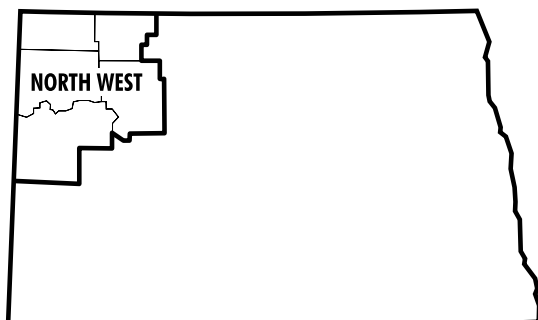




FARM MANAGEMENT PLANNING GUIDE

February 2022

Projected 2022 Crop Budgets



North West North Dakota

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

The 2021 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 2022 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 2014-2020, 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	- .94/lb
Phosphorus	- .65/lb
Potassium	- .53/lb

Seed Prices:

Spring Wheat	17.00/bu
Durum	19.00/bu
Barley	13.00/bu
Corn GM	2.69/thou.kern.
Soybean GM	.34/thou.kern.
Oil Sunflower	1.55/thou.kern.
Canola	12.40/lb
Flax	27.00/bu
Field Peas	20.00/bu
Oats	10.00/bu
Lentils	.30/lb
Mustard	1.00/lb
Safflower	.45/lb
Buckwheat	.40/lb
Millet	.60/lb
Large Chickpeas	.60/lb
Winter Wheat	12.00/bu
Rye	11.00/bu

Fuel prices:

Diesel	2.90/gal
Gas	3.10/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 4.5% 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, \$4.00 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	_____	36	_____
Market Price	7.39	_____	8.89*	_____
MARKET REVENUE	295.60	_____	320.04	_____
DIRECT COSTS				
-Seed	25.50	_____	33.25	_____
-Herbicides	36.10	_____	36.10	_____
-Fungicides**	5.00	_____	5.00	_____
-Insecticides***	0.00	_____	0.00	_____
-Fertilizer	82.84	_____	68.92	_____
-Crop Insurance	6.00	_____	6.50	_____
-Fuel & Lubrication	13.37	_____	13.11	_____
-Repairs	16.52	_____	16.41	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	8.25	_____	8.25	_____
-Operating Interest	4.36	_____	4.22	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	197.94	_____	191.76	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.65	_____	7.57	_____
-Machinery Depreciation	19.54	_____	19.32	_____
-Machinery Investment	10.76	_____	10.64	_____
-Land Charge	35.00	_____	35.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	72.95	_____	72.53	_____
SUM OF ALL LISTED COSTS	270.89	_____	264.29	_____
RETURN TO LABOR & MANAGEMENT	24.71	_____	55.75	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.95	_____	5.33	_____
-Indirect Costs	1.82	_____	2.01	_____
-Total Costs	6.77	_____	7.34	_____

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	_____	100	_____
Market Price	6.09*	_____	4.45	_____
MARKET REVENUE	365.40	_____	445.00	_____
DIRECT COSTS				
-Seed	17.55	_____	61.87*	_____
-Herbicides	26.70	_____	39.90	_____
-Fungicides	5.00**	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	72.99	_____	120.03	_____
-Crop Insurance	5.50	_____	7.50**	_____
-Fuel & Lubrication	14.65	_____	19.03	_____
-Repairs	17.10	_____	20.60	_____
-Drying	0.00	_____	17.10	_____
-Miscellaneous	8.25	_____	8.25	_____
-Operating Interest	3.77	_____	6.62	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	171.51	_____	300.90	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.03	_____	10.15	_____
-Machinery Depreciation	20.63	_____	31.58	_____
-Machinery Investment	11.33	_____	17.22	_____
-Land Charge	35.00	_____	35.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	74.99	_____	93.95	_____
SUM OF ALL LISTED COSTS	246.50	_____	394.85	_____
RETURN TO LABOR & MANAGEMENT	118.90	_____	50.15	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	2.86	_____	3.01	_____
-Indirect Costs	1.25	_____	0.94	_____
-Total Costs	4.11	_____	3.95	_____

Barley notes:

*There is risk of not making malting barley quality. Use \$4.00 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	23	_____	1520	_____
Market Price	11.35	_____	0.245	_____
MARKET REVENUE	261.05	_____	372.40	_____
DIRECT COSTS				
-Seed	65.80*	_____	32.55	_____
-Herbicides	36.00	_____	44.20	_____
-Fungicides	0.00	_____	0.00*	_____
-Insecticides	0.00**	_____	5.00**	_____
-Fertilizer	13.27	_____	50.31	_____
-Crop Insurance	6.00	_____	10.00	_____
-Fuel & Lubrication	12.95	_____	14.37	_____
-Repairs	16.71	_____	17.71	_____
-Drying	0.00	_____	4.56	_____
-Miscellaneous	5.00	_____	16.75	_____
-Operating Interest	3.50	_____	4.40	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	159.23	_____	199.85	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.64	_____	8.29	_____
-Machinery Depreciation	20.40	_____	22.47	_____
-Machinery Investment	11.33	_____	12.63	_____
-Land Charge	35.00	_____	35.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	74.37	_____	78.39	_____
SUM OF ALL LISTED COSTS	233.60	_____	278.24	_____
RETURN TO LABOR & MANAGEMENT	27.45	_____	94.16	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(lb):	
-Direct Costs	6.92	_____	0.131	_____
-Indirect Costs	3.23	_____	0.052	_____
-Total Costs	10.16	_____	0.183	_____

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	1830	_____	20	_____
Market Price	0.256	_____	13.70	_____
MARKET REVENUE	468.48	_____	274.00	_____
DIRECT COSTS				
-Seed	62.00	_____	21.60	_____
-Herbicides	32.30	_____	40.90	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	125.27	_____	26.00	_____
-Crop Insurance	10.00	_____	12.00	_____
-Fuel & Lubrication	14.43	_____	13.97	_____
-Repairs	17.86	_____	18.57	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	8.25	_____	1.50	_____
-Operating Interest	6.08	_____	3.03	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	276.19	_____	137.57	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.93	_____	7.95	_____
-Machinery Depreciation	21.97	_____	22.05	_____
-Machinery Investment	11.92	_____	12.47	_____
-Land Charge	35.00	_____	35.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	76.82	_____	77.47	_____
SUM OF ALL LISTED COSTS	353.01	_____	215.04	_____
RETURN TO LABOR & MANAGEMENT	115.47	_____	58.96	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.151	_____	6.88	_____
-Indirect Costs	0.042	_____	3.87	_____
-Total Costs	0.193	_____	10.75	_____

Field Peas

Oats

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	33	_____	74	_____
Market Price	9.00	_____	3.52	_____
MARKET REVENUE	297.00	_____	260.48	_____
DIRECT COSTS				
-Seed	60.00	_____	20.00	_____
-Herbicides	46.70	_____	11.70	_____
-Fungicides	1.50	_____	0.00	_____
-Insecticides	6.00*	_____	0.00	_____
-Fertilizer	16.72	_____	80.56	_____
-Crop Insurance	7.50	_____	12.00	_____
-Fuel & Lubrication	14.76	_____	17.27	_____
-Repairs	19.17	_____	19.11	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	9.50	_____	8.25	_____
-Operating Interest	4.09	_____	3.80	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	185.94	_____	172.69	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.18	_____	8.87	_____
-Machinery Depreciation	23.38	_____	23.74	_____
-Machinery Investment	12.80	_____	13.63	_____
-Land Charge	35.00	_____	35.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	79.36	_____	81.24	_____
SUM OF ALL LISTED COSTS	265.30	_____	253.93	_____
RETURN TO LABOR & MANAGEMENT	31.70	_____	6.55	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	5.63	_____	2.33	_____
-Indirect Costs	2.40	_____	1.10	_____
-Total Costs	8.04	_____	3.43	_____

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	_____	850	_____
Market Price	0.22	_____	0.45	_____
MARKET REVENUE	270.60	_____	382.50	_____
DIRECT COSTS				
-Seed	21.00	_____	10.35	_____
-Herbicides	46.20*	_____	30.30	_____
-Fungicides	16.00**	_____	0.00	_____
-Insecticides	0.00***	_____	0.00	_____
-Fertilizer	10.49	_____	24.27	_____
-Crop Insurance	9.00	_____	13.00*	_____
-Fuel & Lubrication	16.43	_____	13.85	_____
-Repairs	21.80	_____	18.14	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	9.50	_____	8.25	_____
-Operating Interest	3.38	_____	2.66	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	153.80	_____	120.82	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.53	_____	7.97	_____
-Machinery Depreciation	26.55	_____	21.14	_____
-Machinery Investment	14.38	_____	12.71	_____
-Land Charge	35.00	_____	35.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	84.46	_____	76.82	_____
SUM OF ALL LISTED COSTS	238.26	_____	197.64	_____
RETURN TO LABOR & MANAGEMENT	32.34	_____	184.86	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.125	_____	0.142	_____
-Indirect Costs	0.069	_____	0.090	_____
-Total Costs	0.194	_____	0.233	_____

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	8.10	_____	20.50	_____
-Herbicides	24.30	_____	19.80	_____
-Fungicides	18.00*	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	19.62	_____	11.83	_____
-Crop Insurance	17.00	_____	6.50*	_____
-Fuel & Lubrication	12.47	_____	13.34	_____
-Repairs	16.84	_____	17.38	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	8.25	_____	1.50	_____
-Operating Interest	2.80	_____	2.04	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	127.38	_____	92.89	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.50	_____	7.77	_____
-Machinery Depreciation	19.22	_____	20.49	_____
-Machinery Investment	10.71	_____	11.91	_____
-Land Charge	35.00	_____	35.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	72.43	_____	75.17	_____
SUM OF ALL LISTED COSTS	199.81	_____	168.06	_____
RETURN TO LABOR & MANAGEMENT	83.69	_____	96.29	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.121	_____	0.109	_____
-Indirect Costs	0.069	_____	0.088	_____
-Total Costs	0.190	_____	0.198	_____

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	0.21	_____	0.30	_____
MARKET REVENUE	273.00	_____	420.00	_____
DIRECT COSTS				
-Seed	17.50	_____	84.00	_____
-Herbicides	10.60	_____	54.50	_____
-Fungicides	0.00	_____	36.00*	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	11.09	_____	22.72	_____
-Crop Insurance	0.00	_____	9.50	_____
-Fuel & Lubrication	14.20	_____	17.03	_____
-Repairs	17.72	_____	22.73	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	8.25	_____	8.50	_____
-Operating Interest	1.79	_____	5.74	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	81.15	_____	260.72	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.95	_____	8.74	_____
-Machinery Depreciation	21.12	_____	27.37	_____
-Machinery Investment	12.27	_____	14.97	_____
-Land Charge	35.00	_____	35.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	76.34	_____	86.08	_____
SUM OF ALL LISTED COSTS	157.49	_____	346.80	_____
RETURN TO LABOR & MANAGEMENT	115.51	_____	73.20	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.062	_____	0.186	_____
-Indirect Costs	0.059	_____	0.061	_____
-Total Costs	0.121	_____	0.248	_____

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	6.36	_____	6.47	_____
MARKET REVENUE	279.84	_____	258.80	_____
DIRECT COSTS				
-Seed	12.00	_____	13.20	_____
-Herbicides	32.20	_____	7.20	_____
-Fungicides	9.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	96.77	_____	82.84	_____
-Crop Insurance	6.00	_____	8.00	_____
-Fuel & Lubrication	13.40	_____	12.88	_____
-Repairs	16.66	_____	15.66	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	8.25	_____	8.25	_____
-Operating Interest	4.37	_____	3.33	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	198.65	_____	151.36	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.63	_____	7.49	_____
-Machinery Depreciation	19.50	_____	18.83	_____
-Machinery Investment	10.56	_____	10.23	_____
-Land Charge	35.00	_____	35.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	72.69	_____	71.55	_____
SUM OF ALL LISTED COSTS	271.34	_____	222.91	_____
RETURN TO LABOR & MANAGEMENT	8.50	_____	35.89	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.51	_____	3.78	_____
-Indirect Costs	1.65	_____	1.79	_____
-Total Costs	6.17	_____	5.57	_____

Winter Wheat notes:

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

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