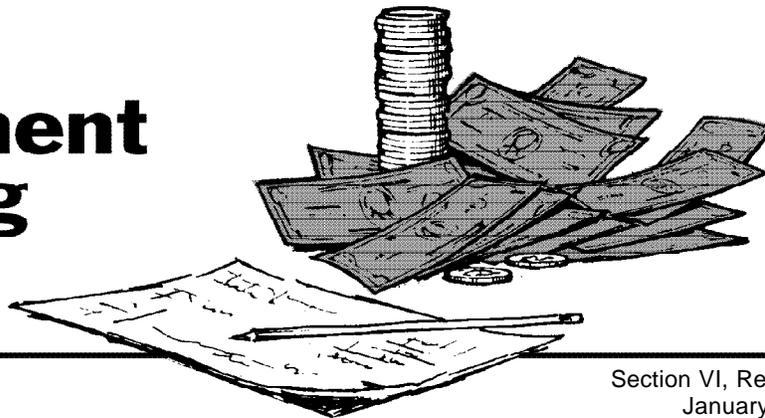


# Farm Management Planning Guide

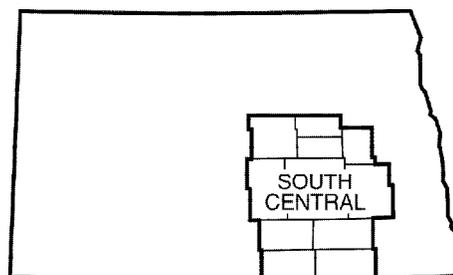


Section VI, Region 5  
January 2003

## Projected 2003 *Organic*

### Crop Budgets

### South Central North Dakota



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The organic crop budgets for 2003 provide an estimate of revenues and costs for the organic production of selected crops in south central North Dakota. THESE BUDGETS ARE ONLY INTENDED TO BE USED AS A GUIDE. There is considerable variation in soil type and productivity, weather conditions, as well as management and organic production practices within this large multi-county region. Also, organic production may have more variability in revenue, from both yield and price, compared to conventional production. Chemical pesticide and fertilizer cannot be used to subdue a pest problem or treat a nutrient deficiency. Strong premiums can be achieved with organic commodities, but the market is smaller than for conventionally grown crops and price discovery can be difficult. Therefore, EVERY

INDIVIDUAL IS HIGHLY ENCOURAGED TO DEVELOP HIS/HER OWN BUDGETS!

PROFITABILITY and CASH FLOW budgets are shown because each provides valuable information to the producer. To fully understand the budgets, it is important that you study the explanations of how each item is calculated. Crop prices, direct costs, and the land tax and investment are best estimates for only the 2003 crop year, but crop yields are estimated at 75 percent of the historic average yields of conventional production and machinery ownership costs are an average for the total length of ownership.

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. Organic farming requires intensive labor and management for production, marketing and maintaining records for certification and verification.



North Dakota State University, Fargo, ND 58105

The profitability 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 investment cost items with your per acre interest, or rental, expense of machinery and land, respectively.

The CASH FLOW budget shows the one-year cash flow feasibility of the crop enterprise. The net cash flow represents the cash left for family living, state and federal taxes, saving and investment after all the cash operating expenses and 2003 land and machinery debt obligations (principal and interest payments) have been met. It is assumed that there are loans on 40% of the land and machinery investment. No depreciation or provision for machinery replacement is considered.

Calculation of farm program payments are the same for enrolled organic producers as for conventional producers. De-coupled payments under the 2002 Farm Bill are not included in the budgets because those payments are not tied to crop selection or production.

## Primary Assumptions For All Budgets

**Market Yields:** Yields are based on 75 percent of the average yield of conventional crops from the 7 year period, 1995-2001, after the low and high yield years are removed. Conventional yields for field peas, millet and buckwheat are from NDSU extension agronomists and industry sources. The 75 percent factor was derived from interviews with producers, buyers, and NDSU extension personnel. Although some experienced growers can achieve yields similar to or above average yields of conventional producers, other growers have had less success in managing pests and fertility under an organic system of production. Production has been increasing and it takes time for new growers and land to convert to an organic system. Also, to meet stringent standards, the cleanout from organic grain is often greater than for conventional markets, resulting in less marketable yield per acre for the organic food market.

It is important to note that the cleanout, or screenings, from organic grain can have significant value as feed for certified organic livestock production. No estimate of this value is provided in the budgets.

**Price:** Prices are from a survey of buyers and growers of organic grains. The prices are for food quality grain, unless otherwise noted, and hauling costs are paid by the producer.

Price discounts for poor quality grain and payment risk are factors that should be considered by growers. The "floor price" for organic grains is the market price of conventionally grown commodities of similar grade. The organic market is not as liquid as the conventional market. Producers often wait 30 days or more for payments.

The marketing skills necessary for organic producers are somewhat different than for conventional producers. Conventional grain producers can enhance revenue, relative to their peers, through better timing of sales. Some organic producers may get \$.50 to \$2 per bushel more than others, not because of market timing, but because of knowing where a market is, negotiation, and by having established long-term relationships with buyers as a dependable supplier.

Organic markets can be volatile. Sometimes there is strong demand relative to available supply and other times there are few buyers and little premium for a particular commodity — the producer must decide whether to be patient and wait for more buying interest. A concern of some experienced growers is that new growers, inexperienced in marketing, will sell products too cheaply and depress the market for all growers.

### Costs of Hauling to Market and Cleaning:

The budgets have the following costs for hauling to market. Cleaning is done by buyer and producer is paid on quantity after cleaning. The hauling cost assumes about 200 miles to destination. Adjust these numbers if your hauling charges are different.

	Hauling
Spring Wheat, Durum, Soybeans, Rye, Flax and Corn Grain	\$ .50/bu
Feed Barley	.40/bu
Oats	.30/bu
Sunflowers, Millet, Buckwheat and Field Peas	.80/cwt

Grain cleaning and shipping charges are important factors when evaluating price and costs. Contracts may specify the producer as responsible for both, either one, or neither. For example, some prices are quoted FOB a destination point and the producer must pay shipping and cleaning. Other buyers may quote a farm gate price based on quantity after cleaning and pay for the cleaning and shipping. Experienced growers stress that cleaning and shipping are significant costs and one must read the fine print to avoid a surprise. It is also important to understand what happens if the commodity is below contract quality specifications.

Current cropland value/acre = \$379.00

Current cropland rent/acre = \$ 32.46

**Fertility:** Reliance on rotation with “green manure” crops such as sweet clover, alfalfa and other legumes.

**Seed Prices (for planting):** Organic certified seed is required. However, in 2003 conventionally grown untreated seed (not GMO) can be used if organic seed is not commercially available. Prices for conventional sunflower and sweet clover seed were used in these budgets.

Spring Wheat	9.50/bu
Durum	10.50/bu
Barley	7.50/bu
Corn grain	1.20/thou.kern.
Oil Sunflower	.64/thou.kern.
Conf. Sunflower	1.05/thou.kern.
Soybean	20.00/bu
Oats	5.75/bu
Flax	40.00/bu
Field Peas	9.00/bu
Millet	.30/lb
Buckwheat	.32/lb
Rye	7.00/bu
Sweet Clover	1.00/lb

**Fuel prices:**

Diesel	-1.03/gal
Gas	-1.44/gal

**Lubrication charge:** 15% of fuel cost

**Miscellaneous:** machinery rent, inoculant.

**Operating interest:** direct costs charged 6.25% interest for 6 month period.

Costs of moving crop to storage are included.

## Assumptions for Profitability Budgets

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, \$2 per acre is assumed for organic certification and inspection fees and grain testing. Finally, \$1 per acre is assumed for general farm utilities, farm publications, meetings, income tax preparation, legal fees, etc.

Land investment charge = average cash rent for region minus land tax.

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)

## Assumptions for Cash Cost Budgets

Misc. Overhead - same as for “profitability” budget except the housing expense calculation for machinery is omitted.

Machinery Investment cost = Annual principal and interest payment on machinery debt. Loan amount is 40% of total machinery investment. Terms of machinery debt is 7 years at 6.5% interest. You should enter your actual annual debt payment for machinery per acre.

Land Investment cost = Annual principal and interest payment on land debt. Loan amount is 40% of crop land value. Terms of land debt is 30 years at 6.75% interest. You should use your actual annual land loan payment per acre. Substitute cash rent cost for land taxes and loan payment if land is cash rented instead of owned.

## Rotations

The science and management of crop rotations is beyond the scope of this publication. However, rotations are the essence of an organic production system. The crop budgets assume that reasonably sound agronomic rotations and selection and timing of operations are used to manage fertility and weed, disease, and insect pests.

A specific rotation is not assumed. It has been stated that 30 organic growers may provide 30 different responses to the question, "What is the best rotation?" All of the answers may be based on similar agronomic principals and possibly influenced by current market prices. It depends on the environment (soil, slope, weather, pests) at an individual farm and the experience, equipment and marketing of the grower. And the response will constantly evolve over time as grower experience and new techniques are used to adapt to the environment and markets.

The principal rule is to rotate crops to break pest cycles. The same crop should never be grown back to back, nor should crops that have seeds

that cannot be sorted from one another, if the previous crop is expected to become a "weed" in the other. In general, early seeded crops are rotated with late seeded crops, grasses with broadleaves, and shallow-rooted with deep-rooted. An organic producer has the challenging task of being proactive to avoid pest problems because reliance on chemical pesticide is not an option. Labor and management is more intense than with conventional production.

Rotations with a green manure fallow every 3rd, 4th or 5th year, are common. In general it becomes more difficult to control weeds, provide fertility and maintain production levels the longer the rotation goes between green manure fallow.

For more information on crop rotations and organic management practices contact: Brad Brummond, Walsh County Extension Agent, (701) 284-6248, e-mail [brummon@ndsuxext.nodak.edu](mailto:brummon@ndsuxext.nodak.edu).

Two samples of four year rotations, and a composite budget, are used for illustration purposes. The example rotations assume that food grade quality is achieved.

# Example 1 Crop Rotation

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	Year 1	Year 2	Year 3	Year 4	
	Oats seeded with S.Clover 25%	Green Manure Fallow 25%	Spring Wheat 25%	Soybeans 25%	Composite Budget 100%
Crop composite					
Market Yield	41 BU	0	23 BU	23 BU	N/A
Price	\$ 2.90	\$ 0.00	\$ 6.50	\$ 12.00	N/A
MARKET INCOME	118.90	0.00	149.50	276.00	136.10
DIRECT COSTS					
-Seed	22.94	0.00	19.00	28.00	17.49
-Crop Insurance	3.40	0.00	3.10	3.60	2.53
-Fuel & Lubrication	5.79	5.19	6.46	10.55	7.00
-Repairs	9.68	4.89	10.35	15.68	10.15
-Drying	0.00	0.00	0.00	0.00	0.00
-Hauling to Market	18.45	0.00	11.50	11.50	10.36
-Miscellaneous	0.00	0.00	0.00	1.50	0.39
-Operating Interest	1.88	0.31	1.58	2.21	1.49
SUM OF LISTED DIRECT COSTS	62.14	10.39	51.98	73.04	49.39
INDIRECT (FIXED) COSTS					
-Misc. Overhead	5.70	4.60	5.65	7.22	5.79
-Machinery Depreciation	12.26	7.44	12.62	19.14	12.87
-Machinery Investment	7.81	5.35	8.17	13.40	8.68
-Land Taxes	5.10	5.10	5.10	5.10	5.10
-Land Investment	27.36	27.36	27.36	27.36	27.36
SUM OF LISTED INDIRECT COSTS	58.23	49.85	58.90	72.22	59.80
SUM OF ALL LISTED COSTS	120.37	60.24	110.88	145.27	109.19
RETURN TO LABOR & MANAGEMENT	-1.47	-60.24	38.62	130.73	26.91

## Example 2 Crop Rotation

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	Year 1	Year 2	Year 3	Year 4	
Crop composite	Spr. Wheat seeded with S.Clover 25%	Green Manure Fallow 25%	Rye 25%	Flax 25%	Composite Budget 100%
Market Yield	23 BU	0	29 BU	11 BU	N/A
Price	\$ 6.50	\$ 0.00	\$ 4.25	\$ 14.50	N/A
MARKET INCOME	149.50	0.00	123.25	159.50	108.06
DIRECT COSTS					
-Seed	29.00	0.00	8.40	36.00	18.35
-Crop Insurance	3.10	0.00	2.80	3.20	2.28
-Fuel & Lubrication	6.46	5.19	6.76	7.31	6.43
-Repairs	10.35	4.89	10.48	11.13	9.21
-Drying	0.00	0.00	0.00	0.00	0.00
-Hauling to Market	11.50	0.00	14.50	7.00	8.25
-Miscellaneous	0.00	0.00	0.00	0.00	0.00
-Operating Interest	1.89	0.31	1.34	2.02	1.39
SUM OF LISTED DIRECT COSTS	62.30	10.39	44.28	66.66	45.91
INDIRECT (FIXED) COSTS					
-Misc. Overhead	5.65	4.60	5.73	5.69	5.42
-Machinery Depreciation	12.62	7.44	12.91	13.20	11.54
-Machinery Investment	8.17	5.35	8.26	8.67	7.61
-Land Taxes	5.10	5.10	5.10	5.10	5.10
-Land Investment	27.36	27.36	27.36	27.36	27.36
SUM OF LISTED INDIRECT COSTS	58.90	49.85	59.36	60.01	57.03
SUM OF ALL LISTED COSTS	121.20	60.24	103.64	126.67	102.94
RETURN TO LABOR & MANAGEMENT	28.30	-60.24	19.61	32.83	5.13

# Organic Spring Wheat

Market Yield Price	23 \$ 6.50	Profitability Per Acre	Cash Flow Per Acre	Your Figures
MARKET INCOME		149.50	149.50	_____
DIRECT COSTS				
-Seed		19.00	19.00	_____
-Crop Insurance		3.10	3.10	_____
-Fuel & Lubrication		6.46	6.46	_____
-Repairs		10.35	10.35	_____
-Drying		0.00	0.00	_____
-Hauling to Market		11.50	11.50	_____
-Miscellaneous		0.00	0.00	_____
-Operating Interest		1.58	1.58	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		51.98	51.98	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead		5.65	4.75	_____
-Machinery Depreciation		12.62	xxxxxx	_____
-Machinery Investment		8.17	19.74	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		58.90	41.50	_____
SUM OF ALL LISTED COSTS		110.88	93.48	_____
RETURN TO LABOR & MANAGEMENT		38.62	xxxxxx	_____
NET CASH FLOW		xxxxxx	56.02	_____
LISTED COSTS PER BUDGET UNIT (bu) :				
-Direct Costs		2.26	2.26	_____
-Indirect Costs		2.56	1.80	_____
-Total Costs		4.82	4.06	_____

notes:

There is no charge for green manure fallow year of rotation.

# Organic Durum

Market Yield Price	18 \$ 7.50	Profitability Per Acre	Cash Flow Per Acre	Your Figures
MARKET INCOME		135.00	135.00	_____
DIRECT COSTS				
-Seed		21.00	21.00	_____
-Crop Insurance		3.40	3.40	_____
-Fuel & Lubrication		6.37	6.37	_____
-Repairs		10.25	10.25	_____
-Drying		0.00	0.00	_____
-Hauling to Market		9.00	9.00	_____
-Miscellaneous		0.00	0.00	_____
-Operating Interest		1.56	1.56	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		51.58	51.58	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead		5.56	4.67	_____
-Machinery Depreciation		12.41	xxxxxx	_____
-Machinery Investment		8.01	19.35	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		58.45	41.03	_____
SUM OF ALL LISTED COSTS		110.03	92.61	_____
RETURN TO LABOR & MANAGEMENT		24.97	xxxxxx	_____
NET CASH FLOW		xxxxxx	42.39	_____
LISTED COSTS PER BUDGET UNIT (bu) :				
-Direct Costs		2.87	2.87	_____
-Indirect Costs		3.25	2.28	_____
-Total Costs		6.11	5.14	_____

notes:

There is no charge for green manure fallow year of rotation.

# Organic FEED BARLEY

Market Yield Price	41 \$ 3.50	Profitability Per Acre	Cash Flow Per Acre	Your Figures
MARKET INCOME		143.50	143.50	_____
DIRECT COSTS				
-Seed		15.00	15.00	_____
-Crop Insurance		2.70	2.70	_____
-Fuel & Lubrication		6.77	6.77	_____
-Repairs		10.74	10.74	_____
-Drying		0.00	0.00	_____
-Hauling to Market		16.40	16.40	_____
-Miscellaneous		0.00	0.00	_____
-Operating Interest		1.61	1.61	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		53.22	53.22	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead		5.98	5.01	_____
-Machinery Depreciation		13.35	xxxxxx	_____
-Machinery Investment		8.72	21.18	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		60.51	43.20	_____
SUM OF ALL LISTED COSTS		113.74	96.42	_____
RETURN TO LABOR & MANAGEMENT		29.76	xxxxxx	_____
NET CASH FLOW		xxxxxx	47.08	_____
LISTED COSTS PER BUDGET UNIT (bu) :				
-Direct Costs		1.30	1.30	_____
-Indirect Costs		1.48	1.05	_____
-Total Costs		2.77	2.35	_____

notes:

There is no charge for green manure fallow year of rotation.

# Organic CORN GRAIN

Market Yield Price*	70 \$ 3.50	Profitability Per Acre	Cash Flow Per Acre	Your Figures
MARKET INCOME		245.00	245.00	_____
DIRECT COSTS				
-Seed		25.20	25.20	_____
-Crop Insurance		8.00	8.00	_____
-Fuel & Lubrication		10.25	10.25	_____
-Repairs		15.85	15.85	_____
-Drying		8.40	8.40	_____
-Hauling to Market		35.00	35.00	_____
-Miscellaneous		0.00	0.00	_____
-Operating Interest		3.21	3.21	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		105.91	105.91	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead		8.11	6.43	_____
-Machinery Depreciation		22.93	xxxxxx	_____
-Machinery Investment		15.09	38.10	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		78.59	61.54	_____
SUM OF ALL LISTED COSTS		184.50	167.45	_____
RETURN TO LABOR & MANAGEMENT		60.50	xxxxxx	_____
NET CASH FLOW		xxxxxx	77.55	_____
LISTED COSTS PER BUDGET UNIT (bu) :				
-Direct Costs		1.51	1.51	_____
-Indirect Costs		1.12	0.88	_____
-Total Costs		2.64	2.39	_____

notes:

There is no charge for green manure fallow year of rotation.

\*Price for livestock feed.

# Organic OIL SUNFLOWER

Market Yield Price	1040 \$ 0.17	Profitability Per Acre	Cash Flow Per Acre	Your Figures
MARKET INCOME		176.80	176.80	_____
<b>DIRECT COSTS</b>				
-Seed		14.08	14.08	_____
-Crop Insurance		3.50	3.50	_____
-Fuel & Lubrication		9.78	9.78	_____
-Repairs		14.53	14.53	_____
-Drying		2.08	2.08	_____
-Hauling to Market		8.32	8.32	_____
-Miscellaneous		0.00	0.00	_____
-Operating Interest		1.63	1.63	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		53.93	53.93	_____
<b>INDIRECT (FIXED) COSTS</b>				
-Misc. Overhead		6.96	5.60	_____
-Machinery Depreciation		18.10	xxxxxx	_____
-Machinery Investment		12.24	30.15	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		69.77	52.76	_____
SUM OF ALL LISTED COSTS		123.70	106.69	_____
RETURN TO LABOR & MANAGEMENT		53.10	xxxxxx	_____
NET CASH FLOW		xxxxxx	70.11	_____
<b>LISTED COSTS PER BUDGET UNIT (lb) :</b>				
-Direct Costs		0.05	0.05	_____
-Indirect Costs		0.07	0.05	_____
-Total Costs		0.12	0.10	_____

notes:

There is no charge for green manure fallow year of rotation.

# Organic CONFECTIONERY SUNFLOWER

Market Yield	950	Profitability	Cash Flow	Your
Price	\$ 0.17	Per Acre	Per Acre	Figures
MARKET INCOME		161.50	161.50	_____
DIRECT COSTS				
-Seed		20.48	20.48	_____
-Crop Insurance		5.30	5.30	_____
-Fuel & Lubrication		9.73	9.73	_____
-Repairs		14.47	14.47	_____
-Drying		1.90	1.90	_____
-Hauling to Market		7.60	7.60	_____
-Miscellaneous		0.00	0.00	_____
-Operating Interest		1.86	1.86	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		61.33	61.33	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead		6.91	5.56	_____
-Machinery Depreciation		17.99	xxxxxx	_____
-Machinery Investment		12.16	29.93	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		69.52	52.50	_____
SUM OF ALL LISTED COSTS		130.85	113.83	_____
RETURN TO LABOR & MANAGEMENT		30.65	xxxxxx	_____
NET CASH FLOW		xxxxxx	47.67	_____
LISTED COSTS PER BUDGET UNIT (lb) :				
-Direct Costs		0.06	0.06	_____
-Indirect Costs		0.07	0.06	_____
-Total Costs		0.14	0.12	_____

notes:

There is no charge for green manure fallow year of rotation.

# Organic SOYBEANS

Market Yield	23	Profitability	Cash Flow	Your
Price*	\$ 12.00	Per Acre	Per Acre	Figures
MARKET INCOME		276.00	276.00	_____
<b>DIRECT COSTS</b>				
-Seed		28.00	28.00	_____
-Crop Insurance		3.60	3.60	_____
-Fuel & Lubrication		10.55	10.55	_____
-Repairs		15.68	15.68	_____
-Drying		0.00	0.00	_____
-Hauling to Market		11.50	11.50	_____
-Miscellaneous		1.50	1.50	_____
-Operating Interest		2.21	2.21	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		73.04	73.04	_____
<b>INDIRECT (FIXED) COSTS</b>				
-Misc. Overhead		7.22	5.73	_____
-Machinery Depreciation		19.14	xxxxxx	_____
-Machinery Investment		13.40	32.63	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		72.22	55.37	_____
SUM OF ALL LISTED COSTS		145.27	128.42	_____
RETURN TO LABOR & MANAGEMENT		130.73	xxxxxx	_____
NET CASH FLOW		xxxxxx	147.58	_____
<b>LISTED COSTS PER BUDGET UNIT (bu) :</b>				
-Direct Costs		3.18	3.18	_____
-Indirect Costs		3.14	2.41	_____
-Total Costs		6.32	5.58	_____

notes:

There is no charge for green manure fallow year of rotation.

\*Food quality price estimate. Clear hilum soybeans are preferred by most organic buyers. Livestock feed price is about \$7.

# Organic OATS

Market Yield Price	41 \$ 2.90	Profitability Per Acre	Cash Flow Per Acre	Your Figures
MARKET INCOME		118.90	118.90	_____
<b>DIRECT COSTS</b>				
-Seed		12.94	12.94	_____
-Crop Insurance		3.40	3.40	_____
-Fuel & Lubrication		6.77	6.77	_____
-Repairs		10.74	10.74	_____
-Drying		0.00	0.00	_____
-Hauling to Market		12.30	12.30	_____
-Miscellaneous		0.00	0.00	_____
-Operating Interest		1.44	1.44	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		47.59	47.59	_____
<b>INDIRECT (FIXED) COSTS</b>				
-Misc. Overhead		5.98	5.01	_____
-Machinery Depreciation		13.35	xxxxxx	_____
-Machinery Investment		8.72	21.18	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		60.51	43.20	_____
SUM OF ALL LISTED COSTS		108.10	90.79	_____
RETURN TO LABOR & MANAGEMENT		10.80	xxxxxx	_____
NET CASH FLOW		xxxxxx	28.11	_____
<b>LISTED COSTS PER BUDGET UNIT (bu) :</b>				
-Direct Costs		1.16	1.16	_____
-Indirect Costs		1.48	1.05	_____
-Total Costs		2.64	2.21	_____

notes:

There is no charge for green manure fallow year of rotation.

# Organic FLAX

Market Yield*	11	Profitability	Cash Flow	Your
Price	\$ 14.50	Per Acre	Per Acre	Figures
MARKET INCOME		159.50	159.50	_____
<b>DIRECT COSTS</b>				
-Seed**		36.00	36.00	_____
-Crop Insurance		3.20	3.20	_____
-Fuel & Lubrication		7.31	7.31	_____
-Repairs		11.13	11.13	_____
-Drying		0.00	0.00	_____
-Hauling to Market		7.00	7.00	_____
-Miscellaneous		0.00	0.00	_____
-Operating Interest		2.02	2.02	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		66.66	66.66	_____
<b>INDIRECT (FIXED) COSTS</b>				
-Misc. Overhead		5.69	4.72	_____
-Machinery Depreciation		13.20	xxxxxx	_____
-Machinery Investment		8.67	20.76	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		60.01	42.50	_____
SUM OF ALL LISTED COSTS		126.67	109.16	_____
RETURN TO LABOR & MANAGEMENT		32.83	xxxxxx	_____
NET CASH FLOW		xxxxxx	50.34	_____
<b>LISTED COSTS PER BUDGET UNIT (bu) :</b>				
-Direct Costs		6.06	6.06	_____
-Indirect Costs		5.46	3.86	_____
-Total Costs		11.52	9.92	_____

notes:

There is no charge for green manure fallow year of rotation.

\*Market yield is after estimated 25% cleanout to meet food quality specifications.

\*\*Seed price projection is unusually high because of short supply. In 2003, if certified organic seed is not available, conventional non-treated seed would cost about \$9.

# Organic FIELD PEAS

Market Yield Price*	1570 \$ 0.10	Profitability Per Acre	Cash Flow Per Acre	Your Figures
MARKET INCOME		157.00	157.00	_____
DIRECT COSTS				
-Seed		27.00	27.00	_____
-Crop Insurance		7.10	7.10	_____
-Fuel & Lubrication		7.38	7.38	_____
-Repairs		11.53	11.53	_____
-Drying		0.00	0.00	_____
-Hauling to Market		12.56	12.56	_____
-Miscellaneous		1.50	1.50	_____
-Operating Interest		2.10	2.10	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		69.17	69.17	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead		5.88	4.90	_____
-Machinery Depreciation		14.26	xxxxxx	_____
-Machinery Investment		8.82	21.37	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		61.42	43.28	_____
SUM OF ALL LISTED COSTS		130.59	112.45	_____
RETURN TO LABOR & MANAGEMENT		26.41	xxxxxx	_____
NET CASH FLOW		xxxxxx	44.55	_____
LISTED COSTS PER BUDGET UNIT (lb) :				
-Direct Costs		0.04	0.04	_____
-Indirect Costs		0.04	0.03	_____
-Total Costs		0.08	0.07	_____

notes:

There is no charge for green manure fallow year of rotation.

\*Food quality price estimate, livestock feed price is about \$.07/lb.

# Organic MILLET

Market Yield Price	1350 \$ 0.11	Profitability Per Acre	Cash Flow Per Acre	Your Figures
MARKET INCOME		148.50	148.50	_____
<b>DIRECT COSTS</b>				
-Seed		7.50	7.50	_____
-Crop Insurance		0.00	0.00	_____
-Fuel & Lubrication		6.37	6.37	_____
-Repairs		10.17	10.17	_____
-Drying		0.00	0.00	_____
-Hauling to Market		10.80	10.80	_____
-Miscellaneous		0.00	0.00	_____
-Operating Interest		1.09	1.09	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		35.93	35.93	_____
<b>INDIRECT (FIXED) COSTS</b>				
-Misc. Overhead		5.61	4.73	_____
-Machinery Depreciation		12.49	xxxxxx	_____
-Machinery Investment		7.90	19.22	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		58.46	40.96	_____
SUM OF ALL LISTED COSTS		94.39	76.89	_____
RETURN TO LABOR & MANAGEMENT		54.11	xxxxxx	_____
NET CASH FLOW		xxxxxx	71.61	_____
<b>LISTED COSTS PER BUDGET UNIT (lb) :</b>				
-Direct Costs		0.03	0.03	_____
-Indirect Costs		0.04	0.03	_____
-Total Costs		0.07	0.06	_____

notes:

There is no charge for green manure fallow year of rotation.

# Organic BUCKWHEAT

Market Yield Price	850 \$ 0.15	Profitability Per Acre	Cash Flow Per Acre	Your Figures
MARKET INCOME		127.50	127.50	_____
DIRECT COSTS				
-Seed		16.00	16.00	_____
-Crop Insurance		0.00	0.00	_____
-Fuel & Lubrication		6.86	6.86	_____
-Repairs		10.79	10.79	_____
-Drying		0.00	0.00	_____
-Hauling to Market		6.80	6.80	_____
-Miscellaneous		0.00	0.00	_____
-Operating Interest		1.26	1.26	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		41.72	41.72	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead		5.65	4.73	_____
-Machinery Depreciation		12.92	xxxxxx	_____
-Machinery Investment		8.27	19.99	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		59.30	41.73	_____
SUM OF ALL LISTED COSTS		101.02	83.44	_____
RETURN TO LABOR & MANAGEMENT		26.48	xxxxxx	_____
NET CASH FLOW		xxxxxx	44.06	_____
LISTED COSTS PER BUDGET UNIT (lb) :				
-Direct Costs		0.05	0.05	_____
-Indirect Costs		0.07	0.05	_____
-Total Costs		0.12	0.10	_____

notes:

There is no charge for green manure fallow year of rotation.

# Organic RYE

Market Yield Price	29 \$ 4.25	Profitability Per Acre	Cash Flow Per Acre	Your Figures
MARKET INCOME		123.25	123.25	_____
DIRECT COSTS				
-Seed		8.40	8.40	_____
-Crop Insurance		2.80	2.80	_____
-Fuel & Lubrication		6.76	6.76	_____
-Repairs		10.48	10.48	_____
-Drying		0.00	0.00	_____
-Hauling to Market		14.50	14.50	_____
-Miscellaneous		0.00	0.00	_____
-Operating Interest		1.34	1.34	_____
		=====	=====	=====
SUM OF LISTED DIRECT COSTS		44.28	44.28	_____
INDIRECT (FIXED) COSTS				
-Misc. Overhead		5.73	4.81	_____
-Machinery Depreciation		12.91	xxxxxx	_____
-Machinery Investment		8.26	20.03	_____
-Land Taxes		5.10	5.10	_____
-Land Investment		27.36	11.91	_____
		=====	=====	=====
SUM OF LISTED INDIRECT COSTS		59.36	41.86	_____
SUM OF ALL LISTED COSTS		103.64	86.14	_____
RETURN TO LABOR & MANAGEMENT		19.61	xxxxxx	_____
NET CASH FLOW		xxxxxx	37.11	_____
LISTED COSTS PER BUDGET UNIT (bu) :				
-Direct Costs		1.53	1.53	_____
-Indirect Costs		2.05	1.44	_____
-Total Costs		3.57	2.97	_____

# Rotational Green Manure Fallow

	Profitability Per Acre	Cash Flow Per Acre	Your Figures
MARKET INCOME	0.00	0.00	_____
DIRECT COSTS			
-Seed*	10.00	10.00	_____
-Crop Insurance	0.00	0.00	_____
-Fuel & Lubrication	5.19	5.19	_____
-Repairs	4.89	4.89	_____
-Drying	0.00	0.00	_____
-Hauling to Market	0.00	0.00	_____
-Miscellaneous	0.00	0.00	_____
-Operating Interest	0.63	0.63	_____
	=====	=====	=====
SUM OF LISTED DIRECT COSTS	20.71	20.71	_____
INDIRECT (FIXED) COSTS			
-Misc. Overhead	4.60	4.01	_____
-Machinery Depreciation	7.44	xxxxxx	_____
-Machinery Investment	5.35	13.03	_____
-Land Taxes	5.10	5.10	_____
-Land Investment	27.36	11.91	_____
	=====	=====	=====
SUM OF LISTED INDIRECT COSTS	49.85	34.06	_____
SUM OF ALL LISTED COSTS	70.56	54.76	_____
RETURN TO LABOR & MANAGEMENT	(70.56)	xxxxxx	_____
NET CASH FLOW	xxxxxx	(54.76)	_____

notes:

Sweet clover is underseeded in crop the previous year. Other legumes are also used for soil building green manure crops.

\*Cost is for conventional untreated seed. It is assumed that organic certified sweet clover seed will not be available in 2003.

# Machinery List

Machine	Purch. Price	Annual Use	Years to trade	Trade in	Deprec.	Invest.	Repairs	Ac/hr
2WD 100HP Tractor	49100	400 hr	20	15855	4.16 /hr	3.65 /hr	5.01 /hr	
2WD 160HP Tractor	80900	500 hr	15	23921	7.60 /hr	4.72 /hr	8.23 /hr	
4WD 280HP Tractor	111300	500 hr	15	32952	10.45 /hr	6.49 /hr	6.48 /hr	
SP Combine (base unit)	129000	250 hr	12	32077	32.31 /hr	14.50 /hr	20.93 /hr	
Tandem Truck (2)	49600	150 hr	20	12500	12.37 /hr	9.32 /hr	6.48 /hr	
Pick-up Truck	18300	300 hr	10	3700	4.87 /hr	1.65 /hr	2.38 /hr	
Swather 25 ft	13200	1000 ac	20	3123	0.50 /ac	0.37 /ac	0.23 /ac	12.1
Chisel Plow 32 ft	21300	1600 ac	14	12542	0.39 /ac	0.48 /ac	0.62 /ac	14.8
Field Cultivator 45 ft	29200	3000 ac	14	16240	0.31 /ac	0.34 /ac	0.52 /ac	23.2
Tandem Disk 28 ft	22400	600 ac	20	6432	1.33 /ac	1.08 /ac	0.63 /ac	12.2
Harrow (springtooth) 60 ft	9500	1200 ac	20	5492	0.17 /ac	0.28 /ac	0.12 /ac	34.0
Row-crop cultivator 8-30	5400	600 ac	15	3079	0.26 /ac	0.32 /ac	0.31 /ac	7.8
Grain Drill 30 ft	40800	1200 ac	12	19192	1.50 /ac	1.12 /ac	2.09 /ac	11.5
Planter 8-30	22100	400 ac	20	7416	1.84 /ac	1.66 /ac	1.85 /ac	7.1
Corn head 8-30	29100	400 ac	20	2817	3.29 /ac	1.80 /ac	0.90 /ac	5.1
Grain head w/pu	10000	1200 ac	10	3546	0.54 /ac	0.25 /ac	0.19 /ac	8.5
Grain str. cut 25 ft	13500	400 ac	20	1409	1.51 /ac	0.84 /ac	0.25 /ac	8.5
Head w/sunf pans 20 ft	13800	400 ac	20	1396	1.55 /ac	0.85 /ac	0.32 /ac	6.8
Soybeans str. cut 20 ft	14700	400 ac	20	1500	1.65 /ac	0.91 /ac	0.34 /ac	6.8
Mower-conditioner 14 ft	18300	400 ac	20	4332	1.75 /ac	1.27 /ac	1.17 /ac	5.7
Baler (large round)	18600	400 ac	20	5948	1.58 /ac	1.38 /ac	2.61 /ac	5.0
Rock picker	14000	50 hr	20	4448	0.32 /ac	0.28 /ac	0.21 /ac	29.1
Loader for tractor	4800	150 hr	15	1854	1.33 /hr	1.02 /hr	2.20 /hr	
Grain auger	4900	50 hr	20	700	4.20 /hr	2.52 /hr	0.60 /hr	

