

Corn Cost-Return Budget in Western Kansas

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Kansas State University Agricultural Experiment Station and Cooperative Extension Service

Troy J. Dumler
Agricultural Economist

Daniel M. O'Brien
Agricultural Economist

Interest in dryland no-till corn increased in western Kansas in the late 1990s as producers increased the intensity of their cropping systems. However, dryland corn acreage in western Kansas has decreased recently due to dry conditions. Research by K-State Research and Extension shows that increased returns and reduced financial risk can occur by increasing cropping intensity beyond the traditional dryland wheat-fallow rotation. Increased moisture conservation from no-till corn production practices in a wheat-corn-fallow (W-C-F) rotation can increase yields and returns over conventional-till and reduced-till corn in western Kansas. Following is a cost-return budget for no-till corn in a W-C-F rotation in western Kansas.

Income Per Acre

Crop production costs per unit and net returns are highly dependent on yields. The following estimated budgets include three different yield levels, which are intended to represent expected yields for land of varying quality for a given level of management. Producers can compare the profitability of crop enterprises on farmland tracts with varying yield potential by considering alternative expected yield scenarios. Land values and government payments have been adjusted for alternative yield levels in this budget. In customizing a budget to your farm, attention should be given to using land values representative of your farm's productive capacity and local farmland market conditions.

Price per bushel represents an expected harvest price in Scott City, Kan. Producers in other regions of western

Table 1. Production Inputs — Wheat-Corn-Fallow

Item	Yield Level (bu/a)			
	60	80	100	
Seed, 1,000/a*	20	20	20	\$3.49/1,000
Fertilizer:				
N (anhydrous)	0	0	0	\$0.47/lb
N	51	78	105	\$0.65/lb
P	24	39	49	\$0.60/lb
K	0	0	0	\$0.51/lb
Lime	0	0	0	\$0.01/lb
Herbicide				
RT3 + 2,4-D + Atrazine 4L	1.0	0.0	0.0	\$16.02/a
RT3 + Additives	1.0	1.0	1.0	\$3.42/a
RT3 + Bicep Lite II Magnum	0.0	1.0	1.0	\$21.37/a
Insecticide / Fungicide				
Seed treatment	1	1	1	\$1.00/a

*Bt seed

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

Table 2. Machinery and Land Resources — Wheat-Corn-Fallow

Item	Yield Level (bu/a)			Custom Rate
	60	80	100	
Tillage/Planting/Chemical Applications:				
Sweep	0	0	0	\$7.90/a
Disk	0	0	0	\$9.88/a
Field cultivate	0	0	0	\$9.47/a
No-till plant	1	1	1	\$15.48/a
Anhydrous application	0	0	0	\$10.87/a
Fertilizer application	1	1	1	\$5.36/a
Herbicide application	2	2	2	\$5.46/a
Insecticide application	0	0	0	\$5.53/a
Harvest				
Base charge	1	1	1	\$26.14/a
Extra charge for yields exceeding	74	74	74	\$0.207/bu
Hauling	60	80	100	\$0.174/bu
Non-machinery labor	0.59	0.64	0.70	\$13.00/hr
Land charge/rent	\$78.00	\$97.50	\$117.00	
Interest on capital				6.5%

expense, than an expected value for indemnity payments should be included in the returns section. Historically, crop insurance indemnity payments have exceeded premiums due to government subsidies.

Costs Per Acre

Production costs at the three production levels are shown on lines 1-13. 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 no-till corn. Herbicide requirements include both pre-crop and in-crop treatments. Table 2 outlines the machinery and land resources used for no-till corn in a wheat-corn-fallow rotation. Each tillage, planting, and harvest operation is identified.

COST-RETURN PROJECTION — CORN (W-C-F ROTATION) — WESTERN KANSAS

	Yield Level (bu/a)			Your Farm
	60	80	100	
INCOME PER ACRE				
A. Yield per acre	60	80	100	
B. Price per bushel	\$ 6.49	\$ 6.49	\$ 6.49	
C. Net government payment	\$ 11.22	\$ 12.20	\$ 13.17	
D. Indemnity payments	\$	\$	\$	
E. Miscellaneous income.....	\$	\$	\$	
F. Returns/acre ((A × B) + C + D + E)	\$ 400.62	\$ 531.40	\$ 662.17	
COSTS PER ACRE				
1. Seed	\$ 69.80	\$ 69.80	\$ 69.80	
2. Herbicide	19.44	24.79	24.79	
3. Insecticide / Fungicide	1.00	1.00	1.00	
4. Fertilizer and Lime	47.43	73.91	97.41	
5. Crop Consulting.....				
6. Crop Insurance				
7. Drying				
8. Miscellaneous.....	5.50	5.50	5.50	
9. Custom Hire / Machinery Expense.....	68.34	73.06	80.68	
10. Non-machinery Labor	7.72	8.26	9.12	
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.....	78.00	97.50	117.00	
G. SUB TOTAL	\$ 297.23	\$ 353.81	\$ 405.29	
13. Interest on ½ Nonland Costs	7.13	8.33	9.37	
H. TOTAL COSTS	\$ 304.36	\$ 362.14	\$ 414.66	
I. RETURNS OVER COSTS (F - H)	\$ 96.26	\$ 169.26	\$ 247.51	
J. TOTAL COSTS/BUSHEL (H ÷ A)	\$ 5.07	\$ 4.53	\$ 4.15	
K. RETURN TO ANNUAL COST (I + 13) ÷ G	34.78%	50.19%	63.38%	

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