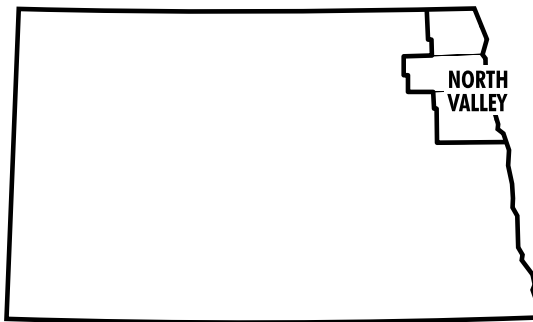




FARM MANAGEMENT PLANNING GUIDE

December 2014

Projected 2015 Crop Budgets



North Valley North Dakota

Andrew Swenson, Farm Management Specialist
Ron Haugen, Farm Management Specialist

The 2015 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 2015 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.

NDSU EXTENSION
SERVICE

North Dakota State University, Fargo, ND

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 2014 Farm Bill initiated the Price Loss Coverage (PLC) and Agricultural Risk Coverage (ARC) support programs, and eliminated the direct and counter-cyclical payment programs and the ACRE program.

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 2007-2013, 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 - 32 lb
 Phosphorus - 10 ppm
 Potassium - 280 ppm

Fertilizer prices:
 Nitrogen - .46/lb
 Phosphorus - .45/lb
 Potassium - .38/lb

Seed Prices:

Spring Wheat	11.00/bu
Durum	18.50/bu
Barley	9.00/bu
Corn grain RR/Bt	2.70/thou.kern.
Soybean RR2	.35/thou.kern.
Dry Beans	.88/lb
Oil Sunflower	1.50/thou.kern.
Conf. Sunflower	2.50/thou.kern.
Canola	10.25/lb
Flax	18.00/bu
Field Peas	12.75/bu
Oats	6.00/bu
Mustard	1.70/lb
Winter Wheat	10.50/bu

Fuel prices:

Diesel	2.65/gal
Gas	2.60/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

Durum

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	53	_____	44	_____
Market Price	6.07	_____	7.07*	_____
MARKET INCOME	321.71	_____	311.08	_____
DIRECT COSTS				
-Seed	22.00	_____	37.00	_____
-Herbicides	22.00	_____	22.00	_____
-Fungicides**	5.50	_____	5.50	_____
-Insecticides***	0.00	_____	0.00	_____
-Fertilizer	76.95	_____	61.38	_____
-Crop Insurance	14.70	_____	15.90	_____
-Fuel & Lubrication	18.30	_____	17.74	_____
-Repairs	19.40	_____	19.16	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	7.50	_____	7.50	_____
-Operating Interest	3.96	_____	3.96	_____
SUM OF LISTED DIRECT COSTS	190.31	=====	190.14	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.61	_____	7.45	_____
-Machinery Depreciation	22.59	_____	22.15	_____
-Machinery Investment	13.12	_____	12.89	_____
-Land Charge	92.00	_____	92.00	_____
SUM OF LISTED INDIRECT COSTS	135.32	=====	134.49	=====
SUM OF ALL LISTED COSTS	325.63	_____	324.63	_____
RETURN TO LABOR & MANAGEMENT	(3.92)	_____	(13.55)	_____
LISTED COSTS PER BUDGET UNIT	(bu)		(bu)	
-Direct Costs	3.59	_____	4.32	_____
-Indirect Costs	2.55	_____	3.06	_____
-Total Costs	6.14	_____	7.38	_____

Wheat notes:

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

**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 (about \$12) are highly recommended when a more susceptible cultivar is grown and/or when conditions are favorable for infection.

***Wheat midge insecticide would cost about \$6.

Cereal grain aphid insecticide would cost about \$6.

Malting Barley

Corn Grain

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	67		123	
Market Price	4.67*		3.50	
MARKET INCOME	312.89		430.50	
DIRECT COSTS				
-Seed	18.00		85.05*	
-Herbicides	19.20		21.00	
-Fungicides	5.50**		0.00	
-Insecticides	0.00		0.00	
-Fertilizer	56.55		92.25	
-Crop Insurance	17.60		37.60	
-Fuel & Lubrication	20.08		24.60	
-Repairs	20.34		25.86	
-Drying	0.00		25.83	
-Miscellaneous	7.50		7.50	
-Operating Interest	3.50		6.79	
SUM OF LISTED DIRECT COSTS	168.27		326.48	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.12		10.21	
-Machinery Depreciation	23.81		34.29	
-Machinery Investment	14.34		19.72	
-Land Charge	92.00		92.00	
SUM OF LISTED INDIRECT COSTS	138.27		156.21	
SUM OF ALL LISTED COSTS	306.54		482.69	
RETURN TO LABOR & MANAGEMENT	6.35		(52.19)	
LISTED COSTS PER BUDGET UNIT				
	(bu)		(bu)	
-Direct Costs	2.51		2.65	
-Indirect Costs	2.06		1.27	
-Total Costs	4.58		3.92	

Barley notes:

*On average, about 60% of production is feed quality. Use \$2.88 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 notes:

*RR/Bt corn. Cost includes insecticide seed treatment for wireworm, rootworm, white grub and suppression of cutworm.

Soybeans

Drybeans

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	33	_____	1690	_____
Market Price	9.02	_____	0.25	_____
MARKET INCOME	297.66	_____	422.50	_____
DIRECT COSTS				
-Seed	69.25*	_____	44.00	_____
-Herbicides	20.00	_____	41.60	_____
-Fungicides	0.00	_____	20.00*	_____
-Insecticides	7.00**	_____	0.00	_____
-Fertilizer	2.90	_____	44.76	_____
-Crop Insurance	17.40	_____	24.00	_____
-Fuel & Lubrication	15.48	_____	20.58	_____
-Repairs	18.79	_____	23.74	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	15.50	_____
-Operating Interest	3.24	_____	4.98	_____
SUM OF LISTED DIRECT COSTS	155.55	=====	239.15	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.25	_____	8.98	_____
-Machinery Depreciation	21.86	_____	28.26	_____
-Machinery Investment	12.57	_____	18.39	_____
-Land Charge	92.00	_____	92.00	_____
SUM OF LISTED INDIRECT COSTS	133.68	=====	147.63	=====
SUM OF ALL LISTED COSTS	289.23	_____	386.78	_____
RETURN TO LABOR & MANAGEMENT	8.43	_____	35.72	_____
LISTED COSTS PER BUDGET UNIT	(bu)		(lb)	
-Direct Costs	4.71	_____	0.14	_____
-Indirect Costs	4.05	_____	0.09	_____
-Total Costs	8.76	_____	0.23	_____

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

Drybean notes:

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

Oil Sunflower

Confectionery Sunflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1430		1170	
Market Price	0.18		0.252	
MARKET INCOME	257.40		294.84	
DIRECT COSTS				
-Seed	36.00*		50.00*	
-Herbicides	27.00		29.20	
-Fungicides	0.00**		0.00**	
-Insecticides	7.00***		14.00***	
-Fertilizer	35.15		26.08	
-Crop Insurance	11.30		15.60	
-Fuel & Lubrication	17.54		17.03	
-Repairs	19.00		18.77	
-Drying	4.29		3.51	
-Miscellaneous	15.50		23.50	
-Operating Interest	3.67		4.20	
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	176.45		201.90	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	8.03		7.88	
-Machinery Depreciation	24.45		24.04	
-Machinery Investment	14.78		14.56	
-Land Charge	92.00		92.00	
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	139.25		138.49	
SUM OF ALL LISTED COSTS	315.70		340.39	
RETURN TO LABOR & MANAGEMENT	(58.30)		(45.55)	
LISTED COSTS PER BUDGET UNIT				
	(lb)		(lb)	
-Direct Costs	0.12		0.17	
-Indirect Costs	0.10		0.12	
-Total Costs	0.22		0.29	

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 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."

Canola

Flax

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1680	_____	23	_____
Market Price	0.166	_____	11.63	_____
MARKET INCOME	278.88	_____	267.49	_____
DIRECT COSTS				
-Seed	51.25*	_____	16.20	_____
-Herbicides	20.70	_____	19.80	_____
-Fungicides	0.00**	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	71.74	_____	32.46	_____
-Crop Insurance	15.70	_____	8.50	_____
-Fuel & Lubrication	15.57	_____	17.82	_____
-Repairs	17.79	_____	20.27	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	7.50	_____	1.50	_____
-Operating Interest	4.26	_____	2.48	_____
SUM OF LISTED DIRECT COSTS	204.51	=====	119.02	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.14	_____	7.60	_____
-Machinery Depreciation	20.61	_____	22.79	_____
-Machinery Investment	12.26	_____	14.07	_____
-Land Charge	92.00	_____	92.00	_____
SUM OF LISTED INDIRECT COSTS	132.01	=====	136.46	=====
SUM OF ALL LISTED COSTS	336.51	_____	255.48	_____
RETURN TO LABOR & MANAGEMENT	(57.63)	_____	12.01	_____
LISTED COSTS PER BUDGET UNIT	(lb)		(bu)	
-Direct Costs	0.12	_____	5.17	_____
-Indirect Costs	0.08	_____	5.93	_____
-Total Costs	0.20	_____	11.11	_____

Canola notes:

*Cost includes insecticide seed treatment for flea beetles.

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

Field Peas

Oats

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	37		76	
Market Price	6.30*		2.53	
MARKET INCOME	233.10		192.28	
DIRECT COSTS				
-Seed	38.25**		12.00	
-Herbicides	28.00		5.25	
-Fungicides	1.50		0.00	
-Insecticides	0.00		0.00	
-Fertilizer	7.92		54.77	
-Crop Insurance	10.50		11.60	
-Fuel & Lubrication	17.46		20.63	
-Repairs	20.60		20.59	
-Drying	0.00		0.00	
-Miscellaneous	6.00		7.50	
-Operating Interest	2.77		2.81	
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	133.00		135.15	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.63		8.28	
-Machinery Depreciation	23.96		24.24	
-Machinery Investment	13.71		14.58	
-Land Charge	92.00		92.00	
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	137.30		139.10	
SUM OF ALL LISTED COSTS	270.30		274.24	
RETURN TO LABOR & MANAGEMENT	(37.20)		(81.96)	
LISTED COSTS PER BUDGET UNIT	(bu)		(bu)	
-Direct Costs	3.59		1.78	
-Indirect Costs	3.71		1.83	
-Total Costs	7.31		3.61	

Field Pea notes:

*Yellow pea food quality price. Use \$7.80 for green pea food quality and about \$4.00 for feed quality peas.

**Yellow pea seed cost, use \$47 per acre for green peas.

Yellow Mustard

Winter Wheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	950	_____	52*	_____
Market Price	0.299	_____	5.63	_____
MARKET INCOME	284.05	_____	292.76	_____
DIRECT COSTS				
-Seed	20.40	_____	13.65	_____
-Herbicides	13.70	_____	23.90	_____
-Fungicides	0.00	_____	9.00	_____
-Insecticides	6.00*	_____	0.00	_____
-Fertilizer	29.99	_____	75.22	_____
-Crop Insurance	0.00**	_____	14.70	_____
-Fuel & Lubrication	14.25	_____	16.83	_____
-Repairs	17.26	_____	18.78	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	7.50	_____
-Operating Interest	2.19	_____	3.82	_____
SUM OF LISTED DIRECT COSTS	105.29	=====	183.40	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.84	_____	7.40	_____
-Machinery Depreciation	19.67	_____	21.85	_____
-Machinery Investment	11.74	_____	12.46	_____
-Land Charge	92.00	_____	92.00	_____
SUM OF LISTED INDIRECT COSTS	130.26	=====	133.71	=====
SUM OF ALL LISTED COSTS	235.54	_____	317.11	_____
RETURN TO LABOR & MANAGEMENT	48.51	_____	(24.35)	_____
LISTED COSTS PER BUDGET UNIT	(lb)		(bu)	
-Direct Costs	0.11	_____	3.53	_____
-Indirect Costs	0.14	_____	2.57	_____
-Total Costs	0.25	_____	6.10	_____

Yellow Mustard notes:

*Insecticide seed treatment for flea beetles.

**Crop insurance is not available in this region.

Winter Wheat notes:

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

2015 Machinery List

Machine	Purch. Price	Annual Use	Years to trade	Trade in	Deprec.	Invest.	Repairs	Ac/hr
FWA 140HP Tractor	128100	400 hr	20	40090	11.00 /hr	9.46 /hr	12.66 /hr	
FWA 180HP Tractor	173600	500 hr	15	49843	16.50 /hr	10.05 /hr	17.15 /hr	
4WD 340HP Tractor	228700	500 hr	15	65685	21.74 /hr	13.25 /hr	12.92 /hr	
SP Combine (base unit)	277800	250 hr	12	67068	70.24 /hr	31.04 /hr	43.77 /hr	
Tandem Truck (used)	37700	150 hr	15	12000	11.42 /hr	7.46 /hr	7.73 /hr	
Semi & Trailer (used)	42300	150 hr	10	12100	20.13 /hr	8.16 /hr	9.33 /hr	
Pick-up Truck	29800	300 hr	10	5900	7.97 /hr	2.68 /hr	3.50 /hr	
Swather 30 ft	30200	1000 ac	20	7152	1.15 /ac	0.84 /ac	0.49 /ac	13.1
Sprayer 90 ft	38200	5000 ac	10	19024	0.38 /ac	0.26 /ac	0.49 /ac	42.5
Chisel Plow 38 ft	42700	3000 ac	15	24932	0.39 /ac	0.51 /ac	0.95 /ac	19.6
Field Cultivator 48 ft	48900	3000 ac	15	28558	0.45 /ac	0.58 /ac	0.86 /ac	24.7
Tandem Disk 28 ft	33800	800 ac	20	9684	1.50 /ac	1.22 /ac	0.86 /ac	13.6
Heavy Harrow 70 ft	30600	2000 ac	20	17837	0.32 /ac	0.55 /ac	0.34 /ac	39.7
Air Seeder 40 ft	178100	2400 ac	10	91039	3.62 /ac	2.52 /ac	6.16 /ac	17.0
Planter 12-30	66700	800 ac	20	22191	2.78 /ac	2.50 /ac	3.68 /ac	10.6
Planter 24-22	133300	1600 ac	15	55417	3.24 /ac	2.65 /ac	5.02 /ac	15.6
Bean cutter	13200	400 ac	20	3738	1.18 /ac	0.95 /ac	0.71 /ac	6.5
Corn head 12R w/chopper	115500	1000 ac	15	22116	6.22 /ac	3.10 /ac	2.44 /ac	7.5
Grain head w/pu	15400	800 ac	20	1511	0.87 /ac	0.47 /ac	0.24 /ac	10.2
Grain str. cut 30 ft	25600	1000 ac	15	5204	1.36 /ac	0.69 /ac	0.40 /ac	10.2
Head w/sunf pans 30 ft	30800	600 ac	20	3148	2.30 /ac	1.27 /ac	0.48 /ac	10.2
Flex head 30 ft	38000	1000 ac	20	3486	1.72 /ac	0.93 /ac	0.59 /ac	10.2
Head w/drybean pickups	30800	400 ac	20	3280	3.44 /ac	1.92 /ac	0.55 /ac	8.9
Grain Cart	30000	100 hr	20	5100	12.45 /hr	7.90 /hr	7.50 /hr	
Grain auger	12500	50 hr	20	725	11.78 /hr	5.95 /hr	4.70 /hr	

The NDSU Extension Service does not endorse commercial products or companies even though reference may be made to tradenames, trademarks or service names. NDSU encourages you to use and share this content, but please do so under the conditions of our Creative Commons license. You may copy, distribute, transmit and adapt this work as long as you give full attribution, don't use the work for commercial purposes and share your resulting work similarly. For more information, visit www.ag.ndsu.edu/agcomm/creative-commons.

For more information on this and other topics, see www.ag.ndsu.edu

County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. North Dakota State University does not discriminate on the basis of age, color, disability, gender expression/identity, genetic information, marital status, national origin, public assistance status, race, religion, sex, sexual orientation, or status as a U.S. veteran. Direct inquiries to the Vice President for Equity, Diversity and Global Outreach, 205 Old Main, (701) 231-7708. This publication will be made available in alternative formats for people with disabilities upon request, (701) 231-7881. ???-12-14