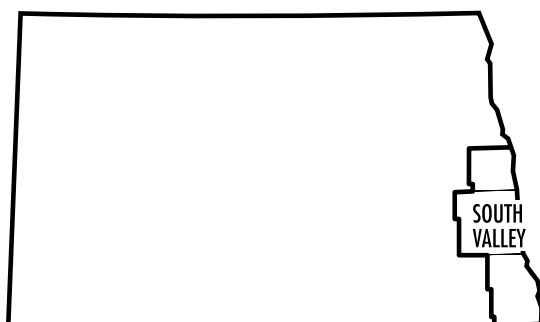




FARM MANAGEMENT PLANNING GUIDE

February 2024

Projected 2024 Crop Budgets



South Valley North Dakota

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

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
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.
Oats	9.00/bu
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

Malting Barley

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	63	_____	84	_____
Market Price	7.15	_____	5.24*	_____
MARKET REVENUE	450.45	_____	440.16	_____
DIRECT COSTS				
-Seed	30.00	_____	24.00	_____
-Herbicides	21.70	_____	22.70	_____
-Fungicides	18.50*	_____	18.50**	_____
-Insecticides	0.00**	_____	0.00	_____
-Fertilizer	108.54	_____	86.56	_____
-Crop Insurance	5.30	_____	4.00	_____
-Fuel & Lubrication	26.95	_____	28.39	_____
-Repairs	25.13	_____	25.50	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	9.50	_____	9.50	_____
-Operating Interest	9.82	_____	8.77	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	255.44	_____	227.92	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.88	_____	11.25	_____
-Machinery Depreciation	29.86	_____	31.01	_____
-Machinery Investment	15.47	_____	15.90	_____
-Land Charge	137.00	_____	137.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	193.21	_____	195.16	_____
SUM OF ALL LISTED COSTS	448.65	_____	423.08	_____
RETURN TO LABOR & MANAGEMENT	1.80	_____	17.08	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.05	_____	2.71	_____
-Indirect Costs	3.07	_____	2.32	_____
-Total Costs	7.12	_____	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 \$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 Grain

Soybeans

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	172	_____	41	_____
Market Price	4.40	_____	11.12	_____
MARKET REVENUE	756.80	_____	455.92	_____
DIRECT COSTS				
-Seed	100.50*	_____	65.80*	_____
-Herbicides	37.50	_____	46.00	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	4.00**	_____
-Fertilizer	157.23	_____	5.15	_____
-Crop Insurance	11.40	_____	6.20	_____
-Fuel & Lubrication	38.72	_____	22.30	_____
-Repairs	34.45	_____	23.24	_____
-Drying	34.40	_____	0.00	_____
-Miscellaneous	9.50	_____	2.00	_____
-Operating Interest	16.95	_____	6.99	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	440.65	_____	181.68	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	14.79	_____	10.24	_____
-Machinery Depreciation	48.16	_____	27.88	_____
-Machinery Investment	24.00	_____	14.24	_____
-Land Charge	137.00	_____	137.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	223.95	_____	189.36	_____
SUM OF ALL LISTED COSTS	664.60	_____	371.04	_____
RETURN TO LABOR & MANAGEMENT	92.20	_____	84.88	_____
LISTED COSTS PER BUDGET UNIT	(bu):	_____	(bu):	_____
-Direct Costs	2.56	_____	4.43	_____
-Indirect Costs	1.30	_____	4.62	_____
-Total Costs	3.86	_____	9.05	_____

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	2080	_____	2420	_____
Market Price	0.34	_____	0.205	_____
MARKET REVENUE	707.20	_____	496.10	_____
DIRECT COSTS				
-Seed	86.63	_____	41.04	_____
-Herbicides	54.70*	_____	28.60	_____
-Fungicides	20.00**	_____	0.00*	_____
-Insecticides	0.00	_____	5.00**	_____
-Fertilizer	68.85	_____	80.43	_____
-Crop Insurance	15.50	_____	10.50	_____
-Fuel & Lubrication	24.86	_____	26.99	_____
-Repairs	26.47	_____	24.36	_____
-Drying	0.00	_____	9.68	_____
-Miscellaneous	19.00	_____	19.00	_____
-Operating Interest	12.64	_____	9.82	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	328.65	_____	255.42	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.93	_____	11.69	_____
-Machinery Depreciation	32.26	_____	32.96	_____
-Machinery Investment	16.48	_____	17.49	_____
-Land Charge	137.00	_____	137.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	196.67	_____	199.14	_____
SUM OF ALL LISTED COSTS	525.32	_____	454.56	_____
RETURN TO LABOR & MANAGEMENT	181.88	_____	41.54	_____
LISTED COSTS PER BUDGET UNIT	(lb):	_____	(lb):	_____
-Direct Costs	0.158	_____	0.106	_____
-Indirect Costs	0.095	_____	0.082	_____
-Total Costs	0.253	_____	0.188	_____

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	1760	_____	100	_____
Market Price	0.317	_____	3.17	_____
MARKET REVENUE	557.92	_____	317.00	_____
DIRECT COSTS				
-Seed	60.40	_____	18.00	_____
-Herbicides	31.60	_____	6.20	_____
-Fungicides	0.00*	_____	0.00	_____
-Insecticides	10.00**	_____	0.00	_____
-Fertilizer	53.87	_____	88.76	_____
-Crop Insurance	15.50	_____	9.50	_____
-Fuel & Lubrication	25.36	_____	31.35	_____
-Repairs	23.70	_____	26.85	_____
-Drying	7.04	_____	0.00	_____
-Miscellaneous	28.50	_____	9.50	_____
-Operating Interest	10.24	_____	7.61	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	266.21	_____	197.77	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	11.28	_____	11.92	_____
-Machinery Depreciation	31.57	_____	33.34	_____
-Machinery Investment	16.89	_____	17.40	_____
-Land Charge	137.00	_____	137.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	196.74	_____	199.66	_____
SUM OF ALL LISTED COSTS	462.95	_____	397.43	_____
RETURN TO LABOR & MANAGEMENT	94.97	_____	(80.43)	_____
LISTED COSTS PER BUDGET UNIT	(lb):	_____	(bu):	_____
-Direct Costs	0.151	_____	1.98	_____
-Indirect Costs	0.112	_____	2.00	_____
-Total Costs	0.263	_____	3.97	_____

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	69*	_____
Market Price	6.23	_____
MARKET REVENUE	429.87	_____
DIRECT COSTS		
-Seed	16.90	_____
-Herbicides	26.80	_____
-Fungicides	10.00	_____
-Insecticides	0.00	_____
-Fertilizer	120.49	_____
-Crop Insurance	5.30	_____
-Fuel & Lubrication	24.73	_____
-Repairs	23.49	_____
-Drying	0.00	_____
-Miscellaneous	9.50	_____
-Operating Interest	9.49	_____
	=====	=====
SUM OF LISTED DIRECT COSTS	246.70	_____
INDIRECT (FIXED) COSTS		
-Misc. Overhead	10.55	_____
-Machinery Depreciation	28.47	_____
-Machinery Investment	14.31	_____
-Land Charge	137.00	_____
	=====	=====
SUM OF LISTED INDIRECT COSTS	190.33	_____
SUM OF ALL LISTED COSTS	437.03	_____
RETURN TO LABOR & MANAGEMENT	(7.16)	_____
LISTED COSTS PER BUDGET UNIT	(bu):	_____
-Direct Costs	3.58	_____
-Indirect Costs	2.76	_____
-Total Costs	6.33	_____

Winter Wheat notes:

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

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