

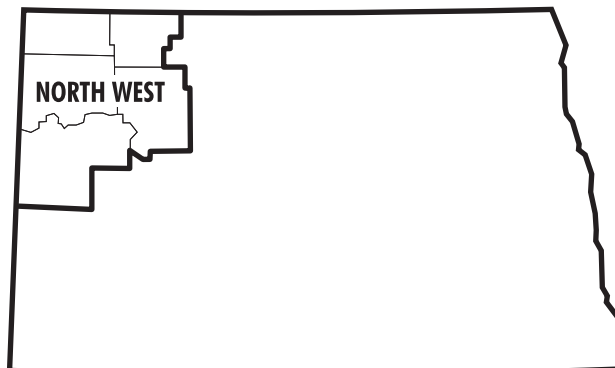
Farm Management Planning Guide



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Projected 2008 Crop Budgets North West North Dakota

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The 2008 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, or rental, expense of machinery and land, and real estate tax if land is owned, respectively.

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 2008 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.

The 2002 farm bill has expired and a new farm bill had not yet passed at the time of this publication. Projected crop prices are higher than average and no government payments, coupled to 2008 production, are expected.

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 and North West regions 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 2000-2006, 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 - 40 lb
 Phosphorus - 6 ppm
 Potassium - 328 ppm

Fertilizer prices:

Nitrogen - .44/lb
 Phosphorus - .40/lb
 Potassium - .29/lb

Seed Prices:

Spring Wheat 11.25/bu
 Durum 19.50/bu
 Barley 8.50/bu
 Corn grain RR 1.60/thou.kern.
 Oil Sunflower .72/thou.kern.
 Flax 16.50/bu
 Canola 3.65/lb
 Oats 5.00/bu
 Field Peas 10.50/bu
 Millet .24/lb
 Buckwheat .33/lb
 Safflower .47/lb
 Lentils .34/lb
 Mustard .88/lb
 Large Chickpeas .65/lb
 Rye 4.50/bu
 Winter Wheat 10.00/bu

Fuel prices:

Diesel 2.90/gal
 Gas 3.10/gal

Lubrication charge: 15% of fuel cost

Crop Insurance: Coverage levels are 70% on all insurable crops. MPCI 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 7.50% 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, \$1 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	5.98	_____	6.88	_____
MARKET INCOME	167.44	_____	192.64	_____
DIRECT COSTS				
-Seed	14.06	_____	29.25	_____
-Herbicides	14.95	_____	14.95	_____
-Fungicides*	1.50	_____	1.50	_____
-Insecticides**	0.00	_____	0.00	_____
-Fertilizer	32.18	_____	32.18	_____
-Crop Insurance	9.80	_____	10.70	_____
-Fuel & Lubrication	11.13	_____	11.13	_____
-Repairs	9.36	_____	9.36	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.00	_____	6.00	_____
-Operating Interest	3.71	_____	4.32	_____
SUM OF LISTED DIRECT COSTS	102.70	=====	119.39	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.04	_____	3.04	_____
-Machinery Depreciation	11.31	_____	11.31	_____
-Machinery Investment	6.02	_____	6.02	_____
-Land Charge	28.00	_____	28.00	_____
SUM OF LISTED INDIRECT COSTS	48.37	=====	48.37	=====
SUM OF ALL LISTED COSTS	151.07	_____	167.76	_____
RETURN TO LABOR & MANAGEMENT	16.37	_____	24.88	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	3.67	_____	4.26	_____
-Indirect Costs	1.73	_____	1.73	_____
-Total Costs	5.40	_____	5.99	_____

notes:

*Early season foliar fungicide would cost about \$3-\$4 and late season fungicide would cost about \$6 or \$12 per acre, depending on product availability, 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	47	_____	66	_____
Market Price	5.05*	_____	3.44	_____
MARKET INCOME	237.35	_____	227.04	_____
DIRECT COSTS				
-Seed	10.63	_____	30.40*	_____
-Herbicides	14.35	_____	11.75	_____
-Fungicides	1.25	_____	0.00	_____
-Insecticides	0.00	_____	3.80**	_____
-Fertilizer	34.58	_____	42.67	_____
-Crop Insurance	5.00	_____	0.00***	_____
-Fuel & Lubrication	13.16	_____	14.25	_____
-Repairs	10.35	_____	11.67	_____
-Drying	0.00	_____	9.31	_____
-Miscellaneous	6.00	_____	6.00	_____
-Operating Interest	3.57	_____	4.87	_____
SUM OF LISTED DIRECT COSTS	98.89	=====	134.71	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.56	_____	4.34	_____
-Machinery Depreciation	12.98	_____	17.11	_____
-Machinery Investment	7.23	_____	9.40	_____
-Land Charge	28.00	_____	28.00	_____
SUM OF LISTED INDIRECT COSTS	51.77	=====	58.85	=====
SUM OF ALL LISTED COSTS	150.65	_____	193.56	_____
RETURN TO LABOR & MANAGEMENT	86.70	_____	33.48	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	2.10	_____	2.04	_____
-Indirect Costs	1.10	_____	0.89	_____
-Total Costs	3.21	_____	2.93	_____

Barley notes:

*On average, about 35% of production is feed quality. Use \$3.51 estimate for feed barley price.

Corn notes:

*Roundup (glyphosate) resistant corn.

**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	1250	_____	1340	_____
Market Price	0.19	_____	0.199	_____
MARKET INCOME	237.50	_____	266.66	_____
DIRECT COSTS				
-Seed	16.92	_____	18.25	_____
-Herbicides	24.25	_____	21.75	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	12.00*	_____	6.00*	_____
-Fertilizer	27.32	_____	53.41**	_____
-Crop Insurance	13.20	_____	12.20	_____
-Fuel & Lubrication	11.93	_____	12.21	_____
-Repairs	10.07	_____	10.02	_____
-Drying	2.50	_____	0.00	_____
-Miscellaneous	11.75	_____	6.00	_____
-Operating Interest	4.87	_____	5.24	_____
SUM OF LISTED DIRECT COSTS	134.81	=====	145.08	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.53	_____	3.28	_____
-Machinery Depreciation	13.44	_____	12.31	_____
-Machinery Investment	7.34	_____	6.89	_____
-Land Charge	28.00	_____	28.00	_____
SUM OF LISTED INDIRECT COSTS	52.31	=====	50.48	=====
SUM OF ALL LISTED COSTS	187.12	_____	195.56	_____
RETURN TO LABOR & MANAGEMENT	50.38	_____	71.10	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.11	_____	0.11	_____
-Indirect Costs	0.04	_____	0.04	_____
-Total Costs	0.15	_____	0.15	_____

Oil Sunflower notes:

*Includes seed treatment for control of wireworm and flea beetle, \$6, and one spraying for head feeding insects (red seed weevil, lygus bug and banded moths) at about \$6 per acre. Custom application cost of \$5.75 is under "Miscellaneous."

Canola notes:

*Insecticide seed treatment for flea beetles.

**Fertilizer cost includes 20 lbs sulfur.

Flax

Field Peas

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	18	_____	30	_____
Market Price	10.01	_____	6.18*	_____
MARKET INCOME	180.18	_____	185.40	_____
DIRECT COSTS				
-Seed	9.90	_____	31.50	_____
-Herbicides	22.23	_____	21.75	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	20.14	_____	9.83	_____
-Crop Insurance	6.20	_____	5.20	_____
-Fuel & Lubrication	11.64	_____	13.49	_____
-Repairs	10.18	_____	11.22	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.00	_____	6.00	_____
-Operating Interest	3.24	_____	3.71	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	89.53	_____	102.70	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.16	_____	3.45	_____
-Machinery Depreciation	11.84	_____	13.76	_____
-Machinery Investment	6.70	_____	7.31	_____
-Land Charge	28.00	_____	28.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	49.70	_____	52.52	_____
SUM OF ALL LISTED COSTS	139.23	_____	155.21	_____
RETURN TO LABOR & MANAGEMENT	40.95	_____	30.19	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	4.97	_____	3.42	_____
-Indirect Costs	2.76	_____	1.75	_____
-Total Costs	7.73	_____	5.17	_____

Field Pea notes:

*Food quality price. Use \$4.50 price estimate for feed quality peas.

Oats

Lentils

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	55	_____	1350	_____
Market Price	2.27	_____	0.20	_____
MARKET INCOME	124.85	_____	270.00	_____
DIRECT COSTS				
-Seed	10.00	_____	23.80	_____
-Herbicides	5.13	_____	24.50	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	34.68	_____	7.37	_____
-Crop Insurance	9.00	_____	9.70	_____
-Fuel & Lubrication	13.50	_____	13.51	_____
-Repairs	10.47	_____	11.59	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.00	_____	6.00	_____
-Operating Interest	3.33	_____	3.62	_____
SUM OF LISTED DIRECT COSTS	92.11	=====	100.09	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.67	_____	3.43	_____
-Machinery Depreciation	13.22	_____	13.92	_____
-Machinery Investment	7.35	_____	7.48	_____
-Land Charge	28.00	_____	28.00	_____
SUM OF LISTED INDIRECT COSTS	52.24	=====	52.82	=====
SUM OF ALL LISTED COSTS	144.35	_____	152.91	_____
RETURN TO LABOR & MANAGEMENT	(19.50)	_____	117.09	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(lb):	
-Direct Costs	1.67	_____	0.07	_____
-Indirect Costs	0.95	_____	0.04	_____
-Total Costs	2.62	_____	0.11	_____

notes:

Safflower

Yellow Mustard

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	950	_____	900	_____
Market Price	0.20	_____	0.268	_____
MARKET INCOME	190.00	_____	241.20	_____
DIRECT COSTS				
-Seed	11.75	_____	8.80	_____
-Herbicides	15.25	_____	12.25	_____
-Fungicides	0.10*	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	17.87	_____	26.53	_____
-Crop Insurance	13.60	_____	3.50	_____
-Fuel & Lubrication	11.01	_____	11.83	_____
-Repairs	9.31	_____	9.88	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.00	_____	1.50	_____
-Operating Interest	3.18	_____	2.79	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	88.07	_____	77.09	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.00	_____	3.16	_____
-Machinery Depreciation	11.22	_____	12.03	_____
-Machinery Investment	5.98	_____	6.75	_____
-Land Charge	28.00	_____	28.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	48.20	_____	49.94	_____
SUM OF ALL LISTED COSTS	136.27	_____	127.03	_____
RETURN TO LABOR & MANAGEMENT	53.73	_____	114.17	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.09	_____	0.09	_____
-Indirect Costs	0.05	_____	0.06	_____
-Total Costs	0.14	_____	0.14	_____

Safflower notes:

*Fungicide for alternaria 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	_____	0.087	_____
MARKET INCOME	162.35	_____	113.10	_____
DIRECT COSTS				
-Seed	16.50	_____	6.00	_____
-Herbicides	12.00	_____	4.75	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	12.25	_____	15.52	_____
-Crop Insurance	0.00	_____	0.00	_____
-Fuel & Lubrication	11.96	_____	12.26	_____
-Repairs	9.93	_____	10.03	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	6.00	_____
-Operating Interest	2.41	_____	2.05	_____
SUM OF LISTED DIRECT COSTS	66.54	=====	56.61	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.20	_____	3.29	_____
-Machinery Depreciation	12.12	_____	12.33	_____
-Machinery Investment	6.79	_____	6.90	_____
-Land Charge	28.00	_____	28.00	_____
SUM OF LISTED INDIRECT COSTS	50.11	=====	50.53	=====
SUM OF ALL LISTED COSTS	116.65	_____	107.14	_____
RETURN TO LABOR & MANAGEMENT	45.70	_____	5.96	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.08	_____	0.04	_____
-Indirect Costs	0.06	_____	0.04	_____
-Total Costs	0.14	_____	0.08	_____

notes:

Large Chickpeas Winter Wheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1100		35*	
Market Price	0.27		5.45	
MARKET INCOME	297.00		190.75	
DIRECT COSTS				
-Seed	78.00		10.00	
-Herbicides	21.25		10.70	
-Fungicides	50.00*		6.00	
-Insecticides	0.00		0.00	
-Fertilizer	8.41		44.63	
-Crop Insurance	11.10		9.80	
-Fuel & Lubrication	14.02		10.93	
-Repairs	12.49		9.03	
-Drying	0.00		0.00	
-Miscellaneous	7.00		6.00	
-Operating Interest	7.59		4.02	
SUM OF LISTED DIRECT COSTS	209.85		111.10	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.55		3.00	
-Machinery Depreciation	14.56		11.00	
-Machinery Investment	7.97		5.67	
-Land Charge	28.00		28.00	
SUM OF LISTED INDIRECT COSTS	54.07		47.67	
SUM OF ALL LISTED COSTS	263.93		158.77	
RETURN TO LABOR & MANAGEMENT	33.07		31.98	
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.19		3.17	
-Indirect Costs	0.05		1.36	
-Total Costs	0.24		4.54	

Large Chickpea notes:

*Three treatments of fungicide for ascochyta blight. More treatment may be necessary. Two different chemistries should be used for fungicide resistance management.

Winter Wheat notes:

*Yield is per harvested acre, 2000-2006 acreage abandonment averaged 8%.

Rye

	Per Acre	Your Figures
Market Yield	35	
Market Price	2.54	
MARKET INCOME	88.90	
DIRECT COSTS		
-Seed	5.40	
-Herbicides	3.25	
-Fungicides	0.00	
-Insecticides	0.00	
-Fertilizer	44.63	
-Crop Insurance	4.60	
-Fuel & Lubrication	11.09	
-Repairs	8.98	
-Drying	0.00	
-Miscellaneous	6.00	
-Operating Interest	3.15	
	=====	=====
SUM OF LISTED DIRECT COSTS	87.09	
INDIRECT (FIXED) COSTS		
-Misc. Overhead	3.05	
-Machinery Depreciation	11.14	
-Machinery Investment	5.85	
-Land Charge	28.00	
	=====	=====
SUM OF LISTED INDIRECT COSTS	48.04	
SUM OF ALL LISTED COSTS	135.13	
RETURN TO LABOR & MANAGEMENT	(46.23)	
LISTED COSTS PER BUDGET UNIT	(bu):	
-Direct Costs	2.49	
-Indirect Costs	1.37	
-Total Costs	3.86	

notes:

2008 Machinery List

Machine	Purch. Price	Annual Use	Years to trade	Trade in	Deprec.	Invest.	Repairs	Ac/hr
2WD 100HP Tractor	55500	400 hr	20	17877	4.70 /hr	4.13 /hr	5.65 /hr	
2WD 160HP Tractor	91300	500 hr	15	27021	8.57 /hr	5.32 /hr	9.30 /hr	
4WD 280HP Tractor	125700	500 hr	15	37199	11.80 /hr	7.33 /hr	7.31 /hr	
SP Combine (base unit)	160200	250 hr	12	39855	40.12 /hr	18.00 /hr	26.01 /hr	
Tandem Truck (used)	31000	150 hr	15	10300	9.20 /hr	6.20 /hr	5.73 /hr	
Semi & Trailer (used)	36000	150 hr	10	10300	17.13 /hr	6.95 /hr	7.13 /hr	
Pick-up Truck	20900	300 hr	10	4300	5.53 /hr	1.89 /hr	2.67 /hr	
Swather 25 ft	17500	1000 ac	20	4150	0.67 /ac	0.49 /ac	0.31 /ac	12.1
Sprayer 90 ft	27200	5000 ac	10	13529	0.27 /ac	0.18 /ac	0.35 /ac	42.5
Heavy Harrow 70 ft	23100	2000 ac	20	13512	0.24 /ac	0.41 /ac	0.26 /ac	39.7
Air Seeder 35 ft	81200	2200 ac	10	41500	1.80 /ac	1.25 /ac	3.22 /ac	14.8
Planter 12-30	40800	800 ac	20	13586	1.70 /ac	1.53 /ac	2.26 /ac	10.6
Corn head 6-30	25600	400 ac	20	2532	2.90 /ac	1.59 /ac	0.71 /ac	5.7
Grain head w/pu	11200	800 ac	15	2333	0.74 /ac	0.38 /ac	0.21 /ac	8.5
Grain str. cut 25 ft	15100	1600 ac	8	6058	0.71 /ac	0.30 /ac	0.28 /ac	8.5
Head w/sunf pans 25 ft	18800	400 ac	20	1983	2.10 /ac	1.17 /ac	0.35 /ac	8.5
Rock picker	16000	50 hr	20	5103	0.36 /ac	0.32 /ac	0.24 /ac	29.1
Grain auger	6900	50 hr	20	530	6.37 /hr	3.34 /hr	0.68 /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				0.50	0.43
2	Spray (burn-down)	90	6.0	42.5	0.34	0.48
3	Plant	35	5.0	14.8	2.77	3.71
4	Spray	90	6.0	42.5	0.34	0.48
5	Combine str. cut	25	4.0	8.5	3.98	3.34
	Trucks*				1.20	0.43
	Grain auger (pto)				0.20	0.01
	Pickup truck allocation				1.80	0.48
	Total				11.13	9.36

* Truck costs will vary between crops.

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