



Confectionary Sunflowers Cost-Return Budget (W-SF-F Rotation) in Western Kansas

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Dryland sunflowers, both confectionary and oil-type, are being used by more farmers in Western Kansas in wheat-spring crop-fallow rotations. Sunflower and grain sorghum production are similar in many respects such as in tillage practices, crop water requirements, and fertility needs. Quality of land, the amount of experience, and the management expertise of crop producers with the crop have large impacts on sunflower yields in this region. Sunflower moth is a problem in sunflower production, but can be controlled with management practices such as planting date selection and timely application of insecticides. See KSU Management Guide MF-903, *Wheat Cost-Return Budget (W-S-F Rotation) in Western Kansas*, for cost-return projections of the wheat crop that precedes sunflowers in the wheat-spring crop-fallow rotation.

Yield Goals

Cost per cwt and net returns in crop production are highly dependent on yields. The following estimated budget includes three different yield levels. Yield goals vary for a number of reasons such as soil type or land quality, historical weather patterns, input levels, and management. Budgeting for alternative yield goals can help producers compare the profitability of crop enterprises on farmland tracts with varying yield potentials. Multi-peril crop insurance expenses at a 65 percent yield level are included in this budget as a cost of managing production risk in an area prone to great yield variability.

Variable and Fixed Costs, Return Factors

Variable costs such as fertilizer, repairs, and fuel-oil are costs that may vary with the level of production. The cost columns show the interest on the variable costs (Lines 1 through 15) 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. Land values have been adjusted for alternative yield goals in this budget. In custom-

izing this budget to fit 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 or other investments.

Table 1. Factors Used for Cost-Return Budget

Item	Yield Level (lbs)			
	1,150	1,350	1,550	
Fertilizer:				
N (Anhy.)	45	55	65	\$0.17 /lb
N (Dry)	0	0	0	\$0.31/lb
P	0	0	0	\$0.28/lb
K	0	0	0	\$0.13/lb
Lime	0	0	0	\$0.005/lb
Seed,				
seeds/acre	13,000	13,000	13,000	
Seed price,				
\$/1,000 seeds	\$1.05	\$1.05	\$1.05	
Labor hours	1.27	1.30	1.33	
Labor price/hour				\$10.80
Land value/acre*	\$420	\$525	\$630	
Land interest rate				6.00%
Land real estate tax rate				0.50%
Machinery investment**				\$191
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%

*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 — CONFECTIONARY SUNFLOWERS (W-SF-F ROTATION)
— WESTERN KANSAS**

	Yield Level (lbs)			Your Farm
	1,150	1,350	1,550	
VARIABLE COSTS PER ACRE:¹				
1. Labor	\$ 13.76	\$ 14.04	\$ 14.32	
2. Seed	13.65	13.65	13.65	
3. Herbicide	11.74	11.74	11.74	
4. Insecticide	25.06	25.06	25.06	
5. Fertilizer and Lime	7.65	9.35	11.05	
6. Fuel and Oil	6.43	6.56	6.70	
7.				
8. Machinery and Equipment Repairs	12.38	12.63	12.88	
9.				
10. Crop Insurance	8.30	8.36	8.42	
11. Drying				
12. Custom Hire				
13. Crop Consulting				
14. Miscellaneous	5.00	5.00	5.00	
15. Interest on 1/2 Variable Costs	5.20	5.32	5.44	
A. TOTAL VARIABLE COSTS	\$ 109.17	\$ 111.71	\$ 114.26	
FIXED COSTS PER ACRE:¹				
16. Real Estate Taxes	3.15	3.94	4.73	
17. Interest on Land ²	37.80	47.25	56.70	
18. Rent for Rented Land				
19. Depreciation on Crop Machinery	12.42	12.42	12.42	
20. Interest on Crop Machinery ³	12.89	12.89	12.89	
21.				
22.				
23. Insurance on Machinery	0.48	0.48	0.48	
B. TOTAL FIXED COSTS	\$ 66.74	\$ 76.97	\$ 87.21	
C. TOTAL COSTS (A + B)	\$ 175.90	\$ 188.69	\$ 201.47	
D. YIELD PER ACRE	1,150	1,350	1,550	
E. PRICE PER CWT⁴	\$ 13.25	\$ 13.25	\$ 13.25	
F. NET GOVERNMENT PAYMENT⁴	\$ 12.18	\$ 13.23	\$ 14.29	
G. INDEMNITY PAYMENTS	\$	\$	\$	
H. MISCELLANEOUS INCOME	\$	\$	\$	
I. RETURNS PER ACRE [(D × E) + F + G + H]	\$ 164.56	\$ 192.11	\$ 219.67	
J. RETURNS OVER VARIABLE COSTS (I – A)	\$ 55.39	\$ 80.39	\$ 105.41	
K. RETURNS OVER TOTAL COSTS (I – C)	\$ -11.35	\$ 3.42	\$ 18.20	
L. VARIABLE COSTS PER CWT ((A ÷ D) × 100)	\$ 9.49	\$ 8.28	\$ 7.37	
M. TOTAL COSTS PER CWT ((C ÷ D) × 100)	\$ 15.30	\$ 13.98	\$ 13.00	
N. NET RETURN ON INVESTMENT				
[(K+15+17+20) ÷ INVESTMENT] ⁵	5.43%	7.04%	8.21%	

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.**Kansas State University Agricultural Experiment Station and Cooperative Extension Service, Manhattan, Kansas**

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