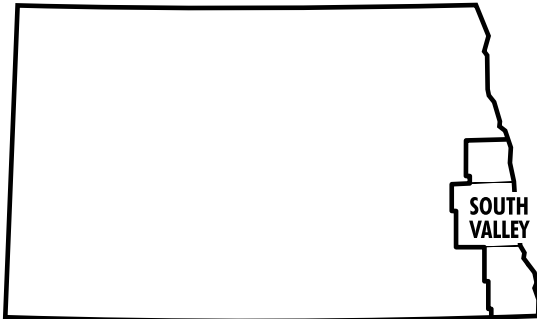




FARM MANAGEMENT PLANNING GUIDE

February 2022

Projected 2022 Crop Budgets



South Valley North Dakota

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Note: This region consists of three counties: Cass, Richland and Traill.

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
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.
Oats	10.00/bu
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

Malting Barley

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	64	_____	82	_____
Market Price	7.66	_____	5.98*	_____
MARKET REVENUE	490.24	_____	490.36	_____
DIRECT COSTS				
-Seed	34.00	_____	26.00	_____
-Herbicides	29.40	_____	21.70	_____
-Fungicides**	17.00*	_____	17.00**	_____
-Insecticides***	0.00**	_____	0.00	_____
-Fertilizer	154.33	_____	108.99	_____
-Crop Insurance	5.50	_____	4.00	_____
-Fuel & Lubrication	21.46	_____	22.46	_____
-Repairs	21.91	_____	22.17	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	8.25	_____	8.25	_____
-Operating Interest	6.57	_____	5.19	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	298.42	_____	235.76	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.22	_____	9.51	_____
-Machinery Depreciation	25.69	_____	26.46	_____
-Machinery Investment	15.16	_____	15.51	_____
-Land Charge	126.00	_____	126.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	176.07	_____	177.48	_____
SUM OF ALL LISTED COSTS	474.49	_____	413.24	_____
RETURN TO LABOR & MANAGEMENT	15.75	_____	77.12	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.66	_____	2.88	_____
-Indirect Costs	2.75	_____	2.16	_____
-Total Costs	7.41	_____	5.04	_____

Spring Wheat notes:

*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.

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 Grain

Soybeans

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	168	_____	40	_____
Market Price	4.45	_____	11.62	_____
MARKET REVENUE	747.60	_____	464.80	_____
DIRECT COSTS				
-Seed	100.50*	_____	65.80*	_____
-Herbicides	53.20	_____	70.00	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	4.00	_____
-Fertilizer	217.85	_____	4.87	_____
-Crop Insurance	11.00	_____	6.00	_____
-Fuel & Lubrication	30.68	_____	17.71	_____
-Repairs	29.98	_____	20.18	_____
-Drying	28.98	_____	0.00	_____
-Miscellaneous	8.25	_____	1.50	_____
-Operating Interest	10.81	_____	4.28	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	491.25	_____	194.34	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	12.67	_____	8.59	_____
-Machinery Depreciation	41.02	_____	23.92	_____
-Machinery Investment	23.40	_____	13.89	_____
-Land Charge	126.00	_____	126.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	203.09	_____	172.40	_____
SUM OF ALL LISTED COSTS	694.34	_____	366.74	_____
RETURN TO LABOR & MANAGEMENT	53.26	_____	98.06	_____
LISTED COSTS PER BUDGET UNIT	(bu):	_____	(bu):	_____
-Direct Costs	2.92	_____	4.86	_____
-Indirect Costs	1.21	_____	4.31	_____
-Total Costs	4.13	_____	9.17	_____

Corn notes:

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

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 foliage-feeding caterpillars.

Drybeans

Oil Sunflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	2020	_____	2000	_____
Market Price	0.33	_____	0.256	_____
MARKET REVENUE	666.60	_____	512.00	_____
DIRECT COSTS				
-Seed	61.88	_____	37.20	_____
-Herbicides	46.90*	_____	36.00	_____
-Fungicides	20.00**	_____	0.00*	_____
-Insecticides	0.00	_____	5.00**	_____
-Fertilizer	63.48	_____	76.79	_____
-Crop Insurance	15.00	_____	10.00	_____
-Fuel & Lubrication	19.79	_____	20.62	_____
-Repairs	23.12	_____	20.85	_____
-Drying	0.00	_____	6.39	_____
-Miscellaneous	16.75	_____	16.75	_____
-Operating Interest	6.01	_____	5.17	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	272.93	_____	234.77	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.23	_____	9.67	_____
-Machinery Depreciation	28.13	_____	27.55	_____
-Machinery Investment	16.26	_____	16.73	_____
-Land Charge	126.00	_____	126.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	179.62	_____	179.95	_____
SUM OF ALL LISTED COSTS	452.55	_____	414.72	_____
RETURN TO LABOR & MANAGEMENT	214.05	_____	97.28	_____
LISTED COSTS PER BUDGET UNIT	(lb):	_____	(lb):	_____
-Direct Costs	0.135	_____	0.117	_____
-Indirect Costs	0.089	_____	0.090	_____
-Total Costs	0.224	_____	0.207	_____

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 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

Oats

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1600	_____	100	_____
Market Price	0.358	_____	3.70	_____
MARKET REVENUE	572.80	_____	370.00	_____
DIRECT COSTS				
-Seed	55.00	_____	20.00	_____
-Herbicides	38.90	_____	5.90	_____
-Fungicides	0.00*	_____	0.00	_____
-Insecticides	10.00**	_____	0.00	_____
-Fertilizer	50.53	_____	117.24	_____
-Crop Insurance	15.00	_____	9.50	_____
-Fuel & Lubrication	19.81	_____	24.85	_____
-Repairs	20.48	_____	23.42	_____
-Drying	5.22	_____	0.00	_____
-Miscellaneous	25.25	_____	8.25	_____
-Operating Interest	5.40	_____	4.71	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	245.59	_____	213.87	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	9.43	_____	10.16	_____
-Machinery Depreciation	26.85	_____	28.54	_____
-Machinery Investment	16.37	_____	17.03	_____
-Land Charge	126.00	_____	126.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	178.65	_____	181.73	_____
SUM OF ALL LISTED COSTS	424.24	_____	395.60	_____
RETURN TO LABOR & MANAGEMENT	148.56	_____	(25.60)	_____
LISTED COSTS PER BUDGET UNIT	(lb):	_____	(bu):	_____
-Direct Costs	0.153	_____	2.14	_____
-Indirect Costs	0.112	_____	1.82	_____
-Total Costs	0.265	_____	3.96	_____

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."

Winter Wheat

	Per Acre	Your Figures
Market Yield	65*	_____
Market Price	6.74	_____
MARKET REVENUE	438.10	_____
DIRECT COSTS		
-Seed	15.60	_____
-Herbicides	34.30	_____
-Fungicides	9.00	_____
-Insecticides	0.00	_____
-Fertilizer	157.60	_____
-Crop Insurance	5.50	_____
-Fuel & Lubrication	19.50	_____
-Repairs	20.35	_____
-Drying	0.00	_____
-Miscellaneous	8.25	_____
-Operating Interest	6.08	_____
	=====	=====
SUM OF LISTED DIRECT COSTS	276.18	_____
INDIRECT (FIXED) COSTS		
-Misc. Overhead	8.85	_____
-Machinery Depreciation	24.19	_____
-Machinery Investment	13.90	_____
-Land Charge	126.00	_____
	=====	=====
SUM OF LISTED INDIRECT COSTS	172.94	_____
SUM OF ALL LISTED COSTS	449.12	_____
RETURN TO LABOR & MANAGEMENT	(11.02)	_____
LISTED COSTS PER BUDGET UNIT	(bu):	_____
-Direct Costs	4.25	_____
-Indirect Costs	2.66	_____
-Total Costs	6.91	_____

Winter Wheat notes:

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

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