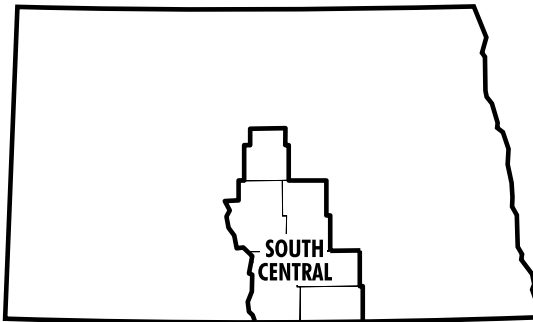




FARM MANAGEMENT PLANNING GUIDE

February 2022

Projected 2022 Crop Budgets



South Central North Dakota

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Note: This region consists of six counties:
Burleigh, Emmons, Kidder, Logan, McIntosh and Sheridan.

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.
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
Lentils	.30/lb
Mustard	1.00/lb
Buckwheat	.40/lb
Millet	.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	46	_____	49	_____
Market Price	7.52	_____	9.03*	_____
MARKET REVENUE	345.92	_____	442.47	_____
DIRECT COSTS				
-Seed	28.90	_____	34.20	_____
-Herbicides	36.10	_____	36.10	_____
-Fungicides**	9.00	_____	9.00	_____
-Insecticides***	0.00	_____	0.00	_____
-Fertilizer	94.34	_____	104.29	_____
-Crop Insurance	7.50	_____	8.00	_____
-Fuel & Lubrication	14.90	_____	15.09	_____
-Repairs	18.40	_____	18.49	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	8.25	_____	8.25	_____
-Operating Interest	4.89	_____	5.25	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	222.28	_____	238.67	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.18	_____	8.24	_____
-Machinery Depreciation	21.38	_____	21.54	_____
-Machinery Investment	12.33	_____	12.41	_____
-Land Charge	54.00	_____	54.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	95.89	_____	96.19	_____
SUM OF ALL LISTED COSTS	318.17	_____	334.86	_____
RETURN TO LABOR & MANAGEMENT	27.75	_____	107.61	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.83	_____	4.87	_____
-Indirect Costs	2.08	_____	1.96	_____
-Total Costs	6.92	_____	6.83	_____

Wheat notes:

*Durum price is for milling quality. There is risk of lower quality and lower price.

**Includes seed treatment, an early season foliar fungicide, and a late season fungicide. Prothioconazole, metconazole or pydiflumetofen containing products are highly recommended when conditions are favorable for fusarium head blight (scab).

***Cereal grain aphid insecticide would cost about \$4.

Malting Barley

Corn Grain

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	65	_____	114	_____
Market Price	5.99*	_____	4.45	_____
MARKET REVENUE	389.35	_____	507.30	_____
DIRECT COSTS				
-Seed	20.80	_____	78.01*	_____
-Herbicides	26.70	_____	47.50	_____
-Fungicides	9.00**	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	73.97	_____	130.62	_____
-Crop Insurance	6.00	_____	10.50	_____
-Fuel & Lubrication	16.11	_____	23.48	_____
-Repairs	18.95	_____	24.02	_____
-Drying	0.00	_____	18.90	_____
-Miscellaneous	8.25	_____	8.25	_____
-Operating Interest	4.05	_____	7.68	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	183.83	_____	348.96	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.54	_____	11.09	_____
-Machinery Depreciation	22.41	_____	36.29	_____
-Machinery Investment	12.87	_____	19.88	_____
-Land Charge	54.00	_____	54.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	97.82	_____	121.26	_____
SUM OF ALL LISTED COSTS	281.65	_____	470.22	_____
RETURN TO LABOR & MANAGEMENT	107.70	_____	37.08	_____
LISTED COSTS PER BUDGET UNIT				
	(bu):		(bu):	
-Direct Costs	2.83	_____	3.06	_____
-Indirect Costs	1.50	_____	1.06	_____
-Total Costs	4.33	_____	4.12	_____

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. Prothioconazole, metconazole or pydiflumetofen containing products are highly 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	33	_____	1630	_____
Market Price	11.45	_____	0.33	_____
MARKET REVENUE	377.85	_____	537.90	_____
DIRECT COSTS				
-Seed	65.80*	_____	61.88	_____
-Herbicides	52.00	_____	46.90*	_____
-Fungicides	0.00	_____	20.00**	_____
-Insecticides	4.00**	_____	0.00	_____
-Fertilizer	7.78	_____	31.07	_____
-Crop Insurance	8.00	_____	12.00	_____
-Fuel & Lubrication	14.07	_____	19.08	_____
-Repairs	17.87	_____	22.32	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	5.00	_____	13.50	_____
-Operating Interest	3.93	_____	5.10	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	178.45	_____	231.85	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.99	_____	9.09	_____
-Machinery Depreciation	21.66	_____	27.82	_____
-Machinery Investment	12.15	_____	16.03	_____
-Land Charge	54.00	_____	54.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	95.80	_____	106.94	_____
SUM OF ALL LISTED COSTS	274.25	_____	338.79	_____
RETURN TO LABOR & MANAGEMENT	103.60	_____	199.11	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(lb):	
-Direct Costs	5.41	_____	0.142	_____
-Indirect Costs	2.90	_____	0.066	_____
-Total Costs	8.31	_____	0.208	_____

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. Fungicide for rust at \$4-\$12 plus application maybe necessary.

Oil Sunflower

Confection Sunflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1740	_____	1600	_____
Market Price	0.251	_____	0.352	_____
MARKET REVENUE	436.74	_____	563.20	_____
DIRECT COSTS				
-Seed	34.10	_____	49.50	_____
-Herbicides	44.20	_____	47.10	_____
-Fungicides	0.00*	_____	0.00*	_____
-Insecticides	5.00**	_____	10.00**	_____
-Fertilizer	57.94	_____	48.59	_____
-Crop Insurance	8.50	_____	21.00	_____
-Fuel & Lubrication	16.29	_____	16.00	_____
-Repairs	18.59	_____	18.47	_____
-Drying	5.28	_____	5.25	_____
-Miscellaneous	16.75	_____	25.25	_____
-Operating Interest	4.65	_____	5.43	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	211.30	_____	246.59	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.80	_____	8.72	_____
-Machinery Depreciation	23.85	_____	23.60	_____
-Machinery Investment	14.10	_____	13.97	_____
-Land Charge	54.00	_____	54.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	100.75	_____	100.29	_____
SUM OF ALL LISTED COSTS	312.05	_____	346.88	_____
RETURN TO LABOR & MANAGEMENT	124.69	_____	216.32	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.121	_____	0.154	_____
-Indirect Costs	0.058	_____	0.063	_____
-Total Costs	0.179	_____	0.217	_____

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).

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." 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	1770	_____	16	_____
Market Price	0.256	_____	14.08	_____
MARKET REVENUE	453.12	_____	225.28	_____
DIRECT COSTS				
-Seed	62.00	_____	24.30	_____
-Herbicides	32.30	_____	40.90	_____
-Fungicides	0.00*	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	108.20	_____	6.67	_____
-Crop Insurance	6.50	_____	11.50	_____
-Fuel & Lubrication	14.36	_____	14.14	_____
-Repairs	17.83	_____	18.60	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	8.25	_____	1.50	_____
-Operating Interest	5.61	_____	2.65	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	255.05	_____	120.26	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.91	_____	7.92	_____
-Machinery Depreciation	21.91	_____	22.09	_____
-Machinery Investment	11.88	_____	12.52	_____
-Land Charge	54.00	_____	54.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	95.70	_____	96.53	_____
SUM OF ALL LISTED COSTS	350.75	_____	216.79	_____
RETURN TO LABOR & MANAGEMENT	102.37	_____	8.49	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.144	_____	7.52	_____
-Indirect Costs	0.054	_____	6.03	_____
-Total Costs	0.198	_____	13.55	_____

Canola notes:

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

Field Peas

Oats

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	38	_____	70	_____
Market Price	9.00	_____	3.44	_____
MARKET REVENUE	342.00	_____	240.80	_____
DIRECT COSTS				
-Seed	60.00	_____	20.00	_____
-Herbicides	46.70	_____	11.70	_____
-Fungicides	1.50	_____	0.00	_____
-Insecticides	0.00*	_____	0.00	_____
-Fertilizer	13.46	_____	64.29	_____
-Crop Insurance	6.00	_____	15.00	_____
-Fuel & Lubrication	15.82	_____	17.68	_____
-Repairs	19.57	_____	19.83	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	9.50	_____	8.25	_____
-Operating Interest	3.88	_____	3.53	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	176.43	_____	160.28	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.37	_____	9.05	_____
-Machinery Depreciation	24.10	_____	24.33	_____
-Machinery Investment	13.22	_____	14.39	_____
-Land Charge	54.00	_____	54.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	99.69	_____	101.77	_____
SUM OF ALL LISTED COSTS	276.12	_____	262.05	_____
RETURN TO LABOR & MANAGEMENT	65.88	_____	(21.25)	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.64	_____	2.29	_____
-Indirect Costs	2.62	_____	1.45	_____
-Total Costs	7.27	_____	3.74	_____

Field Pea notes:

*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	1200	_____	850	_____
Market Price	0.22	_____	0.45	_____
MARKET REVENUE	264.00	_____	382.50	_____
DIRECT COSTS				
-Seed	21.00	_____	12.60	_____
-Herbicides	46.20*	_____	30.30	_____
-Fungicides	16.00**	_____	0.00	_____
-Insecticides	0.00***	_____	0.00	_____
-Fertilizer	7.02	_____	17.83	_____
-Crop Insurance	7.00	_____	0.00*	_____
-Fuel & Lubrication	16.99	_____	14.17	_____
-Repairs	22.23	_____	18.25	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	9.50	_____	8.25	_____
-Operating Interest	3.28	_____	2.28	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	149.22	_____	103.68	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.74	_____	8.01	_____
-Machinery Depreciation	27.05	_____	21.33	_____
-Machinery Investment	14.73	_____	12.83	_____
-Land Charge	54.00	_____	54.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	104.52	_____	96.17	_____
SUM OF ALL LISTED COSTS	253.74	_____	199.85	_____
RETURN TO LABOR & MANAGEMENT	10.26	_____	182.65	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.124	_____	0.122	_____
-Indirect Costs	0.087	_____	0.113	_____
-Total Costs	0.211	_____	0.235	_____

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 not available in this region.

Buckwheat

Millet

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	900	_____	1500	_____
Market Price	0.313	_____	0.21	_____
MARKET REVENUE	281.70	_____	315.00	_____
DIRECT COSTS				
-Seed	20.50	_____	17.50	_____
-Herbicides	19.80	_____	10.60	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	8.73	_____	12.18	_____
-Crop Insurance	10.00*	_____	0.00	_____
-Fuel & Lubrication	13.81	_____	15.12	_____
-Repairs	17.55	_____	18.68	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	8.25	_____
-Operating Interest	2.07	_____	1.85	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	93.96	_____	84.18	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.84	_____	8.29	_____
-Machinery Depreciation	20.79	_____	22.14	_____
-Machinery Investment	12.10	_____	13.25	_____
-Land Charge	54.00	_____	54.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	94.73	_____	97.68	_____
SUM OF ALL LISTED COSTS	188.69	_____	181.86	_____
RETURN TO LABOR & MANAGEMENT	93.01	_____	133.14	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.104	_____	0.056	_____
-Indirect Costs	0.105	_____	0.065	_____
-Total Costs	0.210	_____	0.121	_____

Buckwheat notes:

*Crop insurance is not available in some counties of the region.

Winter Wheat

Rye

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	50*	_____	43	_____
Market Price	6.54	_____	6.98	_____
MARKET REVENUE	327.00	_____	300.14	_____
DIRECT COSTS				
-Seed	13.20	_____	13.20	_____
-Herbicides	32.20	_____	7.20	_____
-Fungicides	9.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	107.61	_____	84.38	_____
-Crop Insurance	7.50	_____	13.00	_____
-Fuel & Lubrication	13.97	_____	13.74	_____
-Repairs	16.81	_____	16.59	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	8.25	_____	8.25	_____
-Operating Interest	4.69	_____	3.52	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	213.33	_____	159.88	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.85	_____	7.81	_____
-Machinery Depreciation	19.92	_____	19.80	_____
-Machinery Investment	11.07	_____	11.18	_____
-Land Charge	54.00	_____	54.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	92.84	_____	92.79	_____
SUM OF ALL LISTED COSTS	305.06	_____	252.67	_____
RETURN TO LABOR & MANAGEMENT	20.93	_____	47.47	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.26	_____	3.72	_____
-Indirect Costs	1.86	_____	2.16	_____
-Total Costs	6.12	_____	5.88	_____

Winter Wheat notes:

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

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