Wheat Cost-Return Budget in Southeast Kansas

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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 including soil type or land quality, weather, input levels, and management. The three yield levels reflect variability due to input levels and management as opposed to land quality since land values are held constant. Budgeting at multiple yield levels can help producers examine the financial risk of a crop enterprise that is directly related to production risk.

Variable and Fixed Costs

Variable costs, such as fertilizer, repairs, and fuel-oil, are costs that vary with the level of production. Interest on the variable costs (lines 1 through 13) is calculated for six months.

Fixed costs do not vary with the level of production and are incurred by virtue of owning assets such as land and machinery. If land is cash rented, the cost of the rent per acre should be listed on line 17 and no taxes or interest shown on lines 15 and 16. If land is rented on a cropshare basis, rent is reflected in yield.

Machinery investment was estimated for an average-sized farm to meet tillage, planting, and harvest requirements. Salvage value of machinery was assumed to be 35 percent of the initial investment. Interest on machinery was calculated on one-half the average investment [(initial investment + salvage value) ÷ 2].

Profit and Return Factors

Net return on investment is the percentage return on investment. This measure enables comparisons to be made among other enterprises and 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

	Yield Level (bu)			
Item	**30**	**35**	**40**	
Fertilizer:				
N (Anhy.)	50	50	60	$0.17/lb
N (Dry)	10	10	10	$0.30/lb
P	30	30	30	$0.28/lb
K	20	20	20	$0.13/lb
Lime	500	500	500	$0.005/lb
Seed, lbs	80	80	90	
Seed price, $/lb	$0.18	$0.20	$0.22	
Labor hours	1.85	1.85	1.85	
Labor price/hour				$9.00
Land value/acre				$625
Land interest rate				6.00%
Land real estate tax rate				0.50%
Machinery investment				$236
Machinery life				10 yrs
Salvage value				35.00%
Interest rate on machinery				10.00%
Insurance rate on machinery				0.25%
Interest on variable costs				10.00%

COST-RETURN PROJECTION — WHEAT — SOUTHEAST KANSAS

	Yield Level (bu)			Your
	30	35	40	Farm
VARIABLE COSTS PER ACRE:[1]				
1. Labor	$ 16.65	$ 16.65	$ 16.65	
2. Seed	14.40	16.00	19.80	
3. Herbicide	4.41	4.41	4.41	
4. Insecticide				
5. Fertilizer and Lime	25.00	25.00	26.70	
6. Fuel and Oil	6.10	6.20	6.30	
7.				
8. Machinery and Equipment Repairs	13.50	13.50	13.50	
9.				
10. Crop Insurance				
11. Drying				
12. Custom Hire				
13. Crop Consulting				
14. Miscellaneous	5.25	5.25	5.25	
15. Interest on 1/2 Variable Costs	4.27	4.35	4.63	
A. TOTAL VARIABLE COSTS	$ 89.58	$ 91.36	$ 97.24	
FIXED COSTS PER ACRE:[1]				
16. Real Estate Taxes	3.13	3.13	3.13	
17 Interest on Land[2]	37.50	37.50	37.50	
18. Rent for Rented Land				
19. Depreciation on Crop Machinery	15.34	15.34	15.34	
20. Interest on Crop Machinery[3]	15.93	15.93	15.93	
21.				
22.				
23. Insurance on Machinery	0.59	0.59	0.59	
B. TOTAL FIXED COSTS	$ 72.49	$ 72.49	$ 72.49	
C. TOTAL COSTS (A + B)	$162.06	$163.85	$169.73	
D. YIELD PER ACRE	30	35	40	
E. PRICE PER BUSHEL[4]	$ 4.04	$ 4.04	$ 4.04	
F. NET GOVERNMENT PAYMENT[4]	$ 8.91	$ 8.91	$ 8.91	
G. RETURNS PER ACRE [(D × E) + F]	$130.11	$150.31	$170.51	
H. RETURNS OVER VARIABLE COSTS (G-A)	$ 40.53	$ 58.95	$ 73.27	
I. RETURNS OVER TOTAL COSTS (G-C)	$ -31.95	$ -13.54	$ 0.78	
J. VARIABLE COSTS PER BUSHEL (A ÷ D)	$ 2.99	$ 2.61	$ 2.43	
K. FIXED COSTS PER BUSHEL (B ÷ D)	$ 2.42	$ 2.07	$ 1.81	
L. TOTAL COSTS PER BUSHEL (C ÷ D)	$ 5.40	$ 4.68	$ 4.24	
M. ASSET TURNOVER (G ÷ INVESTMENT)[5]	15.11%	17.46%	19.80%	
N. NET RETURN ON INVESTMENT [(I+15+17+20) ÷ INVESTMENT][5]	2.99%	5.14%	6.83%	

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

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