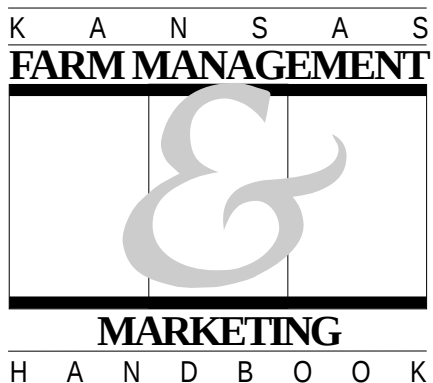




Dryland Wheat in Western Kansas (W-S-F Rotation)

Department of Agricultural Economics

Manhattan, Kansas

Daniel M. O'Brien

Extension Agricultural Economist, NW

James D. Sartwelle, III

Extension Agricultural Economist, SW

Cost-Return Projections

Crop budgets are based on average costs of production for different areas of the state. Production costs for individual farms will vary considerably due to the amounts of fertilizer and chemicals applied, type and amount of farm machinery owned, and land costs.

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 a number of 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.

Variable and Fixed Costs

Variable costs are costs that vary with level of production such as fertilizer, repairs and fuel-oil. The cost columns show the interest on the variable costs (Lines 1 through 13) for one-half year. Fixed costs do not vary with level of production and are incurred by virtue of owning assets such as land and machinery. If the land is rented, the costs of the rent per acre should be listed on Line 17 and no taxes or interest shown on Lines 15 and 16.

Machinery investment was estimated for an average sized farm to meet tillage, planting, and harvest requirements. Interest on crop machinery was calculated on one-half the original cost of machinery plus the salvage value (35 percent of original cost).

Profit and Return Factors

Net return on investment is the percentage return on investment. This measure enables comparisons to be made among enterprises as well as other investment alternatives. Asset turnover is the percentage of investment recovered by total returns. Inverting this measure allows different enterprises to be compared on the basis of capital required to generate a dollar of gross income.

Table 1. Factors Used for Cost-Return Budget

Item	Yield Level (bu)			
	35	40	45	
Fertilizer:				
N (Anhy.)	40	40	50	\$0.19 /lb
N (Dry)	0	0	0	\$0.29/lb
P	0	0	0	\$0.27/lb
K	0	0	0	\$0.13/lb
Lime	0	0	0	\$0.01/lb
Seed, lbs	40	40	50	
Seed price, \$/lb	\$0.22	\$0.22	\$0.22	
Labor Hours	1.10	1.10	1.10	
Labor Price/Hour				\$9.00
Land Value/Acre*				\$490.00
Land Interest Rate				6.00%
Machinery Investment**				\$190.00
Machinery Life (years)				10 yrs
Salvage value				35.00%
Interest Rate on Machinery				10.00%
Insurance Rate on Machinery				0.25%
Interest on Variable Costs				10.00%

*All land costs were computed, and then multiplied by a factor of 1.5 to account for fallow land.

**Investment required per crop and fallow acres

COST-RETURN PROJECTION—DRYLAND WHEAT (W-S-F ROTATION)—WESTERN KANSAS

	Yield Level (bu)			Your Farm
	35	40	45	
VARIABLE COSTS PER ACRE:				
1. Labor (1.10 hrs × \$9.00/hr)	\$9.90	\$9.90	\$9.90	
2. Seed (_____ lbs × \$.22/lb)	8.80	8.80	11.00	
3. Herbicide (\$14.60) and Insecticide	14.60	14.60	14.60	
4. Fertilizer and Lime	7.60	7.60	9.50	
5. Fuel and Oil	4.97	4.97	4.97	
6.				
7. Machinery and Equipment Repairs	10.92	10.92	10.92	
8.				
9. Crop Insurance	6.25	6.25	6.25	
10. Drying				
11. Custom Hire				
12. Crop Consulting				
13. Miscellaneous	5.00	5.00	5.00	
14. Interest on ½ Variable Cost @ 10%	3.40	3.40	3.61	
A. TOTAL VARIABLE COSTS	\$71.44	\$71.44	\$75.74	
FIXED COSTS PER ACRE:				
15. Real Estate Taxes @ .5%	3.68	3.68	3.68	
16. Interest on Land (\$490/A × 1.5 × 6%)¹	44.10	44.10	44.10	
17. Rent for Rented Land				
18. Depreciation on Crop Machinery	12.32	12.32	12.32	
19. Interest on Crop Machinery² @ 10%	12.79	12.79	12.79	
20.				
21.				
22. Insurance on Machinery @ .25%	0.47	0.47	0.47	
B. TOTAL FIXED COSTS	\$73.36	\$73.36	\$73.36	
C. TOTAL COSTS (A + B)	\$144.80	\$144.80	\$149.11	
D. YIELD PER ACRE	35	40	45	
E. PRICE PER BUSHEL	\$3.90	\$3.90	\$3.90	
F. NET GOVERNMENT PAYMENTS³	\$23.80	\$27.20	\$30.60	
G. RETURNS PER ACRE ((D × E)+F)	\$160.30	\$183.20	\$206.10	
H. RETURNS OVER VARIABLE COSTS (G-A)	\$88.86	\$111.76	\$130.36	
I. RETURNS OVER TOTAL COSTS (G-C)	\$15.50	\$38.40	\$56.99	
J. VARIABLE COSTS PER BUSHEL (A ÷ D)	\$2.04	\$1.79	\$1.68	
K FIXED COSTS PER BUSHEL (B ÷ D)	\$2.10	\$1.83	\$1.63	
L. TOTAL COSTS PER BUSHEL (C ÷ D)	\$4.14	\$3.62	\$3.31	
M. ASSET TURNOVER (G ÷ INVESTMENT)⁴	23.59%	26.96%	30.33%	
N. NET RETURN ON INVESTMENT ((I+14+16+19) ÷ INVESTMENT)⁴	5.58%	8.95%	11.72%	

¹Assumes interest rate shown in Table 1.²Assumes one-half the (original cost plus salvage value) at the interest rate shown in Table 1.³Net 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 twelve month national average price for the crop year. The 1995 farm program may have major changes.⁴Investment equals total value of all fixed assets shown in Table 1.**COOPERATIVE EXTENSION SERVICE, MANHATTAN, KANSAS**

MF-903 Revised

October 1995

Issued in furtherance of Cooperative Extension Work, acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture Cooperating, Richard D. Wootton, Associate Director. All educational programs and materials available without discrimination on the basis of race, color, national origin, sex, age, or disability.

File Code: Farm Management 3-1

10-95—1.5M