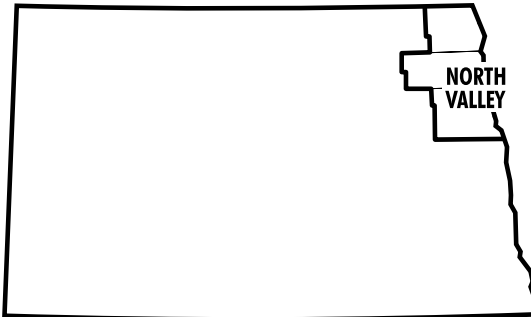




FARM MANAGEMENT PLANNING GUIDE

February 2022

Projected 2022 Crop Budgets



North Valley North Dakota

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

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.

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.
Dry Beans	.75/thou.kern.
Oil Sunflower	1.55/thou.kern.
Conf. Sunflower	2.75/thou.kern.
Canola	12.40/lb
Flax	27.00/bu
Field Peas	20.00/bu
Oats	10.00/bu
Mustard	1.00/lb
Winter Wheat	12.00/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	61	_____	60	_____
Market Price	7.58	_____	9.09*	_____
MARKET REVENUE	462.38	_____	545.40	_____
DIRECT COSTS				
-Seed	34.00	_____	38.00	_____
-Herbicides	31.50	_____	31.50	_____
-Fungicides**	17.00	_____	17.00	_____
-Insecticides***	0.00	_____	0.00	_____
-Fertilizer	132.32	_____	129.06	_____
-Crop Insurance	8.00	_____	12.50	_____
-Fuel & Lubrication	21.26	_____	21.20	_____
-Repairs	21.83	_____	21.80	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	8.25	_____	8.25	_____
-Operating Interest	6.17	_____	6.28	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	280.33	_____	285.59	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.16	_____	9.14	_____
-Machinery Depreciation	25.52	_____	25.47	_____
-Machinery Investment	15.07	_____	15.04	_____
-Land Charge	88.00	_____	88.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	137.75	_____	137.65	_____
SUM OF ALL LISTED COSTS	418.08	_____	423.24	_____
RETURN TO LABOR & MANAGEMENT	44.30	_____	122.16	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.60	_____	4.76	_____
-Indirect Costs	2.26	_____	2.29	_____
-Total Costs	6.85	_____	7.05	_____

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	73	_____	138	_____
Market Price	5.96*	_____	4.45	_____
MARKET REVENUE	435.18	_____	614.10	_____
DIRECT COSTS				
-Seed	26.00	_____	84.74*	_____
-Herbicides	21.70	_____	51.30	_____
-Fungicides	17.00**	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	78.83	_____	156.99	_____
-Crop Insurance	6.50	_____	14.00	_____
-Fuel & Lubrication	21.89	_____	28.86	_____
-Repairs	21.91	_____	29.16	_____
-Drying	0.00	_____	24.84	_____
-Miscellaneous	8.25	_____	8.25	_____
-Operating Interest	4.55	_____	8.96	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	206.63	_____	407.10	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.23	_____	12.13	_____
-Machinery Depreciation	25.43	_____	39.45	_____
-Machinery Investment	14.88	_____	22.59	_____
-Land Charge	88.00	_____	88.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	137.54	_____	162.17	_____
SUM OF ALL LISTED COSTS	344.17	_____	569.27	_____
RETURN TO LABOR & MANAGEMENT	91.91	_____	44.83	_____
LISTED COSTS PER BUDGET UNIT				
	(bu):		(bu):	
-Direct Costs	2.83	_____	2.95	_____
-Indirect Costs	1.88	_____	1.18	_____
-Total Costs	4.71	_____	4.13	_____

Barley notes:

*There is risk of not making malting barley quality. Use \$4.00 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	34	_____	1690	_____
Market Price	11.52	_____	0.33	_____
MARKET REVENUE	391.68	_____	557.70	_____
DIRECT COSTS				
-Seed	65.80*	_____	61.88	_____
-Herbicides	56.00	_____	61.00*	_____
-Fungicides	0.00	_____	20.00**	_____
-Insecticides	4.00**	_____	0.00	_____
-Fertilizer	4.14	_____	28.88	_____
-Crop Insurance	7.00	_____	20.00	_____
-Fuel & Lubrication	17.33	_____	23.82	_____
-Repairs	20.01	_____	26.20	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	16.75	_____
-Operating Interest	3.96	_____	5.82	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	179.74	_____	264.35	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.47	_____	10.42	_____
-Machinery Depreciation	23.59	_____	31.19	_____
-Machinery Investment	13.72	_____	20.29	_____
-Land Charge	88.00	_____	88.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	133.78	_____	149.90	_____
SUM OF ALL LISTED COSTS	313.52	_____	414.25	_____
RETURN TO LABOR & MANAGEMENT	78.16	_____	143.45	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(lb):	
-Direct Costs	5.29	_____	0.156	_____
-Indirect Costs	3.93	_____	0.089	_____
-Total Costs	9.22	_____	0.245	_____

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	1690	_____	1320	_____
Market Price	0.252	_____	0.353	_____
MARKET REVENUE	425.88	_____	465.96	_____
DIRECT COSTS				
-Seed	37.20	_____	55.00	_____
-Herbicides	36.00	_____	38.90	_____
-Fungicides	0.00*	_____	0.00*	_____
-Insecticides	5.00**	_____	10.00**	_____
-Fertilizer	44.22	_____	19.93	_____
-Crop Insurance	12.00	_____	17.50	_____
-Fuel & Lubrication	19.99	_____	19.24	_____
-Repairs	20.57	_____	20.23	_____
-Drying	5.16	_____	3.60	_____
-Miscellaneous	16.75	_____	25.25	_____
-Operating Interest	4.43	_____	4.72	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	201.32	_____	214.37	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.49	_____	9.27	_____
-Machinery Depreciation	27.01	_____	26.36	_____
-Machinery Investment	16.45	_____	16.11	_____
-Land Charge	88.00	_____	88.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	140.95	_____	139.74	_____
SUM OF ALL LISTED COSTS	342.27	_____	354.11	_____
RETURN TO LABOR & MANAGEMENT	83.61	_____	111.85	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.119	_____	0.162	_____
-Indirect Costs	0.083	_____	0.106	_____
-Total Costs	0.203	_____	0.268	_____

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	1980	_____	23	_____
Market Price	0.252	_____	14.15	_____
MARKET REVENUE	498.96	_____	325.45	_____
DIRECT COSTS				
-Seed	62.00	_____	27.00	_____
-Herbicides	32.30	_____	34.60	_____
-Fungicides	0.00*	_____	0.00*	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	115.01	_____	22.56	_____
-Crop Insurance	10.50	_____	15.00	_____
-Fuel & Lubrication	17.99	_____	20.03	_____
-Repairs	19.67	_____	22.20	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	8.25	_____	1.50	_____
-Operating Interest	5.98	_____	3.21	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	271.70	_____	146.10	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.38	_____	8.80	_____
-Machinery Depreciation	23.76	_____	25.55	_____
-Machinery Investment	13.29	_____	15.19	_____
-Land Charge	88.00	_____	88.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	133.43	_____	137.54	_____
SUM OF ALL LISTED COSTS	405.13	_____	283.64	_____
RETURN TO LABOR & MANAGEMENT	93.83	_____	41.81	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.137	_____	6.35	_____
-Indirect Costs	0.067	_____	5.98	_____
-Total Costs	0.205	_____	12.33	_____

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	42	_____	107	_____
Market Price	9.00	_____	3.54	_____
MARKET REVENUE	378.00	_____	378.78	_____
DIRECT COSTS				
-Seed	60.00	_____	20.00	_____
-Herbicides	42.00	_____	5.90	_____
-Fungicides	1.50	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	12.59	_____	117.05	_____
-Crop Insurance	10.00	_____	18.00	_____
-Fuel & Lubrication	19.90	_____	25.30	_____
-Repairs	22.22	_____	23.63	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.00	_____	8.25	_____
-Operating Interest	3.92	_____	4.91	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	178.13	_____	223.04	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.03	_____	10.29	_____
-Machinery Depreciation	26.50	_____	28.92	_____
-Machinery Investment	15.30	_____	17.23	_____
-Land Charge	88.00	_____	88.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	138.83	_____	144.44	_____
SUM OF ALL LISTED COSTS	316.96	_____	367.48	_____
RETURN TO LABOR & MANAGEMENT	61.04	_____	11.30	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.24	_____	2.08	_____
-Indirect Costs	3.31	_____	1.35	_____
-Total Costs	7.55	_____	3.43	_____

Yellow Mustard

Winter Wheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	900	_____	60*	_____
Market Price	0.45	_____	6.65	_____
MARKET REVENUE	405.00	_____	399.00	_____
DIRECT COSTS				
-Seed	10.80	_____	15.60	_____
-Herbicides	21.00	_____	34.30	_____
-Fungicides	0.00	_____	9.00	_____
-Insecticides	6.00*	_____	0.00	_____
-Fertilizer	12.24	_____	129.06	_____
-Crop Insurance	0.00**	_____	7.50	_____
-Fuel & Lubrication	16.60	_____	19.18	_____
-Repairs	19.04	_____	20.21	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	8.25	_____
-Operating Interest	1.96	_____	5.47	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	89.14	_____	248.57	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.11	_____	8.75	_____
-Machinery Depreciation	22.00	_____	23.92	_____
-Machinery Investment	13.15	_____	13.75	_____
-Land Charge	88.00	_____	88.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	131.26	_____	134.42	_____
SUM OF ALL LISTED COSTS	220.40	_____	382.99	_____
RETURN TO LABOR & MANAGEMENT	184.60	_____	16.01	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.099	_____	4.413	_____
-Indirect Costs	0.142	_____	2.240	_____
-Total Costs	0.245	_____	6.383	_____

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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