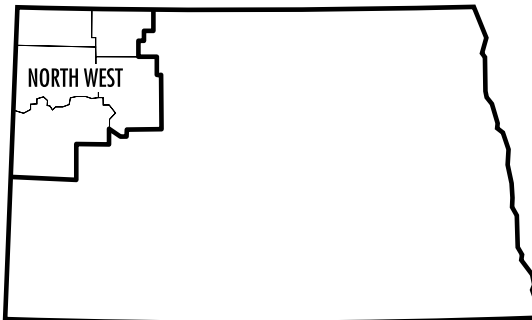




FARM MANAGEMENT PLANNING GUIDE

February 2024

Projected 2024 Crop Budgets



North West North Dakota

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This region consists of five counties:
Burke, Divide, McKenzie, Mountrail and Williams.

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.

The budgets for the South West, North West, South Central and North Central regions typically represent production systems where soil disturbance only occurs at seeding.

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	- .53/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.
Oil Sunflower	1.71/thou.kern.
Canola	15.80/lb
Flax	20.00/bu
Field Peas	20.00/bu
Oats	9.00/bu
Lentils	.30/lb
Mustard	.98/lb
Safflower	.51/lb
Buckwheat	.52/lb
Millet	.60/lb
Large Chickpeas	.70/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	40	_____	38	_____
Market Price	6.90	_____	8.15*	_____
MARKET REVENUE	276.00	_____	309.70	_____
DIRECT COSTS				
-Seed	22.50	_____	29.75	_____
-Herbicides	28.70	_____	28.70	_____
-Fungicides**	6.50	_____	6.50	_____
-Insecticides***	0.00	_____	0.00	_____
-Fertilizer	70.64	_____	66.21	_____
-Crop Insurance	5.70	_____	6.20	_____
-Fuel & Lubrication	16.45	_____	16.30	_____
-Repairs	18.98	_____	18.92	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	9.50	_____	9.50	_____
-Operating Interest	7.16	_____	7.28	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	186.13	_____	189.36	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.13	_____	9.09	_____
-Machinery Depreciation	22.77	_____	22.64	_____
-Machinery Investment	11.00	_____	10.95	_____
-Land Charge	38.00	_____	38.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	80.90	_____	80.68	_____
SUM OF ALL LISTED COSTS	267.03	_____	270.04	_____
RETURN TO LABOR & MANAGEMENT	8.97	_____	39.66	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.65	_____	4.98	_____
-Indirect Costs	2.02	_____	2.12	_____
-Total Costs	6.68	_____	7.11	_____

Wheat notes:

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

**Includes seed treatment and early season foliar fungicide. Although late season fungicides are often not common in this region, prothioconazole, metconazole, or pydiflumetofen containing products are recommended for fusarium head blight (scab) control when conditions are favorable for infection.

***Cereal grain aphid insecticide would cost about \$4. Wheat midge insecticide would cost about \$6.

Malting Barley

Corn Grain

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	60	_____	92	_____
Market Price	5.33*	_____	4.40	_____
MARKET REVENUE	319.8	_____	404.80	_____
DIRECT COSTS				
-Seed	16.20	_____	69.00*	_____
-Herbicides	27.90	_____	23.60	_____
-Fungicides	6.50**	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	65.98	_____	88.71	_____
-Crop Insurance	5.50	_____	7.60**	_____
-Fuel & Lubrication	18.02	_____	22.81	_____
-Repairs	19.62	_____	23.35	_____
-Drying	0.00	_____	18.40	_____
-Miscellaneous	9.50	_____	9.50	_____
-Operating Interest	6.77	_____	10.52	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	175.99	_____	273.49	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.53	_____	11.77	_____
-Machinery Depreciation	24.09	_____	36.31	_____
-Machinery Investment	11.57	_____	17.37	_____
-Land Charge	38.00	_____	38.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	83.19	_____	103.45	_____
SUM OF ALL LISTED COSTS	259.18	_____	376.94	_____
RETURN TO LABOR & MANAGEMENT	60.62	_____	27.86	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	2.93	_____	2.97	_____
-Indirect Costs	1.39	_____	1.12	_____
-Total Costs	4.32	_____	4.10	_____

Barley notes:

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

**Includes seed treatment and early season foliar fungicide. Although late season fungicides are often not common in this region, prothioconazole or metconazole containing products are recommended for fusarium head blight (scab) control when conditions are favorable for infection.

Corn notes:

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

**Crop insurance is only available by written agreement in most counties of region.

Soybeans

Oil Sunflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	22	_____	1630	_____
Market Price	10.85	_____	0.196	_____
MARKET REVENUE	238.70	_____	319.48	_____
DIRECT COSTS				
-Seed	65.80*	_____	35.91	_____
-Herbicides	10.50	_____	37.20	_____
-Fungicides	0.00	_____	0.00*	_____
-Insecticides	0.00	_____	5.00**	_____
-Fertilizer	13.08	_____	55.22	_____
-Crop Insurance	6.20**	_____	10.50	_____
-Fuel & Lubrication	15.96	_____	18.04	_____
-Repairs	19.19	_____	20.45	_____
-Drying	0.00	_____	6.52	_____
-Miscellaneous	5.50	_____	19.00	_____
-Operating Interest	5.45	_____	8.31	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	141.68	_____	216.15	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.14	_____	9.93	_____
-Machinery Depreciation	23.64	_____	26.40	_____
-Machinery Investment	11.58	_____	13.01	_____
-Land Charge	38.00	_____	38.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	82.36	_____	87.34	_____
SUM OF ALL LISTED COSTS	224.04	_____	303.49	_____
RETURN TO LABOR & MANAGEMENT	14.66	_____	15.99	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(lb):	
-Direct Costs	6.44	_____	0.133	_____
-Indirect Costs	3.74	_____	0.054	_____
-Total Costs	10.18	_____	0.186	_____

Soybean notes:

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

**Crop insurance is only available in McKenzie county by written agreement.

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." Foliar applied insecticide for cutworms would cost about \$5 per acre plus application (usually tank mixed with herbicide).

Canola

Flax

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1730	_____	19	_____
Market Price	0.211	_____	11.01	_____
MARKET REVENUE	365.03	_____	209.19	_____
DIRECT COSTS				
-Seed	79.00	_____	16.00	_____
-Herbicides	15.60	_____	33.60	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	102.71	_____	31.39	_____
-Crop Insurance	10.00	_____	12.00	_____
-Fuel & Lubrication	17.61	_____	17.28	_____
-Repairs	20.38	_____	21.27	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	9.50	_____	2.00	_____
-Operating Interest	10.19	_____	5.34	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	264.99	_____	138.88	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.40	_____	9.46	_____
-Machinery Depreciation	25.16	_____	25.28	_____
-Machinery Investment	12.02	_____	12.63	_____
-Land Charge	38.00	_____	38.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	84.58	_____	85.37	_____
SUM OF ALL LISTED COSTS	349.57	_____	224.25	_____
RETURN TO LABOR & MANAGEMENT	15.46	_____	(15.06)	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.153	_____	7.31	_____
-Indirect Costs	0.049	_____	4.49	_____
-Total Costs	0.202	_____	11.80	_____

Field Peas

Oats

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	30.5	_____	70	_____
Market Price	8.52	_____	3.02	_____
MARKET REVENUE	259.86	_____	211.40	_____
DIRECT COSTS				
-Seed	60.00	_____	18.00	_____
-Herbicides	39.70	_____	12.30	_____
-Fungicides	3.00	_____	0.00	_____
-Insecticides	6.00*	_____	0.00	_____
-Fertilizer	16.09	_____	65.60	_____
-Crop Insurance	7.50	_____	12.00	_____
-Fuel & Lubrication	18.23	_____	21.19	_____
-Repairs	21.88	_____	21.78	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	10.00	_____	9.50	_____
-Operating Interest	7.30	_____	6.41	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	189.70	_____	166.78	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.67	_____	10.40	_____
-Machinery Depreciation	26.66	_____	27.45	_____
-Machinery Investment	12.89	_____	13.81	_____
-Land Charge	38.00	_____	38.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	87.22	_____	89.66	_____
SUM OF ALL LISTED COSTS	276.92	_____	256.44	_____
RETURN TO LABOR & MANAGEMENT	(17.06)	_____	(45.04)	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	6.22	_____	2.38	_____
-Indirect Costs	2.86	_____	1.28	_____
-Total Costs	9.08	_____	3.66	_____

Field Pea notes:

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

Lentils

Yellow Mustard

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1230	_____	800	_____
Market Price	0.30	_____	0.45	_____
MARKET REVENUE	369.00	_____	360.00	_____
DIRECT COSTS				
-Seed	21.00	_____	11.27	_____
-Herbicides	39.20*	_____	22.60	_____
-Fungicides	16.00**	_____	0.00	_____
-Insecticides	0.00***	_____	0.00	_____
-Fertilizer	10.82	_____	31.71	_____
-Crop Insurance	9.00	_____	13.00*	_____
-Fuel & Lubrication	20.46	_____	17.36	_____
-Repairs	24.92	_____	20.87	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	10.00	_____	9.50	_____
-Operating Interest	6.06	_____	5.05	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	157.46	_____	131.36	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.12	_____	9.54	_____
-Machinery Depreciation	30.35	_____	24.48	_____
-Machinery Investment	14.54	_____	13.00	_____
-Land Charge	38.00	_____	38.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	93.01	_____	85.02	_____
SUM OF ALL LISTED COSTS	250.47	_____	216.38	_____
RETURN TO LABOR & MANAGEMENT	118.53	_____	143.62	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.128	_____	0.164	_____
-Indirect Costs	0.076	_____	0.106	_____
-Total Costs	0.204	_____	0.270	_____

Lentil notes:

*Includes pre-harvest dessicant.

**Fungicide treatment for ascochyta/anthracnose.

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

Yellow Mustard notes:

**Crop insurance is only available in McKenzie county by written agreement.

Safflower

Buckwheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1050	_____	850	_____
Market Price	0.27	_____	0.311	_____
MARKET REVENUE	283.50	_____	264.35	_____
DIRECT COSTS				
-Seed	12.75	_____	26.00	_____
-Herbicides	16.40	_____	20.70	_____
-Fungicides	18.00*	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	31.53	_____	19.98	_____
-Crop Insurance	17.00	_____	6.50*	_____
-Fuel & Lubrication	15.45	_____	16.70	_____
-Repairs	19.37	_____	20.01	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	9.50	_____	2.00	_____
-Operating Interest	5.60	_____	4.48	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	145.60	_____	116.37	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.99	_____	9.32	_____
-Machinery Depreciation	22.36	_____	23.80	_____
-Machinery Investment	10.97	_____	12.21	_____
-Land Charge	38.00	_____	38.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	80.32	_____	83.33	_____
SUM OF ALL LISTED COSTS	225.92	_____	199.70	_____
RETURN TO LABOR & MANAGEMENT	57.58	_____	64.65	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.139	_____	0.137	_____
-Indirect Costs	0.076	_____	0.098	_____
-Total Costs	0.215	_____	0.235	_____

Safflower notes:

*Fungicide for alternaria leaf spot.

Buckwheat notes:

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

Millet

Large Chickpea

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1300	_____	1400	_____
Market Price	0.11	_____	0.32	_____
MARKET REVENUE	143.00	_____	448.00	_____
DIRECT COSTS				
-Seed	15.00	_____	98.00	_____
-Herbicides	11.10	_____	47.90	_____
-Fungicides	0.00	_____	36.00*	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	23.56	_____	27.14	_____
-Crop Insurance	0.00	_____	9.50	_____
-Fuel & Lubrication	17.74	_____	21.29	_____
-Repairs	20.38	_____	25.99	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	9.50	_____	9.00	_____
-Operating Interest	3.89	_____	10.99	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	101.17	_____	285.81	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.51	_____	10.36	_____
-Machinery Depreciation	24.55	_____	31.31	_____
-Machinery Investment	12.56	_____	15.15	_____
-Land Charge	38.00	_____	38.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	84.62	_____	94.82	_____
SUM OF ALL LISTED COSTS	185.79	_____	380.63	_____
RETURN TO LABOR & MANAGEMENT	(42.79)	_____	67.37	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.078	_____	0.204	_____
-Indirect Costs	0.065	_____	0.068	_____
-Total Costs	0.143	_____	0.272	_____

Large Chickpea notes:

*Two fungicide treatments for ascochyta blight. Additional treatments may be necessary.

Winter Wheat

Rye

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	44*	_____	40	_____
Market Price	5.87	_____	6.01	_____
MARKET REVENUE	258.28	_____	240.40	_____
DIRECT COSTS				
-Seed	13.00	_____	13.20	_____
-Herbicides	24.60	_____	4.00	_____
-Fungicides	10.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	79.51	_____	70.64	_____
-Crop Insurance	5.70	_____	8.00	_____
-Fuel & Lubrication	16.45	_____	15.78	_____
-Repairs	19.14	_____	17.98	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	9.50	_____	9.50	_____
-Operating Interest	7.12	_____	5.56	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	185.02	_____	144.66	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.11	_____	8.95	_____
-Machinery Depreciation	22.73	_____	21.95	_____
-Machinery Investment	10.80	_____	10.46	_____
-Land Charge	38.00	_____	38.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	80.64	_____	79.36	_____
SUM OF ALL LISTED COSTS	265.66	_____	224.02	_____
RETURN TO LABOR & MANAGEMENT	(7.38)	_____	16.38	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.21	_____	3.62	_____
-Indirect Costs	1.83	_____	1.98	_____
-Total Costs	6.04	_____	5.60	_____

Winter Wheat notes:

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

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