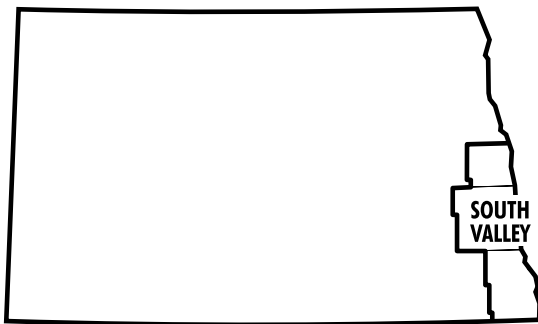




## Projected 2013 Crop Budgets



# South Valley North Dakota

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The 2013 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 2013 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.

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 payments from counter-cyclical type programs are expected with the price levels used in the budgets.

## 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 2005-2011, 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 - 33 lb  
 Phosphorus - 10 ppm  
 Potassium - 278 ppm

## Fertilizer prices:

Nitrogen - .58/lb  
 Phosphorus - .52/lb  
 Potassium - .48/lb

## Seed Prices:

Spring Wheat 13.20/bu  
 Barley 11.00/bu  
 Corn Stacked Trait 3.30/thou.kern  
 Soybean RR2 .37/thou.kern.  
 Dry Beans .88/lb  
 Oil Sunflower 1.38/thou.kern.  
 Conf. Sunflower 2.42/thou.kern.  
 Oats 6.50/bu  
 Winter Wheat 11.25/bu

## Fuel prices:

Diesel 3.40/gal  
 Gas 3.20/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 and sunflowers.

**Miscellaneous:** soil testing, machinery rent and custom work.

**Operating Interest:** Direct costs charged 4.60% 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	50		68	
Market Price	8.94		6.56*	
<b>MARKET INCOME</b>	<b>447.00</b>		<b>446.08</b>	
<b>DIRECT COSTS</b>				
-Seed	26.40		22.00	
-Herbicides	21.00		17.80	
-Fungicides	5.50*		5.50**	
-Insecticides	0.00**		0.00	
-Fertilizer	88.66		70.87	
-Crop Insurance	14.30		16.30	
-Fuel & Lubrication	22.54		25.78	
-Repairs	18.31		20.05	
-Drying	0.00		0.00	
-Miscellaneous	7.00		7.00	
-Operating Interest	4.69		4.26	
	=====	=====	=====	=====
<b>SUM OF LISTED DIRECT COSTS</b>	<b>208.41</b>		<b>189.56</b>	
<b>INDIRECT (FIXED) COSTS</b>				
-Misc. Overhead	7.27		7.92	
-Machinery Depreciation	21.63		23.94	
-Machinery Investment	12.64		14.22	
-Land Charge	111.20		111.20	
	=====	=====	=====	=====
<b>SUM OF LISTED INDIRECT COSTS</b>	<b>152.75</b>		<b>157.29</b>	
<b>SUM OF ALL LISTED COSTS</b>	<b>361.15</b>		<b>346.85</b>	
<b>RETURN TO LABOR &amp; MANAGEMENT</b>	<b>85.85</b>		<b>99.23</b>	
<b>LISTED COSTS PER BUDGET UNIT</b>	<b>(bu):</b>		<b>(bu):</b>	
-Direct Costs	4.17		2.79	
-Indirect Costs	3.05		2.31	
-Total Costs	7.22		5.10	

**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 per acre plus application.

**Barley notes:**

\*Use \$4.87 estimate for feed barley price.

\*\*Includes seed treatment (\$1.50-\$2.00) and early season foliar fungicide (\$2-\$4.50).

## Corn Grain

## Soybeans

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	130		34	
Market Price	5.62		12.62	
<b>MARKET INCOME</b>	<b>730.60</b>		<b>429.08</b>	
<b>DIRECT COSTS</b>				
-Seed	103.95*		64.75*	
-Herbicides	20.00		20.00	
-Fungicides	0.00		0.00	
-Insecticides	0.00		7.00**	
-Fertilizer	121.33		3.45	
-Crop Insurance	38.20		16.20	
-Fuel & Lubrication	31.11		19.25	
-Repairs	24.68		17.83	
-Drying	26.00		0.00	
-Miscellaneous	7.00		4.00	
-Operating Interest	8.56		3.51	
	=====	=====	=====	=====
<b>SUM OF LISTED DIRECT COSTS</b>	<b>380.83</b>		<b>155.98</b>	
<b>INDIRECT (FIXED) COSTS</b>				
-Misc. Overhead	9.89		6.96	
-Machinery Depreciation	33.42		20.83	
-Machinery Investment	19.06		12.12	
-Land Charge	111.20		111.20	
	=====	=====	=====	=====
<b>SUM OF LISTED INDIRECT COSTS</b>	<b>173.57</b>		<b>151.11</b>	
<b>SUM OF ALL LISTED COSTS</b>	<b>554.40</b>		<b>307.09</b>	
<b>RETURN TO LABOR &amp; MANAGEMENT</b>	<b>176.20</b>		<b>121.99</b>	
<b>LISTED COSTS PER BUDGET UNIT</b>	<b>(bu):</b>		<b>(bu):</b>	
-Direct Costs	2.93		4.59	
-Indirect Costs	1.34		4.44	
-Total Costs	4.26		9.03	

**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. Insecticide and fungicide seed treatment would cost about \$11 per acre.

\*\*Soybean aphid and/or spider mite insecticide.

## Drybeans\*

## Oil Sunflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1600	_____	1610	_____
Market Price	0.32	_____	0.245	_____
<b>MARKET INCOME</b>	<b>512.00</b>	_____	<b>394.45</b>	_____
<b>DIRECT COSTS</b>				
-Seed	44.00	_____	33.12*	_____
-Herbicides	40.00	_____	25.90	_____
-Fungicides	20.00**	_____	0.00**	_____
-Insecticides	0.00	_____	7.00***	_____
-Fertilizer	51.31	_____	50.81	_____
-Crop Insurance	27.20	_____	15.00	_____
-Fuel & Lubrication	24.43	_____	22.28	_____
-Repairs	22.22	_____	18.13	_____
-Drying	0.00	_____	3.22	_____
-Miscellaneous	14.50	_____	14.50	_____
-Operating Interest	5.60	_____	4.37	_____
<b>SUM OF LISTED DIRECT COSTS</b>	<b>249.26</b>	=====	<b>194.33</b>	=====
<b>INDIRECT (FIXED) COSTS</b>				
-Misc. Overhead	8.47	_____	7.77	_____
-Machinery Depreciation	27.21	_____	23.88	_____
-Machinery Investment	17.36	_____	14.29	_____
-Land Charge	111.20	_____	111.20	_____
<b>SUM OF LISTED INDIRECT COSTS</b>	<b>164.23</b>	=====	<b>157.14</b>	=====
<b>SUM OF ALL LISTED COSTS</b>	<b>413.50</b>	_____	<b>351.47</b>	_____
<b>RETURN TO LABOR &amp; MANAGEMENT</b>	<b>98.50</b>	_____	<b>42.98</b>	_____
<b>LISTED COSTS PER BUDGET UNIT</b>	<b>(lb):</b>		<b>(lb):</b>	
-Direct Costs	0.16	_____	0.12	_____
-Indirect Costs	0.10	_____	0.10	_____
-Total Costs	0.26	_____	0.22	_____

### 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 2013 are unknown as of 12/14/2012.

\*\*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 \$7.50 is under "Miscellaneous."

# Confectionery Sunflower

# Oats

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1390		78	
Market Price	0.322		3.59	
<b>MARKET INCOME</b>	<b>447.58</b>		<b>280.02</b>	
<b>DIRECT COSTS</b>				
-Seed	48.40*		13.00	
-Herbicides	28.00		5.00	
-Fungicides	0.00**		0.00	
-Insecticides	14.00***		0.00	
-Fertilizer	41.25		69.65	
-Crop Insurance	19.70		13.80	
-Fuel & Lubrication	21.75		26.55	
-Repairs	17.95		20.31	
-Drying	2.78		0.00	
-Miscellaneous	22.00		7.00	
-Operating Interest	4.96		3.57	
	=====		=====	
<b>SUM OF LISTED DIRECT COSTS</b>	<b>220.79</b>		<b>158.88</b>	
<b>INDIRECT (FIXED) COSTS</b>				
-Misc. Overhead	7.65		8.09	
-Machinery Depreciation	23.55		24.41	
-Machinery Investment	14.12		14.47	
-Land Charge	111.20		111.20	
	=====		=====	
<b>SUM OF LISTED INDIRECT COSTS</b>	<b>156.52</b>		<b>158.18</b>	
<b>SUM OF ALL LISTED COSTS</b>	<b>377.31</b>		<b>317.06</b>	
<b>RETURN TO LABOR &amp; MANAGEMENT</b>	<b>70.27</b>		<b>(37.04)</b>	
<b>LISTED COSTS PER BUDGET UNIT</b>	<b>(lb):</b>		<b>(bu):</b>	
-Direct Costs	0.16		2.04	
-Indirect Costs	0.11		2.03	
-Total Costs	0.27		4.06	

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 \$7.50 is under "Miscellaneous."

# Winter Wheat

	Per Acre	Your Figures
Market Yield	53*	_____
Market Price	8.30	_____
<b>MARKET INCOME</b>	<b>439.90</b>	_____
<b>DIRECT COSTS</b>		
-Seed	13.50	_____
-Herbicides	22.00	_____
-Fungicides	9.00	_____
-Insecticides	0.00	_____
-Fertilizer	95.13	_____
-Crop Insurance	14.30	_____
-Fuel & Lubrication	20.96	_____
-Repairs	17.83	_____
-Drying	0.00	_____
-Miscellaneous	7.00	_____
-Operating Interest	4.59	_____
	=====	=====
<b>SUM OF LISTED DIRECT COSTS</b>	<b>204.31</b>	_____
<b>INDIRECT (FIXED) COSTS</b>		
-Misc. Overhead	7.14	_____
-Machinery Depreciation	21.11	_____
-Machinery Investment	12.11	_____
-Land Charge	111.20	_____
	=====	=====
<b>SUM OF LISTED INDIRECT COSTS</b>	<b>151.56</b>	_____
<b>SUM OF ALL LISTED COSTS</b>	<b>355.87</b>	_____
<b>RETURN TO LABOR &amp; MANAGEMENT</b>	<b>84.03</b>	_____
<b>LISTED COSTS PER BUDGET UNIT</b>	<b>(bu):</b>	
-Direct Costs	3.85	_____
-Indirect Costs	2.86	_____
-Total Costs	6.71	_____

Winter Wheat notes:

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

# 2013 Machinery List

Machine	Purch. Price	Annual Use	Years to trade	Trade in	Deprec.	Invest.	Repairs	Ac/hr
FWA 120HP Tractor	122500	400hr	20	37244	10.66 /hr	8.99 /hr	11.76 /hr	
FWA 180HP Tractor	166000	500hr	15	46377	15.95 /hr	9.56 /hr	15.96 /hr	
4WD 330HP Tractor	218800	500hr	15	61022	21.04 /hr	12.59 /hr	12.00 /hr	
SP Combine (base unit)	268400	250hr	12	62943	68.49 /hr	29.82 /hr	41.08 /hr	
Tandem Truck (used)	36600	150hr	15	11700	11.07 /hr	7.25 /hr	7.33 /hr	
Semi & Trailer (used)	41000	150hr	10	11800	19.47 /hr	7.92 /hr	8.93 /hr	
Pick-up Truck	28900	300hr	10	5700	7.47 /hr	2.60 /hr	3.30 /hr	
Swather 25 ft	23100	1000ac	20	5460	0.88 /ac	0.64 /ac	0.40 /ac	12.1
Sprayer 90 ft	36600	5000ac	10	18179	0.37 /ac	0.25 /ac	0.47 /ac	42.5
Chisel Plow 38 ft	40800	3000ac	15	23839	0.38 /ac	0.48 /ac	0.90 /ac	19.6
Field Cultivator 48 ft	46800	3000ac	15	27316	0.43 /ac	0.56 /ac	0.82 /ac	24.7
Tandem Disk 28 ft	32300	800ac	20	9247	1.44 /ac	1.17 /ac	0.91 /ac	12.2
Heavy Harrow 70 ft	29200	2000ac	20	17060	0.30 /ac	0.52 /ac	0.33 /ac	39.7
Air Seeder 40 ft	170400	2400ac	12	80295	3.12 /ac	2.35 /ac	5.89 /ac	17.0
Planter 24-22	127500	1600ac	15	53013	3.10 /ac	2.54 /ac	4.81 /ac	15.6
Bean cutter	12600	400ac	20	3568	1.13 /ac	0.91 /ac	0.68 /ac	6.5
Corn head 12R w/chopper	110500	1000ac	15	21156	5.96 /ac	2.96 /ac	2.33 /ac	7.5
Grain head w/pu	14000	1200ac	10	4965	0.75 /ac	0.36 /ac	0.27 /ac	8.5
Grain str. cut 30 ft	24500	1000ac	15	4979	1.30 /ac	0.66 /ac	0.38 /ac	10.2
Head w/sunf pans 30 ft	29500	600ac	20	3018	2.20 /ac	1.22 /ac	0.46 /ac	10.2
Soybeans str. cut 30 ft	36300	1000ac	20	3330	1.65 /ac	0.89 /ac	0.56 /ac	10.2
Head w/drybean pickups	29500	400ac	20	3144	3.30 /ac	1.84 /ac	0.52 /ac	8.9
Grain Cart	28700	100hr	20	4900	11.90 /hr	7.56 /hr	7.20 /hr	
Grain auger	12000	50hr	20	700	11.30 /hr	5.72 /hr	4.50 /hr	

## Example Sequence of Operations

Field operations sequence for spring wheat.

OP. NO.	DESCRIPTION	(FEET) WIDTH	(MPH) SPEED	(AC/HR) Fld Cap	(\$/AC) FUEL & LUBE	(\$/AC) EST. REPAIRS
1	Field Cultivator	48	5.0	24.7	\$ 2.30	\$ 1.31
2	Plant	40	5.0	17.0	3.35	6.61
3	Spray (130%)	90	6.0	42.5	0.63	0.97
4	Combine	30	4.0	10.2	4.56	4.41
5	Chisel Plow	38	5.0	19.6	2.90	1.52
6	Chisel Plow	38	5.0	19.6	2.90	1.52
	Grain Cart*				1.31	0.34
	Trucks*				2.51	0.95
	Grain auger (pto)				0.23	0.09
	Pickup truck allocation				1.86	0.59
				Total	22.54	18.31

\* Truck costs will vary between crops.

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