Oil-Type Sunflower Cost-Return Budget in North Central and Northeast Kansas

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K-STATE Research and Extension

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Daniel M. O'Brien
Agricultural Economist

Stewart R. Duncan
Crops and Soils, NE

Oil-type sunflowers are an important crop in many areas of Kansas, including north central Kansas. While not as prevalent in northeast Kansas, oil-type sunflowers can be a viable crop in certain areas. As with many north central and northeast Kansas crops, oil-type sunflowers are produced using various crop rotation and tillage systems. This budget is based on oil-type sunflower production in rotation using a no-till system.

Income Per Acre

Crop production costs per unit and net returns are highly dependent on yields. The following estimated budgets include three different yield levels, which are intended to represent expected yields for land of varying quality for a given level of management. Based on K-State research results that generally find higher yields for crops in rotation than in continuous cropping systems, this budget assumes a higher yield for oil-type sunflowers in rotation than would be expected for continuous oil-type sunflower production. Land values and government payments have been adjusted for alternative yield levels in this budget. In customizing a budget to your farm, attention should be given to using land values representative of your farm's productive capacity as well as government payments specific to your land.

Price per hundredweight represents an expected harvest price at the processing plant in Goodland, accounting for government marketing loan price support levels. The Goodland price is adjusted to north central and northeast Kansas to account for transportation costs of $1.25 per mile for an estimated 300-mile trip to Goodland. Oil-type sunflower producers in other areas of north central and northeast Kansas should use an expected price that is representative for their location and transportation costs to Goodland.

Table 1. *Production Inputs — Sunflower*

	Yield Level (lbs)			
Item	1,200	1,600	2,000	
Seed, 1,000/a	22	22	22	$2.14/1,000
Fertilizer:				
N (anhydrous)	51	67	83	$0.44/lb
N	6	9	11	$0.68/lb
P	22	30	37	$0.80/lb
K	0	0	0	$0.55/lb
Lime	500	500	500	$0.01/lb
Herbicide				
Glyphosate	24.0	24.0	24.0	$0.09/oz
+ Ammonium Sulfate	1.5	1.5	1.5	$0.34/lb
Prowl H2O	3.0	3.0	3.0	$5.12/pt
Insecticide / Fungicide				
Warrior 1EC	0.025	0.025	0.025	$248.20/gal
Warrior 1EC	0.025	0.025	0.025	$248.20/gal

Table 2. *Machinery and Land Resources — Sunflower*

	Yield Level (lbs)			Custom
Item	1,200	1,600	2,000	Rate
Tillage/Planting/Chemical Applications:				
Chisel	0	0	0	$11.56/a
Disk	0	0	0	$9.89/a
Field cultivate	0	0	0	$9.49/a
No-till plant	1	1	1	$15.64/a
Anhydrous application	1	1	1	$10.89/a
Fertilizer application	0	0	0	$5.36/a
Herbicide application	1	1	1	$5.47/a
Insecticide / fungicide application	2	2	2	$5.54/a
Harvest				
Base charge	1	1	1	$26.09/a
Extra charge for yields exceeding	1300	1300	1300	$0.003/lb
Hauling	1200	1600	2000	$0.003/lb
Non-machinery labor	0.63	0.65	0.67	$13.00/hr
Land charge/rent	$75.20	$94.00	$112.80	
Interest on capital				6.5%

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.

Costs Per Acre

Production costs at the three yield 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. Table 1 identifies seed, fertilizer, herbicide, and insecticide requirements (rate and cost/unit) for oil-type sunflowers. Fertilizer requirements represent nutrient requirements for estimated yields under rotation. If in continuous sunflower production, expected yields would be lower and corresponding nutrient requirements would also be lower. Herbicide requirements include both pre-crop and in-crop treatments. Insecticide requirements include two in-crop treatments. Table 2 outlines the machinery and land resources used for oil-type sunflowers in a no-till system.

COST-RETURN PROJECTION — OIL-TYPE SUNFLOWERS — NORTH CENTRAL AND NORTHEAST KANSAS

	Yield Level (lbs)			Your
	1,200	**1,600**	**2,000**	**Farm**
INCOME PER ACRE				
A. Yield per acre	1,200	1,600	2,000	
B. Price per cwt	$ 27.70	$ 27.70	$ 27.70	
C. Net government payment	$ 12.77	$ 13.88	$ 14.99	
D. Indemnity payments	$	$	$	
E. Miscellaneous income	$	$	$	
F. Returns/acre ((A × B) + C + D + E)	$ 345.17	$ 457.08	$ 568.99	
COSTS PER ACRE				
1. Seed	$ 47.08	$ 47.08	$ 47.08	
2. Herbicide	18.03	18.03	18.03	
3. Insecticide / Fungicide	12.41	12.41	12.41	
4. Fertilizer and Lime	49.12	64.60	78.60	
5. Crop Consulting				
6. Crop Insurance				
7. Drying	4.68	6.24	7.80	
8. Miscellaneous	7.25	7.25	7.25	
9. Custom Hire / Machinery Expense	72.77	74.87	77.27	
10. Non-machinery Labor	8.22	8.46	8.73	
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	75.20	94.00	112.80	
G. SUB TOTAL	$ 294.76	$ 332.94	$ 369.97	
13. Interest on ½ Nonland Costs	6.98	7.56	8.10	
H. TOTAL COSTS	$ 301.75	$ 340.50	$ 378.08	
I. RETURNS OVER COSTS (F - H)	$ 43.42	$ 116.58	$ 190.91	
J. TOTAL COSTS/CWT ((H ÷ A) × 100)	$ 25.15	$ 21.28	$ 18.90	
K. RETURN TO ANNUAL COST (I + 13) ÷ G	17.10%	37.29%	53.79%	

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