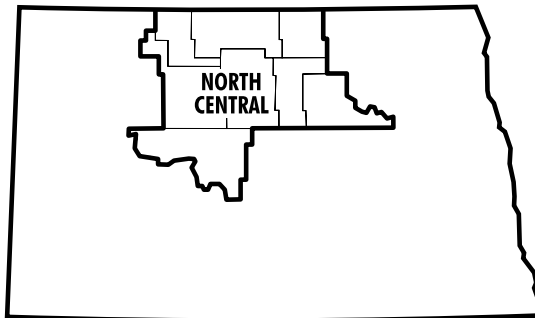




FARM MANAGEMENT PLANNING GUIDE

December 2013

Projected 2014 Crop Budgets



North Central North Dakota

Andrew Swenson, Farm Management Specialist
Ron Haugen, Farm Management Specialist

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.

NDSU EXTENSION
SERVICE

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 \$9.00 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 - 35 lb
 Phosphorus - 8 ppm
 Potassium - 363 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.
Dry Beans	.90/lb
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
Buckwheat	.67/lb
Millet	.38/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	39	_____	36	_____
Market Price	6.74	_____	7.05*	_____
MARKET INCOME	262.86	_____	253.80	_____
DIRECT COSTS				
-Seed	18.38	_____	22.50	_____
-Herbicides	26.00	_____	26.00	_____
-Fungicides**	5.50	_____	5.50	_____
-Insecticides***	0.00	_____	0.00	_____
-Fertilizer	53.60	_____	48.24	_____
-Crop Insurance	13.19	_____	13.20	_____
-Fuel & Lubrication	17.61	_____	17.38	_____
-Repairs	17.62	_____	17.54	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	1.50	_____
-Operating Interest	3.26	_____	3.23	_____
SUM OF LISTED DIRECT COSTS	156.65	=====	155.08	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.02	_____	6.96	_____
-Machinery Depreciation	20.22	_____	20.07	_____
-Machinery Investment	11.81	_____	11.74	_____
-Land Charge	50.20	_____	50.20	_____
SUM OF LISTED INDIRECT COSTS	89.25	=====	88.97	=====
SUM OF ALL LISTED COSTS	245.89	_____	244.06	_____
RETURN TO LABOR & MANAGEMENT	16.97	_____	9.74	_____
LISTED COSTS PER BUDGET UNIT	(bu)		(bu)	
-Direct Costs	4.02	_____	4.31	_____
-Indirect Costs	2.29	_____	2.47	_____
-Total Costs	6.30	_____	6.78	_____

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). Late season fungicides are often warranted in this region. For fusarium head blight (scab) control, prothioconazole or metconazole containing products are highly recommended when a more susceptible cultivar is grown and/or when conditions are favorable for infection.

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

Malting Barley

Corn Grain

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	59	_____	92	_____
Market Price	5.15*	_____	4.00	_____
MARKET INCOME	303.85	_____	368.00	_____
DIRECT COSTS				
-Seed	16.50	_____	71.00*	_____
-Herbicides	23.50	_____	20.00	_____
-Fungicides	5.50**	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	49.23	_____	67.40	_____
-Crop Insurance	15.00	_____	26.56	_____
-Fuel & Lubrication	19.02	_____	25.56	_____
-Repairs	18.00	_____	21.69	_____
-Drying	0.00	_____	19.32	_____
-Miscellaneous	1.50	_____	1.50	_____
-Operating Interest	3.15	_____	5.38	_____
SUM OF LISTED DIRECT COSTS	151.40	=====	258.40	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.34	_____	9.15	_____
-Machinery Depreciation	21.05	_____	30.75	_____
-Machinery Investment	12.23	_____	17.38	_____
-Land Charge	50.20	_____	50.20	_____
SUM OF LISTED INDIRECT COSTS	90.81	=====	107.47	=====
SUM OF ALL LISTED COSTS	242.21	_____	365.87	_____
RETURN TO LABOR & MANAGEMENT	61.64	_____	2.13	_____
LISTED COSTS PER BUDGET UNIT	(bu)		(bu)	
-Direct Costs	2.57	_____	2.81	_____
-Indirect Costs	1.54	_____	1.17	_____
-Total Costs	4.11	_____	3.98	_____

Barley notes:

*On average, about 35% of production is feed quality. Use \$3.37 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.

Soybeans

Drybeans*

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	29	_____	1430	_____
Market Price	10.85	_____	0.31	_____
MARKET INCOME	314.65	_____	443.30	_____
DIRECT COSTS				
-Seed	69.60*	_____	45.00	_____
-Herbicides	20.00	_____	45.30**	_____
-Fungicides	0.00	_____	0.00***	_____
-Insecticides	0.00**	_____	0.00	_____
-Fertilizer	6.81	_____	36.05	_____
-Crop Insurance	11.94	_____	21.84	_____
-Fuel & Lubrication	14.48	_____	20.40	_____
-Repairs	15.71	_____	20.75	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	4.75	_____	12.75	_____
-Operating Interest	3.04	_____	4.29	_____
SUM OF LISTED DIRECT COSTS	146.34	=====	206.38	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.51	_____	7.71	_____
-Machinery Depreciation	19.05	_____	25.83	_____
-Machinery Investment	10.46	_____	14.64	_____
-Land Charge	50.20	_____	50.20	_____
SUM OF LISTED INDIRECT COSTS	86.22	=====	98.38	=====
SUM OF ALL LISTED COSTS	232.55	_____	304.76	_____
RETURN TO LABOR & MANAGEMENT	82.10	_____	138.54	_____
LISTED COSTS PER BUDGET UNIT	(bu)		(lb)	
-Direct Costs	5.05	_____	0.14	_____
-Indirect Costs	2.97	_____	0.07	_____
-Total Costs	8.02	_____	0.21	_____

Soybean notes:

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

**Soybean aphid and/or spider mite insecticide would cost about \$7 per acre plus application.

Drybean notes:

*Acreage limitations existed under the 2008-2012 farm bill with possible forfeiture of government payments on base acres planted to drybeans. Rules for 2014 are unknown as of 12/10/2013.

**Includes desiccant prior to straight cutting.

***Fungicide for white mold would cost about \$18 plus application. Fungicide for rust at \$2-\$4.50 plus application maybe necessary.

Oil Sunflower

Confectionery Sunflower

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1500	_____	1450	_____
Market Price	0.209	_____	0.309	_____
MARKET INCOME	313.50	_____	448.05	_____
DIRECT COSTS				
-Seed	29.82*	_____	44.10*	_____
-Herbicides	32.90	_____	35.00	_____
-Fungicides	0.00**	_____	0.00**	_____
-Insecticides	7.00***	_____	14.00***	_____
-Fertilizer	38.00	_____	36.20	_____
-Crop Insurance	11.72	_____	16.41	_____
-Fuel & Lubrication	19.60	_____	19.48	_____
-Repairs	18.26	_____	18.22	_____
-Drying	4.50	_____	4.35	_____
-Miscellaneous	9.50	_____	17.50	_____
-Operating Interest	3.64	_____	4.36	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	174.95	_____	209.63	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.62	_____	7.59	_____
-Machinery Depreciation	22.58	_____	22.50	_____
-Machinery Investment	13.56	_____	13.52	_____
-Land Charge	50.20	_____	50.20	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	93.95	_____	93.81	_____
SUM OF ALL LISTED COSTS	268.91	_____	303.44	_____
RETURN TO LABOR & MANAGEMENT	44.59	_____	144.61	_____
LISTED COSTS PER BUDGET UNIT	(lb)		(lb)	
-Direct Costs	0.12	_____	0.14	_____
-Indirect Costs	0.06	_____	0.06	_____
-Total Costs	0.18	_____	0.21	_____

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 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

Flax

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1460	_____	20	_____
Market Price	0.205	_____	12.94	_____
MARKET INCOME	299.30	_____	258.80	_____
DIRECT COSTS				
-Seed	48.50*	_____	13.30	_____
-Herbicides	20.50	_____	28.30	_____
-Fungicides	0.00**	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	63.12	_____	26.18	_____
-Crop Insurance	10.82	_____	9.40	_____
-Fuel & Lubrication	17.66	_____	16.32	_____
-Repairs	17.68	_____	17.35	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	1.50	_____
-Operating Interest	3.82	_____	2.39	_____
SUM OF LISTED DIRECT COSTS	183.60	=====	114.73	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.00	_____	6.73	_____
-Machinery Depreciation	20.60	_____	19.50	_____
-Machinery Investment	12.15	_____	11.47	_____
-Land Charge	50.20	_____	50.20	_____
SUM OF LISTED INDIRECT COSTS	89.95	=====	87.89	=====
SUM OF ALL LISTED COSTS	273.54	_____	202.63	_____
RETURN TO LABOR & MANAGEMENT	25.76	_____	56.17	_____
LISTED COSTS PER BUDGET UNIT	(lb)		(bu)	
-Direct Costs	0.13	_____	5.74	_____
-Indirect Costs	0.06	_____	4.39	_____
-Total Costs	0.19	_____	10.13	_____

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	37		61	
Market Price	7.20*		2.99	
MARKET INCOME	266.40		182.39	
DIRECT COSTS				
-Seed	42.00**		14.00	
-Herbicides	31.50		9.70	
-Fungicides	1.50		0.00	
-Insecticides	0.00***		0.00	
-Fertilizer	10.06		41.85	
-Crop Insurance	8.09		9.14	
-Fuel & Lubrication	17.09		20.45	
-Repairs	18.03		18.83	
-Drying	0.00		0.00	
-Miscellaneous	9.25		1.50	
-Operating Interest	2.92		2.45	
SUM OF LISTED DIRECT COSTS	140.44		117.91	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.99		7.75	
-Machinery Depreciation	21.68		22.25	
-Machinery Investment	11.79		13.54	
-Land Charge	50.20		50.20	
SUM OF LISTED INDIRECT COSTS	90.65		93.74	
SUM OF ALL LISTED COSTS	231.09		211.65	
RETURN TO LABOR & MANAGEMENT	35.31		(29.26)	
LISTED COSTS PER BUDGET UNIT				
	(bu)		(bu)	
-Direct Costs	4.37		1.93	
-Indirect Costs	2.54		1.54	
-Total Costs	6.91		3.47	

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.

Lentils

Yellow Mustard

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1400		950	
Market Price	0.18		0.384	
MARKET INCOME	252.00		364.80	
DIRECT COSTS				
-Seed	22.40		20.40	
-Herbicides	36.00*		19.90	
-Fungicides	0.00**		0.00	
-Insecticides	0.00***		6.00*	
-Fertilizer	6.34		30.37	
-Crop Insurance	10.41		21.49**	
-Fuel & Lubrication	16.71		17.10	
-Repairs	18.76		17.66	
-Drying	0.00		0.00	
-Miscellaneous	9.25		1.50	
-Operating Interest	2.55		2.86	
SUM OF LISTED DIRECT COSTS	122.42		137.27	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.08		6.98	
-Machinery Depreciation	21.93		20.14	
-Machinery Investment	12.12		12.42	
-Land Charge	50.20		50.20	
SUM OF LISTED INDIRECT COSTS	91.33		89.75	
SUM OF ALL LISTED COSTS	213.75		227.02	
RETURN TO LABOR & MANAGEMENT	38.25		137.78	
LISTED COSTS PER BUDGET UNIT				
	(lb)		(lb)	
-Direct Costs	0.09		0.14	
-Indirect Costs	0.07		0.09	
-Total Costs	0.15		0.24	

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 notes:

*Insecticide seed treatment for flea beetles.

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

Buckwheat

Millet

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	950	_____	1300	_____
Market Price	0.283	_____	0.09	_____
MARKET INCOME	268.85	_____	117.00	_____
DIRECT COSTS				
-Seed	33.50	_____	9.50	_____
-Herbicides	17.90	_____	9.60	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	17.03	_____	17.00	_____
-Crop Insurance	10.57*	_____	0.00	_____
-Fuel & Lubrication	16.66	_____	17.78	_____
-Repairs	17.01	_____	17.90	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	1.50	_____
-Operating Interest	2.43	_____	1.56	_____
SUM OF LISTED DIRECT COSTS	116.60	=====	74.84	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.82	_____	7.14	_____
-Machinery Depreciation	19.63	_____	20.57	_____
-Machinery Investment	11.75	_____	12.65	_____
-Land Charge	50.20	_____	50.20	_____
SUM OF LISTED INDIRECT COSTS	88.40	=====	90.57	=====
SUM OF ALL LISTED COSTS	205.00	_____	165.40	_____
RETURN TO LABOR & MANAGEMENT	63.85	_____	(48.40)	_____
LISTED COSTS PER BUDGET UNIT	(lb)		(lb)	
-Direct Costs	0.12	_____	0.06	_____
-Indirect Costs	0.09	_____	0.07	_____
-Total Costs	0.22	_____	0.13	_____

Buckwheat notes:

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

Winter Wheat

Rye

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	50*	_____	44	_____
Market Price	6.00	_____	6.73	_____
MARKET INCOME	300.00	_____	296.12	_____
DIRECT COSTS				
-Seed	12.65	_____	13.80	_____
-Herbicides	23.70	_____	6.50	_____
-Fungicides	9.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	73.26	_____	62.53	_____
-Crop Insurance	14.37	_____	9.82	_____
-Fuel & Lubrication	17.56	_____	17.19	_____
-Repairs	16.71	_____	16.30	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	7.50	_____	7.50	_____
-Operating Interest	3.71	_____	2.84	_____
SUM OF LISTED DIRECT COSTS	178.46	=====	136.48	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	6.78	_____	6.72	_____
-Machinery Depreciation	19.40	_____	19.16	_____
-Machinery Investment	10.69	_____	10.67	_____
-Land Charge	50.20	_____	50.20	_____
SUM OF LISTED INDIRECT COSTS	87.07	=====	86.74	=====
SUM OF ALL LISTED COSTS	265.53	_____	223.22	_____
RETURN TO LABOR & MANAGEMENT	34.47	_____	72.90	_____
LISTED COSTS PER BUDGET UNIT	(bu)		(bu)	
-Direct Costs	3.57	_____	3.10	_____
-Indirect Costs	1.74	_____	1.97	_____
-Total Costs	5.31	_____	5.07	_____

Winter Wheat notes:

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

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 16-30	108400	1400 ac	15	45061	3.02 /ac	2.47 /ac	4.49 /ac	14.2
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 Cart	29300	100 hr	20	5000	12.15 /hr	7.72 /hr	7.40 /hr	
Grain auger	12200	50 hr	20	710	11.49 /hr	5.81 /hr	4.60 /hr	

The NDSU Extension Service does not endorse commercial products or companies even though reference may be made to tradenames, trademarks or service names. NDSU encourages you to use and share this content, but please do so under the conditions of our Creative Commons license. You may copy, distribute, transmit and adapt this work as long as you give full attribution, don't use the work for commercial purposes and share your resulting work similarly. For more information, visit www.ag.ndsu.edu/agcomm/creative-commons.

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

County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. North Dakota State University does not discriminate on the basis of age, color, disability, gender expression/identity, genetic information, marital status, national origin, public assistance status, race, religion, sex, sexual orientation, or status as a U.S. veteran. Direct inquiries to the Vice President for Equity, Diversity and Global Outreach, 205 Old Main, (701) 231-7708. This publication will be made available in alternative formats for people with disabilities upon request, (701) 231-7881. 710-12-13