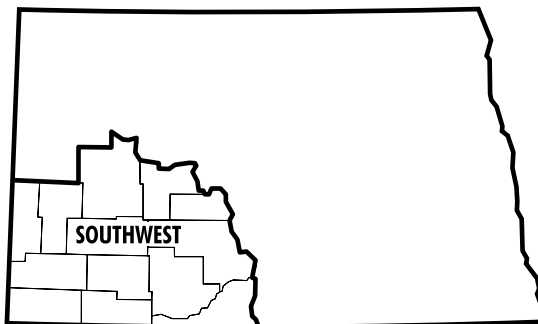




FARM MANAGEMENT PLANNING GUIDE

December 2013

Projected 2014 Crop Budgets



South West North Dakota

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The 2014 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 2014 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.

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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.

Currently, a Farm Bill has not been authorized. **Direct and counter-cyclical payments** have been 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 have been \$6.25 per acre when averaged over all crop acreage. No counter-cyclical payments are expected. If there is an extension of the current Farm Bill, the Average Crop Revenue Election program may provide payments.

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 2006-2012, 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 - 33 lb
 Phosphorus - 10 ppm
 Potassium - 356 ppm

Fertilizer prices:
 Nitrogen - .46/lb
 Phosphorus - .42/lb
 Potassium - .39/lb

Seed Prices:

Spring Wheat	12.25/bu
Durum	11.25/bu
Barley	11.00/bu
Corn grain RR/Bt	2.90/thou.kern.
Corn grain RR	2.60/thou.kern.
Soybean RR2	.352/thou.kern.
Oil Sunflower	1.42/thou.kern.
Conf. Sunflower	2.45/thou.kern.
Canola	9.70/lb
Flax	19.00/bu
Field Peas	14.00/bu
Oats	7.00/bu
Lentils	.32/lb
Mustard	1.70/lb
Safflower	.55/lb
Buckwheat	.67/lb
Millet	.38/lb
Small Chickpeas	.56/lb
Winter Wheat	11.50/bu
Rye	11.50/bu

Fuel prices:

Diesel	3.25/gal
Gas	3.05/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, 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	29		30	
Market Price	6.71		7.05*	
MARKET INCOME	194.59		211.50	
DIRECT COSTS				
-Seed	15.31		16.88	
-Herbicides	25.00		25.00	
-Fungicides**	5.50		5.50	
-Insecticides***	0.00		0.00	
-Fertilizer	34.52		36.24	
-Crop Insurance	12.47		13.18	
-Fuel & Lubrication	12.91		12.96	
-Repairs	14.89		14.91	
-Drying	0.00		0.00	
-Miscellaneous	7.50		7.50	
-Operating Interest	2.72		2.81	
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	130.83		134.98	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.19		6.20	
-Machinery Depreciation	17.26		17.30	
-Machinery Investment	9.39		9.40	
-Land Charge	37.70		37.70	
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	70.54		70.61	
SUM OF ALL LISTED COSTS	201.37		205.58	
RETURN TO LABOR & MANAGEMENT	(6.78)		5.92	
LISTED COSTS PER BUDGET UNIT	(bu)		(bu)	
-Direct Costs	4.51		4.50	
-Indirect Costs	2.43		2.35	
-Total Costs	6.94		6.85	

Wheat notes:

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

**Includes seed treatment (\$1.50-\$2.00) and early season foliar fungicide (\$2-\$4.50). Although late season fungicides are often not warranted in this region, prothioconazole or metconazole containing products are highly recommended for fusarium head blight (scab) control when conditions are favorable for infection.

***Cereal grain aphid insecticide would cost about \$6.

Malting Barley

Corn Grain

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	46		77	
Market Price	5.27*		4.00	
MARKET INCOME	242.42		308.00	
DIRECT COSTS				
-Seed	13.75		56.80*	
-Herbicides	23.50		20.00	
-Fungicides	5.50**		0.00	
-Insecticides	0.00		0.00	
-Fertilizer	33.24		51.01	
-Crop Insurance	14.34		29.58**	
-Fuel & Lubrication	13.73		15.99	
-Repairs	15.22		16.74	
-Drying	0.00		16.17	
-Miscellaneous	7.50		7.50	
-Operating Interest	2.69		4.54	
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	129.48		218.33	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.45		7.81	
-Machinery Depreciation	17.88		24.40	
-Machinery Investment	9.69		13.36	
-Land Charge	37.70		37.70	
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	71.72		83.27	
SUM OF ALL LISTED COSTS	201.20		301.60	
RETURN TO LABOR & MANAGEMENT	41.22		6.40	
LISTED COSTS PER BUDGET UNIT	(bu)		(bu)	
-Direct Costs	2.81		2.84	
-Indirect Costs	1.56		1.08	
-Total Costs	4.37		3.92	

Barley notes:

*Use \$3.44 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 and RR corn without Bt Trait for corn borer refuge. Cost includes insecticide seed treatment for wireworm, rootworm, white grub and suppression of cutworm.

**Crop insurance only available by written agreement in some counties of region.

Soybeans

Oil Sunflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	22	_____	1360	_____
Market Price	10.85	_____	0.207	_____
MARKET INCOME	238.70	_____	281.52	_____
DIRECT COSTS				
-Seed	69.60*	_____	33.37*	_____
-Herbicides	20.00	_____	32.90	_____
-Fungicides	0.00	_____	0.00**	_____
-Insecticides	0.00	_____	7.00***	_____
-Fertilizer	1.80	_____	31.80	_____
-Crop Insurance	15.64**	_____	15.61	_____
-Fuel & Lubrication	13.95	_____	14.08	_____
-Repairs	15.52	_____	16.00	_____
-Drying	0.00	_____	4.08	_____
-Miscellaneous	4.75	_____	15.50	_____
-Operating Interest	3.00	_____	3.62	_____
SUM OF LISTED DIRECT COSTS	144.27	=====	173.95	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.39	_____	6.79	_____
-Machinery Depreciation	18.71	_____	19.71	_____
-Machinery Investment	10.28	_____	10.94	_____
-Land Charge	37.70	_____	37.70	_____
SUM OF LISTED INDIRECT COSTS	73.08	=====	75.14	=====
SUM OF ALL LISTED COSTS	217.35	_____	249.09	_____
RETURN TO LABOR & MANAGEMENT	21.35	_____	32.43	_____
LISTED COSTS PER BUDGET UNIT				
	(bu)		(lb)	
-Direct Costs	6.56	_____	0.13	_____
-Indirect Costs	3.32	_____	0.06	_____
-Total Costs	9.88	_____	0.18	_____

Soybean notes:

*RR2 (glyphosate) resistant soybeans. The cost includes \$8 for inoculant and fungicide treatment in addition to seed expense.

**Crop insurance only available by written agreement in most counties of region.

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." Insecticide treatment for cutworms would cost about \$5 plus application (usually tank mixed with herbicide).

Confectionery Sunflower

Canola

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1250	_____	1260	_____
Market Price	0.306	_____	0.20	_____
MARKET INCOME	382.50	_____	252.00	_____
DIRECT COSTS				
-Seed	51.45*	_____	48.50*	_____
-Herbicides	35.00	_____	20.50	_____
-Fungicides	0.00**	_____	0.00**	_____
-Insecticides	14.00***	_____	0.00	_____
-Fertilizer	28.00	_____	51.23	_____
-Crop Insurance	22.40	_____	10.86	_____
-Fuel & Lubrication	13.91	_____	12.64	_____
-Repairs	15.93	_____	14.78	_____
-Drying	3.75	_____	0.00	_____
-Miscellaneous	23.50	_____	7.50	_____
-Operating Interest	4.42	_____	3.53	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	212.36	_____	169.54	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.74	_____	6.11	_____
-Machinery Depreciation	19.59	_____	17.07	_____
-Machinery Investment	10.88	_____	9.28	_____
-Land Charge	37.70	_____	37.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	74.90	_____	70.17	_____
SUM OF ALL LISTED COSTS	287.26	_____	239.71	_____
RETURN TO LABOR & MANAGEMENT	95.24	_____	12.29	_____
LISTED COSTS PER BUDGET UNIT				
	(lb)		(lb)	
-Direct Costs	0.17	_____	0.13	_____
-Indirect Costs	0.06	_____	0.06	_____
-Total Costs	0.23	_____	0.19	_____

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." Insecticide treatment for cutworms would cost about \$5 plus application (usually tank mixed with herbicide).

Canola notes:

*Cost includes insecticide seed treatment for flea beetles.

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

Flax

Field Peas

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	17		30	
Market Price	12.81		7.20*	
MARKET INCOME	217.77		216.00	
DIRECT COSTS				
-Seed	11.40		42.00**	
-Herbicides	25.20		31.50	
-Fungicides	0.00		1.50	
-Insecticides	0.00		0.00***	
-Fertilizer	19.40		6.00	
-Crop Insurance	12.45		9.33	
-Fuel & Lubrication	13.08		14.96	
-Repairs	15.41		17.21	
-Drying	0.00		0.00	
-Miscellaneous	1.50		6.00	
-Operating Interest	2.09		2.73	
SUM OF LISTED DIRECT COSTS	100.54		131.22	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.24		6.73	
-Machinery Depreciation	17.54		20.58	
-Machinery Investment	9.95		11.14	
-Land Charge	37.70		37.70	
SUM OF LISTED INDIRECT COSTS	71.43		76.15	
SUM OF ALL LISTED COSTS	171.97		207.37	
RETURN TO LABOR & MANAGEMENT	45.80		8.63	
LISTED COSTS PER BUDGET UNIT	(bu)		(bu)	
-Direct Costs	5.91		4.37	
-Indirect Costs	4.20		2.54	
-Total Costs	10.12		6.91	

Field Pea notes:

*Yellow pea food quality price. Use \$9.25 for green pea food quality and about \$5.00 for feed quality peas.

**Yellow pea seed cost, use \$54 per acre for green peas.

***Insecticide treatment for cutworms and/or pea aphids would cost about \$5 per acre plus application.

Oats

Lentils

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	51	_____	1260	_____
Market Price	2.96	_____	0.18	_____
MARKET INCOME	150.96	_____	226.80	_____
DIRECT COSTS				
-Seed	14.00	_____	22.40	_____
-Herbicides	9.70	_____	36.00*	_____
-Fungicides	0.00	_____	0.00**	_____
-Insecticides	0.00	_____	0.00***	_____
-Fertilizer	30.98	_____	4.20	_____
-Crop Insurance	11.77	_____	13.63	_____
-Fuel & Lubrication	15.24	_____	15.82	_____
-Repairs	16.10	_____	18.23	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	7.50	_____	9.25	_____
-Operating Interest	2.24	_____	2.54	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	107.53	_____	122.06	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.90	_____	6.80	_____
-Machinery Depreciation	19.17	_____	21.30	_____
-Machinery Investment	11.04	_____	11.69	_____
-Land Charge	37.70	_____	37.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	74.81	_____	77.49	_____
SUM OF ALL LISTED COSTS	182.34	_____	199.55	_____
RETURN TO LABOR & MANAGEMENT	(31.38)	_____	27.25	_____
LISTED COSTS PER BUDGET UNIT	(bu)		(lb)	
-Direct Costs	2.11	_____	0.10	_____
-Indirect Costs	1.47	_____	0.06	_____
-Total Costs	3.58	_____	0.16	_____

Lentil notes:

*Includes pre-harvest dessicant.

**Fungicide treatment for ascochyta/anthracnose would cost about \$16 plus application.

***Insecticide treatment for cutworms would cost about \$5 per acre plus application.

Yellow Mustard

Safflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	850	_____	1050	_____
Market Price	0.384	_____	0.27	_____
MARKET INCOME	326.40	_____	283.50	_____
DIRECT COSTS				
-Seed	17.00	_____	9.90	_____
-Herbicides	19.90	_____	21.40	_____
-Fungicides	0.00	_____	18.00*	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	24.36	_____	21.95	_____
-Crop Insurance	21.50*	_____	13.37	_____
-Fuel & Lubrication	14.27	_____	13.39	_____
-Repairs	16.15	_____	15.63	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	7.50	_____	7.50	_____
-Operating Interest	2.56	_____	2.57	_____
SUM OF LISTED DIRECT COSTS	123.25	=====	123.71	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.59	_____	6.31	_____
-Machinery Depreciation	18.58	_____	17.84	_____
-Machinery Investment	11.18	_____	9.83	_____
-Land Charge	37.70	_____	37.70	_____
SUM OF LISTED INDIRECT COSTS	74.05	=====	71.68	=====
SUM OF ALL LISTED COSTS	197.30	_____	195.39	_____
RETURN TO LABOR & MANAGEMENT	129.10	_____	88.11	_____
LISTED COSTS PER BUDGET UNIT	(lb)		(lb)	
-Direct Costs	0.14	_____	0.12	_____
-Indirect Costs	0.09	_____	0.07	_____
-Total Costs	0.23	_____	0.19	_____

Yellow Mustard notes:

*Crop Insurance is not available in some counties of the region.

Safflower notes:

*Fungicide for alternaria leaf spot.

Buckwheat

Millet

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	850	_____	1400	_____
Market Price	0.289	_____	0.09	_____
MARKET INCOME	245.65	_____	126.00	_____
DIRECT COSTS				
-Seed	33.50	_____	9.50	_____
-Herbicides	17.90	_____	9.60	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	12.85	_____	18.78	_____
-Crop Insurance	13.02*	_____	0.00	_____
-Fuel & Lubrication	13.70	_____	14.14	_____
-Repairs	15.47	_____	15.65	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	7.50	_____
-Operating Interest	2.29	_____	1.60	_____
SUM OF LISTED DIRECT COSTS	110.24	=====	76.77	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.41	_____	6.55	_____
-Machinery Depreciation	18.00	_____	18.33	_____
-Machinery Investment	10.47	_____	10.63	_____
-Land Charge	37.70	_____	37.70	_____
SUM OF LISTED INDIRECT COSTS	72.58	=====	73.22	=====
SUM OF ALL LISTED COSTS	182.82	_____	149.99	_____
RETURN TO LABOR & MANAGEMENT	62.83	_____	(23.99)	_____
LISTED COSTS PER BUDGET UNIT	(lb)		(lb)	
-Direct Costs	0.13	_____	0.05	_____
-Indirect Costs	0.09	_____	0.05	_____
-Total Costs	0.22	_____	0.11	_____

Buckwheat notes:

*Crop insurance is not available in most counties of the region.

Small Chickpea*

Winter Wheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1400	_____	41*	_____
Market Price	0.27	_____	5.99	_____
MARKET INCOME	378.00	_____	245.59	_____
DIRECT COSTS				
-Seed	67.20	_____	11.50	_____
-Herbicides	35.00	_____	22.25	_____
-Fungicides	36.00**	_____	9.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	8.68	_____	55.09	_____
-Crop Insurance	15.82	_____	13.53	_____
-Fuel & Lubrication	18.24	_____	13.24	_____
-Repairs	21.36	_____	15.15	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	8.25	_____	7.50	_____
-Operating Interest	4.47	_____	3.13	_____
SUM OF LISTED DIRECT COSTS	215.03	=====	150.39	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.48	_____	6.29	_____
-Machinery Depreciation	25.69	_____	17.47	_____
-Machinery Investment	13.86	_____	9.33	_____
-Land Charge	37.70	_____	37.70	_____
SUM OF LISTED INDIRECT COSTS	84.73	=====	70.79	=====
SUM OF ALL LISTED COSTS	299.75	_____	221.18	_____
RETURN TO LABOR & MANAGEMENT	78.25	_____	24.41	_____
LISTED COSTS PER BUDGET UNIT	(lb)		(bu)	
-Direct Costs	0.15	_____	3.67	_____
-Indirect Costs	0.06	_____	1.73	_____
-Total Costs	0.21	_____	5.39	_____

Small Chickpea notes:

*A kabula variety with medium size seed, about 7-8mm, which has better ascochyta resistance than large kabula's.

**Two fungicide treatments for ascochyta blight. Additional treatments may be necessary.

Winter Wheat notes:

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

Rye

	Per Acre	Your Figures
Market Yield	38	_____
Market Price	6.58	_____
MARKET INCOME	250.04	_____
DIRECT COSTS		
-Seed	13.80	_____
-Herbicides	6.50	_____
-Fungicides	0.00	_____
-Insecticides	0.00	_____
-Fertilizer	49.95	_____
-Crop Insurance	15.53	_____
-Fuel & Lubrication	12.80	_____
-Repairs	14.30	_____
-Drying	0.00	_____
-Miscellaneous	7.50	_____
-Operating Interest	2.56	_____
	=====	=====
SUM OF LISTED DIRECT COSTS	122.94	_____
INDIRECT (FIXED) COSTS		
-Misc. Overhead	6.19	_____
-Machinery Depreciation	16.96	_____
-Machinery Investment	9.08	_____
-Land Charge	37.70	_____
	=====	=====
SUM OF LISTED INDIRECT COSTS	69.93	_____
SUM OF ALL LISTED COSTS	192.87	_____
RETURN TO LABOR & MANAGEMENT	57.17	_____
LISTED COSTS PER BUDGET UNIT	(bu)	
-Direct Costs	3.24	_____
-Indirect Costs	1.84	_____
-Total Costs	5.08	_____

2014 Machinery List

Machine	Purch. Price	Annual Use	Years to trade	Trade in	Deprec.	Invest.	Repairs	Ac/hr
FWA 140HP Tractor	125000	400 hr	20	39106	10.74 /hr	9.23 /hr	12.35 /hr	
FWA 180HP Tractor	169300	500 hr	15	48623	16.09 /hr	9.81 /hr	16.73 /hr	
4WD 340HP Tractor	223100	500 hr	15	64074	21.20 /hr	12.92 /hr	12.60 /hr	
SP Combine (base unit)	271000	250 hr	12	65426	68.52 /hr	30.28 /hr	42.70 /hr	
Tandem Truck (used)	37300	150 hr	15	11900	11.29 /hr	7.38 /hr	7.53 /hr	
Semi & Trailer (used)	41800	150 hr	10	12000	19.87 /hr	8.07 /hr	9.20 /hr	
Pick-up Truck	29500	300 hr	10	5800	7.90 /hr	2.65 /hr	3.40 /hr	
Swather 30 ft	29400	1000 ac	20	6971	1.12 /ac	0.82 /ac	0.48 /ac	13.1
Sprayer 90 ft	37300	5000 ac	10	18559	0.38 /ac	0.25 /ac	0.48 /ac	42.5
Heavy Harrow 70 ft	29800	2000 ac	20	17400	0.31 /ac	0.53 /ac	0.33 /ac	39.7
Air Seeder 40 ft	173800	2400 ac	10	88823	3.53 /ac	2.46 /ac	6.01 /ac	17.0
Planter 12-30	65000	800 ac	20	21653	2.71 /ac	2.44 /ac	3.60 /ac	10.6
Corn head	56400	800 ac	12	16151	4.19 /ac	2.04 /ac	1.31 /ac	6.8
Grain head w/pu	15000	800 ac	20	1470	0.84 /ac	0.46 /ac	0.24 /ac	10.2
Grain str. cut 30 ft	25000	2000 ac	8	10096	0.93 /ac	0.39 /ac	0.39 /ac	10.2
Head w/sunf pans 30 ft	30100	600 ac	20	3079	2.25 /ac	1.24 /ac	0.47 /ac	10.2
Flex head 30 ft	37100	1000 ac	20	3400	1.68 /ac	0.91 /ac	0.57 /ac	10.2
Rock picker	21400	50 hr	20	6849	0.49 /ac	0.42 /ac	0.32 /ac	29.1
Grain auger	12200	50 hr	20	710	11.49 /hr	5.81 /hr	4.60 /hr	

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