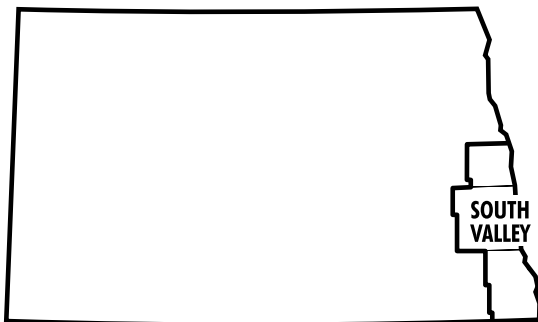




FARM MANAGEMENT PLANNING GUIDE

December 2013

Projected 2014 Crop Budgets



South Valley North Dakota

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The 2014 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 2014 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.

Currently, a Farm Bill has not been authorized. **Direct and counter-cyclical payments** have been omitted from the budgets because those payments are tied to historic farm program base acres and payment yields, not to current crop selection or production. Direct payments for this region have been \$13.00 per acre when averaged over all crop acreage. No counter-cyclical payments are expected. If there is an extension of the current Farm Bill, the Average Crop Revenue Election program may provide payments.

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 2006-2012, 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 of 130% of market yield. N fertilizer can be reduced if previous crop was soybean, dry bean, field peas or lentil.

Soil test - recrop:
 Nitrogen - 35 lb
 Phosphorus - 10 ppm
 Potassium - 278 ppm

Fertilizer prices:

Nitrogen - .46/lb
 Phosphorus - .42/lb
 Potassium - .39/lb

Seed Prices:

Spring Wheat 12.25/bu
 Barley 11.00/bu
 Corn Stacked Trait 3.30/thou.kern
 Soybean RR2 .352/thou.kern.
 Dry Beans .90/lb
 Oil Sunflower 1.42/thou.kern.
 Conf. Sunflower 2.45/thou.kern.
 Oats 7.00/bu
 Winter Wheat 11.50/bu

Fuel prices:

Diesel 3.25/gal
 Gas 3.05/gal

Lubrication charge: 15% of fuel cost

Crop Insurance: Coverage levels are 70% on all insurable crops. Yield Protection or APH insurance estimates are used, except for Revenue Protection on all wheat, barley, corn, soybeans, corn, canola, sunflowers and dry beans.

Miscellaneous: soil testing, machinery rent and custom work.

Operating Interest: Direct costs charged 4.25% 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, \$3 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: 4.5% 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	51	_____	68	_____
Market Price	6.95	_____	5.19*	_____
MARKET INCOME	354.45	_____	352.92	_____
DIRECT COSTS				
-Seed	24.50	_____	22.00	_____
-Herbicides	21.80	_____	19.00	_____
-Fungicides	5.50*	_____	5.50**	_____
-Insecticides	0.00**	_____	0.00	_____
-Fertilizer	71.31	_____	55.48	_____
-Crop Insurance	11.98	_____	15.61	_____
-Fuel & Lubrication	22.21	_____	24.62	_____
-Repairs	18.89	_____	19.88	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	7.50	_____	7.50	_____
-Operating Interest	3.90	_____	3.60	_____
SUM OF LISTED DIRECT COSTS	187.59	=====	173.19	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.42	_____	7.97	_____
-Machinery Depreciation	21.99	_____	23.32	_____
-Machinery Investment	12.77	_____	14.04	_____
-Land Charge	117.00	_____	117.00	_____
SUM OF LISTED INDIRECT COSTS	159.17	=====	162.33	=====
SUM OF ALL LISTED COSTS	346.76	_____	335.52	_____
RETURN TO LABOR & MANAGEMENT	7.69	_____	17.40	_____
LISTED COSTS PER BUDGET UNIT	(bu)		(bu)	
-Direct Costs	3.68	_____	2.55	_____
-Indirect Costs	3.12	_____	2.39	_____
-Total Costs	6.80	_____	4.93	_____

Wheat notes:

*Includes seed treatment (\$1.50-\$2.00) and early season foliar fungicide (\$2-\$4.50). Late season fungicides are often warranted in this region. For fusarium head blight (scab) control, prothioconazole or metconazole containing products are highly recommended when a more susceptible cultivar is grown and/or when conditions are favorable for infection.

**Cereal grain aphid insecticide would cost about \$6.

Barley notes:

*Use \$3.39 estimate for feed barley price.

**Includes seed treatment (\$1.50-\$2.00) and early season foliar fungicide (\$2-\$4.50). Late season fungicides, prothioconazole or metconazole containing products, for fusarium head blight (scab) control are recommended when conditions are favorable for infection.

Corn Grain

Soybeans

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	132		34	
Market Price	4.00		11.12	
MARKET INCOME	528.00		378.08	
DIRECT COSTS				
-Seed	108.90*		69.60*	
-Herbicides	22.60		22.60	
-Fungicides	0.00		0.00	
-Insecticides	0.00		7.00**	
-Fertilizer	97.36		2.78	
-Crop Insurance	30.14		13.34	
-Fuel & Lubrication	32.50		18.98	
-Repairs	25.47		18.36	
-Drying	27.72		0.00	
-Miscellaneous	7.50		1.50	
-Operating Interest	7.48		3.28	
	=====		=====	
SUM OF LISTED DIRECT COSTS	359.68		157.44	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	10.15		7.11	
-Machinery Depreciation	33.93		21.41	
-Machinery Investment	19.49		12.31	
-Land Charge	117.00		117.00	
	=====		=====	
SUM OF LISTED INDIRECT COSTS	180.57		157.84	
SUM OF ALL LISTED COSTS	540.25		315.27	
RETURN TO LABOR & MANAGEMENT	(12.25)		62.81	
LISTED COSTS PER BUDGET UNIT	(bu)		(bu)	
-Direct Costs	2.72		4.63	
-Indirect Costs	1.37		4.64	
-Total Costs	4.09		9.27	

Corn notes:

*Stacked trait GM corn with herbicide resistance and corn borer and corn rootworm control. Cost includes insecticide seed treatment for wireworm, rootworm, white grub and suppression of cutworm.

Soybean notes:

*RR2 (glyphosate) resistant soybeans. The cost includes \$8 for inoculant and fungicide treatment in addition to seed expense.

**Soybean aphid and/or spider mite insecticide

Drybeans*

Oil Sunflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1640	_____	1650	_____
Market Price	0.31	_____	0.215	_____
MARKET INCOME	508.40	_____	354.75	_____
DIRECT COSTS				
-Seed	45.00	_____	34.08*	_____
-Herbicides	41.20	_____	26.70	_____
-Fungicides	20.00**	_____	0.00**	_____
-Insecticides	0.00	_____	7.00***	_____
-Fertilizer	42.21	_____	40.89	_____
-Crop Insurance	29.52	_____	11.00	_____
-Fuel & Lubrication	24.64	_____	21.97	_____
-Repairs	23.00	_____	18.72	_____
-Drying	0.00	_____	4.95	_____
-Miscellaneous	15.50	_____	15.50	_____
-Operating Interest	5.12	_____	3.84	_____
SUM OF LISTED DIRECT COSTS	246.19	=====	184.66	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.69	_____	7.98	_____
-Machinery Depreciation	27.58	_____	24.24	_____
-Machinery Investment	17.78	_____	14.61	_____
-Land Charge	117.00	_____	117.00	_____
SUM OF LISTED INDIRECT COSTS	171.04	=====	163.83	=====
SUM OF ALL LISTED COSTS	417.23	_____	348.49	_____
RETURN TO LABOR & MANAGEMENT	91.17	_____	6.26	_____
LISTED COSTS PER BUDGET UNIT				
	(lb)		(lb)	
-Direct Costs	0.15	_____	0.11	_____
-Indirect Costs	0.10	_____	0.10	_____
-Total Costs	0.25	_____	0.21	_____

Drybean notes:

*Acreage limitations existed under the 2008-2012 farm bill with possible forfeiture of government payments on base acres planted to drybeans. Rules for 2014 are unknown as of 12/10/2013.

**Fungicide for white mold. A second treatment may be necessary. Fungicide for rust at \$2-\$4.50 plus application maybe necessary.

Oil Sunflower notes:

*Cost includes seed treatment for control of wireworm and flea beetle.

**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."

Confectionery Sunflower

Oats

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1400	_____	78	_____
Market Price	0.317	_____	3.17	_____
MARKET INCOME	443.80	_____	247.26	_____
DIRECT COSTS				
-Seed	49.00*	_____	14.00	_____
-Herbicides	28.90	_____	5.20	_____
-Fungicides	0.00**	_____	0.00	_____
-Insecticides	14.00***	_____	0.00	_____
-Fertilizer	32.26	_____	54.50	_____
-Crop Insurance	16.08	_____	11.76	_____
-Fuel & Lubrication	21.36	_____	25.38	_____
-Repairs	18.51	_____	20.15	_____
-Drying	4.17	_____	0.00	_____
-Miscellaneous	23.50	_____	7.50	_____
-Operating Interest	4.42	_____	2.94	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	212.20	_____	141.43	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.84	_____	8.14	_____
-Machinery Depreciation	23.86	_____	23.80	_____
-Machinery Investment	14.41	_____	14.29	_____
-Land Charge	117.00	_____	117.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	163.11	_____	163.23	_____
SUM OF ALL LISTED COSTS	375.31	_____	304.66	_____
RETURN TO LABOR & MANAGEMENT	68.49	_____	(57.40)	_____
LISTED COSTS PER BUDGET UNIT	(lb)		(bu)	
-Direct Costs	0.15	_____	1.81	_____
-Indirect Costs	0.12	_____	2.09	_____
-Total Costs	0.27	_____	3.91	_____

Confectionery Sunflower notes:

*Cost includes seed treatment for control of wireworm and flea beetle.

**Fungicide for rust would cost \$4 plus application.

***Two sprayings for head feeding insects (red seed weevil, lygus bug and banded moths) at about \$7 per application. Each custom application cost of \$8 is under "Miscellaneous."

Winter Wheat

	Your Per Acre	Figures
Market Yield	54*	_____
Market Price	6.33	_____
MARKET INCOME	341.82	_____
DIRECT COSTS		
-Seed	14.95	_____
-Herbicides	23.70	_____
-Fungicides	9.00	_____
-Insecticides	0.00	_____
-Fertilizer	76.45	_____
-Crop Insurance	12.21	_____
-Fuel & Lubrication	20.72	_____
-Repairs	18.39	_____
-Drying	0.00	_____
-Miscellaneous	7.50	_____
-Operating Interest	3.89	_____
	=====	=====
SUM OF LISTED DIRECT COSTS	186.80	_____
INDIRECT (FIXED) COSTS		
-Misc. Overhead	7.29	_____
-Machinery Depreciation	21.46	_____
-Machinery Investment	12.22	_____
-Land Charge	117.00	_____
	=====	=====
SUM OF LISTED INDIRECT COSTS	157.97	_____
SUM OF ALL LISTED COSTS	344.77	_____
RETURN TO LABOR & MANAGEMENT	(2.95)	_____
LISTED COSTS PER BUDGET UNIT	(bu)	
-Direct Costs	3.46	_____
-Indirect Costs	2.93	_____
-Total Costs	6.38	_____

Winter Wheat notes:

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

2014 Machinery List

Machine	Purch. Price	Annual Use	Years to trade	Trade in	Deprec.	Invest.	Repairs	Ac/hr
FWA 140HP Tractor	125000	400 hr	20	39106	10.74 /hr	9.23 /hr	12.35 /hr	
FWA 180HP Tractor	169300	500 hr	15	48623	16.09 /hr	9.81 /hr	16.73 /hr	
4WD 340HP Tractor	223100	500 hr	15	64074	21.20 /hr	12.92 /hr	12.60 /hr	
SP Combine (base unit)	271000	250 hr	12	65426	68.52 /hr	30.28 /hr	42.70 /hr	
Tandem Truck (used)	37300	150 hr	15	11900	11.29 /hr	7.38 /hr	7.53 /hr	
Semi & Trailer (used)	41800	150 hr	10	12000	19.87 /hr	8.07 /hr	9.20 /hr	
Pick-up Truck	29500	300 hr	10	5800	7.90 /hr	2.65 /hr	3.40 /hr	
Swather 30 ft	29400	1000 ac	20	6971	1.12 /ac	0.82 /ac	0.48 /ac	13.1
Sprayer 90 ft	37300	5000 ac	10	18559	0.38 /ac	0.25 /ac	0.48 /ac	42.5
Chisel Plow 38 ft	41600	3000 ac	15	24336	0.38 /ac	0.49 /ac	0.92 /ac	19.6
Field Cultivator 48 ft	47700	3000 ac	15	27862	0.44 /ac	0.57 /ac	0.84 /ac	24.7
Tandem Disk 28 ft	33000	800 ac	20	9442	1.47 /ac	1.19 /ac	0.84 /ac	13.6
Heavy Harrow 70 ft	29800	2000 ac	20	17400	0.31 /ac	0.53 /ac	0.33 /ac	39.7
Row-crop cultivator 12-22	14300	800 ac	15	7847	0.54 /ac	0.63 /ac	0.73 /ac	8.5
Air Seeder 40 ft	173800	2400 ac	10	88823	3.53 /ac	2.46 /ac	6.01 /ac	17.0
Bean cutter	12900	400 ac	20	3641	1.16 /ac	0.93 /ac	0.70 /ac	6.5
Corn head 12R w/chopper	112700	1000 ac	15	21579	6.07 /ac	3.02 /ac	2.38 /ac	7.5
Grain head w/pu	15000	800 ac	20	1470	0.84 /ac	0.46 /ac	0.24 /ac	10.2
Grain str. cut 30 ft	25000	1000 ac	15	5083	1.33 /ac	0.68 /ac	0.39 /ac	10.2
Head w/sunf pans 30 ft	30100	600 ac	20	3079	2.25 /ac	1.24 /ac	0.47 /ac	10.2
Flex head 30 ft	37100	1000 ac	20	3400	1.68 /ac	0.91 /ac	0.57 /ac	10.2
Head w/drybean pickups	30100	400 ac	20	3207	3.37 /ac	1.88 /ac	0.53 /ac	8.9
Grain Cart	29300	100 hr	20	5000	12.15 /hr	7.72 /hr	7.40 /hr	
Grain auger	12200	50 hr	20	710	11.49 /hr	5.81 /hr	4.60 /hr	

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