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Corn Cost-Return Budget in Southeast Kansas

Department of Agricultural Economics — *www.agmanager.info*

K-STATE Kansas State University

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

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Short-season corn acres in southeast Kansas have doubled in the last few years. Planting short-season corn (98 to 105 day) early (March 25 to April 15) results in corn that is at the roasting ear stage in early July then dries down as the weather becomes dryer and hotter. This corn is much more reliable on upland soils than full season corn hybrids. Yields will vary depending on topsoil thickness and actual rainfall in June and July. Short-season corn production costs can be higher than other crops. However, yields can also be good. It can be almost as reliable in yield as grain sorghum. The increase in short-season corn acreage is the primary cause of less grain sorghum. The following budget outlines the expected costs and returns for corn in southeast Kansas.

Income per Acre

Crop production costs per unit are highly dependent on yields. The following estimated budget includes three different yield levels which are intended to represent expected yields for land of varying quality for a given level of management. Alternative expected yields could help producers compare the profitability of crop enterprises on farmland tracts with varying yield potentials. Land values and government payments have been adjusted for alternative yield levels in this budget. In customizing this budget to your farm, attention should be given to using land values representative of your farm's production capacity.

Table 1. *Production Inputs — Corn*

	Yield Level (bu)			
Item	80	110	140	
Seed, 1,000/a	24	24	28	$1.69/1,000
Fertilizer:				
N (anhydrous)*	70	100	130	$0.57/lb
N	0	0	0	$0.85/lb
P	35	35	35	$1.09/lb
K	30	30	30	$0.62/lb
Lime	333	333	333	$0.01/lb
Herbicide				
Bicep II Magnum	2.3	2.3	2.3	$10.25/qt
Spirit	1.0	1.0	1.0	$11.83/oz
Insecticide / Fungicide				
Pounce	0.32	0.32	0.32	$0.78/oz

** If not following soybeans, add 30 lb N*

Table 2. *Machinery and Land Resources — Corn*

	Yield Level (bu)			Custom
Item	80	110	140	Rate
Tillage/Planting/Chemical Applications:				
Chisel	1	1	1	$11.04/a
Disk	1	1	1	$9.07/a
Field cultivate	1	1	1	$8.29/a
Plant	1	1	1	$12.48/a
Anhydrous application	1	1	1	$9.68/a
Fertilizer application	1	1	1	$4.80/a
Herbicide application	2	2	2	$5.15/a
Insecticide / fungicide application	0	0	0	$5.14/a
Harvest				
Base charge	1	1	1	$25.33/a
Extra charge for yields exceeding	71	71	71	$0.188/bu
Hauling	80	110	140	$0.164/bu
Non-machinery labor	0.92	1.01	1.10	$13.00/hr
Land charge/rent	$44.00	$55.00	$66.00	
Interest on capital				8.0%

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Price per bushel represents an expected harvest price in Emporia, Kan. Producers in other regions of southeast Kansas should account for local basis (cash price – futures price) when making their own price forecasts.

Crop insurance was not included as an input expense in this budget because yields reflect an average of all years (good and bad). If crop insurance is included as an input expense, then an expected value for indemnity payments should be included in the returns section. Historically, MPCI indemnity payments have exceeded premiums due to government subsidies.

Costs per Acre

Production costs at the three production levels are shown on lines 1 through 13. Kansas Custom Rates for specific field operations are used to represent fuel and labor costs as well as machinery repair, depreciation, and interest expenses in these budgets. Table 1 identifies the typical seed, fertilizer, herbicide, and insecticide requirements (rate and cost/unit) for conventional till short-season corn. Each tillage, planting, and harvest operation is identified. Table 2 outlines the machinery and land resources used for conventional till short-season corn. Each tillage, planting, and harvest operation is identified.

COST-RETURN PROJECTION — CORN — SOUTHEAST KANSAS

	Yield Level (bu)			Your
	80	**110**	**140**	**Farm**
INCOME PER ACRE				
A. Yield per acre	80	110	140	
B. Price per bushel	$ 4.19	$ 4.19	$ 4.19	
C. Net government payment	$ 10.48	$ 11.39	$ 12.30	
D. Indemnity payments	$	$	$	
E. Miscellaneous income	$	$	$	
F. Returns/acre ((A × B) + C + D + E)	$ 345.68	$ 472.29	$ 598.90	
COSTS PER ACRE				
1. Seed	$ 40.56	$ 40.56	$ 47.32	
2. Herbicide	35.41	35.41	35.41	
3. Insecticide / Fungicide	0.25	0.25	0.25	
4. Fertilizer and Lime	99.98	117.08	134.18	
5. Crop Consulting				
6. Crop Insurance				
7. Drying				
8. Miscellaneous	7.00	7.00	7.00	
9. Custom Hire / Machinery Expense	105.80	116.36	126.92	
10. Non-machinery Labor	11.96	13.15	14.34	
11. Irrigation				
a. Labor				
b. Fuel and Oil				
c. Repairs and Maintenance				
d. Depreciation on Equipment and Well				
e. Interest on Equipment				
12. Land Charge / Rent	44.00	55.00	66.00	
G.SUB TOTAL	$ 344.95	$ 384.81	$ 431.42	
13. Interest on ½ Nonland Costs	12.04	13.19	14.62	
H. TOTAL COSTS	$ 356.99	$ 398.00	$ 446.04	
I. RETURNS OVER COSTS (F - H)	$ -11.31	$ 74.29	$ 152.87	
J. TOTAL COSTS/BUSHEL (H ÷ A)	$ 4.46	$ 3.62	$ 3.19	
K. RETURN TO ANNUAL COST (I + 13) ÷ G	0.21%	22.73%	38.82%	

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