

Corn Cost-Return Budget in Western Kansas

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Dryland no-till corn has gained in popularity in western Kansas in recent years as producers have increased the intensity of their cropping systems. Research at K-State has shown that crop producers in this region can increase returns and reduce risk by increasing cropping intensity beyond the traditional wheat-fallow rotation. The 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. 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 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 can help producers compare the profitability of crop enterprises on farmland tracts with varying yield potential. Land values and government payments have been adjusted for alternative yield levels in this budget. In customizing this budget to

Table 1. Production Inputs — Wheat-Corn-Fallow

Item	Yield Level (bu)			
	65	80	95	
Seed, 1,000/ac*	20	20	22	\$1.45/1,000
Fertilizer:				
N (anhydrous)	0	0	0	\$0.16/lb
N	77	95	113	\$0.23/lb
P	38	34	41	\$0.21/lb
K	0	0	0	\$0.14/lb
Lime	0	0	0	\$0.01/lb
Herbicide				
RT Master + 2,4-D + Atrazine 90DF				
1.0	1.0	1.0	1.0	\$9.49/ac
RT Master + Additives				
1.0	1.0	1.0	1.0	\$5.50/ac
Roundup Ultra + Biceplite II Magnum				
1.0	1.0	1.0	1.0	\$25.66/ac
Insecticide/Fungicide				
Seed treatment	1.0	1.0	1.0	\$1.00/ac

* Bt seed

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

ITEM	Yield Level (bu)			
	65	80	95	
Tillage/Planting/Chemical Applications:				
Sweep	0	0	0	\$5.13/ac
Disk	0	0	0	\$5.60/ac
Field cultivate	0	0	0	\$5.74/ac
No-till plant	1	1	1	\$9.59/ac
Anhydrous application	0	0	0	\$5.23/ac
Fertilizer application	1	1	1	\$3.64/ac
Herbicide application	3	3	3	\$3.61/ac
Insecticide application	0	0	0	\$3.66/ac
Harvest				
Base charge	0	0	0	\$0.00/ac
Extra charge for yields exceeding	0	0	0	\$0.200/bu
Hauling	65	80	95	\$0.087/bu
Non-machinery labor	0.50	0.50	0.50	\$10.00/hr
Irrigation labor	0.00	0.00	0.00	\$10.00/hr
Land value/acre	\$406	\$508	\$610	6.00%
Interest on capital				8.0%

your farm, attention should be given to using land values representative of your farm's productive capacity.

Price per bushel represents an expected harvest price in Scott City, Kan. Producers in other regions of western 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 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, 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 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 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)			Your Farm
	65	80	95	
INCOME PER ACRE				
A. Yield per acre	65	80	95	
B. Price per bushel	\$ 2.28	\$ 2.28	\$ 2.28	
C. Net government payment	\$ 22.15	\$ 24.07	\$ 26.00	
D. Indemnity payments	\$	\$	\$	
E. Miscellaneous income	\$	\$	\$	
F. Returns/acre ((A × B) + C + D + E)	\$170.35	\$206.47	\$242.60	
COSTS PER ACRE				
1. Seed	\$ 29.00	\$ 29.00	\$ 31.90	
2. Herbicide	40.65	40.65	40.65	
3. Insecticide / Fungicide	1.00	1.00	1.00	
4. Fertilizer and Lime	25.69	28.99	34.60	
5. Crop Consulting				
6. Crop Insurance				
7. Drying				
8. Miscellaneous	5.50	5.50	5.50	
9. Custom Hire / Machinery Expense	42.74	47.05	51.36	
10. Non-machinery Labor	5.00	5.00	5.00	
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	36.54	45.72	54.90	
G. SUB TOTAL	\$186.12	\$202.91	\$224.91	
13. Interest on 1/2 Nonland Costs	5.98	6.29	6.80	
H. TOTAL COSTS	\$192.11	\$209.20	\$231.72	
I. RETURNS OVER COSTS (F - H)	\$ -21.76	\$ -2.73	\$ 10.88	
J. TOTAL COSTS/BUSHEL (H ÷ A)	\$ 2.96	\$ 2.62	\$ 2.44	
K. RETURN TO ANNUAL COST (I + 13) ÷ G	-8.48%	1.75%	7.86%	

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