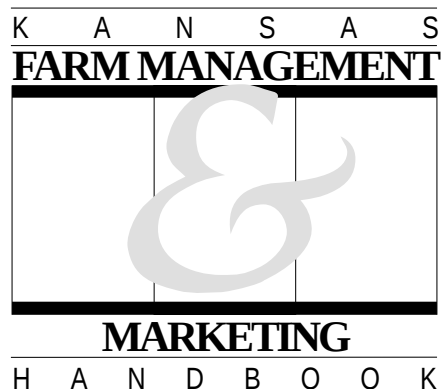




No-Till Corn Cost-Return Budget (W-C-F Rotation) in Western Kansas

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No-Till Farming

Moisture conservation and increased productivity is the primary goal of reduced tillage programs. The goal of using herbicides in place of conventional tillage practices is to control weeds which deplete soil moisture that would otherwise be used for growing crops. Crop residue remains standing which reduces moisture evaporation from the soil surface and increases moisture captured from snowfall. Additional benefits of no-till farming over conventional tillage include increased erosion control, energy conservation, and reduced labor requirements. Crop residue requirements for conservation compliance are met more easily under no-till practices.

Effects of No-till on Cost Structure

Since weed control is achieved by herbicide use in no-till systems rather than with tillage, there is a shift among variable costs detailed in the following estimated crop budget. Herbicide costs increase markedly from a conventional tillage system, but fuel expense, labor, and equipment repairs decrease. The move from conventional tillage to no-till will alter machinery investment with the diminished need for tillage equipment offset by the increased need for spraying equipment.

Expected Yields

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 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 productive capacity. Projections of net percentage return on investment permit comparisons to be made among alternative enterprises and other investments.

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.

Table 1. Factors Used for Cost-Return Budget

Item	Yield Level (bu)			
	63	78	93	
Fertilizer:				
N (Anhy.)	56	69	83	\$0.15/lb
N (Dry)	19	23	28	\$0.24/lb
P	27	34	40	\$0.18/lb
K	0	0	0	\$0.14/lb
Lime	0	0	0	\$0.01/lb
Seed, seeds/acre	20,000	20,000	22,000	
Seed price,				
\$/1,000 seeds*	\$1.51	\$1.51	\$1.51	
Labor hours	0.94	1.00	1.06	
Labor price/hour				\$10.80
Land value/acre**	\$398	\$498	\$598	
Land interest rate				6.00%
Land real estate tax rate				0.50%
Machinery investment***				\$188
Machinery life				10 yrs
Salvage value				35%
Interest rate on machinery				10.00%
Insurance rate on machinery				0.25%
Interest on variable costs				10.00%

*Includes technology fee of \$0.32/1,000 seeds for Bt-corn.

**All land costs were computed and then multiplied by a factor of 1.5 to account for fallow land (two crops every three years).

***Investment required per crop and fallow acres.

COST-RETURN PROJECTION — NO-TILL CORN (W-C-F ROTATION) — WESTERN KANSAS

	Yield Level (bu)			Your Farm
	63	78	93	
VARIABLE COSTS PER ACRE: ¹				
1. Labor	\$ 10.17	\$ 10.80	\$ 11.43	
2. Seed	30.20	30.20	33.22	
3. Herbicide	28.84	28.84	28.84	
4. Insecticide	0.75	0.75	0.75	
5. Fertilizer and Lime	17.82	21.99	26.37	
6. Fuel and Oil	6.44	6.83	7.23	
7.				
8. Machinery and Equipment Repairs	14.13	15.00	15.87	
9.				
10. Crop Insurance				
11. Drying	6.30	7.80	9.30	
12. Custom Hire				
13. Crop Consulting				
14. Miscellaneous	5.00	5.00	5.00	
15. Interest on 1/2 Variable Costs	5.98	6.36	6.90	
A. TOTAL VARIABLE COSTS	\$ 125.63	\$133.57	\$144.90	
FIXED COSTS PER ACRE: ¹				
16. Real Estate Taxes	2.99	3.74	4.49	
17 Interest on Land ²	35.82	44.82	53.82	
18. Rent for Rented Land				
19. Depreciation on Crop Machinery	12.22	12.22	12.22	
20. Interest on Crop Machinery ³	12.69	12.69	12.69	
21.				
22.				
23. Insurance on Machinery	0.47	0.47	0.47	
B. TOTAL FIXED COSTS	\$ 64.19	\$ 73.94	\$ 83.69	
C. TOTAL COSTS (A + B)	\$ 189.82	\$207.51	\$ 228.59	
D. YIELD PER ACRE	63	78	93	
E. PRICE PER BUSHEL ⁴	\$ 2.10	\$ 2.10	\$ 2.10	
F. NET GOVERNMENT PAYMENT ⁴	\$ 8.67	\$ 9.42	\$ 10.17	
G. INDEMNITY PAYMENTS	\$	\$	\$	
H. MISCELLANEOUS INCOME	\$	\$	\$	
I. RETURNS PER ACRE [(D × E) + F + G + H]	\$ 140.97	\$ 173.22	\$ 205.47	
J. RETURNS OVER VARIABLE COSTS (I – A)	\$ 15.34	\$ 39.65	\$ 60.57	
K. RETURNS OVER TOTAL COSTS (I – C)	\$ -48.85	\$ -34.29	\$ -23.12	
L. VARIABLE COSTS PER BUSHEL (A ÷ D)	\$ 1.99	\$ 1.71	\$ 1.56	
M. TOTAL COSTS PER BUSHEL (C ÷ D)	\$ 3.01	\$ 2.66	\$ 2.46	
N. NET RETURN ON INVESTMENT				
[(K+15+17+20) ÷ INVESTMENT] ⁵	0.72%	3.16%	4.64%	

¹Totals were derived using information listed in Table 1. ²Assumes interest rate shown in Table 1. ³Assumes one-half the average investment [(initial investment + salvage value) ÷ 2] at the interest rate shown in Table 1. ⁴See 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. ⁵Investment equals total value of all fixed assets shown in Table 1.

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