



Projected No-till 2005 Crop Budgets Southwest North Dakota

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The 2005 no-till crop budgets provide an estimate of revenues and costs for selected crops. Each set of budgets is developed for a multi-county region. There is considerable variation in soil type and productivity, and weather conditions, as well as management and production practices, within each region.

Therefore, **THESE BUDGETS ARE INTENDED TO BE USED ONLY AS A GUIDE. INDIVIDUALS ARE HIGHLY ENCOURAGED TO DEVELOP THEIR 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 decide 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, with crop yields assumed at break-even levels for 2005 prices, and machinery ownership costs as 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, as well as 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 also should be considered. Crop insurance is not available for some crops.

The budget can be used to estimate cash flow 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 20 cents for wheat, 36 cents for soybeans, 25 cents for corn, and the maximum, 15 cents for barley and 9 cents for oats are expected with the price levels used in the budgets. The payment rate

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times payment yield is paid on 85 percent 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.

No-till Definition

Budgets in this publication are estimated based on no-till practices as defined below:

The no-till planting system leaves 30 percent or more of the soil surface covered with crop residue after planting. In addition to crop residue cover, the soil is left undisturbed from harvest to planting except for strips of up to one-third of the row width (strips may involve only residue disturbance or may include soil disturbance). Planting or drilling is accomplished using disc openers, coulters, row cleaners, in-row chisels or roto-tillers. Weed control is accomplished primarily with crop protection products. Other common terms used to describe no-till include direct-seeding, slot planting, zero-till, row-till and slot-till. Source: National Crop Residue Management Survey, Conservation Technology Information Center. 2002. www.ctic.purdue.edu/Core4/CT/Definitions.html

Sequence of Operations

After weeds and volunteer crops emerge or resume growth, a herbicide (usually glyphosate) is applied to eliminate the "green bridge" and early competition from weeds. With specific crops such as sunflowers, flax and field peas, and where herbicide labels permit, preplant residue herbicides are tank-mixed with glyphosate for the preplant burn-down for residual weed control.

Nitrogen fertilizer, usually in the form of urea, is broadcast. Sufficient rainfall prior to significant volatilization of fertilizer is required to move nitrogen into the soil. Some producers apply fertilizer with coulters or knives in a separate operation prior to seeding. Some drills have the capability to place seed and fertilizer in separate bands to avoid injury from fertilizer.

Postemergent application of crop protection chemicals are made as required. When wheat follows wheat, a foliar fungicide product is included with the herbicide to control diseases such as tan spot. When wheat follows nonhost crops, the foliar fungicide product is not included.

Harvest is done with a combine equipped with a straw spreader or straw chopper. Some producers use a stripper header rather than a conventional header for wheat and barley that leaves more residue intact and less crop residue going through the combine.

Rotational Acre Budgets

In research trials, no-till practices properly implemented will increase grain yields an average of 47 percent in southwestern North Dakota, when compared with conventionally tilled yields. Rotations are an integral part of no-till, and when the proper diversity in the rotation occurs, producers have increased yields by about 30 percent over continuous wheat. Source: Roger Ashley, Dickinson REC.

Producers who use no-till seeding practices must build a systems-approach to managing inputs for profitability. No-till systems with rotations having little diversity will fail in the long run. Crop rotations are the most effective way of reducing many pest populations. Soil environments created by some crops remain after their growth and improve the growth efficiency of following crops. This rotational effect is specific for some crop combinations and sequences. A positive relationship between these crops in a rotation can make some rotations more profitable than other rotations in the long run.

A specific rotation is not assumed in this publication; however, two rotation examples are given on pages 4 and 5. The inclusion of field peas in the rotation reduces the amount of fertilizer nitrogen applied and eliminates a foliar fungicide application for the control of tan spot for the following spring wheat crop. This reduces input costs and increases net return for the wheat crop, as well as for the entire rotation sequence.

Use net return per rotational acre to measure profitability of different crop rotations correctly. In a rotational acre analysis, net returns for each crop year in the rotation are summed and divided by the number of years in the rotation, thereby standardizing all rotations to an acre basis. Break-even yields were calculated based on the expected market price. Producers can estimate the net return by multiplying the expected market price by expected yield in each crop and subtracting the sum of costs. This is done for each crop, and a composite budget for the rotation can be derived by summing the costs and returns for the life of the rotation and dividing by the number of years in the rotation.

Comparison to Conventional Budgets

In comparing the profitability of a no-till budget to a conventional budget, one must keep in mind the return to labor and management. It is often difficult to distinguish between return to labor and return to management from an owner/operator point of view. Economists often assume a charge for owner labor and management resulting in an economic profit or loss for the enterprise. A charge is not included for labor of management, the bottom line is return to labor and management. Typically less labor and machinery investment is needed for a no-till operation, as compared to a convention operation. However, management time and costs would typically be higher in no-till operation. Risk factors for each enterprise are also not considered.

Primary Assumptions

Expected Market Price: Best estimates by NDSU extension economists. The greater of projected market price or marketing loan rate is used.

Break-even yields at expected market price are calculated to cover all listed costs.

Fertilizer: Cost of fertilizer applied, based on soil test, to meet yield goal of 130 percent of market yield.

Soil test

Nitrogen - 55 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 RR	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
Gasoline 1.90/gal

Lubrication charge: 15 percent of fuel cost

Miscellaneous: Soil testing, machinery rent and custom work.

Direct costs charged 6.50 percent interest for six-month period.

Costs of moving crop to storage are included.

All crops are assumed to be planted on dryland continuously-cropped ground.

Miscellaneous Overhead: Machinery housing and insurance at .5 percent and .85 percent, 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 percent 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. Average machinery investment = (purchase price + disposal price)/2

Depreciation = (purchase price - disposal price/ years of ownership)

Example 1. CROP ROTATION

	Year 1	Year 2	Year 3	Year 4	Composite
Crop Composite	Spring Wheat 25%	Winter Wheat 25%	Grain Corn 25%	Field Peas 25%	Budget 100%
Break-even Yield at Expected Market Price:	32.9 bu	43.2 bu	72.7 bu	31.9 bu	N/A
Expected Market Price	\$3.26	\$2.94	\$1.97	\$3.50	N/A
MARKET INCOME	107.10	126.92	143.28	111.50	112.20
DIRECT COSTS					
-Seed	7.25	4.50	26.98	17.25	14.00
-Herbicides	11.95	8.13	10.50	17.39	11.99
-Fungicides	1.50	6.50	0.00	0.00	2.00
-Insecticides	0.00	0.00	0.00	0.00	0.00
-Fertilizer	17.29	34.64	14.61	0.00	16.64
-Crop Insurance	3.60	3.60	0.00	4.20	2.85
-Fuel & Lubrication	6.27	6.86	8.39	7.08	7.15
-Repairs	8.43	9.14	11.22	9.72	9.63
-Drying	0.00	0.00	8.64	0.00	2.16
-Miscellaneous	5.00	5.00	5.00	7.00	5.50
-Operating Interest	1.99	2.55	2.77	2.04	2.34
SUM OF LISTED DIRECT COSTS	63.29	80.91	88.11	64.68	74.25
INDIRECT (FIXED) COSTS					
-Misc. Overhead	2.98	3.35	4.25	3.23	3.45
-Machinery Depreciation	10.41	11.53	16.94	12.19	12.77
-Machinery Investment	5.71	6.43	9.28	6.70	7.03
-Land Investment	24.70	24.70	24.70	24.70	24.70
SUM OF LISTED INDIRECT COSTS	43.80	46.01	55.17	46.82	47.95
SUM OF ALL LISTED COSTS	107.10	126.92	143.28	111.50	122.20

Example 2. CROP ROTATION

	Year 1	Year 2	Year 3	
Crop Composite	Spring Wheat 33.3%	Grain Corn 33.3%	Field Peas 33.3%	Composite Budget 100%
Break-even Yield at				
Expected Market Price:	32.9 bu	72.7 bu	31.9 bu	N/A
Expected Market Price	\$3.26	\$1.97	\$3.50	N/A
MARKET INCOME	107.10	143.28	111.50	120.63
DIRECT COSTS				
-Seed	7.25	26.98	17.25	17.16
-Herbicides	11.95	10.50	17.39	13.28
-Fungicides	1.50	0.00	0.00	0.50
-Insecticides	0.00	0.00	0.00	0.00
-Fertilizer	17.29	14.61	0.00	10.63
-Crop Insurance	3.60	0.00	4.20	2.60
-Fuel & Lubrication	6.27	8.39	7.08	7.25
-Repairs	8.43	11.22	9.72	9.79
-Drying	0.00	8.64	0.00	2.88
-Miscellaneous	5.00	5.00	7.00	5.67
-Operating Interest	1.99	2.77	2.04	2.27
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	63.29	88.11	64.68	72.03
INDIRECT (FIXED) COSTS				
-Misc. Overhead	2.98	4.25	3.23	3.49
-Machinery Depreciation	10.41	16.94	12.19	13.18
-Machinery Investment	5.71	9.28	6.70	7.23
-Land Investment	24.70	24.70	24.70	24.70
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	43.80	55.17	46.82	48.60
SUM OF ALL LISTED COSTS	107.10	143.28	111.50	120.63

No-till Spring Wheat

No-till Durum

	Per Acre	Your Figures	Per Acre	Your Figures
Break-even Yield at Expected Market Price (bu):	32.9	_____	30.1	_____
Expected Market Price:	\$ 3.26	_____	\$ 3.62	_____
MARKET INCOME	107.10	_____	108.80	_____
DIRECT COSTS				
-Seed	7.25	_____	9.00	_____
-Herbicides	11.95	_____	11.95	_____
-Fungicides	1.50*	_____	1.50*	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	17.29	_____	17.29	_____
-Crop Insurance	3.60	_____	3.50	_____
-Fuel & Lubrication	6.27	_____	6.27	_____
-Repairs	8.43	_____	8.43	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	5.00	_____	5.00	_____
-Operating Interest	1.99	_____	2.05	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	63.29	_____	65.00	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	2.98	_____	2.98	_____
-Machinery Depreciation	10.41	_____	10.41	_____
-Machinery Investment	5.71	_____	5.71	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	43.80	_____	43.80	_____
SUM OF ALL LISTED COSTS	107.10	_____	108.80	_____
RETURN TO LABOR & MANAGEMENT	—	_____	—	_____

Spring wheat notes:

*Early-season foliar fungicide would cost about \$5.

Durum notes:

*Early-season foliar fungicide would cost about \$5.

No-till Malting Barley

No-till Corn Grain

	Per Acre	Your Figures	Per Acre	Your Figures
Break-even Yield at Expected Market Price (bu):	46.9	_____	72.7	_____
Expected Market Price:	\$ 2.26*	_____	\$ 1.97	_____
MARKET INCOME	106.00	_____	143.28	_____
DIRECT COSTS				
-Seed	6.30	_____	26.98*	_____
-Herbicides	11.45	_____	10.50	_____
-Fungicides	1.25	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	10.75	_____	14.61	_____
-Crop Insurance	4.20	_____	0.00**	_____
-Fuel & Lubrication	7.70	_____	8.39	_____
-Repairs	9.82	_____	11.22	_____
-Drying	0.00	_____	8.64	_____
-Miscellaneous	5.00	_____	5.00	_____
-Operating Interest	1.84	_____	2.77	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	58.31	_____	88.11	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.49	_____	4.25	_____
-Machinery Depreciation	12.38	_____	16.94	_____
-Machinery Investment	7.13	_____	9.28	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	47.69	_____	55.17	_____
SUM OF ALL LISTED COSTS	106.00	_____	143.28	_____
RETURN TO LABOR & MANAGEMENT	—	_____	—	_____

Barley notes:

*Use loan rate of about \$1.70 for feed barley price. Break-even yield for feed barley would be 62.4 bu.

Corn notes:

*Glyphosate resistant corn.

**Crop insurance only available by written agreement.

No-till Oil Sunflower

No-till Confectionery Sunflower

	Per Acre	Your Figures	Per Acre	Your Figures
Break-even Yield at				
Expected Market Price (lb):	1,000.2	_____	847.6	_____
Expected Market Price:	\$ 0.124	_____	\$ 0.168	_____
MARKET INCOME	124.02	_____	142.40	_____
DIRECT COSTS				
-Seed	13.20	_____	19.44	_____
-Herbicides	26.51	_____	26.51	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00*	_____	6.00*	_____
-Fertilizer	8.75	_____	8.21	_____
-Crop Insurance	6.10	_____	7.60	_____
-Fuel & Lubrication	5.79	_____	5.77	_____
-Repairs	7.69	_____	7.67	_____
-Drying	2.50	_____	2.44	_____
-Miscellaneous	5.00	_____	9.75	_____
-Operating Interest	2.45	_____	3.04	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	77.99	_____	96.42	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.27	_____	3.26	_____
-Machinery Depreciation	11.49	_____	11.46	_____
-Machinery Investment	6.57	_____	6.55	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	46.03	_____	45.98	_____
SUM OF ALL LISTED COSTS	124.02	_____	142.40	_____
RETURN TO LABOR & MANAGEMENT	—	_____	—	_____

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 often is needed. Seed treatment for wireworm would cost about \$5. Insecticide for sunflower beetle would cost about \$2 plus application.

No-till Canola

No-till Flax

	Per Acre	Your Figures	Per Acre	Your Figures
Break-even Yield at Expected Market Price (lb):	1,375.9		21.9	
Expected Market Price:	\$ 0.10		\$ 5.34	
MARKET INCOME	137.59		116.74	
DIRECT COSTS				
-Seed	17.05*		8.40	
-Herbicides	18.75**		17.46	
-Fungicides	0.00		0.00	
-Insecticides	7.00		0.00*	
-Fertilizer	21.33***		15.10	
-Crop Insurance	4.90		5.00	
-Fuel & Lubrication	6.71		7.34	
-Repairs	8.92		9.57	
-Drying	0.00		0.00	
-Miscellaneous	5.00		5.00	
-Operating Interest	2.91		2.21	
	=====		=====	
SUM OF LISTED DIRECT COSTS	92.56		70.06	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.07		3.27	
-Machinery Depreciation	10.96		11.84	
-Machinery Investment	6.29		6.86	
-Land Charge	24.70		24.70	
	=====		=====	
SUM OF LISTED INDIRECT COSTS	45.02		46.67	
SUM OF ALL LISTED COSTS	137.59		116.74	
RETURN TO LABOR & MANAGEMENT	—		—	

Canola notes:

*Glyphosate resistant canola.

**Includes technology fee.

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

Flax notes:

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

No-till Field Peas

No-till Oats

	Per Acre	Your Figures	Per Acre	Your Figures
Break-even Yield at Expected Market Price (bu):	31.9	_____	81.8	_____
Expected Market Price:	\$ 3.50*	_____	\$ 1.22	_____
MARKET INCOME	111.50	_____	99.84	_____
DIRECT COSTS				
-Seed	17.25**	_____	6.80	_____
-Herbicides	17.39	_____	4.63	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	0.00	_____	11.14	_____
-Crop Insurance	4.20	_____	4.70	_____
-Fuel & Lubrication	7.08	_____	7.87	_____
-Repairs	9.72	_____	9.93	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	7.00	_____	5.00	_____
-Operating Interest	2.04	_____	1.63	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	64.68	_____	51.69	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.23	_____	3.59	_____
-Machinery Depreciation	12.19	_____	12.62	_____
-Machinery Investment	6.70	_____	7.25	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	46.82	_____	48.15	_____
SUM OF ALL LISTED COSTS	111.50	_____	99.84	_____
RETURN TO LABOR & MANAGEMENT	—	_____	—	_____

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.

No-till Lentils

No-till Yellow Mustard

	Per Acre	Your Figures	Per Acre	Your Figures
Break-even Yield at				
Expected Market Price (lb):	938.8	_____	712.3	_____
Expected Market Price:	\$ 0.12	_____	\$ 0.136	_____
MARKET INCOME	112.65	_____	96.87	_____
DIRECT COSTS				
-Seed	14.00	_____	8.50	_____
-Herbicides	18.89	_____	9.95	_____
-Fungicides	0.00	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	0.00	_____	6.66	_____
-Crop Insurance	8.00	_____	5.20	_____
-Fuel & Lubrication	8.04	_____	6.55	_____
-Repairs	10.37	_____	8.81	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	4.00	_____	5.00	_____
-Operating Interest	2.06	_____	1.65	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	65.35	_____	52.31	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.31	_____	2.97	_____
-Machinery Depreciation	12.09	_____	10.72	_____
-Machinery Investment	7.20	_____	6.17	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	47.30	_____	44.56	_____
SUM OF ALL LISTED COSTS	112.65	_____	96.87	_____
RETURN TO LABOR & MANAGEMENT	—	_____	—	_____

notes:

No-till Safflower

No-till Buckwheat

	Per Acre	Your Figures	Per Acre	Your Figures
Break-even Yield at Expected Market Price (lb):	717.3	_____	750.0	_____
Expected Market Price:	\$ 0.135	_____	\$ 0.113	_____
MARKET INCOME	96.83	_____	84.74	_____
DIRECT COSTS				
-Seed	12.50	_____	14.00	_____
-Herbicides	14.64	_____	2.75	_____
-Fungicides	0.10	_____	0.00	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	1.70	_____	1.58	_____
-Crop Insurance	3.80	_____	0.00	_____
-Fuel & Lubrication	6.02	_____	6.60	_____
-Repairs	8.26	_____	8.84	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	5.00	_____	5.00	_____
-Operating Interest	1.69	_____	1.26	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	53.72	_____	40.03	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	2.83	_____	3.00	_____
-Machinery Depreciation	10.05	_____	10.79	_____
-Machinery Investment	5.53	_____	6.21	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	43.11	_____	44.71	_____
SUM OF ALL LISTED COSTS	96.83	_____	84.74	_____
RETURN TO LABOR & MANAGEMENT	—	_____	—	_____

notes:

No-till Millet

No-till Large Chickpeas

	Per Acre	Your Figures	Per Acre	Your Figures
Break-even Yield at				
Expected Market Price (lb):	1,261.4	_____	996.8	_____
Expected Market Price:	\$ 0.063	_____	\$ 0.24	_____
MARKET INCOME	79.47	_____	239.23	_____
DIRECT COSTS				
-Seed	4.25	_____	84.00	_____
-Herbicides	4.25	_____	18.89	_____
-Fungicides	0.00	_____	49.00*	_____
-Insecticides	0.00	_____	0.00	_____
-Fertilizer	3.81	_____	2.03	_____
-Crop Insurance	0.00	_____	0.00	_____
-Fuel & Lubrication	6.81	_____	7.97	_____
-Repairs	8.99	_____	11.23	_____
-Drying	0.00	_____	0.00	_____
-Miscellaneous	5.00	_____	10.00	_____
-Operating Interest	1.08	_____	5.95	_____
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	34.18	_____	189.07	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.13	_____	3.56	_____
-Machinery Depreciation	11.10	_____	13.84	_____
-Machinery Investment	6.37	_____	8.06	_____
-Land Charge	24.70	_____	24.70	_____
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	45.29	_____	50.16	_____
SUM OF ALL LISTED COSTS	79.47	_____	239.23	_____
RETURN TO LABOR & MANAGEMENT	—	_____	—	_____

Large chickpea notes:

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

No-till Winter Wheat

No-till Rye

	Per Acre	Your Figures	Per Acre	Your Figures
Break-even Yield at Expected Market Price (bu):	43.2*		55.7	
Expected Market Price:	\$ 2.94		\$ 1.69	
MARKET INCOME	126.92		94.12	
DIRECT COSTS				
-Seed	4.50		4.80	
-Herbicides	8.13		2.75	
-Fungicides	6.50		0.00	
-Insecticides	0.00		0.00	
-Fertilizer	34.64		18.56	
-Crop Insurance	3.60		4.50	
-Fuel & Lubrication	6.86		6.11	
-Repairs	9.14		8.02	
-Drying	0.00		0.00	
-Miscellaneous	5.00		5.00	
-Operating Interest	2.55		1.62	
	=====	=====	=====	=====
SUM OF LISTED DIRECT COSTS	80.91		51.36	
INDIRECT (FIXED) COSTS				
-Misc. Overhead	3.35		2.87	
-Machinery Depreciation	11.53		9.91	
-Machinery Investment	6.43		5.29	
-Land Charge	24.70		24.70	
	=====	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	46.01		42.77	
SUM OF ALL LISTED COSTS	126.92		94.12	
RETURN TO LABOR & MANAGEMENT	—		—	

notes:

2005 No-till Machinery List

Machine	Purch. Price	Annual Use	Years to trade	Trade in	Deprec.	Invest.	Repairs	Ac/hr
2WD 100HP Tractor	\$50,500	400 hr	20	\$16,334	4.27/hr	3.76/hr	5.16/hr	
2WD 160HP Tractor	83,300	500 hr	15	24,653	7.82/hr	4.86/hr	8.48/hr	
4WD 280HP Tractor	114,700	500 hr	15	33,953	10.77/hr	6.69/hr	6.68/hr	
SP Combine (base unit)	132,900	250 hr	12	33,041	33.29/hr	14.93/hr	21.56/hr	
Tandem Truck (used)	30,000	150 hr	15	10,000	8.89/hr	6.00/hr	5.33/hr	
Semi & Trailer (used)	35,000	150 hr	10	10,000	16.67/hr	6.75/hr	6.67/hr	
Pickup Truck	19,000	300 hr	10	4,000	5.00/hr	1.73/hr	2.47/hr	
Swather 25 ft	16,000	1,000 ac	20	3,788	0.61/ac	0.45/ac	0.28/ac	12.1
Sprayer 90 ft	24,500	2,200 ac	15	9,709	0.45/ac	0.35/ac	0.31/ac	42.5
No-till drill 30 ft	71,400	1,800 ac	12	33,657	1.75/ac	1.31/ac	3.30/ac	12.7
No-till planter 12-30	38,900	800 ac	20	12,863	1.62/ac	1.46/ac	2.15/ac	10.6
Corn head 6-30	23,400	400 ac	20	2,192	2.65/ac	1.44/ac	0.83/ac	4.5
Grain head w/pu	10,200	800 ac	15	2,124	0.67/ac	0.35/ac	0.19/ac	8.5
Grain str. cut 25 ft	13,800	1,200 ac	10	4,729	0.76/ac	0.35/ac	0.25/ac	8.5
Head w/sunf pans 25 ft	17,200	400 ac	20	1,813	1.92/ac	1.07/ac	0.32/ac	8.5
Grain auger	6,300	50 hr	20	500	5.80/hr	3.06/hr	0.62/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	Spray (burn-down)	90	6.0	42.5	0.19	0.44
2	Plant	35	5.0	12.7	1.78	3.82
3	Spray (postemergence)	90	6.0	42.5	0.19	0.44
4	Combine str. cut	25	4.0	8.5	2.20	2.79
	Trucks*				0.70	0.48
	Grain auger (pto)				0.11	0.01
	Pickup truck allocation				1.10	0.45
	Total				6.27	8.43

* Truck costs will vary between crops.

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