

Flood-Irrigated Corn Cost-Return Budget

Department of Agricultural Economics



Kansas State University Agricultural Experiment Station and Cooperative Extension Service

Troy J. Dumler
Agricultural Economist, SW

Curtis R. Thompson
Crops and Soils, SW

Daniel M. O'Brien
Agricultural Economist, NW

Roger Stockton
Crops and Soils, NW

This budget provides cost and return estimates for furrow Flood-Irrigated corn in western Kansas. Feed demand from the area's cattle feeding complex and developing hog industry make irrigated corn an important crop. Kansas ranked eighth in the nation in corn production during 2000. During the 1995-2000 period, 73 percent of Kansas irrigated corn production was located in the western third of the state.

Income Per Acre

Crop production costs per unit and net returns are highly dependent on yields. The following estimated budget includes three different yield levels, which are intended to represent expected yields for land of varying quality for a given level of management. Alternative expected yields can help producers compare the profitability of crop enterprises on farmland tracts with varying yield potential. Land values and government payments have been adjusted for alternative yield levels in the budgets. In customizing a budget to your farm, attention should be given to using land values representative of your farm's productive capacity.

Price per bushel represents an expected harvest price in Scott City, Kan., accounting for government marketing

Table 1. Production Inputs — Flood-Irrigated Corn

Item	Yield Level (bu)			
	160	190	220	
Seed, 1,000/acre	28	32	36	\$1.16/1,000
Fertilizer:				
N (anhydrous)	189	225	260	\$0.16/lb
N	0	0	0	\$0.23/lb
P	69	82	94	\$0.21/lb
K	0	0	0	\$0.14/lb
Lime	0	0	0	\$0.01/lb
Herbicide				
Bicep II Magnum	2.0	2.0	2.0	\$10.06/qt
Marksman	2.0	2.0	2.0	\$3.67/pt
+ Aim	0.33	0.33	0.33	\$8.40/oz
+ Adjuvants	1.0	1.0	1.0	\$1.00/ac
Insecticide / Fungicide				
Force 3G	5.4	5.4	5.4	\$3.93/lb
Capture 2EC	0.08	0.08	0.08	\$208.41/lb
Irrigation water, in	18	21	24	\$3.22/in

Table 2. Machinery and Land Resources — Flood-Irrigated Corn

ITEM	Yield Level (bu)			
	160	190	220	
Tillage/Planting/Chemical Applications:				
Chisel/disk	2	2	2	\$6.09/ac
Field cultivate	1	1	1	\$5.74/ac
Bed/furrow	1	1	1	\$6.00/ac
Plant	1	1	1	\$8.01/ac
Anhydrous application	1	1	1	\$5.23/ac
Fertilizer application	0	0	0	\$3.64/ac
Herbicide application	2	2	2	\$3.61/ac
Insecticide / fungicide application	1	1	1	\$3.66/ac
Harvest				
Base charge	0	0	0	\$0.00/ac
Extra charge for yields exceeding	0	0	0	\$0.200/bu
Hauling	160	190	220	\$0.087/bu
Non-machinery labor	0.50	0.50	0.50	\$10.00/hr
Irrigation labor	1.00	1.00	1.00	\$10.00/hr
Land value/acre	\$643	\$804	\$965	6.00%
Interest on capital				8.0%
Irrigation Equipment	Investment, \$/ac		Years	Salvage value
Well, pump and gearhead value	\$250.00		15	0%
Power unit and meter	\$32.50		7	0%
Irrigation system	\$32.86		10	0%

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loan price support levels. Corn producers in other regions of western Kansas should use an expected price that is representative for their location.

Costs Per Acre

Production costs at the three production 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 in these budgets. Table 1 identifies the typical seed, fertilizer, herbicide, insecticide, and irrigation water requirements (rate and cost/unit) for flood-irrigated corn. Herbicide requirements include both pre-crop and in-crop treatments.

Table 2 outlines the machinery, irrigation equipment, and land resources used for flood-irrigated corn. Each tillage, planting, and harvest operation is identified.

Irrigation Costs

Any land preparation costs are included with the land charge. Capital requirements for sprinkler systems will run \$20,000 to \$40,000 higher than flood irrigation systems. Price of the energy source and Total Dynamic Head (TDH) are the major factors affecting pumping costs. See MF-836, *Irrigation Capital Requirements and Energy Costs*, for an explanation of differences in capital costs, TDH, and examples of pumping costs for natural gas, diesel, electricity and propane.

COST-RETURN PROJECTION — FLOOD-IRRIGATED CORN

	Yield Level (bu)			Your
	160	190	220	Farm
INCOME PER ACRE				
A. Yield per acre	160	190	220	
B. Price per bushel	\$ 2.28	\$ 2.28	\$ 2.28	
C. Net government payment	\$ 14.76	\$ 16.05	\$ 17.33	
D. Indemnity payments	\$	\$	\$	
E. Miscellaneous income	\$	\$	\$	
F. Returns/acre ((A × B) + C + D + E)	\$ 379.56	\$449.25	\$518.93	
COSTS PER ACRE				
1. Seed	\$ 32.48	\$ 37.12	\$ 41.76	
2. Herbicide	31.23	31.23	31.23	
3. Insecticide / Fungicide	37.89	37.89	37.89	
4. Fertilizer and Lime	44.73	53.22	61.34	
5. Crop Consulting	6.50	6.50	6.50	
6. Crop Insurance				
7. Drying				
8. Miscellaneous	10.00	10.00	10.00	
9. Custom Hire / Machinery Expense	94.03	102.65	111.27	
10. Non-machinery Labor	5.00	5.00	5.00	
11. Irrigation				
a. Labor	10.00	10.00	10.00	
b. Fuel and Oil	57.96	67.62	77.28	
c. Repairs and Maintenance	3.78	4.41	5.04	
d. Depreciation on Equipment and Well	24.60	24.60	24.60	
e. Interest on Equipment	2.61	2.61	2.61	
12. Land Charge / Rent	38.58	48.24	57.90	
G. SUB TOTAL	\$ 399.39	\$441.09	\$482.42	
13. Interest on 1/2 Nonland Costs	14.43	15.71	16.98	
H. TOTAL COSTS	\$ 413.82	\$456.81	\$499.41	
I. RETURNS OVER COSTS (F - H)	\$ -34.26	\$ -7.56	\$ 19.53	
J. TOTAL COSTS/BUSHEL (H ÷ A)	\$ 2.59	\$ 2.40	\$ 2.27	
K. RETURN TO ANNUAL COST (I + 13) ÷ G	-4.96%	1.85%	7.57%	

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