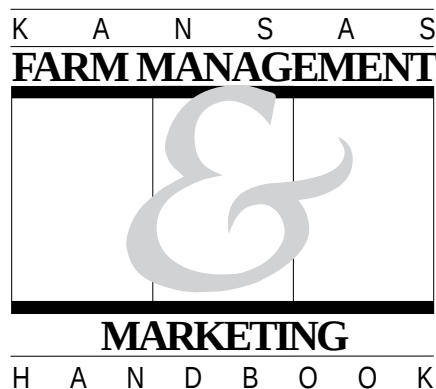




Center-Pivot-Irrigated Short Season Corn

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Irrigated short season corn (or early-corn early) 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.

Producers should compare the cash-flow requirements and profitability of short season corn with alternate crops. Though early-corn early may be for 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 date, taking advantage of old-crop prices may be possible. In addition, short season corn compares favorably with grain sorghum since corn often receives a premium over milo.

Short season corn allows producers to rotate to wheat without leaving the land idle for a year. Rotational benefits will 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 corn borers and spider mites may be possible. New bio-type and pesticide-resistant greenbugs identified pose problems for grain sorghum production that do not affect corn. While eliminating insecticide costs may be possible, the cost of one treatment is included in the budget.

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.

Cost-Return Projections

Land preparation costs are included in land value. Other investments are shown in Table 1. Price of the energy source and Total Dynamic Head are the important factors affecting pumping costs. For instance, a \$1 change in natural gas price causes a \$2.97 increase with 100 feet TDH. However, with 500 feet TDH, a \$1 change in gas price causes a \$14.83 change in costs for each acre foot of water pumped.

Yield Level

Cost per bushel and net returns in crop production are highly dependent on yields. The following estimated budget includes three different yield levels. Yield levels vary for many reasons such as soil type/land quality, weather, input levels, and management. Budgeting at multiple yield levels can help producers examine the financial risk of a crop enterprise that is directly related to production risk as well as to compare the profitability of crop enterprises on farmland tracts with varying yield potentials.

Table 1. Factors Used for Cost-Return Budget

Item	Yield Level (bu)			
	120	160	200	
Water, 325 TDH (acre inches)	14	17	20	\$2.41/inch
Fertilizer:				
N (Anhy.)	140	140	190	\$0.19/lb
N (Dry)	10	10	10	\$0.29/lb
P	40	40	40	\$0.27/lb
K	0	0	0	\$0.13/lb
Seed (lbs/Acre)	36,000	36,000	36,000	
Seed Price, \$/lb	\$0.90	\$0.90	\$0.90	
Labor Hours	2.30	2.30	2.30	
Labor Price/Hour				\$9.00
Land Value/Acre				\$540.00
Land Interest Rate				6.00%
Machinery Investment				\$208.00
Machinery Life				10 yrs
Interest Rate on Machinery				10.00%
Well, Pump, and Gearhead Value				\$290.00
Well, Pump, and Gearhead Life				15 yrs
Power Unit and Meter Value				\$50.00
Power Unit and Meter Life				7 yrs
Irrigation System Value				\$385.00
Irrigation System Life				10 yrs
Insurance Rate on Machinery				0.25%
Interest on Variable Costs				10.00%

COST-RETURN PROJECTION—CENTER PIVOT IRRIGATED SHORT SEASON CORN¹

	Yield Level (bu.)			Your Farm
	120	160	200	
VARIABLE COSTS PER ACRE:				
1. Labor (2.30 hrs × \$9.00 per hr)	\$ 20.70	\$ 20.70	\$ 20.70	
2. Seed (36,00 seeds × \$0.90 per 1,000 seeds)	32.40	32.40	32.40	
3. Herbicide (\$32.45) and Insecticide (\$20.25)	52.70	52.70	52.70	
4. Fertilizer	40.30	40.30	49.80	
5. Fuel and Oil—Crop	7.15	7.15	7.15	
6. Fuel and Oil—Pumping ²	33.74	40.97	48.20	
7. Crop Machinery Repairs	22.60	22.60	22.60	
8. Irrigation Repairs and Maintenance	4.20	5.10	6.00	
9. Crop Insurance	5.00	5.00	5.00	
10. Drying @ \$0.10/bu	12.00	16.00	20.00	
11. Custom Hire (_____ operation) ³				
12. Crop Consulting	6.50	6.50	6.50	
13. Miscellaneous	6.00	6.00	6.00	
14. Interest ½ Variable Costs @ 10%	12.16	12.77	13.85	
A. TOTAL VARIABLE COSTS	\$255.45	\$268.19	\$290.90	
FIXED COSTS PER ACRE:				
15. Real Estate Taxes (including well) @ 0.5%	\$ 4.15	\$ 4.15	\$ 4.15	
16. Interest on Land and Well (\$830/A × 6%) ⁴	49.80	49.80	49.80	
17. Rent for Rented Land ⁵				
18. Depreciation on Crop Machinery	13.52	13.52	13.52	
19. Interest on Crop Machinery @ 10% ⁶	14.04	14.04	14.04	
20. Depreciation on Irrigation Equipment and Well	64.98	64.98	64.98	
21. Interest on Irrigation Equipment @ 10% ⁶	21.75	21.75	21.75	
22. Insurance on Machinery and Equipment @ .25%	1.61	1.61	1.61	
B. TOTAL FIXED COSTS	\$169.84	\$169.84	\$169.84	
C. TOTAL COSTS (A + B)	\$425.30	\$438.03	\$460.75	
D. YIELD PER ACRE	120	160	200	
E. PRICE PER BUSHEL	\$ 2.50	\$ 2.50	\$ 2.50	
F. NET GOVERNMENT PAYMENT ⁷	\$ 30.60	\$ 40.80	\$ 51.00	
G. RETURNS PER ACRE ((D × E) + F)	\$330.60	\$440.80	\$551.00	
H. RETURNS OVER VARIABLE COSTS (G – A)	\$ 75.15	\$172.61	\$260.10	
I. RETURNS OVER TOTAL COSTS (G – C)	\$–94.70	\$ 2.77	\$ 90.25	
J. VARIABLE COSTS PER BUSHEL (A ÷ D)	\$ 2.13	\$ 1.68	\$ 1.45	
K. FIXED COSTS PER BUSHEL (B ÷ D)	\$ 1.42	\$ 1.06	\$ 0.85	
L. TOTAL COSTS PER BUSHEL (C ÷ D)	\$ 3.54	\$ 2.74	\$ 2.30	
M. ASSET TURNOVER (G ÷ INVESTMENT) ⁸	22.44%	29.93%	37.41%	
N. NET RETURN ON INVESTMENT ((I+14+16+19) ÷ INVESTMENT) ⁸	–1.27%	5.39%	11.40%	

¹See Table 1, page 1, for factors used. ²See MF-836, "Irrigation Capital Requirements and Energy Costs." If using custom hire, adjust lines 5, 7, 18, and 19. ³Assumes interest rate shown in Table 1. ⁴If cash rented, insert zero in lines 15 and 16. ⁵Assumes one-half the (original cost plus salvage value) at the interest rate shown in Table 1. ⁶Net government payment equals yield per acre (D) times expected deficiency payment minus prorated cost of set-aside acres. Based on 15% flex acres and 5% ARP. The price used was a five-year average price. The 1995 farm program may have major changes. ⁷Investment equals total value of all fixed assets shown in Table 1.

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