

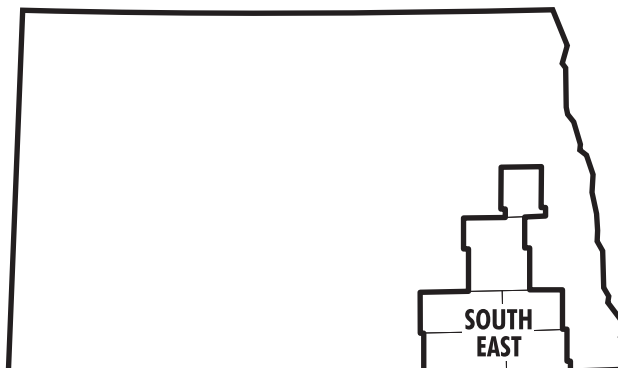
Farm Management Planning Guide



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Projected 2011 Crop Budgets South East North Dakota

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Note: This region consists of six counties: Barnes, Dickey, LaMoure, Ransom, Sargent and Steele.

The 2011 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 2011 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
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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 \$11.25 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.

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 2003-2009, 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 - 30 lb
 Phosphorus - 10 ppm
 Potassium - 248 ppm

Fertilizer prices:

Nitrogen - .48/lb
 Phosphorus - .56/lb
 Potassium - .46/lb

Seed Prices:

Spring Wheat 11.00/bu
 Durum 10.50/bu
 Barley 7.50/bu
 Corn Triple Trait GM 2.80/thous.kern
 Corn grain RR 2.15/thou.kern.
 Soybean RR .295/thou.kern.
 Dry Beans .78/lb
 Oil Sunflower 1.30/thou.kern.
 Conf. Sunflower 2.20/thou.kern.
 Canola 8.50/lb
 Flax 17.50/bu
 Field Peas 10.50/bu
 Oats 5.75/bu
 Buckwheat .54/lb
 Millet .26/lb
 Winter Wheat 9.50/bu

Fuel prices:

Diesel 3.00/gal
 Gas 3.00/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, corn, soybeans, canola and sunflowers.

Miscellaneous: soil testing, machinery rent and custom work.

Operating Interest: Direct costs charged 5.00% 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	48		39	
Market Price	7.24		7.49*	
MARKET INCOME	347.52		292.11	
DIRECT COSTS				
-Seed	19.25		21.00	
-Herbicides	19.00		19.00	
-Fungicides**	5.50		5.50	
-Insecticides***	0.00		0.00	
-Fertilizer	74.49		57.83	
-Crop Insurance	13.20		10.30	
-Fuel & Lubrication	17.58		16.97	
-Repairs	15.57		15.35	
-Drying	0.00		0.00	
-Miscellaneous	1.50		1.50	
-Operating Interest	4.15		3.69	
SUM OF LISTED DIRECT COSTS	170.24		151.14	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.54		6.40	
-Machinery Depreciation	17.66		17.27	
-Machinery Investment	10.35		10.14	
-Land Charge	68.90		68.90	
SUM OF LISTED INDIRECT COSTS	103.45		102.70	
SUM OF ALL LISTED COSTS	273.70		253.84	
RETURN TO LABOR & MANAGEMENT	73.82		38.27	
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	3.55		3.88	
-Indirect Costs	2.16		2.63	
-Total Costs	5.70		6.51	

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, which may not be warranted with good rotations, (\$3-\$4.50). Late season fungicide, often warranted in this region, would cost \$4-\$14, 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.

***Cereal grain aphid insecticide would cost about \$6 per acre plus application.

Malting Barley

Corn Grain

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	65	_____	124	_____
Market Price	4.87*	_____	4.37	_____
MARKET INCOME	316.55	_____	541.88	_____
DIRECT COSTS				
-Seed	15.00	_____	81.43*	_____
-Herbicides	16.00	_____	18.00	_____
-Fungicides	1.50	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	59.93	_____	101.92	_____
-Crop Insurance	7.40	_____	26.40	_____
-Fuel & Lubrication	20.13	_____	26.97	_____
-Repairs	16.82	_____	19.19	_____
-Drying	0.00	_____	24.80	_____
-Miscellaneous	1.50	_____	1.50	_____
-Operating Interest	3.46	_____	7.51	_____
SUM OF LISTED DIRECT COSTS	141.73	=====	307.73	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.12	_____	8.89	_____
-Machinery Depreciation	19.77	_____	27.61	_____
-Machinery Investment	11.77	_____	16.13	_____
-Land Charge	68.90	_____	68.90	_____
SUM OF LISTED INDIRECT COSTS	107.57	=====	121.53	=====
SUM OF ALL LISTED COSTS	249.30	_____	429.26	_____
RETURN TO LABOR & MANAGEMENT	67.25	_____	112.62	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	2.18	_____	2.48	_____
-Indirect Costs	1.65	_____	0.98	_____
-Total Costs	3.84	_____	3.46	_____

Barley notes:

*Use \$3.63 estimate for feed barley price.

Corn notes:

*Triple GM trait corn is planted on 80 percent of acres and RR corn without Bt Trait is on 20 percent of acres for corn borer refuge. 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	_____	1550	_____
Market Price	11.58	_____	0.245	_____
MARKET INCOME	382.14	_____	379.75	_____
DIRECT COSTS				
-Seed	51.63*	_____	39.00	_____
-Herbicides	18.00	_____	36.00**	_____
-Fungicides	0.00	_____	18.00***	_____
-Insecticides	7.00**	_____	0.00	_____
-Fertilizer	3.60	_____	44.26	_____
-Crop Insurance	13.60	_____	15.00	_____
-Fuel & Lubrication	15.24	_____	20.73	_____
-Repairs	15.31	_____	18.27	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	6.50	_____	4.50	_____
-Operating Interest	3.27	_____	4.89	_____
SUM OF LISTED DIRECT COSTS	134.15	=====	200.66	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.37	_____	7.17	_____
-Machinery Depreciation	17.51	_____	22.32	_____
-Machinery Investment	10.23	_____	13.11	_____
-Land Charge	68.90	_____	68.90	_____
SUM OF LISTED INDIRECT COSTS	103.01	=====	111.50	=====
SUM OF ALL LISTED COSTS	237.16	_____	312.15	_____
RETURN TO LABOR & MANAGEMENT	144.98	_____	67.60	_____
LISTED COSTS PER BUDGET UNIT	(bu):		(lb):	
-Direct Costs	4.07	_____	0.13	_____
-Indirect Costs	3.12	_____	0.07	_____
-Total Costs	7.19	_____	0.20	_____

Soybean notes:

*Roundup (glyphosate) resistant soybeans. Insecticide and fungicide seed treatment would cost about \$10 per acre.

**Soybean aphid and/or spider mite insecticide

Drybean notes:

*Acreage limitations exist under the farm bill. The general rule is drybean acres can not be planted on base acres. If farm or producer has drybean history, drybean can be planted on base acres but government payments on those acres will be forfeited.

**Includes desiccant prior to straight cutting.

***Fungicide for white mold.

Oil Sunflower

Confectionery Sunflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1530	_____	1350	_____
Market Price	0.202	_____	0.295	_____
MARKET INCOME	309.06	_____	398.25	_____
DIRECT COSTS				
-Seed	28.60*	_____	41.80*	_____
-Herbicides	24.00	_____	24.00	_____
-Fungicides	0.00**	_____	0.00**	_____
-Insecticides	6.00***	_____	12.00***	_____
-Fertilizer	42.80	_____	36.07	_____
-Crop Insurance	15.90	_____	19.20	_____
-Fuel & Lubrication	20.35	_____	19.97	_____
-Repairs	15.11	_____	14.98	_____
-Drying	3.06	_____	2.70	_____
-Miscellaneous	8.50	_____	15.50	_____
-Operating Interest	4.11	_____	4.66	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	168.44	_____	190.87	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.22	_____	7.13	_____
-Machinery Depreciation	20.52	_____	20.26	_____
-Machinery Investment	12.61	_____	12.48	_____
-Land Charge	68.90	_____	68.90	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	109.25	_____	108.77	_____
SUM OF ALL LISTED COSTS	277.69	_____	299.64	_____
RETURN TO LABOR & MANAGEMENT	31.37	_____	98.61	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(lb):	
-Direct Costs	0.11	_____	0.14	_____
-Indirect Costs	0.07	_____	0.08	_____
-Total Costs	0.18	_____	0.22	_____

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 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 \$6 per application. Each custom application cost of \$7 is under "Miscellaneous."

Canola

Flax

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1440	_____	19	_____
Market Price	0.216	_____	12.44	_____
MARKET INCOME	311.04	_____	236.36	_____
DIRECT COSTS				
-Seed	42.50*	_____	14.00	_____
-Herbicides	16.00	_____	18.00	_____
-Fungicides	0.00**	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	64.68	_____	27.25	_____
-Crop Insurance	12.10	_____	5.50	_____
-Fuel & Lubrication	17.60	_____	17.20	_____
-Repairs	15.91	_____	16.15	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	1.50	_____
-Operating Interest	4.26	_____	2.49	_____
SUM OF LISTED DIRECT COSTS	174.55	=====	102.10	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.51	_____	6.53	_____
-Machinery Depreciation	18.13	_____	18.07	_____
-Machinery Investment	10.89	_____	11.20	_____
-Land Charge	68.90	_____	68.90	_____
SUM OF LISTED INDIRECT COSTS	104.44	=====	104.71	=====
SUM OF ALL LISTED COSTS	278.99	_____	206.81	_____
RETURN TO LABOR & MANAGEMENT	32.05	_____	29.55	_____
LISTED COSTS PER BUDGET UNIT	(lb):		(bu):	
-Direct Costs	0.12	_____	5.37	_____
-Indirect Costs	0.07	_____	5.51	_____
-Total Costs	0.19	_____	10.88	_____

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	36		70	
Market Price	6.30*		2.86	
MARKET INCOME	226.80		200.20	
DIRECT COSTS				
-Seed	31.50		11.50	
-Herbicides	24.50		4.20	
-Fungicides	0.00		0.00	
-Insecticides	0.00		0.00	
-Fertilizer	9.59		54.31	
-Crop Insurance	7.30		7.70	
-Fuel & Lubrication	18.10		20.47	
-Repairs	17.06		16.94	
-Drying	0.00		0.00	
-Miscellaneous	8.00		1.50	
-Operating Interest	2.90		2.92	
SUM OF LISTED DIRECT COSTS	118.96		119.53	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.72		7.20	
-Machinery Depreciation	19.59		19.99	
-Machinery Investment	11.31		11.89	
-Land Charge	68.90		68.90	
SUM OF LISTED INDIRECT COSTS	106.52		107.99	
SUM OF ALL LISTED COSTS	225.48		227.52	
RETURN TO LABOR & MANAGEMENT	1.32		(27.32)	
LISTED COSTS PER BUDGET UNIT	(bu):		(bu):	
-Direct Costs	3.30		1.71	
-Indirect Costs	2.96		1.54	
-Total Costs	6.26		3.25	

Field Pea notes:

*Food quality price. Use \$3.50 price estimate for feed quality peas.

Buckwheat

Millet

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	950		1800	
Market Price	0.235		0.075	
MARKET INCOME	223.25		135.00	
DIRECT COSTS				
-Seed	27.00		6.50	
-Herbicides	10.50		2.70	
-Fungicides	0.00		0.00	
-Insecticides	0.00		0.00	
-Fertilizer	19.83		32.91	
-Crop Insurance	10.90		0.00	
-Fuel & Lubrication	15.25		18.18	
-Repairs	15.13		16.12	
-Drying	0.00		0.00	
-Miscellaneous	1.50		1.50	
-Operating Interest	2.50		1.95	
SUM OF LISTED DIRECT COSTS	102.62		79.85	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.17		6.66	
-Machinery Depreciation	16.70		18.50	
-Machinery Investment	9.92		11.10	
-Land Charge	68.90		68.90	
SUM OF LISTED INDIRECT COSTS	101.70		105.15	
SUM OF ALL LISTED COSTS	204.32		185.00	
RETURN TO LABOR & MANAGEMENT	18.93		(50.00)	
LISTED COSTS PER BUDGET UNIT				
	(lb):		(lb):	
-Direct Costs	0.11		0.04	
-Indirect Costs	0.11		0.06	
-Total Costs	0.22		0.10	

notes:

Winter Wheat

	Per Acre	Your Figures
Market Yield	56*	_____
Market Price	6.39	_____
MARKET INCOME	357.84	_____
DIRECT COSTS		
-Seed	11.40	_____
-Herbicides	17.80	_____
-Fungicides	9.00	_____
-Insecticides	0.00	_____
-Fertilizer	89.31	_____
-Crop Insurance	13.70	_____
-Fuel & Lubrication	15.93	_____
-Repairs	14.69	_____
-Drying	0.00	_____
-Miscellaneous	6.50	_____
-Operating Interest	4.46	_____
	=====	=====
SUM OF LISTED DIRECT COSTS	182.79	_____
INDIRECT (FIXED) COSTS		
-Misc. Overhead	6.33	_____
-Machinery Depreciation	16.79	_____
-Machinery Investment	9.42	_____
-Land Charge	68.90	_____
	=====	=====
SUM OF LISTED INDIRECT COSTS	101.44	_____
SUM OF ALL LISTED COSTS	284.23	_____
RETURN TO LABOR & MANAGEMENT	73.61	_____
LISTED COSTS PER BUDGET UNIT	(bu):	
-Direct Costs	3.26	_____
-Indirect Costs	1.81	_____
-Total Costs	5.08	_____

Winter Wheat notes:

*Yield is per harvested acre, 2003-2009 acreage abandonment averaged 8%.

2011 Machinery List

Machine	Purch. Price	Annual Use	Years to trade	Trade in	Deprec.	Invest.	Repairs	Ac/hr
2WD 100HP Tractor	62100	400hr	20	20032	5.26 /hr	4.62 /hr	6.33 /hr	
2WD 160HP Tractor	105600	500hr	15	31268	9.91 /hr	6.16 /hr	10.76 /hr	
4WD 330HP Tractor	183300	500hr	15	54237	17.21 /hr	10.69 /hr	10.67 /hr	
SP Combine (base unit)	231800	250hr	12	57648	58.05 /hr	26.05 /hr	37.62 /hr	
Tandem Truck (used)	34000	150hr	15	10800	10.31 /hr	6.72 /hr	6.67 /hr	
Semi & Trailer (used)	38100	150hr	10	10900	18.13 /hr	7.35 /hr	8.27 /hr	
Pick-up Truck	25500	300hr	10	5000	6.83 /hr	2.29 /hr	3.03 /hr	
Swather 25 ft	21100	1000ac	20	4997	0.81 /ac	0.59 /ac	0.37 /ac	12.1
Sprayer 90 ft	33500	5000ac	10	15176	0.31 /ac	0.22 /ac	0.43 /ac	42.5
Chisel Plow 38 ft	34700	3000ac	15	20264	0.32 /ac	0.41 /ac	0.77 /ac	19.6
Field Cultivator 48 ft	40400	3000ac	15	23591	0.37 /ac	0.48 /ac	0.71 /ac	24.7
Tandem Disk 28 ft	29700	800ac	20	8471	1.33 /ac	1.08 /ac	0.84 /ac	12.2
Heavy Harrow 70 ft	26800	2000ac	20	15602	0.28 /ac	0.48 /ac	0.30 /ac	39.7
Air Seeder 40 ft	156000	2400ac	12	73524	2.86 /ac	2.15 /ac	5.40 /ac	17.0
Planter 12-30	49200	800ac	20	16360	2.05 /ac	1.84 /ac	2.72 /ac	10.6
Corn head	42200	600ac	20	3977	3.18 /ac	1.73 /ac	0.98 /ac	6.8
Grain head w/pu	13500	1200ac	10	4758	0.73 /ac	0.34 /ac	0.25 /ac	8.5
Grain str. cut 30 ft	22500	1000ac	15	4564	1.19 /ac	0.61 /ac	0.35 /ac	10.2
Head w/sunf pans 30 ft	27000	600ac	20	2758	2.02 /ac	1.11 /ac	0.42 /ac	10.2
Soybeans str. cut 30 ft	33300	1000ac	20	3043	1.51 /ac	0.82 /ac	0.51 /ac	10.2
Rock picker	19300	50hr	20	6139	0.44 /ac	0.38 /ac	0.29 /ac	29.1
Grain Cart	27600	100hr	20	4700	11.45 /hr	7.27 /hr	7.00 /hr	
Grain auger	8400	50hr	20	610	7.79 /hr	4.05 /hr	4.20 /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	Field Cultivate	48	5.0	24.7	\$ 2.03	\$ 1.14
2	Pick Rocks				0.52	0.50
3	Plant	40	5.0	17.0	2.95	6.03
4	Spray (130%)	90	6.0	42.5	0.46	0.75
5	Combine	30	4.0	10.2	3.88	4.04
6	Chisel Plow	38	5.0	19.6	2.56	1.32
	Grain Cart*				1.11	0.32
	Trucks*				2.12	0.84
	Grain auger (pto)				0.21	0.08
	Pickup truck allocation				1.74	0.55
				Total	17.58	15.57

* Truck costs will vary between crops.

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

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