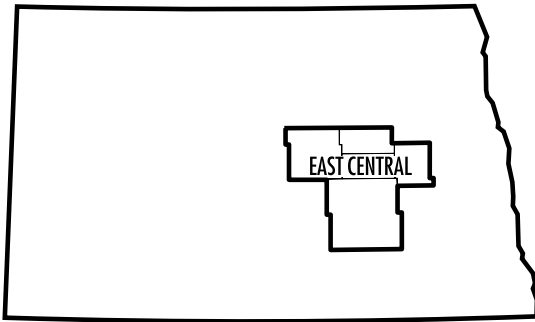




FARM MANAGEMENT PLANNING GUIDE

February 2024

Projected 2024 Crop Budgets



East Central North Dakota

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Note: This region consists of five counties:
Eddy, Foster, Griggs, Stutsman and Wells.

The 2024 crop budgets provide an estimate of revenues and costs for selected crops. Each set of budgets are developed for a multi-county region. There is considerable variation in soil type and productivity, weather conditions, as well as management and production practices within each region. Therefore, **THESE BUDGETS ARE ONLY INTENDED TO BE USED AS A GUIDE. EVERY INDIVIDUAL IS HIGHLY ENCOURAGED TO DEVELOP HIS/HER OWN BUDGETS!**

The profitability budget accounts for full economic opportunity costs for land and machinery investment, regardless of farm operator equity position. The bottom line is the return to labor and management. This is the expected “payment” to the producer for the labor and managerial efforts required by the crop enterprise. Each individual must make the decision whether it is sufficient.

The budget can be changed to conform to the more common definition of accounting profit (return to unpaid labor and management, and owner equity) by

replacing the machinery investment and land charge cost items with your per acre interest and rental expense of machinery and land, and real estate tax if land is owned.

The budget can be used for long run decisions if the revenues and costs are realistic for several years. (Crop prices, direct costs, and the land charge are best estimates for only the 2024 crop year, but crop yields are historic averages and machinery ownership costs are an average for the total length of ownership). If the budget shows a high return to labor and management, and is representative for several years, increased acreage and corresponding investment should be considered. However, if long-run returns to labor and management are unsatisfactory the best decision may be to exit the crop enterprise and employ the machinery and land investment, and labor and management, in a different enterprise or investment.

For short-run planning decisions you can omit the indirect costs if the land and machinery required to produce the different enterprises are in place. Simply compare the crop enterprises by calculating return over direct costs. Labor requirements and risk should also be considered. Insurance is not available for some crops.

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The budget can be used to estimate cashflow by making a few modifications. Machinery depreciation should be omitted and the machinery investment number replaced with your per acre principal and interest payment on machinery debt. For owned land, the land charge should be replaced with your per acre real estate tax and principal and interest payment on land debt.

The 2018 Farm Bill continues the Price Loss Coverage (PLC) and Agricultural Risk Coverage (ARC) support programs. PLC and ARC payments have been omitted from the budgets because those payments, if any, are tied to historic farm program base acres, not to current crop selection or production.

Primary Assumptions:

Crops are planted on dryland recrop ground. Costs of moving crop to local market/storage are included.

Market Price: Best estimates of NDSU extension economists. The greater of projected market price and marketing loan rate is used.

Market Yields: Average yield for the 7 year period 2016-2022, after the low and high yield years are removed. Yields for safflower, yellow mustard, buckwheat, millet, rye and chickpeas are from NDSU extension agronomists and industry sources.

Fertilizer: Cost of fertilizer applied, based on soil test, to meet yield goal. N fertilizer can be reduced if previous crop was soybean, dry bean, field peas or lentil.

Fertilizer prices:

Nitrogen	- .55/lb
Phosphorus	- .67/lb
Potassium	- .44/lb

Seed Prices:

Spring Wheat	15.00/bu
Durum	17.00/bu
Barley	12.00/bu
Corn GM	3.00/thou.kern.
Soybean GM	.34/thou.kern.
Dry Beans	1.05/thou.kern.
Oil Sunflower	1.71/thou.kern.
Conf. Sunflower	3.02/thou.kern.
Canola	15.80/lb
Flax	20.00/bu
Field Peas	20.00/bu
Oats	9.00/bu
Mustard	.98/lb
Buckwheat	.52/lb
Millet	.60/lb
Winter Wheat	13.00/bu
Rye	11.00/bu

Fuel prices:

Diesel	3.55/gal
Gasoline	2.90/gal

Lubrication charge: 15% of fuel cost

Crop Insurance: Revenue Protection was used for all wheat, barley, soybeans, corn, canola, sunflowers, field peas, dry beans and lentils with a 75% coverage level and enterprise units. APH insurance was used for other crops for which 70% coverage and optional units were assumed.

Miscellaneous: soil testing, machinery rent and custom work.

Operating Interest: Direct costs charged 8.0% interest for 6 month period.

Misc. Overhead: Machinery housing and insurance at .5% and .85%, respectively, of average machinery investment. Also, liability insurance and license fees of trucks. In addition, \$5.00 per acre is assumed for general farm utilities, farm publications, meetings, dues, income tax preparation, legal fees, etc.

Land charge = average cash rent.

Machinery investment: 4.0% real interest rate, over the years of machine ownership, is charged on average machinery investment. The real, or inflation adjusted, rate is the commercial rate minus the inflation rate. Ave. mach. investment = (Purchase price + Disposal price)/2

Depreciation = (Purchase price - disposal price / years ownership)

Spring Wheat

Durum

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	54	_____	54	_____
Market Price	7.07	_____	8.31*	_____
MARKET REVENUE	381.78	_____	448.74	_____
DIRECT COSTS				
-Seed	26.25	_____	29.75	_____
-Herbicides	23.90	_____	23.90	_____
-Fungicides**	18.50	_____	18.50	_____
-Insecticides***	0.00	_____	0.00	_____
-Fertilizer	97.20	_____	97.20	_____
-Crop Insurance	7.20	_____	9.00	_____
-Fuel & Lubrication	23.84	_____	23.84	_____
-Repairs	23.69	_____	23.69	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	2.00	_____	2.00	_____
-Operating Interest	8.90	_____	9.12	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	231.48	_____	237.00	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.39	_____	10.39	_____
-Machinery Depreciation	27.75	_____	27.75	_____
-Machinery Investment	14.29	_____	14.29	_____
-Land Charge	73.00	_____	73.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	125.43	_____	125.43	_____
SUM OF ALL LISTED COSTS	356.91	_____	362.43	_____
RETURN TO LABOR & MANAGEMENT	24.87	_____	86.31	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.29	_____	4.39	_____
-Indirect Costs	2.32	_____	2.32	_____
-Total Costs	6.61	_____	6.71	_____

Wheat notes:

*Durum price is for milling quality. There is high risk of lower quality and lower price.

**Includes seed treatment, an early season foliar fungicide, and a late season fungicide which is recommended when conditions are favorable for fusarium head blight (scab).

***Cereal grain aphid insecticide would cost about \$4.

Malting Barley

Corn Grain

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	71	_____	147	_____
Market Price	5.19*	_____	4.40	_____
MARKET REVENUE	368.49	_____	646.80	_____
DIRECT COSTS				
-Seed	21.00	_____	94.50*	_____
-Herbicides	22.70	_____	35.50	_____
-Fungicides	18.50**	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	77.02	_____	143.28	_____
-Crop Insurance	5.00	_____	11.90	_____
-Fuel & Lubrication	24.96	_____	37.00	_____
-Repairs	23.93	_____	32.20	_____
-Drying	0.00	_____	29.40	_____
-Miscellaneous	2.00	_____	2.00	_____
-Operating Interest	7.80	_____	15.43	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	202.91	_____	401.21	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.80	_____	14.50	_____
-Machinery Depreciation	29.24	_____	47.96	_____
-Machinery Investment	14.99	_____	23.85	_____
-Land Charge	73.00	_____	73.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	128.03	_____	159.31	_____
SUM OF ALL LISTED COSTS	330.94	_____	560.52	_____
RETURN TO LABOR & MANAGEMENT	37.55	_____	86.28	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	2.86	_____	2.73	_____
-Indirect Costs	1.80	_____	1.08	_____
-Total Costs	4.66	_____	3.81	_____

Barley notes:

*There is risk of not making malting barley quality. Use \$3.75 for feed barley.

**Includes seed treatment, an early season foliar fungicide, and a late season fungicide which is recommended when conditions are favorable for fusarium head blight (scab).

Corn notes:

*GM corn with herbicide tolerance and above ground insect control traits.

Soybeans

Drybeans

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	35	_____	1660	_____
Market Price	11.00	_____	0.34	_____
MARKET REVENUE	385.00	_____	564.40	_____
DIRECT COSTS				
-Seed	65.80*	_____	86.63	_____
-Herbicides	31.40	_____	54.70*	_____
-Fungicides	0.00	_____	20.00**	_____
-Insecticides	4.00**	_____	0.00	_____
-Fertilizer	12.60	_____	52.62	_____
-Crop Insurance	5.70	_____	10.50	_____
-Fuel & Lubrication	20.34	_____	26.63	_____
-Repairs	22.44	_____	27.43	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	5.50	_____	15.00	_____
-Operating Interest	6.71	_____	11.74	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	174.49	_____	305.25	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.03	_____	11.17	_____
-Machinery Depreciation	27.11	_____	33.49	_____
-Machinery Investment	13.81	_____	17.42	_____
-Land Charge	73.00	_____	73.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	123.95	_____	135.08	_____
SUM OF ALL LISTED COSTS	298.44	_____	440.33	_____
RETURN TO LABOR & MANAGEMENT	86.56	_____	124.07	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(lb):	
-Direct Costs	4.99	_____	0.184	_____
-Indirect Costs	3.54	_____	0.081	_____
-Total Costs	8.53	_____	0.265	_____

Soybean notes:

*GM soybeans with herbicide tolerance. The cost includes \$8 for inculant and fungicide treatment in addition to seed expense.

**Insecticide for soybean aphid, spider mite or foliar-feeding caterpillars.

Drybean notes:

*Includes dessicant prior to straight cutting.

**Fungicide for white mold. A second treatment may be necessary. Fungicide for rust at \$4-\$12 plus application maybe necessary.

Oil Sunflower

Confection Sunflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	2010	_____	1670	_____
Market Price	0.202	_____	0.313	_____
MARKET REVENUE	406.02	_____	522.71	_____
DIRECT COSTS				
-Seed	37.62	_____	57.38	_____
-Herbicides	28.60	_____	31.60	_____
-Fungicides	0.00*	_____	0.00*	_____
-Insecticides	5.00**	_____	10.00**	_____
-Fertilizer	69.17	_____	54.69	_____
-Crop Insurance	10.00	_____	15.50	_____
-Fuel & Lubrication	25.70	_____	24.85	_____
-Repairs	24.29	_____	23.94	_____
-Drying	8.04	_____	6.68	_____
-Miscellaneous	11.50	_____	21.00	_____
-Operating Interest	8.80	_____	9.83	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	228.72	_____	255.47	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	11.32	_____	11.10	_____
-Machinery Depreciation	31.11	_____	30.39	_____
-Machinery Investment	16.77	_____	16.46	_____
-Land Charge	73.00	_____	73.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	132.20	_____	130.95	_____
SUM OF ALL LISTED COSTS	360.92	_____	386.42	_____
RETURN TO LABOR & MANAGEMENT	45.10	_____	136.29	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.114	_____	0.153	_____
-Indirect Costs	0.066	_____	0.078	_____
-Total Costs	0.180	_____	0.231	_____

Oil Sunflower notes:

*Fungicide for rust would cost \$4 plus application.

**One spraying for head feeding insects (red seed weevil, lygus bug and banded moths). Custom application cost of \$8 is under "Miscellaneous."

Confection Sunflower notes:

*Fungicide for rust would cost \$4 plus application.

**Two sprayings for head feeding insects (red seed weevil, lygus bug and banded moths) at about \$5 per application. Each custom application cost of \$8 is under "Miscellaneous."

Canola

Flax

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1680	_____	18	_____
Market Price	0.211	_____	11.38	_____
MARKET REVENUE	354.48	_____	204.84	_____
DIRECT COSTS				
-Seed	79.00	_____	20.00	_____
-Herbicides	15.60	_____	27.10	_____
-Fungicides	0.00*	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	95.00	_____	28.18	_____
-Crop Insurance	8.00	_____	12.00	_____
-Fuel & Lubrication	22.94	_____	22.63	_____
-Repairs	23.32	_____	24.21	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	2.00	_____	2.00	_____
-Operating Interest	9.83	_____	5.44	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	255.69	_____	141.56	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.12	_____	10.18	_____
-Machinery Depreciation	28.10	_____	28.22	_____
-Machinery Investment	14.18	_____	14.80	_____
-Land Charge	73.00	_____	73.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	125.40	_____	126.20	_____
SUM OF ALL LISTED COSTS	381.09	_____	267.76	_____
RETURN TO LABOR & MANAGEMENT	(26.61)	_____	(62.92)	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.152	_____	7.86	_____
-Indirect Costs	0.075	_____	7.01	_____
-Total Costs	0.227	_____	14.88	_____

Canola notes:

*Fungicide for white mold would cost about \$18 plus application.

Field Peas

Oats

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	30	_____	79	_____
Market Price	8.52	_____	2.95	_____
MARKET REVENUE	255.60	_____	233.05	_____
DIRECT COSTS				
-Seed	60.00	_____	18.00	_____
-Herbicides	34.90	_____	6.20	_____
-Fungicides	3.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	12.51	_____	72.52	_____
-Crop Insurance	6.00	_____	12.00	_____
-Fuel & Lubrication	23.61	_____	27.97	_____
-Repairs	24.83	_____	25.68	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	10.00	_____	2.00	_____
-Operating Interest	6.99	_____	6.57	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	181.84	_____	170.94	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.40	_____	11.40	_____
-Machinery Depreciation	29.63	_____	31.86	_____
-Machinery Investment	15.06	_____	16.50	_____
-Land Charge	73.00	_____	73.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	128.09	_____	132.76	_____
SUM OF ALL LISTED COSTS	309.93	_____	303.70	_____
RETURN TO LABOR & MANAGEMENT	(54.33)	_____	(70.65)	_____
LISTED COSTS PER BUDGET UNIT				
	(bu):		(bu):	
-Direct Costs	6.06	_____	2.16	_____
-Indirect Costs	4.27	_____	1.68	_____
-Total Costs	10.33	_____	3.84	_____

Field Pea notes:

*Foliar insecticide for cutworms and/or pea aphids would cost about \$4 per acre plus application.

Yellow Mustard

Buckwheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	800	_____	950	_____
Market Price	0.45	_____	0.314	_____
MARKET REVENUE	360.00	_____	298.30	_____
DIRECT COSTS				
-Seed	13.72	_____	26.00	_____
-Herbicides	12.90	_____	13.60	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	6.00*	_____	0.00	_____
-Fertilizer	30.35	_____	23.29	_____
-Crop Insurance	0.00**	_____	9.50*	_____
-Fuel & Lubrication	21.82	_____	22.18	_____
-Repairs	23.22	_____	23.38	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	2.00	_____	2.00	_____
-Operating Interest	4.40	_____	4.80	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	114.41	_____	124.75	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.03	_____	10.15	_____
-Machinery Depreciation	27.14	_____	27.49	_____
-Machinery Investment	14.46	_____	14.60	_____
-Land Charge	73.00	_____	73.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	124.63	_____	125.24	_____
SUM OF ALL LISTED COSTS	239.04	_____	249.99	_____
RETURN TO LABOR & MANAGEMENT	120.96	_____	48.31	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.143	_____	0.131	_____
-Indirect Costs	0.156	_____	0.132	_____
-Total Costs	0.299	_____	0.263	_____

Yellow Mustard notes:

*Insecticide seed treatment for flea beetles.

**Crop insurance is not available in this region.

Buckwheat notes:

*Crop insurance is not available in most counties of the region.

Millet

Winter Wheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1700	_____	59*	_____
Market Price	0.11	_____	6.06	_____
MARKET INCOME	187.00	_____	357.54	_____
DIRECT COSTS				
-Seed	15.00	_____	15.60	_____
-Herbicides	3.90	_____	26.80	_____
-Fungicides	0.00	_____	10.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	34.81	_____	107.72	_____
-Crop Insurance	0.00	_____	7.20	_____
-Fuel & Lubrication	24.44	_____	20.55	_____
-Repairs	24.25	_____	21.04	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	2.00	_____	9.50	_____
-Operating Interest	4.18	_____	8.74	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	108.58	_____	227.15	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.49	_____	9.75	_____
-Machinery Depreciation	28.89	_____	25.18	_____
-Machinery Investment	15.22	_____	12.25	_____
-Land Charge	73.00	_____	73.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	127.60	_____	120.18	_____
SUM OF ALL LISTED COSTS	236.18	_____	347.33	_____
RETURN TO LABOR & MANAGEMENT	(49.18)	_____	10.21	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.064	_____	3.85	_____
-Indirect Costs	0.075	_____	2.04	_____
-Total Costs	0.139	_____	5.89	_____

Winter Wheat notes:

*Yield is per harvested acre. There is some risk of acreage abandonment in spring.

Rye

	Per Acre	Your Figures
Market Yield	47	_____
Market Price	6.64	_____
MARKET REVENUE	312.08	_____
DIRECT COSTS		
-Seed	13.20	_____
-Herbicides	4.00	_____
-Fungicides	0.00	_____
-Insecticides	0.00	_____
-Fertilizer	82.47	_____
-Crop Insurance	14.00	_____
-Fuel & Lubrication	19.72	_____
-Repairs	20.33	_____
-Drying	0.00	_____
-Miscellaneous	9.50	_____
-Operating Interest	6.53	_____
	=====	=====
SUM OF LISTED DIRECT COSTS	169.75	_____
INDIRECT (FIXED) COSTS		
-Misc. Overhead	9.56	_____
-Machinery Depreciation	24.44	_____
-Machinery Investment	12.06	_____
-Land Charge	73.00	_____
	=====	=====
SUM OF LISTED INDIRECT COSTS	119.06	_____
SUM OF ALL LISTED COSTS	288.81	_____
RETURN TO LABOR & MANAGEMENT	23.27	_____
LISTED COSTS PER BUDGET UNIT	(bu):	
-Direct Costs	3.61	_____
-Indirect Costs	2.53	_____
-Total Costs	6.14	_____

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