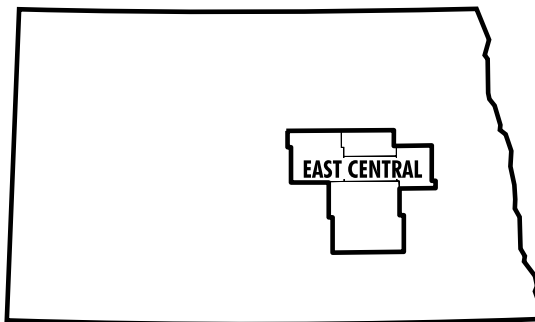




FARM MANAGEMENT PLANNING GUIDE

December 2014

Projected 2015 Crop Budgets



East Central North Dakota

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Note: This region consists of five counties: Eddy, Foster, Griggs, Stutsman and Wells.

The 2015 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 2015 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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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 2014 Farm Bill initiated the Price Loss Coverage (PLC) and Agricultural Risk Coverage (ARC) support programs, and eliminated the direct and counter-cyclical payment programs and the ACRE program.

PLC and ARC payments have been omitted from the budgets because those payments, if any, are tied to historic farm program base acres, not to current crop selection or production.

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 2007-2013, 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 - 8 ppm
 Potassium - 280 ppm

Fertilizer prices:
 Nitrogen - .46/lb
 Phosphorus - .45/lb
 Potassium - .38/lb

Seed Prices:

Spring Wheat	11.00/bu
Durum	18.50/bu
Barley	9.00/bu
Corn grain RR/Bt	2.70/thou.kern.
Soybean RR2	.35/thou.kern.
Dry Beans	.88/lb
Oil Sunflower	1.50/thou.kern.
Conf. Sunflower	2.50/thou.kern.
Canola	10.25/lb
Flax	18.00/bu
Field Peas	12.75/bu
Oats	6.00/bu
Mustard	1.70/lb
Buckwheat	.62/lb
Millet	.30/lb
Winter Wheat	10.50/bu
Rye	9.50/bu

Fuel prices:

Diesel	2.65/gal
Gas	2.60/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, corn, 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	48	_____	38	_____
Market Price	6.06	_____	7.05*	_____
MARKET INCOME	290.88	_____	267.90	_____
DIRECT COSTS				
-Seed	19.25	_____	32.38	_____
-Herbicides	22.00	_____	22.00	_____
-Fungicides**	5.50	_____	5.50	_____
-Insecticides***	0.00	_____	0.00	_____
-Fertilizer	71.60	_____	53.52	_____
-Crop Insurance	13.70	_____	15.00	_____
-Fuel & Lubrication	16.31	_____	15.68	_____
-Repairs	18.42	_____	18.15	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	1.50	_____
-Operating Interest	3.58	_____	3.48	_____
SUM OF LISTED DIRECT COSTS	171.86	=====	167.21	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.31	_____	7.13	_____
-Machinery Depreciation	21.31	_____	20.82	_____
-Machinery Investment	12.28	_____	12.02	_____
-Land Charge	67.00	_____	67.00	_____
SUM OF LISTED INDIRECT COSTS	107.90	=====	106.98	=====
SUM OF ALL LISTED COSTS	279.76	_____	274.19	_____
RETURN TO LABOR & MANAGEMENT	11.12	_____	(6.29)	_____
LISTED COSTS PER BUDGET UNIT				
	(bu)		(bu)	
-Direct Costs	3.58	_____	4.40	_____
-Indirect Costs	2.25	_____	2.82	_____
-Total Costs	5.83	_____	7.22	_____

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 (\$2-\$4.50). Late season fungicides are often warranted in this region. For fusarium head blight (scab) control, prothioconazole or metconazole containing products (about \$12) are highly recommended when a more susceptible cultivar is grown and/or 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	66		116	
Market Price	4.65*		3.50	
MARKET INCOME	306.90		406.00	
DIRECT COSTS				
-Seed	15.75		85.05*	
-Herbicides	19.20		21.00	
-Fungicides	5.50**		0.00	
-Insecticides	0.00		0.00	
-Fertilizer	58.89		91.68	
-Crop Insurance	12.80		34.40	
-Fuel & Lubrication	17.29		24.17	
-Repairs	18.67		24.22	
-Drying	0.00		24.36	
-Miscellaneous	1.50		1.50	
-Operating Interest	3.18		6.51	
SUM OF LISTED DIRECT COSTS	152.78		312.88	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.67		10.08	
-Machinery Depreciation	22.40		33.90	
-Machinery Investment	12.89		19.49	
-Land Charge	67.00		67.00	
SUM OF LISTED INDIRECT COSTS	109.96		130.46	
SUM OF ALL LISTED COSTS	262.74		443.34	
RETURN TO LABOR & MANAGEMENT	44.16		(37.34)	
LISTED COSTS PER BUDGET UNIT				
	(bu)		(bu)	
-Direct Costs	2.31		2.70	
-Indirect Costs	1.67		1.12	
-Total Costs	3.98		3.82	

Barley notes:

*On average, about 40% of production is feed quality. Use \$2.87 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. 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	31	_____	1560	_____
Market Price	9.00	_____	0.25	_____
MARKET INCOME	279.00	_____	390.00	_____
DIRECT COSTS				
-Seed	69.25*	_____	44.00	_____
-Herbicides	20.00	_____	45.80*	_____
-Fungicides	0.00	_____	20.00**	_____
-Insecticides	7.00**	_____	0.00	_____
-Fertilizer	7.80	_____	44.88	_____
-Crop Insurance	12.60	_____	16.00	_____
-Fuel & Lubrication	14.28	_____	18.57	_____
-Repairs	18.32	_____	22.75	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	4.75	_____	12.75	_____
-Operating Interest	3.27	_____	4.78	_____
SUM OF LISTED DIRECT COSTS	157.28	=====	229.52	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.16	_____	8.22	_____
-Machinery Depreciation	21.56	_____	27.75	_____
-Machinery Investment	12.35	_____	16.03	_____
-Land Charge	67.00	_____	67.00	_____
SUM OF LISTED INDIRECT COSTS	108.07	=====	119.00	=====
SUM OF ALL LISTED COSTS	265.35	_____	348.52	_____
RETURN TO LABOR & MANAGEMENT	13.65	_____	41.48	_____
LISTED COSTS PER BUDGET UNIT	(bu)		(lb)	
-Direct Costs	5.07	_____	0.15	_____
-Indirect Costs	3.49	_____	0.08	_____
-Total Costs	8.56	_____	0.22	_____

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

Drybean notes:

*Includes desiccant prior to straight cutting.

**Fungicide for white mold. A second treatment may be necessary.

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	1420		1250	
Market Price	0.18		0.253	
MARKET INCOME	255.60		316.25	
DIRECT COSTS				
-Seed	33.00*		47.50*	
-Herbicides	27.00		29.20	
-Fungicides	0.00**		0.00**	
-Insecticides	7.00***		14.00***	
-Fertilizer	36.66		30.46	
-Crop Insurance	10.30		13.20	
-Fuel & Lubrication	17.29		16.96	
-Repairs	19.24		19.09	
-Drying	4.26		3.75	
-Miscellaneous	9.50		17.50	
-Operating Interest	3.49		4.07	
	=====		=====	
SUM OF LISTED DIRECT COSTS	167.75		195.73	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.93		7.83	
-Machinery Depreciation	23.66		23.40	
-Machinery Investment	14.45		14.31	
-Land Charge	67.00		67.00	
	=====		=====	
SUM OF LISTED INDIRECT COSTS	113.04		112.54	
SUM OF ALL LISTED COSTS	280.79		308.27	
RETURN TO LABOR & MANAGEMENT	(25.19)		7.98	
LISTED COSTS PER BUDGET UNIT				
	(lb)		(lb)	
-Direct Costs	0.12		0.16	
-Indirect Costs	0.08		0.09	
-Total Costs	0.20		0.25	

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."

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."

Canola

Flax

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1450	_____	18	_____
Market Price	0.169	_____	11.63	_____
MARKET INCOME	245.05	_____	209.34	_____
DIRECT COSTS				
-Seed	51.25*	_____	16.20	_____
-Herbicides	20.70	_____	19.80	_____
-Fungicides	0.00**	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	64.19	_____	23.28	_____
-Crop Insurance	11.40	_____	7.40	_____
-Fuel & Lubrication	15.95	_____	15.94	_____
-Repairs	18.43	_____	19.32	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	1.50	_____
-Operating Interest	3.90	_____	2.20	_____
SUM OF LISTED DIRECT COSTS	187.31	=====	105.64	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.29	_____	7.40	_____
-Machinery Depreciation	21.27	_____	21.98	_____
-Machinery Investment	12.90	_____	13.56	_____
-Land Charge	67.00	_____	67.00	_____
SUM OF LISTED INDIRECT COSTS	108.47	=====	109.93	=====
SUM OF ALL LISTED COSTS	295.78	_____	215.57	_____
RETURN TO LABOR & MANAGEMENT	(50.73)	_____	(6.23)	_____
LISTED COSTS PER BUDGET UNIT	(lb)		(bu)	
-Direct Costs	0.13	_____	5.87	_____
-Indirect Costs	0.07	_____	6.11	_____
-Total Costs	0.20	_____	11.98	_____

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	35		65	
Market Price	6.30*		2.46	
MARKET INCOME	220.50		159.90	
DIRECT COSTS				
-Seed	38.25**		12.00	
-Herbicides	28.00		5.25	
-Fungicides	1.50		0.00	
-Insecticides	0.00		0.00	
-Fertilizer	10.20		47.37	
-Crop Insurance	9.70		8.00	
-Fuel & Lubrication	16.80		18.66	
-Repairs	20.37		19.95	
-Drying	0.00		0.00	
-Miscellaneous	9.25		1.50	
-Operating Interest	2.85		2.40	
SUM OF LISTED DIRECT COSTS	136.92		115.12	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.57		8.03	
-Machinery Depreciation	23.86		23.74	
-Machinery Investment	13.57		14.10	
-Land Charge	67.00		67.00	
SUM OF LISTED INDIRECT COSTS	112.00		112.87	
SUM OF ALL LISTED COSTS	248.92		227.99	
RETURN TO LABOR & MANAGEMENT	(28.42)		(68.09)	
LISTED COSTS PER BUDGET UNIT	(bu)		(bu)	
-Direct Costs	3.91		1.77	
-Indirect Costs	3.20		1.74	
-Total Costs	7.11		3.51	

Field Pea notes:

*Yellow pea food quality price. Use \$7.80 for green pea food quality and about \$4.00 for feed quality peas.

**Yellow pea seed cost, use \$47 per acre for green peas.

Yellow Mustard

Buckwheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	850	_____	950	_____
Market Price	0.294	_____	0.244	_____
MARKET INCOME	249.90	_____	231.80	_____
DIRECT COSTS				
-Seed	20.40	_____	31.00	_____
-Herbicides	13.70	_____	11.50	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	6.00*	_____	0.00	_____
-Fertilizer	27.01	_____	18.45	_____
-Crop Insurance	0.00**	_____	10.00	_____
-Fuel & Lubrication	14.73	_____	14.97	_____
-Repairs	18.27	_____	18.38	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	1.50	_____
-Operating Interest	2.16	_____	2.25	_____
SUM OF LISTED DIRECT COSTS	103.77	=====	108.05	=====
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.09	_____	7.18	_____
-Machinery Depreciation	20.97	_____	21.18	_____
-Machinery Investment	12.64	_____	12.75	_____
-Land Charge	67.00	_____	67.00	_____
SUM OF LISTED INDIRECT COSTS	107.70	=====	108.12	=====
SUM OF ALL LISTED COSTS	211.47	_____	216.17	_____
RETURN TO LABOR & MANAGEMENT	38.43	_____	15.63	_____
LISTED COSTS PER BUDGET UNIT	(lb)		(lb)	
-Direct Costs	0.12	_____	0.11	_____
-Indirect Costs	0.13	_____	0.11	_____
-Total Costs	0.25	_____	0.23	_____

Yellow Mustard notes:

*Insecticide seed treatment for flea beetles.

**Crop insurance is not available.

Buckwheat notes:

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

Millet

Winter Wheat

	Per Acre	Your Figures	Per Acre	Your Figures
Market Yield	1700	_____	50*	_____
Market Price	0.075	_____	5.56	_____
MARKET INCOME	127.50	_____	278.00	_____
DIRECT COSTS				
-Seed	7.50	_____	12.60	_____
-Herbicides	3.25	_____	23.90	_____
-Fungicides	0.00	_____	9.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	28.66	_____	75.22	_____
-Crop Insurance	0.00	_____	13.70	_____
-Fuel & Lubrication	16.74	_____	14.38	_____
-Repairs	19.11	_____	17.12	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	1.50	_____	7.50	_____
-Operating Interest	1.63	_____	3.69	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	78.38	_____	177.11	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	7.48	_____	6.93	_____
-Machinery Depreciation	22.23	_____	19.84	_____
-Machinery Investment	13.31	_____	10.93	_____
-Land Charge	67.00	_____	67.00	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	110.02	_____	104.70	_____
SUM OF ALL LISTED COSTS	188.40	_____	281.81	_____
RETURN TO LABOR & MANAGEMENT	(60.90)	_____	(3.81)	_____
LISTED COSTS PER BUDGET UNIT	(lb)		(bu)	
-Direct Costs	0.05	_____	3.54	_____
-Indirect Costs	0.06	_____	2.09	_____
-Total Costs	0.11	_____	5.64	_____

Winter Wheat notes:

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

Rye

	Per Acre	Your Figures
Market Yield	44	_____
Market Price	6.38	_____
MARKET INCOME	280.72	_____
DIRECT COSTS		
-Seed	11.40	_____
-Herbicides	6.50	_____
-Fungicides	0.00	_____
-Insecticides	0.00	_____
-Fertilizer	64.37	_____
-Crop Insurance	12.30	_____
-Fuel & Lubrication	14.08	_____
-Repairs	16.70	_____
-Drying	0.00	_____
-Miscellaneous	7.50	_____
-Operating Interest	2.82	_____
	=====	=====
SUM OF LISTED DIRECT COSTS	135.67	_____
INDIRECT (FIXED) COSTS		
-Misc. Overhead	6.86	_____
-Machinery Depreciation	19.59	_____
-Machinery Investment	10.91	_____
-Land Charge	67.00	_____
	=====	=====
SUM OF LISTED INDIRECT COSTS	104.37	_____
SUM OF ALL LISTED COSTS	240.04	_____
RETURN TO LABOR & MANAGEMENT	40.68	_____
LISTED COSTS PER BUDGET UNIT	(bu)	
-Direct Costs	3.08	_____
-Indirect Costs	2.37	_____
-Total Costs	5.46	_____

2015 Machinery List

Machine	Purch. Price	Annual Use	Years to trade	Trade in	Deprec.	Invest.	Repairs	Ac/hr
FWA 140HP Tractor	128100	400 hr	20	40090	11.00 /hr	9.46 /hr	12.66 /hr	
FWA 180HP Tractor	173600	500 hr	15	49843	16.50 /hr	10.05 /hr	17.15 /hr	
4WD 340HP Tractor	228700	500 hr	15	65685	21.74 /hr	13.25 /hr	12.92 /hr	
SP Combine (base unit)	277800	250 hr	12	67068	70.24 /hr	31.04 /hr	43.77 /hr	
Tandem Truck (used)	37700	150 hr	15	12000	11.42 /hr	7.46 /hr	7.73 /hr	
Semi & Trailer (used)	42300	150 hr	10	12100	20.13 /hr	8.16 /hr	9.33 /hr	
Pick-up Truck	29800	300 hr	10	5900	7.97 /hr	2.68 /hr	3.50 /hr	
Swather 30 ft	30200	1000 ac	20	7152	1.15 /ac	0.84 /ac	0.49 /ac	13.1
Sprayer 90 ft	38200	5000 ac	10	19024	0.38 /ac	0.26 /ac	0.49 /ac	42.5
Chisel Plow 38 ft	42700	3000 ac	15	24932	0.39 /ac	0.51 /ac	0.95 /ac	19.6
Field Cultivator 48 ft	48900	3000 ac	15	28558	0.45 /ac	0.58 /ac	0.86 /ac	24.7
Tandem Disk 28 ft	33800	800 ac	20	9684	1.50 /ac	1.22 /ac	0.86 /ac	13.6
Heavy Harrow 70 ft	30600	2000 ac	20	17837	0.32 /ac	0.55 /ac	0.34 /ac	39.7
Air Seeder 40 ft	178100	2400 ac	10	91039	3.62 /ac	2.52 /ac	6.16 /ac	17.0
Planter 16-30	111100	1400 ac	15	46192	3.09 /ac	2.53 /ac	4.61 /ac	14.2
Corn head	57800	800 ac	12	16565	4.29 /ac	2.09 /ac	1.34 /ac	6.8
Grain head w/pu	15400	800 ac	20	1511	0.87 /ac	0.47 /ac	0.24 /ac	10.2
Grain str. cut 30 ft	25600	2000 ac	8	10336	0.95 /ac	0.40 /ac	0.40 /ac	10.2
Head w/sunf pans 30 ft	30800	600 ac	20	3148	2.30 /ac	1.27 /ac	0.48 /ac	10.2
Flex head 30 ft	38000	1000 ac	20	3486	1.72 /ac	0.93 /ac	0.59 /ac	10.2
Rock picker	22000	50 hr	20	7013	0.50 /ac	0.44 /ac	0.33 /ac	29.1
Grain Cart	30000	100 hr	20	5100	12.45 /hr	7.90 /hr	7.50 /hr	
Grain auger	12500	50 hr	20	725	11.78 /hr	5.95 /hr	4.70 /hr	

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