

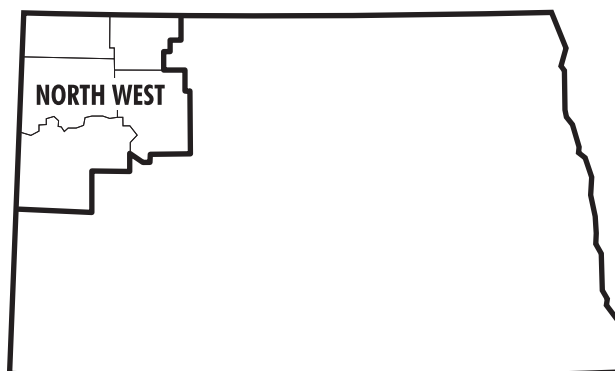
Farm Management Planning Guide



December 2008

Projected 2009 Crop Budgets North West North Dakota

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The 2009 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 2009 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.

NDSU

Extension Service

North Dakota State University, Fargo, ND 58105

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.

Direct and counter-cyclical payments under the Farm Bill are 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 are \$7.50 per acre when averaged over all crop acreage. Counter-cyclical payments, which occur if the national average price of program crops are below a certain level, are not 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.

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 2001-2007, after the low and high yield years are removed. Yields for safflower, yellow mustard, buckwheat, millet, rye, lentils 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 - 47 lb
 Phosphorus - 6 ppm
 Potassium - 328 ppm

Fertilizer prices:

Nitrogen - .54/lb
 Phosphorus - .66/lb
 Potassium - .70/lb

Seed Prices:

Spring Wheat 9.40/bu
 Durum 10.25/bu
 Barley 7.60/bu
 Corn grain RR 2.03/thou.kern.
 Oil Sunflower 1.07/thou.kern.
 Canola 7.90/lb
 Flax 14.00/bu
 Field Peas 11.00/bu
 Oats 4.40/bu
 Lentils .38/lb
 Mustard 1.25/lb
 Safflower .50/lb
 Buckwheat .50/lb
 Millet .20/lb
 Large Chickpeas .65/lb
 Winter Wheat 8.75/bu
 Rye 5.50/bu

Fuel prices:

Diesel 2.10/gal
 Gas 1.90/gal

Lubrication charge: 15% of fuel cost

Crop Insurance: Coverage levels are 70% on all insurable crops. MPCl estimates are used, except for RA-HPO on all wheat, soybeans and canola.

Miscellaneous: soil testing, machinery rent and custom work.

Operating Interest: Direct costs charged 5.50% 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, \$2 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	28		28	
Market Price	5.83		7.12*	
MARKET INCOME	163.24		199.36	
DIRECT COSTS				
-Seed	11.75		15.38	
-Herbicides	20.00		20.00	
-Fungicides**	1.50		1.50	
-Insecticides***	0.00		0.00	
-Fertilizer	39.83		39.83	
-Crop Insurance	10.00		10.80	
-Fuel & Lubrication	7.86		7.86	
-Repairs	10.72		10.72	
-Drying	0.00		0.00	
-Miscellaneous	6.00		6.00	
-Operating Interest	2.96		3.08	
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	110.62		115.17	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	4.36		4.36	
-Machinery Depreciation	12.91		12.91	
-Machinery Investment	7.05		7.05	
-Land Taxes	0.00		0.00	
-Land Investment	30.60		30.60	
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	54.92		54.92	
SUM OF ALL LISTED COSTS	165.55		170.09	
RETURN TO LABOR & MANAGEMENT	(2.31)		29.27	
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	3.95		4.11	
-Indirect Costs	1.96		1.96	
-Total Costs	5.91		6.07	

Wheat notes:

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

**Early season foliar fungicide would cost about \$3-\$4.50 and late season fungicide would cost about \$6-\$12 per acre, plus application. Trials consistently show yield response of 5-10% with early season fungicide, IF wheat planted into residue, and 15-20% with late application IF weather favors disease development.

***Orange wheat blossom midge insecticide would cost about \$5 per acre plus application.

Malting Barley

Corn Grain

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	48		69	
Market Price	4.33*		3.71	
MARKET INCOME	207.84		255.99	
DIRECT COSTS				
-Seed	9.50		38.57*	
-Herbicides	16.50		17.00	
-Fungicides	1.50		0.00	
-Insecticides	0.00		0.00	
-Fertilizer	45.14		58.56	
-Crop Insurance	6.70		0.00**	
-Fuel & Lubrication	9.36		9.96	
-Repairs	11.82		12.71	
-Drying	0.00		13.80	
-Miscellaneous	6.00		6.00	
-Operating Interest	2.93		4.31	
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	109.45		160.90	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	4.93		5.63	
-Machinery Depreciation	14.74		18.73	
-Machinery Investment	8.37		10.21	
-Land Taxes	0.00		0.00	
-Land Investment	30.60		30.60	
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	58.64		65.16	
SUM OF ALL LISTED COSTS	168.09		226.06	
RETURN TO LABOR & MANAGEMENT	39.75		29.93	
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	2.28		2.33	
-Indirect Costs	1.22		0.94	
-Total Costs	3.50		3.28	

Barley notes:

*On average, about 35% of production is feed quality. Use \$2.89 estimate for feed barley price.

Corn notes:

*Roundup (glyphosate) resistant corn. Cost includes insecticide seed treatment for wireworm, rootworm, white grub and suppression of cutworm.

**Crop insurance only available by written agreement.

Oil Sunflower

Canola

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1240		1300	
Market Price	0.149		0.156	
MARKET INCOME	184.76		202.80	
DIRECT COSTS				
-Seed	25.15*		39.50*	
-Herbicides	27.50		18.00	
-Fungicides	0.00		0.00	
-Insecticides	6.00**		0.00	
-Fertilizer	33.15		64.67**	
-Crop Insurance	14.80		10.90	
-Fuel & Lubrication	8.43		8.62	
-Repairs	11.51		11.43	
-Drying	2.48		0.00	
-Miscellaneous	11.75		6.00	
-Operating Interest	3.87		4.38	
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	144.63		163.49	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	4.89		4.61	
-Machinery Depreciation	15.26		14.01	
-Machinery Investment	8.51		8.00	
-Land Taxes	0.00		0.00	
-Land Investment	30.60		30.60	
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	59.26		57.23	
SUM OF ALL LISTED COSTS	203.89		220.72	
RETURN TO LABOR & MANAGEMENT	(19.13)		(17.92)	
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.12		0.13	
-Indirect Costs	0.05		0.04	
-Total Costs	0.16		0.17	

Oil Sunflower notes:

*Solid seeded. Cost includes seed treatment for control of wireworm and flea beetle, \$6.

**One spraying for head feeding insects (red seed weevil, lygus bug and banded moths). Custom application cost of \$5.75 is under "Miscellaneous."

Canola notes:

*Cost includes insecticide seed treatment for flea beetles, \$6.

**Fertilizer cost includes 20 lbs sulfur.

Flax

Field Peas

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	17		30	
Market Price	7.47		6.48*	
MARKET INCOME	126.99		194.40	
DIRECT COSTS				
-Seed	8.40		33.00	
-Herbicides	25.50*		25.90	
-Fungicides	0.00		0.00	
-Insecticides	0.00		0.00	
-Fertilizer	21.10		16.22	
-Crop Insurance	8.30		8.20	
-Fuel & Lubrication	8.08		9.57	
-Repairs	11.34		12.82	
-Drying	0.00		0.00	
-Miscellaneous	1.50		6.25	
-Operating Interest	2.32		3.08	
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	86.53		115.03	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	4.44		4.81	
-Machinery Depreciation	13.28		15.69	
-Machinery Investment	7.63		8.50	
-Land Taxes	0.00		0.00	
-Land Investment	30.60		30.60	
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	55.94		59.61	
SUM OF ALL LISTED COSTS	142.47		174.64	
RETURN TO LABOR & MANAGEMENT	(15.48)		19.76	
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	5.09		3.83	
-Indirect Costs	3.29		1.99	
-Total Costs	8.38		5.82	

Flax notes:

*Includes pre-harvest dessicant on one-half of acres.

Field Pea notes:

*Food quality price. Use \$3.75 price estimate for feed quality peas.

Oats

Lentils

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	55		1300	
Market Price	2.32		0.24	
MARKET INCOME	127.60		312.00	
DIRECT COSTS				
-Seed	8.80		26.60	
-Herbicides	9.00		31.00*	
-Fungicides	0.00		0.00	
-Insecticides	0.00		0.00	
-Fertilizer	43.59		11.71	
-Crop Insurance	9.80		15.90	
-Fuel & Lubrication	9.58		9.56	
-Repairs	11.94		13.22	
-Drying	0.00		0.00	
-Miscellaneous	6.00		6.25	
-Operating Interest	2.71		3.14	
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	101.42		117.38	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	5.02		4.79	
-Machinery Depreciation	14.96		15.86	
-Machinery Investment	8.48		8.68	
-Land Taxes	0.00		0.00	
-Land Investment	30.60		30.60	
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	59.06		59.94	
SUM OF ALL LISTED COSTS	160.49		177.32	
RETURN TO LABOR & MANAGEMENT	(32.89)		134.68	
LISTED COSTS PER BUDGET UNIT	(bu):		(lb):	
-Direct Costs	1.84		0.09	
-Indirect Costs	1.07		0.05	
-Total Costs	2.92		0.14	

Lentil notes:

*Includes pre-harvest dessicant.

Yellow Mustard

Safflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	900	_____	950	_____
Market Price	0.298	_____	0.190	_____
MARKET INCOME	268.20	_____	180.50	_____
DIRECT COSTS				
-Seed	12.50	_____	12.50	_____
-Herbicides	17.00	_____	18.10	_____
-Fungicides	0.00	_____	0.00*	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	33.29	_____	21.66	_____
-Crop Insurance	9.90	_____	17.60	_____
-Fuel & Lubrication	8.80	_____	7.77	_____
-Repairs	11.83	_____	10.67	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.00	_____	6.00	_____
-Operating Interest	2.73	_____	2.59	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	102.05	_____	96.89	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	4.68	_____	4.32	_____
-Machinery Depreciation	14.24	_____	12.82	_____
-Machinery Investment	8.47	_____	7.01	_____
-Land Taxes	0.00	_____	0.00	_____
-Land Investment	30.60	_____	30.60	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	57.99	_____	54.74	_____
SUM OF ALL LISTED COSTS	160.04	_____	151.63	_____
RETURN TO LABOR & MANAGEMENT	108.16	_____	28.87	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.11	_____	0.10	_____
-Indirect Costs	0.06	_____	0.06	_____
-Total Costs	0.18	_____	0.16	_____

Safflower notes:

*Fungicide for aternaria leaf spot would cost \$17 plus application.

Buckwheat

Millet

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	850	_____	1300	_____
Market Price	0.191	_____	0.065	_____
MARKET INCOME	162.35	_____	84.50	_____
DIRECT COSTS				
-Seed	25.00	_____	5.00	_____
-Herbicides	16.00	_____	9.00	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	14.46	_____	18.27	_____
-Crop Insurance	0.00	_____	0.00	_____
-Fuel & Lubrication	8.46	_____	8.68	_____
-Repairs	11.34	_____	11.46	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	6.00	_____
-Operating Interest	2.11	_____	1.61	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	78.87	_____	60.02	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	4.54	_____	4.63	_____
-Machinery Depreciation	13.84	_____	14.06	_____
-Machinery Investment	7.92	_____	8.03	_____
-Land Taxes	0.00	_____	0.00	_____
-Land Investment	30.60	_____	30.60	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	56.89	_____	57.32	_____
SUM OF ALL LISTED COSTS	135.76	_____	117.34	_____
RETURN TO LABOR & MANAGEMENT	26.59	_____	(32.84)	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.09	_____	0.05	_____
-Indirect Costs	0.07	_____	0.04	_____
-Total Costs	0.16	_____	0.09	_____

notes:

Large Chickpeas

Winter Wheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1100	_____	35*	_____
Market Price	0.29	_____	5.02	_____
MARKET INCOME	319.00	_____	175.70	_____
DIRECT COSTS				
-Seed	78.00	_____	8.75	_____
-Herbicides	28.80	_____	15.00	_____
-Fungicides	65.00*	_____	9.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	13.87	_____	56.14	_____
-Crop Insurance	11.10	_____	10.00	_____
-Fuel & Lubrication	9.96	_____	7.71	_____
-Repairs	14.23	_____	10.36	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	7.00	_____	6.00	_____
-Operating Interest	6.27	_____	3.38	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	234.23	_____	126.34	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	4.94	_____	4.30	_____
-Machinery Depreciation	16.61	_____	12.55	_____
-Machinery Investment	9.25	_____	6.65	_____
-Land Taxes	0.00	_____	0.00	_____
-Land Investment	30.60	_____	30.60	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	61.40	_____	54.10	_____
SUM OF ALL LISTED COSTS	295.63	_____	180.44	_____
RETURN TO LABOR & MANAGEMENT	23.37	_____	(4.74)	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.21	_____	3.61	_____
-Indirect Costs	0.06	_____	1.55	_____
-Total Costs	0.27	_____	5.16	_____

Large Chickpea notes:

*Three treatments of fungicides of different modes of action for ascochyta blight. Ascochyta has resistance to strobilurin fungicides in ND.

Winter Wheat notes:

*Yield is per harvested acre, 2001-2007 acreage abandonment averaged 8%.

Rye

	Per Acre	Your Figures
Market Yield	35	_____
Market Price	3.47	_____
MARKET INCOME	121.45	_____
DIRECT COSTS		
-Seed	6.60	_____
-Herbicides	7.00	_____
-Fungicides	0.00	_____
-Insecticides	0.00	_____
-Fertilizer	56.14	_____
-Crop Insurance	4.60	_____
-Fuel & Lubrication	7.83	_____
-Repairs	10.30	_____
-Drying	0.00	_____
-Miscellaneous	6.00	_____
-Operating Interest	2.71	_____
	=====	=====
SUM OF LISTED DIRECT COSTS	101.17	_____
INDIRECT (FIXED) COSTS		
-Misc. Overhead	4.36	_____
-Machinery Depreciation	12.70	_____
-Machinery Investment	6.85	_____
-Land Taxes	0.00	_____
-Land Investment	30.60	_____
	=====	=====
SUM OF LISTED INDIRECT COSTS	54.51	_____
SUM OF ALL LISTED COSTS	155.69	_____
RETURN TO LABOR & MANAGEMENT	(34.24)	_____
LISTED COSTS PER BUDGET UNIT	(bu):	
-Direct Costs	2.89	_____
-Indirect Costs	1.56	_____
-Total Costs	4.45	_____

notes:

2009 Machinery List

Machine	Purch. Price	Annual Use	Years to trade	Trade in	Deprec.	Invest.	Repairs	Ac/hr
2WD 100HP Tractor	59900	400 hr	20	19314	5.07 /hr	4.46 /hr	6.10 /hr	
2WD 160HP Tractor	98600	500 hr	15	29193	9.25 /hr	5.75 /hr	10.05 /hr	
4WD 280HP Tractor	144600	500 hr	15	42789	13.57 /hr	7.43 /hr	8.41 /hr	
SP Combine (base unit)	184200	250 hr	12	45827	46.12 /hr	20.70 /hr	29.91 /hr	
Tandem Truck (used)	31000	150 hr	15	10300	9.20 /hr	6.20 /hr	6.33 /hr	
Semi & Trailer (used)	37000	150 hr	10	10600	17.60 /hr	7.14 /hr	7.87 /hr	
Pick-up Truck	21500	300 hr	10	4400	5.70 /hr	1.94 /hr	2.93 /hr	
Swather 25 ft	19700	1000 ac	20	4674	0.75 /ac	0.55 /ac	0.34 /ac	12.1
Sprayer 90 ft	30600	5000 ac	10	13828	0.35 /ac	0.25 /ac	0.39 /ac	42.5
Heavy Harrow 70 ft	25000	2000 ac	20	14581	0.26 /ac	0.45 /ac	0.28 /ac	39.7
Air Seeder 35 ft	93400	2200 ac	10	44034	2.29 /ac	1.72 /ac	3.70 /ac	14.8
Planter 12-30	45900	800 ac	20	15256	1.92 /ac	1.72 /ac	2.53 /ac	10.6
Corn head 6-30	28800	400 ac	20	2852	3.26 /ac	1.79 /ac	0.80 /ac	5.7
Grain head w/ptu	12600	800 ac	15	2611	0.83 /ac	0.43 /ac	0.24 /ac	8.5
Grain str. cut 25 ft	17000	1600 ac	8	6819	0.80 /ac	0.33 /ac	0.31 /ac	8.5
Head w/sunf pans 25 ft	21200	400 ac	20	2235	2.37 /ac	1.32 /ac	0.39 /ac	8.5
Rock picker	18000	50 hr	20	5730	0.41 /ac	0.36 /ac	0.27 /ac	29.1
Grain auger	7800	50 hr	20	590	7.21 /hr	3.78 /hr	4.00 /hr	

Example Sequence of Operations

Field operations sequence for spring wheat and durum

OP. NO.	DESCRIPTION	(FEET) WIDTH	(MPH) SPEED	(AC/HR) Fld Cap	(\$/AC) FUEL & LUBE	(\$/AC) EST. REPAIRS
1	Pick Rocks				0.37	0.48
2	Spray (burn-down)	90	6.0	42.5	0.25	0.53
3	Plant	35	5.0	14.8	2.00	4.27
4	Spray	90	6.0	42.5	0.25	0.53
5	Combine	25	4.0	8.5	2.88	3.84
	Trucks*				0.87	0.46
	Grain auger (pto)				0.15	0.08
	Pickup truck allocation				1.10	0.53
Total					7.86	10.72

* Truck costs will vary between crops.

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

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