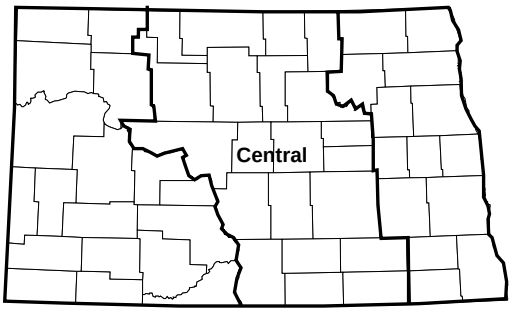

Projected Budgets for Irrigated Crops

Central North Dakota - January 2007

Dwight Aakre, Farm Management Specialist

These crop budgets provide an estimate of cost and returns for producing various crops under irrigation. The budgets are developed for a multicounty region. Soil type and productivity, as well as weather conditions, vary considerably across the region. These budgets are intended to be used as a guide. Producers should develop their own budgets.

These budgets account for full economic opportunity costs for land, machinery and machinery housing. Labor and management costs are not included. Therefore, the bottom line represents the return to labor and management. Labor and management become the residual claimants of profit or loss, and as a result, are negative for some projected budgets.

Farm program payments (direct and counter-cyclical payments) are not included in this budget. These payments are tied to historic farm program base acres and payment yields, not to the current crop produced. They are an important component of overall farm profitability, but have very little impact on the selection of crops to produce or the comparative profitability of those crops. Loan deficiency payments and marketing loan gains affect crop profitability, and therefore crop selection, if the expected market price is below the loan rate. However, the projected prices are at or above loan for all program crops in these budgets.

Electricity rates used for irrigation reflect off-peak or controlled electric rates plus demand and other charges for all crops.

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Input Prices Used

Seed	Alfalfa	$2.50/pound
	Barley	$5.50/bushel
	Corn	$120/unit (80,000 kern.)
	Dry beans	$0.62/pound
	Soybeans RR	$28/50 lb. unit
	Spring wheat	$6.90/bu
Fertilizer	Nitrogen	$0.26/pound
	Phosphorous	$0.26/pound
	Potassium	$0.19/pound
Fuel	Diesel	$2.30/gallon
	Gasoline	$2.35/gallon

Miscellaneous expenses include soil testing and twine.

Operating interest is charged at 8.5 percent annual percentage rate for six months.

Miscellaneous overhead expense includes machinery housing and insurance, farm liability insurance, vehicle license and insurance, farm utilities, farm publications and legal fees.

Land charge is based on the average dryland cash rental rate for the region.

Machinery and irrigation equipment investment is calculated at 5 percent of average investment. The average investment equals (purchase price plus disposal price) divided by two.

Machinery and irrigation equipment depreciation equals (purchase price minus disposal price) divided by years of ownership.

Market yields are based on estimates of Extension agronomists assuming use of best production management practices.

Market prices are Extension economists' estimates.

Projected Budgets for Irrigated Crops - **Central North Dakota**

	ALFALFA		ALFALFA SEEDING		CORN GRAIN		CORN SILAGE	
	Tons Per Acre	Your Figures	Tons Per Acre	Your Figures	Bushels Per Acre	Your Figures	Tons Per Acre	Your Figures
Market Yield	5.5	_____	3.0	_____	160.0	_____	20.0	_____
Market Price	$75.00	_____	$75.00	_____	$3.00	_____	$18.00	_____
MARKET INCOME	412.50	_____	225.00	_____	480.00	_____	360.00	_____
DIRECT COSTS								
-Seed	0.00	_____	45.00	_____	52.50	_____	52.50	_____
-Herbicides	0.00	_____	13.75	_____	22.00	_____	22.00	_____
-Fungicides	0.00	_____	0.00	_____	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____	0.00	_____	0.00	_____
-Fertilizer	36.21	_____	36.21	_____	77.98	_____	81.70	_____
-Crop Insurance	0.00	_____	0.00	_____	30.77	_____	30.77	_____
-Fuel & Lubrication	22.71	_____	21.53	_____	27.34	_____	79.09	_____
-Repairs	18.18	_____	18.18	_____	16.36	_____	30.35	_____
-Irrigation Power	23.92	_____	23.92	_____	17.08	_____	17.08	_____
-Irrigation Repairs	10.21	_____	10.21	_____	7.29	_____	7.29	_____
-Drying	0.00	_____	0.00	_____	24.00	_____	0.00	_____
-Miscellaneous	6.60	_____	4.10	_____	1.00	_____	1.00	_____
-Operating Interest	5.01	_____	7.35	_____	11.74	_____	13.68	_____
SUM OF LISTED DIRECT COSTS	122.84	_____	180.25	_____	288.06	_____	335.46	_____
INDIRECT (FIXED) COSTS								
-Misc. Overhead	6.09	_____	6.38	_____	8.18	_____	16.67	_____
-Machinery Depreciation	22.06	_____	23.61	_____	30.22	_____	55.19	_____
-Machinery Investment	12.40	_____	13.72	_____	19.32	_____	39.28	_____
-Irrigation Depreciation	47.44	_____	47.44	_____	47.44	_____	47.44	_____
-Irrigation Investment	21.18	_____	21.18	_____	21.18	_____	21.18	_____
-Land Charge	38.84	_____	38.84	_____	38.84	_____	38.84	_____
SUM OF LISTED INDIRECT COSTS	148.01	_____	151.17	_____	165.18	_____	218.60	_____
SUM OF ALL LISTED COSTS	270.85	_____	331.42	_____	453.24	_____	554.06	_____
RETURN TO LABOR & MANAGEMENT	**141.65**	_____	**-106.42**	_____	**26.76**	_____	**-194.06**	_____
LISTED COSTS PER BUDGET UNIT:								
-Direct Costs	22.33	_____	60.08	_____	1.80	_____	16.77	_____
-Indirect Costs	26.91	_____	50.39	_____	1.03	_____	10.93	_____
-Total Costs	49.25	_____	110.47	_____	2.83	_____	27.70	_____

Projected Budgets for Irrigated Crops - **Central North Dakota**

DRY BEANS		MALTING BARLEY		SOYBEANS		SPRING WHEAT	
Pounds Per Acre	Your Figures	Bushels Per Acre	Your Figures	Bushels Per Acre	Your Figures	Bushels Per Acre	Your Figures
2200.0	_____	100.0	_____	55.0	_____	70.0	_____
$0.20	_____	$3.30	_____	$6.50	_____	$4.75	_____
440.00	_____	330.00	_____	357.50	_____	332.50	_____
32.50	_____	15.50	_____	33.60	_____	13.80	_____
25.90	_____	17.25	_____	10.20	_____	17.25	_____
0.00	_____	14.50	_____	0.00	_____	14.50	_____
0.00	_____	0.00	_____	5.00	_____	0.00	_____
31.40	_____	47.92	_____	18.84	_____	54.30	_____
18.04	_____	11.82	_____	21.38	_____	15.88	_____
21.13	_____	15.07	_____	15.07	_____	15.07	_____
14.09	_____	11.13	_____	9.57	_____	9.57	_____
17.08	_____	17.08	_____	17.08	_____	17.08	_____
7.29	_____	7.29	_____	7.29	_____	7.29	_____
0.00	_____	0.00	_____	0.00	_____	0.00	_____
1.00	_____	1.00	_____	1.00	_____	1.00	_____
7.16	_____	6.74	_____	5.91	_____	7.04	_____
========	=========	========	=========	========	=========	========	=========
175.59	_____	165.30	_____	144.94	_____	172.78	_____
6.67	_____	5.75	_____	5.75	_____	5.75	_____
22.85	_____	16.05	_____	16.05	_____	16.05	_____
14.25	_____	9.32	_____	9.32	_____	9.32	_____
47.44	_____	47.44	_____	47.44	_____	47.44	_____
21.18	_____	21.18	_____	21.18	_____	21.18	_____
38.84	_____	38.84	_____	38.84	_____	38.84	_____
========	=========	========	=========	========	=========	========	=========
151.23	_____	138.58	_____	138.58	_____	138.58	_____
326.82	_____	303.88	_____	283.52	_____	311.36	_____
113.18	_____	**26.12**	_____	**73.98**	_____	**21.14**	_____
0.08	_____	1.65	_____	2.64	_____	2.47	_____
0.07	_____	1.39	_____	2.52	_____	1.98	_____
0.15	_____	3.04	_____	5.15	_____	4.45	_____

Projected Budgets for Irrigated Crops - **Central North Dakota**

Irrigation Investment Assumptions

Center pivot	$56,000
Well	$18,000
Pump, motor and electrical	$19,000
Pipe	$7,000
Total investment	$100,000

Excludes cost of getting power to the site.

Irrigation Costs By Amount of Water Pumped

	Dry beans, corn & small grain			Alfalfa		
Pivot acres	125			125		
Inches pumped	10			14		
Operating hours	701			982		
kwh/hr	55.37			55.37		
$/kwh	$0.055			$0.055		
			per acre			**per acre**
Average annual interest cost per acre @ 5%			$21.18			$21.18
Depreciation cost per acre			$47.44			$47.44
Total ownership costs			$68.62			$68.62
Repairs per hour of operation	**per hour**	**total**	**per acre**	**per hour**	**total**	**per acre**
Power unit @	$0.36	$252.36	$2.02	$0.36	$353.52	$2.83
Delivery system @	$0.89	$623.89	$4.99	$0.89	$873.98	$6.99
Oil/elec. motor @	$0.05	$ 35.05	$0.28	$0.05	$ 49.10	$0.39
Total repairs			$7.29			$10.21
Electricity @	$3.05	$2,134.79	$17.08	$3.05	$2,990.53	$23.92
Total operating costs/acre			$24.37			$34.14

For more information on this and other topics, see: **www.ag.ndsu.edu**

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