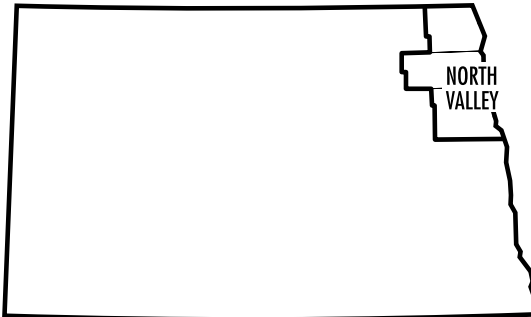




FARM MANAGEMENT PLANNING GUIDE

February 2024

Projected 2024 Crop Budgets



North Valley North Dakota

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This region consists of three counties: Grand Forks, Pembina and Walsh.

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	- .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.
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
Winter Wheat	13.00/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	60	_____	57	_____
Market Price	7.08	_____	8.33*	_____
MARKET REVENUE	424.80	_____	474.81	_____
DIRECT COSTS				
-Seed	30.00	_____	34.00	_____
-Herbicides	23.90	_____	23.90	_____
-Fungicides**	18.50	_____	18.50	_____
-Insecticides***	0.00	_____	0.00	_____
-Fertilizer	97.80	_____	91.82	_____
-Crop Insurance	7.60	_____	11.90	_____
-Fuel & Lubrication	26.71	_____	26.48	_____
-Repairs	25.04	_____	24.94	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	9.50	_____	9.50	_____
-Operating Interest	9.56	_____	9.64	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	248.61	_____	250.68	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.82	_____	10.76	_____
-Machinery Depreciation	29.67	_____	29.47	_____
-Machinery Investment	15.38	_____	15.30	_____
-Land Charge	96.00	_____	96.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	151.87	_____	151.53	_____
SUM OF ALL LISTED COSTS	400.48	_____	402.21	_____
RETURN TO LABOR & MANAGEMENT	24.32	_____	72.60	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.14	_____	4.40	_____
-Indirect Costs	2.53	_____	2.66	_____
-Total Costs	6.67	_____	7.06	_____

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. Wheat midge insecticide would cost about \$6.

Malting Barley

Corn Grain

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	72	_____	140	_____
Market Price	5.21*	_____	4.40	_____
MARKET REVENUE	375.12	_____	616.00	_____
DIRECT COSTS				
-Seed	24.00	_____	94.50*	_____
-Herbicides	22.70	_____	35.50	_____
-Fungicides	18.50**	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	67.01	_____	120.06	_____
-Crop Insurance	6.50	_____	14.70	_____
-Fuel & Lubrication	27.45	_____	36.34	_____
-Repairs	25.12	_____	33.49	_____
-Drying	0.00	_____	28.00	_____
-Miscellaneous	9.50	_____	9.50	_____
-Operating Interest	8.03	_____	14.88	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	208.81	_____	386.97	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.88	_____	14.18	_____
-Machinery Depreciation	29.60	_____	46.14	_____
-Machinery Investment	15.19	_____	23.13	_____
-Land Charge	96.00	_____	96.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	151.67	_____	179.45	_____
SUM OF ALL LISTED COSTS	360.48	_____	566.42	_____
RETURN TO LABOR & MANAGEMENT	14.64	_____	49.58	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	2.90	_____	2.76	_____
-Indirect Costs	2.11	_____	1.28	_____
-Total Costs	5.01	_____	4.05	_____

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	_____	1710	_____
Market Price	11.02	_____	0.34	_____
MARKET REVENUE	385.70	_____	581.40	_____
DIRECT COSTS				
-Seed	65.80*	_____	86.63	_____
-Herbicides	31.40	_____	54.70*	_____
-Fungicides	0.00	_____	20.00**	_____
-Insecticides	4.00**	_____	0.00	_____
-Fertilizer	4.40	_____	44.58	_____
-Crop Insurance	7.20	_____	20.50	_____
-Fuel & Lubrication	21.83	_____	25.07	_____
-Repairs	23.05	_____	26.49	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	2.00	_____	19.00	_____
-Operating Interest	6.39	_____	11.88	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	166.07	_____	308.85	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.12	_____	10.92	_____
-Machinery Depreciation	27.49	_____	31.93	_____
-Machinery Investment	14.07	_____	16.53	_____
-Land Charge	96.00	_____	96.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	147.68	_____	155.38	_____
SUM OF ALL LISTED COSTS	313.75	_____	464.23	_____
RETURN TO LABOR & MANAGEMENT	71.95	_____	117.17	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(lb):	
-Direct Costs	4.74	_____	0.181	_____
-Indirect Costs	4.22	_____	0.091	_____
-Total Costs	8.96	_____	0.271	_____

Soybean notes:

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

**Insecticide for soybean aphid, spider mite, or foliage-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	1850	_____	1460	_____
Market Price	0.202	_____	0.313	_____
MARKET REVENUE	373.70	_____	456.98	_____
DIRECT COSTS				
-Seed	41.04	_____	60.40	_____
-Herbicides	28.60	_____	31.60	_____
-Fungicides	0.00*	_____	0.00*	_____
-Insecticides	5.00**	_____	10.00**	_____
-Fertilizer	52.72	_____	37.03	_____
-Crop Insurance	12.50	_____	18.00	_____
-Fuel & Lubrication	25.58	_____	24.61	_____
-Repairs	23.79	_____	23.39	_____
-Drying	7.40	_____	5.84	_____
-Miscellaneous	19.00	_____	28.50	_____
-Operating Interest	8.63	_____	9.57	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	224.26	_____	248.94	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	11.33	_____	11.09	_____
-Machinery Depreciation	31.76	_____	30.94	_____
-Machinery Investment	16.97	_____	16.62	_____
-Land Charge	96.00	_____	96.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	156.06	_____	154.65	_____
SUM OF ALL LISTED COSTS	380.32	_____	403.59	_____
RETURN TO LABOR & MANAGEMENT	(6.62)	_____	53.39	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.121	_____	0.171	_____
-Indirect Costs	0.084	_____	0.106	_____
-Total Costs	0.206	_____	0.276	_____

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	1960		23	
Market Price	0.207		11.37	
MARKET REVENUE	405.72		261.51	
DIRECT COSTS				
-Seed	79.00		20.00	
-Herbicides	15.60		27.10	
-Fungicides	0.00*		0.00*	
-Insecticides	0.00		0.00	
-Fertilizer	98.85		32.46	
-Crop Insurance	10.50		15.00	
-Fuel & Lubrication	22.37		25.30	
-Repairs	22.51		25.48	
-Drying	0.00		0.00	
-Miscellaneous	9.50		2.00	
-Operating Interest	10.33		5.89	
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	268.66		153.23	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.93		10.45	
-Machinery Depreciation	27.34		29.39	
-Machinery Investment	13.47		15.44	
-Land Charge	96.00		96.00	
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	146.74		151.28	
SUM OF ALL LISTED COSTS	415.40		304.51	
RETURN TO LABOR & MANAGEMENT	(9.68)		(43.00)	
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.137		6.66	
-Indirect Costs	0.075		6.58	
-Total Costs	0.212		13.24	

Canola notes:

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

Flax notes:

*Fungicide treatment for pasmo has shown good yield response.

Field Peas

Oats

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	46.333	_____	107	_____
Market Price	8.52	_____	3.03	_____
MARKET REVENUE	394.76	_____	324.21	_____
DIRECT COSTS				
-Seed	60.00	_____	18.00	_____
-Herbicides	34.90	_____	6.20	_____
-Fungicides	3.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	14.20	_____	91.39	_____
-Crop Insurance	10.00	_____	18.00	_____
-Fuel & Lubrication	25.25	_____	31.90	_____
-Repairs	25.54	_____	27.07	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.50	_____	9.50	_____
-Operating Interest	7.18	_____	8.08	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	186.57	_____	210.14	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.74	_____	12.06	_____
-Machinery Depreciation	30.61	_____	33.80	_____
-Machinery Investment	15.57	_____	17.59	_____
-Land Charge	96.00	_____	96.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	152.92	_____	159.45	_____
SUM OF ALL LISTED COSTS	339.49	_____	369.59	_____
RETURN TO LABOR & MANAGEMENT	55.27	_____	(45.38)	_____
LISTED COSTS PER BUDGET UNIT				
	(bu):		(bu):	
-Direct Costs	4.03	_____	1.96	_____
-Indirect Costs	3.30	_____	1.49	_____
-Total Costs	7.33	_____	3.45	_____

Yellow Mustard

Winter Wheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	850	_____	66*	_____
Market Price	0.45	_____	6.14	_____
MARKET REVENUE	382.50	_____	405.24	_____
DIRECT COSTS				
-Seed	11.76	_____	16.90	_____
-Herbicides	12.90	_____	26.80	_____
-Fungicides	0.00	_____	10.00	_____
-Insecticides	6.00*	_____	0.00	_____
-Fertilizer	24.84	_____	109.75	_____
-Crop Insurance	0.00**	_____	7.60	_____
-Fuel & Lubrication	20.92	_____	24.49	_____
-Repairs	21.91	_____	23.39	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	2.00	_____	9.50	_____
-Operating Interest	4.01	_____	9.14	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	104.34	_____	237.57	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.70	_____	10.49	_____
-Machinery Depreciation	25.49	_____	28.27	_____
-Machinery Investment	13.46	_____	14.23	_____
-Land Charge	96.00	_____	96.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	144.65	_____	148.99	_____
SUM OF ALL LISTED COSTS	248.99	_____	386.56	_____
RETURN TO LABOR & MANAGEMENT	133.51	_____	18.68	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.123	_____	3.600	_____
-Indirect Costs	0.170	_____	2.257	_____
-Total Costs	0.293	_____	5.857	_____

Yellow Mustard notes:

*Insecticide seed treatment for flea beetles.

**Crop insurance is not available in this region.

Winter Wheat notes:

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

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