

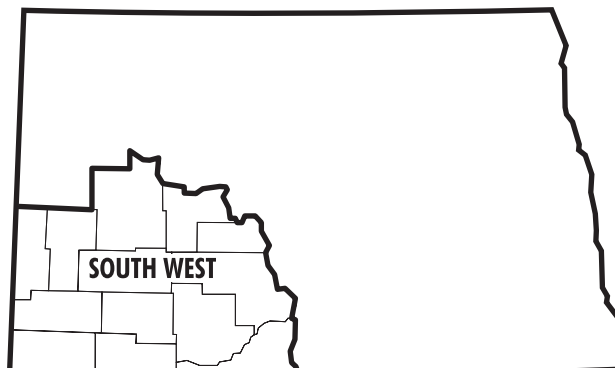
Farm Management Planning Guide



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Projected 2005 Crop Budgets South West North Dakota

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The 2005 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 2005 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 2002 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 about \$6.25 per acre when averaged over all crop acreage. Counter-cyclical payments will occur if the national average price of wheat, feed grains or soybeans is below a certain level. Counter-cyclical payment rates per bushel of \$0.20 for wheat, \$0.36 for soybeans, \$0.25 for corn, and the maximum, \$0.15 for barley and \$0.09 for oats are expected with the price levels used in the budgets. The payment rate times payment yield is paid on 85% of that crop's base acres. Counter-cyclical payments will vary by a farm's base acres and payment yields and will dissipate if prices rise.

Primary Assumptions:

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 1997-2003, after the low and high yield years are removed. Yields for field peas, safflower, yellow mustard, buckwheat, millet and garbanzo beans 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.

Soil test	- recrop:	fallow:
Nitrogen	- 55 lb	- 75 lb
Phosphorus	- 12 ppm	
Potassium	- 356 ppm	

Fertilizer prices:

Nitrogen	- .254/lb
Phosphorus	- .225/lb
Potassium	- .18/lb

Seed Prices:

Spring Wheat	5.80/bu
Durum	6.00/bu
Barley	4.20/bu
Corn grain RR	1.42/thous.kern.
Oil Sunflower	.66/thou.kern.
Conf. Sunflower	1.08/thou.kern.
Flax	14.00/bu
Canola	3.10/lb
Oats	3.40/bu
Field Peas	5.75/bu
Millet	.17/lb
Buckwheat	.28/lb
Safflower	.50/lb
Lentils	.20/lb
Mustard	.85/lb
Large Chickpeas	.70/lb
Rye	4.00/bu
Winter Wheat	4.50/bu

Fuel prices:

Diesel	1.60/gal
Gas	1.90/gal

Lubrication charge: 15% of fuel cost

Miscellaneous: soil testing, machinery rent and custom work.

Direct costs charged 6.50% interest for 6 month period.

Costs of moving crop to storage are included.

Spring wheat and durum budgets for fallow and recrop. All other crops are assumed to be planted on dryland recrop ground.

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 (fallow)

Durum (fallow)

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	30	_____	31	_____
Market Price:	3.26	_____	3.62	_____
MARKET INCOME	97.80	_____	112.22	_____
DIRECT COSTS				
-Seed	7.25	_____	9.00	_____
-Herbicides	2.10	_____	2.10	_____
-Fungicides*	1.50	_____	1.50	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	8.06	_____	8.96	_____
-Crop Insurance	3.10	_____	3.20	_____
-Fuel & Lubrication	6.34	_____	6.36	_____
-Repairs	8.11	_____	8.12	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.00	_____	1.00	_____
-Operating Interest	1.22	_____	1.31	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	38.67	_____	41.55	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.03	_____	3.04	_____
-Machinery Depreciation	10.45	_____	10.48	_____
-Machinery Investment	5.99	_____	6.01	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	44.17	_____	44.23	_____
DIRECT AND INDIRECT COSTS OF FALLOW	48.07	_____	48.07	_____
SUM OF ALL LISTED COSTS	130.91	_____	133.85	_____
RETURN TO LABOR & MANAGEMENT	(33.11)	_____	(21.63)	_____

notes:

*Early season foliar fungicide would cost about \$3-\$5 and late season fungicide would cost about \$9.50 plus application. Recent trials consistently show yield responses of 5-10% with early season fungicide, if wheat planted into residue, and 15-20% with late application if weather favors disease development.

Spring Wheat (recrop)

Durum (recrop)

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	26	_____	26	_____
Market Price:	3.26	_____	3.62	_____
MARKET INCOME	84.76	_____	94.12	_____
DIRECT COSTS				
-Seed	7.25	_____	9.00	_____
-Herbicides	9.20	_____	9.20	_____
-Fungicides*	1.50	_____	1.50	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	9.52	_____	9.52	_____
-Crop Insurance	3.60	_____	3.50	_____
-Fuel & Lubrication	7.66	_____	7.66	_____
-Repairs	9.11	_____	9.11	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.00	_____	1.00	_____
-Operating Interest	1.59	_____	1.64	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	50.43	_____	52.13	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.27	_____	3.27	_____
-Machinery Depreciation	11.41	_____	11.41	_____
-Machinery Investment	6.89	_____	6.89	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	46.26	_____	46.26	_____
SUM OF ALL LISTED COSTS	96.69	_____	98.40	_____
RETURN TO LABOR & MANAGEMENT	(11.93)	_____	(4.28)	_____
LISTED COSTS PER BUDGET UNIT	(bu) :		(bu) :	
-Direct Costs	1.94	_____	2.01	_____
-Indirect Costs	1.78	_____	1.78	_____
-Total Costs	3.72	_____	3.78	_____

notes:

*Early season foliar fungicide would cost about \$3-\$5 and late season fungicide would cost about \$9.50 plus application. Recent trials consistently show yield responses of 5-10% with early season fungicide, if wheat planted into residue, and 15-20% with late application if weather favors disease development.

Malting Barley

Corn Grain

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	45	_____	64	_____
Market Price:	2.26*	_____	1.97	_____
MARKET INCOME	101.70	_____	126.08	_____
DIRECT COSTS				
-Seed	5.25	_____	26.98*	_____
-Herbicides	8.70	_____	7.75	_____
-Fungicides	1.25	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	10.75	_____	14.61	_____
-Crop Insurance	4.20	_____	0.00**	_____
-Fuel & Lubrication	8.84	_____	11.31	_____
-Repairs	10.38	_____	13.12	_____
-Drying	0.00	_____	8.64	_____
-Miscellaneous	1.00	_____	1.00	_____
-Operating Interest	1.64	_____	2.71	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	52.01	_____	86.12	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.79	_____	4.83	_____
-Machinery Depreciation	13.31	_____	19.49	_____
-Machinery Investment	8.12	_____	11.23	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	49.92	_____	60.25	_____
SUM OF ALL LISTED COSTS	101.93	_____	146.37	_____
RETURN TO LABOR & MANAGEMENT	(0.23)	_____	(20.29)	_____
LISTED COSTS PER BUDGET UNIT	(bu) :		(bu) :	
-Direct Costs	1.16	_____	1.35	_____
-Indirect Costs	1.11	_____	0.94	_____
-Total Costs	2.27	_____	2.29	_____

Barley notes:

*Use loan rate of about \$1.70 for feed barley price.

Corn notes:

*Roundup (glyphosate) resistant corn.

**Crop insurance only available by written agreement.

Oil Sunflower

Confectionery Sunflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1250	_____	1220	_____
Market Price:	0.124	_____	0.168	_____
MARKET INCOME	155.00	_____	204.96	_____
DIRECT COSTS				
-Seed	15.51	_____	22.68	_____
-Herbicides	17.70	_____	17.70	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00*	_____	6.00*	_____
-Fertilizer	8.75	_____	8.21	_____
-Crop Insurance	6.10	_____	7.60	_____
-Fuel & Lubrication	7.78	_____	7.34	_____
-Repairs	9.34	_____	9.10	_____
-Drying	2.50	_____	2.44	_____
-Miscellaneous	1.00	_____	5.75	_____
-Operating Interest	2.23	_____	2.82	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	70.91	_____	89.63	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.62	_____	3.52	_____
-Machinery Depreciation	13.11	_____	12.77	_____
-Machinery Investment	7.74	_____	7.41	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	49.17	_____	48.40	_____
SUM OF ALL LISTED COSTS	120.09	_____	138.03	_____
RETURN TO LABOR & MANAGEMENT	34.91	_____	66.93	_____
LISTED COSTS PER BUDGET UNIT	(lb) :		(lb) :	
-Direct Costs	0.06	_____	0.07	_____
-Indirect Costs	0.04	_____	0.04	_____
-Total Costs	0.10	_____	0.11	_____

Oil Sunflower notes:

*Sunflower beetle insecticide would cost about \$2 plus application.
Red seed weevil insecticide would cost about \$6 plus application.

Confectionery Sunflower notes:

*One treatment of insecticide for red seed weevil, lygus bugs and banded moths. Custom application cost of \$4.75 is under "Miscellaneous." A second treatment is often needed. Seed treatment for wireworm would cost about \$5. Insecticide for sunflower beetle would cost about \$2 plus application.

Canola

Flax

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1240		19	
Market Price:	0.10		5.34	
MARKET INCOME	124.00		101.46	
DIRECT COSTS				
-Seed	17.05		8.40	
-Herbicides	16.00		14.71	
-Fungicides	0.00		0.00	
-Insecticides	7.00		0.00*	
-Fertilizer	21.33*		6.49	
-Crop Insurance	4.90		5.00	
-Fuel & Lubrication	7.52		7.98	
-Repairs	9.03		9.57	
-Drying	0.00		0.00	
-Miscellaneous	1.00		1.00	
-Operating Interest	2.72		1.73	
	=====		=====	
SUM OF LISTED DIRECT COSTS	86.55		54.87	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.22		3.32	
-Machinery Depreciation	11.48		12.13	
-Machinery Investment	6.79		7.24	
-Land Charge	24.70		24.70	
	=====		=====	
SUM OF LISTED INDIRECT COSTS	46.19		47.38	
SUM OF ALL LISTED COSTS	132.74		102.25	
RETURN TO LABOR & MANAGEMENT	(8.74)		(0.79)	
LISTED COSTS PER BUDGET UNIT	(lb) :		(bu) :	
-Direct Costs	0.07		2.89	
-Indirect Costs	0.04		2.49	
-Total Costs	0.11		5.38	

Canola notes:

*Fertilizer cost includes 20 lbs sulfur at \$.26/lb.

Flax notes:

*Insecticide for grasshopper outbreak late July or August would cost about \$8 per acre plus application.

Field Peas

Oats

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	29		53	
Market Price:	3.50*		1.22	
MARKET INCOME	101.50		64.66	
DIRECT COSTS				
-Seed	17.25**		6.80	
-Herbicides	14.64		1.88	
-Fungicides	0.00		0.00	
-Insecticides	0.00		0.00	
-Fertilizer	1.98		11.14	
-Crop Insurance	4.20		4.70	
-Fuel & Lubrication	7.89		9.00	
-Repairs	9.84		10.49	
-Drying	0.00		0.00	
-Miscellaneous	2.00		1.00	
-Operating Interest	1.88		1.46	
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	59.68		46.48	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.38		3.88	
-Machinery Depreciation	12.71		13.55	
-Machinery Investment	7.19		8.24	
-Land Charge	24.70		24.70	
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	47.98		50.37	
SUM OF ALL LISTED COSTS	107.67		96.85	
RETURN TO LABOR & MANAGEMENT	(6.16)		(32.19)	
LISTED COSTS PER BUDGET UNIT	(bu) :		(bu) :	
-Direct Costs	2.06		0.88	
-Indirect Costs	1.65		0.95	
-Total Costs	3.71		1.83	

Field Pea notes:

*Loan rate is used because market price is expected to be lower.

**Producer's own seed is used. Seed cost for new grower would be about \$27.

Lentils Yellow Mustard

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1200	_____	850	_____
Market Price:	0.12	_____	0.136	_____
MARKET INCOME	144.00	_____	115.60	_____
DIRECT COSTS				
-Seed	14.00	_____	8.50	_____
-Herbicides	16.14	_____	5.95	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	1.37	_____	6.66	_____
-Crop Insurance	8.00	_____	5.20	_____
-Fuel & Lubrication	8.85	_____	7.17	_____
-Repairs	10.48	_____	8.49	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	4.00	_____	1.00	_____
-Operating Interest	2.04	_____	1.40	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	64.89	_____	44.36	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.46	_____	2.99	_____
-Machinery Depreciation	12.61	_____	10.69	_____
-Machinery Investment	7.69	_____	6.23	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	48.46	_____	44.61	_____
SUM OF ALL LISTED COSTS	113.35	_____	88.97	_____
RETURN TO LABOR & MANAGEMENT	30.65	_____	26.63	_____
LISTED COSTS PER BUDGET UNIT	(lb) :		(lb) :	
-Direct Costs	0.05	_____	0.05	_____
-Indirect Costs	0.04	_____	0.05	_____
-Total Costs	0.09	_____	0.10	_____

notes:

Safflower

Buckwheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	850	_____	800	_____
Market Price:	0.135	_____	0.113	_____
MARKET INCOME	114.75	_____	90.40	_____
DIRECT COSTS				
-Seed	12.50	_____	14.00	_____
-Herbicides	9.75	_____	0.00	_____
-Fungicides	0.10	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	1.70	_____	1.58	_____
-Crop Insurance	3.80	_____	0.00	_____
-Fuel & Lubrication	6.65	_____	8.20	_____
-Repairs	7.94	_____	9.35	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.00	_____	1.00	_____
-Operating Interest	1.41	_____	1.11	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	44.85	_____	35.24	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	2.85	_____	3.21	_____
-Machinery Depreciation	10.02	_____	11.53	_____
-Machinery Investment	5.58	_____	6.91	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	43.15	_____	46.36	_____
SUM OF ALL LISTED COSTS	88.01	_____	81.59	_____
RETURN TO LABOR & MANAGEMENT	26.74	_____	8.81	_____
LISTED COSTS PER BUDGET UNIT	(lb) :		(lb) :	
-Direct Costs	0.05	_____	0.04	_____
-Indirect Costs	0.05	_____	0.06	_____
-Total Costs	0.10	_____	0.10	_____

notes:

Millet Large Chickpeas

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1400		1100	
Market Price:	0.063		0.24	
MARKET INCOME	88.20		264.00	
DIRECT COSTS				
-Seed	4.25		84.00	
-Herbicides	1.50		16.14	
-Fungicides	0.00		49.00*	
-Insecticides	0.00		0.00	
-Fertilizer	3.81		2.03	
-Crop Insurance	0.00		0.00	
-Fuel & Lubrication	7.94		8.79	
-Repairs	9.55		11.34	
-Drying	0.00		0.00	
-Miscellaneous	1.00		6.00	
-Operating Interest	0.91		5.76	
	=====		=====	
SUM OF LISTED DIRECT COSTS	28.96		183.06	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.43		3.71	
-Machinery Depreciation	12.03		14.36	
-Machinery Investment	7.36		8.55	
-Land Charge	24.70		24.70	
	=====		=====	
SUM OF LISTED INDIRECT COSTS	47.52		51.32	
SUM OF ALL LISTED COSTS	76.48		234.38	
RETURN TO LABOR & MANAGEMENT	11.72		29.62	
LISTED COSTS PER BUDGET UNIT	(lb) :		(lb) :	
-Direct Costs	0.02		0.17	
-Indirect Costs	0.03		0.05	
-Total Costs	0.05		0.21	

Large Chickpea notes:

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

Winter Wheat

Rye

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	32*	_____	36	_____
Market Price:	2.94	_____	1.69	_____
MARKET INCOME	94.08	_____	60.84	_____
DIRECT COSTS				
-Seed	4.50	_____	4.80	_____
-Herbicides	5.38	_____	0.00	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	14.95	_____	18.56	_____
-Crop Insurance	3.60	_____	4.50	_____
-Fuel & Lubrication	6.52	_____	8.32	_____
-Repairs	8.32	_____	9.20	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.10	_____	1.00	_____
-Operating Interest	1.44	_____	1.51	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	45.81	_____	47.88	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.09	_____	3.30	_____
-Machinery Depreciation	10.70	_____	11.51	_____
-Machinery Investment	6.15	_____	6.74	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	44.64	_____	46.25	_____
SUM OF ALL LISTED COSTS	90.45	_____	94.13	_____
RETURN TO LABOR & MANAGEMENT	3.63	_____	(33.29)	_____
LISTED COSTS PER BUDGET UNIT	(bu) :		(bu) :	
-Direct Costs	1.43	_____	1.33	_____
-Indirect Costs	1.40	_____	1.28	_____
-Total Costs	2.83	_____	2.61	_____

Winter Wheat notes:

*Yield is per harvested acre, 1997-2003 acreage abandonment averaged 21%.

2005 Machinery List

Machine	Purch. Price	Annual Use	Years to trade	Trade in	Deprec.	Invest.	Repairs	Ac/hr
2WD 100HP Tractor	50500	400 hr	20	16334	4.27/hr	3.76/hr	5.16/hr	
2WD 160HP Tractor	83300	500 hr	15	24653	7.82/hr	4.86/hr	8.48/hr	
4WD 280HP Tractor	114700	500 hr	15	33953	10.77/hr	6.69/hr	6.68/hr	
SP Combine (base unit)	132900	250 hr	12	33041	33.29/hr	14.93/hr	21.56/hr	
Tandem Truck (used)	30000	150 hr	15	10000	8.89/hr	6.00/hr	5.33/hr	
Semi & Trailer (used)	35000	150 hr	10	10000	16.67/hr	6.75/hr	6.67/hr	
Pick-up Truck	19000	300 hr	10	4000	5.00/hr	1.73/hr	2.47/hr	
Swather 25 ft	16000	1000 ac	20	3788	0.61/ac	0.45/ac	0.28/ac	12.1
Sprayer 90 ft	24500	2200 ac	15	9709	0.45/ac	0.35/ac	0.31/ac	42.5
Chisel Plow 35 ft	24300	1600 ac	15	14204	0.42/ac	0.54/ac	0.65/ac	16.2
Field Cultivator 45 ft	30400	3000 ac	15	16837	0.30/ac	0.35/ac	0.54/ac	23.2
Tandem Disk 28 ft	23300	800 ac	20	6675	1.04/ac	0.84/ac	0.66/ac	12.2
Harrow (springtooth) 60 ft	9900	1200 ac	20	5687	0.18/ac	0.29/ac	0.13/ac	34.0
Heavy Harrow 70 ft	21100	2000 ac	20	12345	0.22 /ac	0.38 /ac	0.24 /ac	39.7
Row-crop cultivator 12-30	10100	800 ac	15	5563	0.38/ac	0.44/ac	0.38/ac	11.6
Air Seeder 35 ft	68700	1800 ac	12	32174	1.69/ac	1.26/ac	2.70/ac	14.8
Planter 12-30	37200	800 ac	20	12397	1.55/ac	1.40/ac	2.06/ac	10.6
Corn head 6-30	23400	400 ac	20	2192	2.65/ac	1.44/ac	0.83/ac	4.5
Grain head w/pu	10200	800 ac	15	2124	0.67/ac	0.35/ac	0.19/ac	8.5
Grain str. cut 25 ft	13800	1200 ac	10	4729	0.76/ac	0.35/ac	0.25/ac	8.5
Head w/sunf pans 25 ft	17200	400 ac	20	1813	1.92/ac	1.07/ac	0.32/ac	8.5
Rock picker	14600	50 hr	20	4611	0.33/ac	0.29/ac	0.21/ac	29.1
Grain auger	6300	50 hr	20	500	5.80/hr	3.06/hr	0.62/hr	

Summer-fallow cost budget for crop/fallow rotation:

	Costs/AC
DIRECT COST	
-Fuel & Lubrication	6.69
-Repairs	4.70
-Interest	0.37
TOTAL DIRECT COSTS	11.76
-Misc. Overhead	2.24
-Mach. Depreciation	5.24
-Mach. Investment	4.13
-Land Charge	24.70
TOTAL INDIRECT COSTS	36.31
TOTAL LISTED COSTS	48.07

Example Sequence of Operations

Field operations sequence for recrop spring wheat and durum

OP. NO.	DESCRIPTION	(FEET) WIDTH	(MPH) SPEED	(AC/HR) Fld Cap	(\$/AC) FUEL & LUBE	(\$/AC) EST. REPAIRS
1	Chisel Plow +NH3	35	4.5	16.2	1.40	1.06
2	Pick Rocks				0.28	0.39
3	Plant	35	5.0	14.8	1.53	3.15
4	Spray	90	6.0	42.5	0.19	0.44
5	Combine str. cut	25	4.0	8.5	2.20	2.79
6	Heavy Harrow	70	5.5	39.7	0.33	0.45
	Trucks*				0.53	0.37
	Grain auger (pto)				0.11	0.01
	Pickup truck allocation				1.10	0.45
Total					7.66	9.11

* Truck costs will vary between crops.

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

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