

# Double-Crop Sunflower Cost-Return Budget in Central and Eastern Kansas

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Oil-type sunflowers are an important crop in many areas of Kansas. Double-crop production systems can expand the opportunities to include sunflowers among the viable cropping choices in central and eastern Kansas. As with many central and eastern Kansas crops, double crop oil-type sunflowers can be produced using various cropping and tillage systems. This budget is based on double crop oil-type sunflower production 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. Yield levels are assumed to be less under the double-crop production system than would be expected for full-season oil-type sunflower production. Land values and government payments are excluded from the budget because of the double crop production system. The land values and government payments should be accounted for in the primary crop, thus the double crop oil-type sunflowers can be analyzed simply on the basis of crop income minus non-land production costs.

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

Table 1. Production Inputs — Double-Crop Sunflower

| Item                    | Yield Level (lbs) |       |       |              |
|-------------------------|-------------------|-------|-------|--------------|
|                         | 800               | 1,000 | 1,200 |              |
| Seed, 1,000/a           | 22.0              | 22.0  | 22.0  | \$0.87/1,000 |
| Fertilizer:             |                   |       |       |              |
| N (anhydrous)           | 0                 | 0     | 0     | \$0.29/lb    |
| N                       | 38                | 47    | 57    | \$0.50/lb    |
| P                       | 15                | 19    | 22    | \$0.39/lb    |
| K                       | 0                 | 0     | 0     | \$0.23/lb    |
| Lime                    | 0                 | 0     | 0     | \$0.01/lb    |
| Herbicide               |                   |       |       |              |
| Glyphosate              | 24.0              | 24.0  | 24.0  | \$0.12/oz    |
| + 2% Ammonium Sulfate   | 1.5               | 1.5   | 1.5   | \$0.22/lb    |
| Prowl                   | 3.0               | 3.0   | 3.0   | \$3.03/pt    |
| Insecticide / Fungicide |                   |       |       |              |
| Warrior IEC             | 0.025             | 0.025 | 0.025 | \$289.86/gal |

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

Crop insurance was not included as an input expense in this budget because yields reflect an average of all years

Table 2. Machinery and Land Resources — Double-Crop Sunflower

| Item                                    | Yield Level (lbs) |        |        | Custom Rate |
|-----------------------------------------|-------------------|--------|--------|-------------|
|                                         | 800               | 1,000  | 1,200  |             |
| Tillage/Planting/Chemical Applications: |                   |        |        |             |
| Chisel                                  | 0                 | 0      | 0      | \$9.21/a    |
| Disk                                    | 0                 | 0      | 0      | \$7.88/a    |
| Field cultivate                         | 0                 | 0      | 0      | \$7.46/a    |
| No-till plant                           | 1                 | 1      | 1      | \$11.75/a   |
| Anhydrous application                   | 0                 | 0      | 0      | \$6.83/a    |
| Fertilizer application                  | 1                 | 1      | 1      | \$4.20/a    |
| Herbicide application                   | 1                 | 1      | 1      | \$4.45/a    |
| Insecticide / fungicide application     | 1                 | 1      | 1      | \$4.56/a    |
| Harvest                                 |                   |        |        |             |
| Base charge                             | 1                 | 1      | 1      | \$19.78/a   |
| Extra charge for yields exceeding       | 1,200             | 1,200  | 1,200  | \$0.002/cwt |
| Hauling                                 | 800               | 1,000  | 1,200  | \$0.003/cwt |
| Non-machinery labor                     | 0.51              | 0.51   | 0.51   | \$10.00/hr  |
| Land charge/rent                        | \$0.00            | \$0.00 | \$0.00 |             |
| Interest on capital                     |                   |        |        | 8.5%        |

(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. Herbicide requirements include both pre-crop and in-crop treatments. Insecticide requirements include one in-crop treatment as compared to two in full-season sunflower production. The later planting date generally will allow producers to avoid one insecticide treatment. Table 2 outlines the machinery and land resources (although no land charges are realized) used for double crop oil-type sunflowers in a no-till system.

## COST-RETURN PROJECTION — SUNFLOWERS — CENTRAL AND EASTERN KANSAS

|                                             | Yield Level (lbs) |           |           | Your Farm |
|---------------------------------------------|-------------------|-----------|-----------|-----------|
|                                             | 800               | 1,000     | 1,200     |           |
| INCOME PER ACRE                             |                   |           |           |           |
| A. Yield per acre .....                     | 800               | 1,000     | 1,200     |           |
| B. Price per hundred weight .....           | \$ 18.31          | \$ 18.31  | \$ 18.31  |           |
| C. Net government payment.....              | \$                | \$        | \$        |           |
| D. Indemnity payments.....                  | \$                | \$        | \$        |           |
| E. Miscellaneous income .....               | \$                | \$        | \$        |           |
| F. Returns/acre ((A × B) + C + D + E) ..... | \$ 146.48         | \$ 183.10 | \$ 219.72 |           |
| COSTS PER ACRE                              |                   |           |           |           |
| 1. Seed.....                                | \$ 19.14          | \$ 19.14  | \$ 19.14  |           |
| 2. Herbicide.....                           | 12.30             | 12.30     | 12.30     |           |
| 3. Insecticide / Fungicide .....            | 7.25              | 7.25      | 7.25      |           |
| 4. Fertilizer and Lime.....                 | 24.78             | 30.82     | 36.97     |           |
| 5. Crop Consulting .....                    |                   |           |           |           |
| 6. Crop Insurance .....                     |                   |           |           |           |
| 7. Drying .....                             | 3.12              | 3.90      | 4.68      |           |
| 8. Miscellaneous .....                      | 6.81              | 6.81      | 6.81      |           |
| 9. Custom Hire / Machinery Expense .....    | 44.76             | 44.77     | 44.78     |           |
| 10. Non-machinery Labor .....               | 5.06              | 5.06      | 5.06      |           |
| 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 .....                |                   |           |           |           |
| G.SUB TOTAL .....                           | \$ 123.22         | \$ 130.04 | \$ 136.98 |           |
| 13. Interest on ½ Nonland Costs.....        | 5.10              | 5.36      | 5.62      |           |
| H. TOTAL COSTS .....                        | \$ 128.32         | \$ 135.40 | \$ 142.61 |           |
| I. RETURNS OVER COSTS (F - H).....          | \$ 18.16          | \$ 47.70  | \$ 77.11  |           |
| J. TOTAL COSTS/CWT ((H ÷ A) × 100) .....    | \$ 14.42          | \$ 13.54  | \$ 11.88  |           |
| K. RETURN TO ANNUAL COST (I + 13) ÷ G ..... | 18.88%            | 40.80%    | 60.40%    |           |

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