



Publication 60  
**Field Crop  
Budgets**  
2024

These crop budgets are a tool for estimating expenses. The sample costs are only a guide to illustrate a method of preparing your projections. They are based on many assumptions, including seeding rates, levels of fertilizer use, etc. Due to regional differences, there may be considerable variation in results.

To project your break-even price after total costs, enter your farm figures in the spaces provided. The resulting estimate will help you choose your crop mix and set target prices and marketing strategies for your farm.

Electronic versions of these crop budget worksheets can be found at [ontario.ca/agbusiness](http://ontario.ca/agbusiness) under *Cost of Production Budgets*.

The use of imperial and metric measurement in this publication reflects the way information is reported by industry. Fertilizer rates are typically reported in kilogram (kg)/hectare. See page 22 for metric and imperial conversions.

Front cover: Field of soybeans mid-season.

Back cover: Sprout of recently appeared corn. Photo source: Shutterstock.

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## 2024 FIELD CROP BUDGETS

Crop budgets are a management tool to estimate costs and evaluate cropping alternatives. The sample costs are not averages or recommended treatments. The budgets comprise treatments derived from crop advisors in the areas where the crops are commonly grown. There will be differences due to growing region, cropping practices, individual needs and yield expectations. The budgets, unless indicated otherwise, are based on conventional tillage practices. Seed costs, except for the *Bacillus thuringiensis* (Bt), Roundup Ready (RR) and herbicide-tolerant corn, spring canola and soybeans, are for non-genetically enhanced varieties. The budgets developed for Bt, RR or herbicide-tolerant varieties do not represent an endorsement of these products. They are included due to the current predominance of these production systems in field crop operations.

Identity Preserved (IP) crops require budgeting for any extra expenses and revenue, e.g., increased seed, weed control, storage and equipment cleaning costs. Some of the budgets provide a line item for this.

Interest rates were calculated at 8.2% for the period between planting and harvest.

These budgets will be most meaningful if you use your expected yields and specific costs in developing production plans. Input prices for seed, fertilizer, fuel and pesticides were based on the survey results reported in the Ontario Farm Input Monitoring Project conducted by the University of Guelph, Ridgetown campus. The production insurance and risk management program premiums shown are the producer premiums at the highest coverage level and at the floating price, if available.

The estimated costs for machinery are derived from agricultural engineering formulas and Ontario average custom rates. The Ontario average custom rates are allocated across the six machinery-related expenses. It is recommended that you use your records to derive your costs. Experience is the best guide to help budget machinery costs. Prior year's statements of income and expenses can provide information on equipment repairs, maintenance and fuel costs. The portion of those costs that relates to crop production can be divided by the acres of crop produced to arrive at a cost per acre.

Overhead expenses are a major part of the total cost of doing business. In addition to the depreciation of machinery, include depreciation on all related tools and storage buildings. Land costs would include property tax and any other land-related costs. Other overhead expenses should include insurance, professional fees, office, vehicles and storage. In all cases, divide overhead expenses by the acreage of crop to express costs on a per-acre basis. Interest on investment is an opportunity cost to you — the rate of return that you expect or want on your invested capital.

If there are significant debt commitments for land and equipment, an alternative method of budgeting overhead expenses is to use the debt servicing requirements. In this case, use the actual interest and principal payment commitments, rather than depreciation and expected return on invested capital.

"Total Revenue" is the yield you expect, multiplied by the price you expect. Yield information is most accurate if based on your experience with the land and techniques you will be using. If you do not have such records, check with AGRICORP or a local farm supply dealer. They can help you develop plans and reasonable expectations for your crops.

"Contribution Margin" is the difference between total operating expenses and total revenue. "Operating Expenses" (e.g., seed, fertilizer, fuel, repairs, etc.) change with the crop grown and the production blend used. "Fixed or overhead costs" will show little or no change whether one crop or another is grown. "Contribution Margin" is a quick and easy measure for comparing relative profitability among your cropping choices.

**Table 1.** Adjustment of nitrogen requirements for previous crops with nitrogen credits

Type of crop	N requirement reduction (kg/ha)	
	Corn	Other Crops
Perennial forage, less than one-third legume	0	0
Perennial forage, one-third to half legume	55	55
Perennial forage, half or more legume	110	110
Clover cover crop seeded/ploughed in same year	80	45 <sup>1</sup>
Soybean and field bean residue	30	0

<sup>1</sup> Applies where the legume stand is thick and over 40 cm (16 in.) high.

## 2024 Crop Comparison Summary Table for Selected Field Crops (\$/acre)\*

Expense	Corn Conventional Tillage	Herbicide- Tolerant Spring Canola	Non-GMO Soybeans No Till	Roundup Ready Soybeans No Till	Coloured Beans	White/ Black Beans	Soft Red Winter Wheat No Till	Oats	Hard Red Spring Wheat
Seed	116.90	93.25	66.10	93.20	143.55	106.15	82.70	45.35	85.50
Seed treatment	4.00	–	13.00	13.00	–	–	–	–	–
Fertility	245.10	158.80	77.80	77.80	85.95	85.95	167.85	107.10	129.25
Pesticides	33.50	67.70	79.65	27.85	139.45	148.25	47.70	53.20	37.20
<b>Total Inputs</b>	<b>399.50</b>	<b>319.75</b>	<b>236.55</b>	<b>211.85</b>	<b>368.95</b>	<b>340.35</b>	<b>298.25</b>	<b>205.65</b>	<b>251.95</b>
Tillage	78.45	68.95	–	–	114.30	76.35	–	68.95	68.95
Planting	28.20	23.20	30.10	30.10	28.20	32.20	29.10	23.20	23.20
Spraying	13.75	41.25	27.50	27.50	54.95	68.70	41.25	41.25	27.50
Fertilizing	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00
Harvesting & trucking	110.35	69.25	70.15	70.15	144.80	81.40	81.25	69.10	71.50
<b>Total Machinery</b>	<b>247.75</b>	<b>219.65</b>	<b>144.75</b>	<b>144.75</b>	<b>359.25</b>	<b>275.65</b>	<b>168.60</b>	<b>219.50</b>	<b>208.15</b>
Drying	108.45	–	–	–	–	–	–	–	–
Production insurance	20.30	30.70	13.95	13.95	40.25	28.70	12.55	11.85	20.35
Risk management	7.50	11.10	3.35	3.35	1.00	1.50	4.15	10.30	5.00
Interest @ 8.2%	31.50	21.70	15.80	14.80	25.80	23.95	32.45	10.90	17.40
Marketing & other	45.35	4.10	14.75	14.75	7.35	7.40	2.10	1.85	1.30
<b>Total Costs</b>	<b>860.35</b>	<b>607.00</b>	<b>429.15</b>	<b>403.45</b>	<b>802.60</b>	<b>677.55</b>	<b>518.10</b>	<b>460.05</b>	<b>504.15</b>
Yield									
Price									
<b>Gross Return</b>									
<b>Net Margin/Acre</b>									
Less:									
Land cost/rent									
Utilities/acct/misc.									
Net Return per Acre									

\* The crop comparison summary table is derived from the individual budgets in the publication. Some expense items have been combined in the summary table. For the break-out of the individual expenses, refer to the respective budget in the publication.

## Crop Budgeting Tools

Market and input prices projected were as of November 2023. Use the following tools to determine your cost of production:

- [Ontario Enterprise Budgeting Tools](#)
- [Custom Farmwork Rates](#)
- [Custom Farmwork Rate calculator](#)
- [Field Crop Statistics : Harvested Area, Production, Crop Prices, Corn Supply and Disposition](#)
- Crop Nutrient Removal calculator (from IPNI): [www.ipni.net/article/IPNI-3346](http://www.ipni.net/article/IPNI-3346)
- Corn Nitrogen calculator: [www.gocorn.net](http://www.gocorn.net)
- Mobile Apps: Cash Cropper, Pest Manager and Ontario Corn Nitrogen Calculator: [www.gfo.ca/apps](http://www.gfo.ca/apps)

## HAY

<b>DIRECT SEEDING ESTABLISHMENT</b> (Alfalfa-timothy 50% yield; Premium market 66% yield)		<b>Alfalfa-Timothy</b>	<b>Premium Market</b>	<b>Your Farm Budget</b>
Seed	13.45 kg/ha; 18 kg/ha alfalfa	81.15	108.20	
Other seed	4.48 kg/ha timothy	18.05	18.05	
Inoculant		1.05	1.05	
Fertility	45 kg/ha N	–	40.50	
	crop 24 kg/ha; 41 kg/ha P <sub>2</sub> O <sub>5</sub> (6.1 kg/tonne removal rate)	16.55	28.25	
	removal 92 kg/ha; 157 kg/ha K <sub>2</sub> O (23.5 kg/tonne removal rate)	52.70	90.05	
	lime 2,273 kg/ha	–	30.00	
Herbicide	broadleaf weed control	20.05	19.70	
	burndown	–	10.10	
Production insurance		7.20	7.20	
Tractor and machine expenses	fuel (43 L; 57 L) and lubricants	65.75	87.40	
	repairs	46.30	79.40	
Custom work	pesticide applications (2; 2)	27.50	27.50	
	fertilizer applications (2; 3), mixing and delivery	34.00	51.00	
	bale wrapping — plastic — 50% yield	42.40	–	
Drying (\$0.022/kg)		–	66.15	
Storage (\$0.022/kg)		–	66.15	
Twine		2.85	14.75	
Operator labour (self or hired)		33.50	42.15	
Interest		34.05	61.10	
<b>Total Establishment Year Expenses</b>		<b>483.10</b>	<b>848.70</b>	
<b>ANNUAL OPERATING EXPENSES (based on projected yield of 3.15 tonnes DM/acre over 2 cuts; 4.05 tonnes DM/acre over 3 cuts)</b>				
Establishment year expenses — over 4 years; 3 years (less establishment year sales)		34.55	7.90	
Fertility	45 kg/ha N	–	40.50	
	crop 47 kg/ha; 61 kg/ha P <sub>2</sub> O <sub>5</sub> (6.1 kg/tonne removal rate)	32.95	42.40	
	removal 183 kg/ha; 235 kg/ha K <sub>2</sub> O (applied in fall) (23.5 kg/tonne removal rate)	105.05	135.05	
	lime 2,273 kg/ha	–	30.00	
Pesticide	broadleaf weed control	–	9.85	
	insecticide	–	5.80	
Tractor and machine expenses	fuel (32 L; 46 L) and lubricants	48.90	69.80	
	repairs	43.30	82.60	
Twine		5.70	22.10	
Production insurance		25.00	50.25	
Custom work	pesticide applications (0; 2)	–	27.50	
	fertilizer applications (2; 2), mixing and delivery	34.00	34.00	
	bale wrapping — plastic	84.80	–	
Drying (\$0.022/kg)		–	99.25	
Storage (\$0.022/kg)		–	99.25	
Other costs		–	–	
Land rent		–	–	
Operator labour (self or hired)		34.55	44.00	
Interest on operating		19.35	34.95	
<b>Total Annual Operating Expenses</b>		<b>468.15</b>	<b>835.20</b>	
<b>REVENUE</b>				
Expected yield	_____			
Expected price	_____			
		<b>Total Revenue (Yield x Price)</b>		
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>				
<b>OVERHEAD EXPENSES</b>				
Machinery	depreciation	50.05	97.70	
	interest on investment	22.70	33.80	
Land		–	–	
Other overhead		10.50	18.75	
<b>NITROGEN CREDIT TO FOLLOWING CROPS IN ROTATION</b>				
Nitrogen credit (\$/acre = N reduction (from Table 1) x price of N)				
Grain yield increase				
Total benefits/year				
<b>TOTAL EXPENSES</b>		<b>551.40</b>	<b>985.45</b>	
Break-even price on your farm (total expenses/expected yield):				

## BARLEY

OPERATING EXPENSES (costs based on projected yield of 1.5 tonnes/acre (70 bu/acre))			Feed Barley	Malting Barley	Your Farm Budget	
			Sample Costs/Acre			
<b>Expenses for Grain</b>						
Seed	1.0–1.4 million seeds/acre, certified seed		64.80	64.80		
Fertility	113 kg/ha N (246 kg/ha Urea (Northern Ontario — Feed))		100.70	–		
	90 kg/ha N (196 kg/ha Urea (Southern Ontario — Feed))		80.20	–		
	56 kg/ha N (122 kg/ha Urea (Eastern Ontario — Feed))		49.90	–		
	45–67 kg/ha N (98–146 kg/ha Urea (Malting))		–	49.90		
	crop removal	30 kg/ha P <sub>2</sub> O <sub>5</sub> (8.0 kg/tonne removal rate)	21.15	21.15		
	24 kg/ha K <sub>2</sub> O (6.3 kg/tonne removal rate)	13.70	13.70			
Herbicide	broadleaf weed control		10.95	10.95		
	grassy weed control		10.00	10.00		
Fungicide			26.65	26.65		
Tractor and machine expenses	fuel (27 L) and lubricants		41.85	41.85		
	repairs and maintenance		30.15	30.15		
Production insurance			11.85	11.85		
Risk Management Program			12.45	12.45		
Marketing board fees (\$1.38/tonne)			2.10	2.10		
Custom work	fertilizer applications (1; 1), mixing and delivery		17.00	17.00		
	pesticide applications (2; 2)		27.50	27.50		
	other		–	–		
Trucking (\$11.35/tonne)			15.90	15.90		
Storage			–	–		
Quality testing			–	–		
Land rent			–	–		
Operator labour (self or hired)			14.25	14.25		
Interest on operating			22.05	20.95		
<b>Total Operating Expenses — Grain (Feed (average of 3 regions))</b>			<b>419.30</b>	<b>391.15</b>		
<b>Expenses for Straw (costs based on projected yield of 1.89 tonnes/acre)</b>						
Fertility	crop removal	12 kg/ha P <sub>2</sub> O <sub>5</sub> (2.6 kg/tonne removal rate)	8.50	8.50		
		94 kg/ha K <sub>2</sub> O (20.0 kg/tonne removal rate)	54.25	54.25		
Tractor and machine expenses	fuel (7 L) and lubricants		10.25	10.25		
	repairs and maintenance		5.60	5.60		
Twine			11.55	11.55		
Other			16.40	16.40		
<b>Total Operating Expenses — Straw</b>			<b>106.55</b>	<b>106.55</b>		
<b>Total Operating Expenses</b>			<b>525.85</b>	<b>497.70</b>		
<b>REVENUE</b>						
Expected barley yield _____						
Expected barley price _____						
<b>Total Market Revenue (Yield x Price)</b>						
Program payment _____						
<b>Total Barley Revenue</b>						
Expected straw yield _____						
Expected straw price _____						
<b>Total Straw Revenue (Yield x Price)</b>						
<b>Total Revenue</b>						
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>						
<b>OVERHEAD EXPENSES</b>			<b>Feed Barley</b>		<b>Malting Barley</b>	
			<b>Barley Only</b>	<b>Barley &amp; Straw</b>	<b>Barley Only</b>	<b>Barley &amp; Straw</b>
Machinery	depreciation		41.60	49.00	41.60	49.00
	interest on investment		13.35	14.45	13.35	14.45
Land			–	–	–	–
Other overhead			6.85	8.85	6.85	8.85
<b>TOTAL EXPENSES</b>			<b>481.10</b>	<b>598.15</b>	<b>452.95</b>	<b>570.00</b>
Break-even price on your farm (total expenses/expected yield):						



## SPRING CANOLA (Herbicide Tolerant)

<b>OPERATING EXPENSES</b> (costs based on projected yield of 1.03 tonnes/acre (2,268 lb/acre))		Sample Costs/ Acre	Your Farm Budget
Seed	5.6 kg/ha hybrid, treated	93.25	
Fertility	95 kg/ha N (155 kg/ha urea + 112 kg/ha ammonium sulphate) <sup>1</sup>	97.30	
	crop removal	43.75	
	61 kg/ha P <sub>2</sub> O <sub>5</sub> (24.5 kg/tonne removal rate) 30 kg/ha K <sub>2</sub> O (12.0 kg/tonne removal rate)	17.75	
Herbicide	grass and broadleaf weed control	19.70	
Technology use agreement		-	
Insecticide	if required (swede midge)	26.75	
Fungicide	white mould	21.25	
Tractor and machine expenses	fuel (31 L) and lubricants	47.65	
	repairs and maintenance	31.30	
Marketing board and Grain Financial Protection fees (\$4.00/tonne)		4.10	
Production insurance		30.70	
Risk Management Program		11.10	
Custom work	fertilizer applications (1), mixing and delivery	17.00	
	pesticide applications (3)	41.25	
	other	-	
Trucking (\$10.45/tonne)		10.75	
Storage		-	
Land rent		-	
Operator labour (self or hired)		15.45	
Interest on operating		21.70	
<b>Total Operating Expenses</b>		<b>550.75</b>	
<b>REVENUE</b>			
Expected yield _____			
Expected price _____			
<b>Total Market Revenue (Yield x Price)</b>			
Program payment			
<b>Total Revenue</b>			
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>			
<b>OVERHEAD EXPENSES</b>			
Machinery	depreciation	36.90	
	interest on investment	12.40	
Land		-	
Other overhead		6.90	
<b>TOTAL EXPENSES</b>		<b>606.95</b>	
Break-even price on your farm (total expenses/expected yield):			

<sup>1</sup> Nitrogen rate is based on nitrogen price of \$2.23/kg (\$1.01/lb) N and a canola price of \$690/tonne. 112 kg/ha ammonium sulphate (21-0-0-24) supplies 27 kg/ha sulphur.

See the canola section of the OMAFRA *Agronomy Guide for Field Crops*, Publication 811, for more accurate nitrogen requirements for canola, adjusted for yield and fertilizer cost.

## WINTER CANOLA

<b>OPERATING EXPENSES</b> (costs based on projected yield of 1.5 tonnes/acre)		Sample Costs/ Acre	Your Farm Budget
Seed*	4.5 kg/ha — hybrid, treated	82.85	
Fertility**	202 kg/ha N (375 kg/ha urea + 140 kg/ha ammonium sulphate) <sup>1</sup>	195.95	
	crop removal	63.80	
	92 kg/ha P <sub>2</sub> O <sub>5</sub> (24.5 kg/tonne removal rate) 45 kg/ha K <sub>2</sub> O (12.0 kg/tonne removal rate)	25.85	
Herbicide	volunteer cereal control	11.30	
	burndown	13.55	
Insecticide	if required (cabbage seedpod weevil)	26.75	
Fungicide	white mould	21.25	
Tractor and machine expenses	fuel (26 L), lubricants	40.20	
	repairs and maintenance	19.35	
Marketing board and Grain Financial Protection fees (\$4.00/tonne)		6.00	
Production insurance		30.70	
Risk Management Program		16.20	
Custom work	fertilizer applications (2), mixing and delivery	34.00	
	pesticide applications (3)	41.25	
	other	-	
Trucking (\$10.45/tonne)		15.65	
Storage		-	
Land rent		-	
Operator labour (self or hired)		12.55	
Interest on operating		26.95	
<b>Total Operating Expenses</b>		<b>684.15</b>	
<b>REVENUE</b>			
Expected yield _____			
Expected price _____			
<b>Total Market Revenue (Yield x Price)</b>			
Program payment			
<b>Total Revenue</b>			
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>			
<b>OVERHEAD EXPENSES</b>			
Machinery	depreciation	24.20	
	interest on investment	7.75	
Land		-	
Other overhead		3.85	
<b>TOTAL EXPENSES</b>		<b>719.95</b>	
Break-even price on your farm (total expenses/expected yield):			

\* Seeding rate recommended range is 3.4–5.6 kg/ha (3–5 lb/acre). The lower rate may be difficult to achieve with some seed drills.

\*\* Additional nitrogen in the fall may be beneficial if seeding is delayed.

<sup>1</sup> 140 kg/ha ammonium sulphate (21-0-0-24) supplies 34 kg/ha sulphur.

## COLOURED BEANS

<b>OPERATING EXPENSES</b> (costs based on projected yield of 1.13 tonnes/acres (25 cwt/acre))		<b>Sample Costs/ Acre</b>	<b>Your Farm Budget</b>
Seed	78–90 kg/ha (4–5 seeds/ft row) certified, treated seed (with fungicide plus Cruiser insecticide)	143.55	
Fertility	40 kg/ha N	35.65	
	crop removal	27.55	
	40 kg/ha P <sub>2</sub> O <sub>5</sub> (14.0 kg/tonne removal rate) 40 kg/ha K <sub>2</sub> O (14.0 kg/tonne removal rate)	22.75	
Herbicide	annual grass and broadleaf weeds	83.10	
	other weed control, if required	–	
Insecticide		–	
Fungicide	if required (white mould)	48.35	
Crop pre-harvest		8.00	
Tractor and machine expenses	fuel (46 L) and lubricants	69.65	
	repairs and maintenance	58.55	
Marketing board fees (\$6.50/tonne)		7.35	
Production insurance		40.25	
Risk Management Program		1.00	
Custom work	fertilizer applications (1), mixing and delivery	17.00	
	pesticide applications (4)	54.95	
Trucking (\$10.45/tonne)		11.85	
Drying		–	
Land rent		–	
Operator labour (self or hired)		26.30	
Interest on operating		25.80	
<b>Total Operating Expenses</b>		<b>681.65</b>	
<b>REVENUE</b>			
Expected yield _____			
Expected price _____			
<b>Total Market Revenue (Yield x Price)</b>			
Less pick charges (typically 2%–4%)			
Program payment			
<b>Total Revenue</b>			
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>			
<b>OVERHEAD EXPENSES</b>			
Machinery	depreciation	77.80	
	interest on investment	28.15	
Land		–	
Other overhead		15.05	
<b>TOTAL EXPENSES</b>		<b>802.65</b>	
Break-even price on your farm (total expenses/expected yield):			

## GRAIN CORN

<b>OPERATING EXPENSES</b> (costs based on projected yield of 4.61 tonnes/acre (181 bu/acre))		Tillage System			Your Farm Budget
		Conventional	Non-GMO Conventional	No-Till	
		Sample Costs/Acre			
Seed <sup>1</sup> (average cost of 3 hybrids)	32,000 kernels — treated — RR <sup>2</sup>	122.95	–	122.95	
	32,000 kernels — treated — Bt	101.05	–	101.05	
	32,000 kernels — treated — multi-trait	126.70	–	126.70	
	32,000 kernels — treated — non-GMO	–	99.65	–	
Insecticide seed treatment, if required		4.00	4.00	4.00	
Fertility <sup>3</sup>	156 kg/ha N (557 kg/ha of 28-0-0 U.A.N.)	154.70	154.70	154.70	
	crop removal 83 kg/ha P <sub>2</sub> O <sub>5</sub> (7.25 kg/tonne removal rate)	58.00	58.00	58.00	
	56 kg/ha K <sub>2</sub> O (4.9 kg/tonne removal rate)	32.40	32.40	32.40	
Herbicide	annual grass and broadleaf weed	33.50	32.80	33.50	
	burndown	–	–	11.40	
	other weed control, if required	–	–	–	
Insecticide/fungicide	if required	–	–	–	
Tractor and machine expenses	fuel (37 L conventional, 21 L no-till) and lubricant	55.80	55.80	31.35	
	repairs and maintenance	31.20	31.20	15.95	
Marketing board and Grain Financial Protection fees (\$0.44/tonne)		2.05	2.05	2.05	
Production insurance		20.30	20.30	20.30	
Risk Management Program		7.50	7.50	7.50	
Custom work	fertilizer applications (1; 1; 1), mixing and delivery	17.00	17.00	17.00	
	pesticide applications (1; 1; 2)	13.75	13.75	27.50	
	other	–	–	–	
Trucking (\$11.35/tonne)		52.25	52.25	52.25	
Drying (\$23.75/tonne, 8 points)		108.45	108.45	108.45	
Land rent		–	–	–	
Operator labour (self or hired)		17.75	17.75	9.40	
Storage (\$2.35/tonne/month x 4 months)		43.30	43.30	43.30	
Interest on operating		31.50	30.80	30.60	
<b>Total Operating Expenses</b>		<b>800.35</b>	<b>781.70</b>	<b>776.55</b>	
<b>REVENUE</b>					
Expected yield _____ (Corn following corn: 8.5% corn yield decrease)					
Expected price _____					
<b>Total Market Revenue (Yield x Price)</b>					
Program payment _____					
<b>Total Revenue</b>					
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>					
<b>OVERHEAD EXPENSES</b>					
Machinery	depreciation	40.00	40.00	20.55	
	interest on investment	13.50	13.50	7.10	
Land		–	–	–	
Other overhead		6.50	6.50	2.95	
<b>TOTAL EXPENSES</b>		<b>860.35</b>	<b>841.70</b>	<b>807.15</b>	
Break-even price on your farm (total expenses/expected yield):					

<sup>1</sup> Seed treated with fungicide only.

<sup>2</sup> Roundup Ready.

<sup>3</sup> Nitrogen rate is based on the nitrogen rate calculator. Nitrogen recommendation is for corn grown in southwestern/central Ontario, 2,800 heat units, clay loam soil, following wheat with straw removed, with projected corn yield of 4.61 tonnes/acre (181 bu/acre), nitrogen cost of \$2.48/kg and corn price of \$240/tonne (\$6.10/bu). See [www.gocorn.net](http://www.gocorn.net) for more accurate nitrogen requirements for corn.

## FORAGES — WARM SEASON ANNUALS

<b>OPERATING EXPENSES</b> (costs based on projected yield of 9.07 tonnes DM/acre silage corn; 7.84 tonnes DM/acre sorghum-sudangrass over two cuts)		Silage Corn	Sorghum- Sudangrass	Your Farm Budget
		Sample Costs/Acre		
Seed	32,000 kernels, with seed treatment silage corn; 40 kg/ha sorghum-sudangrass	126.95	60.70	
Insecticide seed treatment, if required		4.00	–	
Fertility <sup>1</sup>	156 kg/ha N (557 kg/ha of 28-0-0 U.A.N.) silage corn; 140 kg/ha N sorghum-sudangrass	154.70	124.75	
	crop	86.60	74.85	
	removal (5.5 kg P <sub>2</sub> O <sub>5</sub> /tonne DM removal rate 11.7 kg K <sub>2</sub> O/tonne DM removal rate)	151.70	131.75	
Herbicide	annual grass and broadleaf weeds	33.50	33.50	
	other weed control, if required	–	–	
Insecticide/fungicide	if required	–	–	
Tractor and machine expenses	fuel (19 L silage corn; 5 L sorghum-sudangrass) and lubricants	28.95	8.00	
	repairs and maintenance	21.80	5.95	
Silo repair and maintenance		–	–	
Production insurance		20.30	7.20	
Silage inoculant		–	–	
Custom work	fertilizer applications (1; 1), mixing and delivery	17.00	17.00	
	pesticide applications (1; 1)	13.75	13.75	
	harvest	136.55	328.40	
	storage (ensiled)	324.75	262.90	
Land rent		–	–	
Operator labour (self or hired)		10.25	4.10	
Interest on operating		46.35	44.00	
<b>Total Operating Expenses</b>		<b>1,177.15</b>	<b>1,116.85</b>	
<b>REVENUE</b>				
Expected yield _____				
Expected price _____				
<b>Total Market Revenue (Yield x Price)</b>				
Program payment				
<b>Total Revenue</b>				
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>				
<b>OVERHEAD EXPENSES</b>				
Machinery	depreciation	28.75	7.30	
	interest on investment	10.90	2.45	
Land		–	–	
Other overhead		6.05	1.35	
<b>TOTAL EXPENSES</b>		<b>1,222.85</b>	<b>1,127.95</b>	
Cost per tonne on your farm (total expenses/expected yield):				

<sup>1</sup> Nitrogen rate is based on the nitrogen rate calculator. Nitrogen recommendation is for corn grown in southwestern/central Ontario, 2,800 heat units, clay loam soil, following wheat with straw removed, with projected grain corn yield of 4.61 tonnes/acre (181 bu/acre), ensiled at 65% moisture, nitrogen cost of \$2.48/kg and corn price of \$240/tonne (\$6.10/bu). See [www.gocorn.net](http://www.gocorn.net) for more accurate nitrogen requirements for corn.

## FORAGES — COOL SEASON ANNUALS

<b>OPERATING EXPENSES</b> (costs based on projected yield of 2.43 tonnes DM/acre fall rye; 1.50 tonnes DM/acre oats)		Fall Rye	Oats and Peas	Your Farm Budget
		Sample Costs/Acre		
Seed	112 kg/ha forage fall rye; 50 kg/ha oats and 50 kg/ha peas	48.05	70.70	
Fertility	90 kg/ha N fall rye; 55 kg/ha N oats	80.20	49.00	
	crop removal	38.20	16.65	
	54 kg/ha P <sub>2</sub> O <sub>5</sub> (9.0 kg/tonne DM removal rate) fall rye; 24 kg/ha P <sub>2</sub> O <sub>5</sub> (6.4 kg/tonne DM removal rate) oats/peas			
	240 kg/ha K <sub>2</sub> O (40 kg/tonne DM removal rate) fall rye; 116 kg/ha K <sub>2</sub> O (31.1 kg/tonne DM removal rate) oats/peas	139.30	67.50	
Herbicide	annual grass and broadleaf weeds	10.55	10.55	
	other weed control, if required	-	-	
Insecticide/fungicide	leaf disease, if required	10.50	10.50	
Tractor and machine expenses	fuel (5 L) and lubricants	8.00	8.00	
	repairs and maintenance	5.95	5.95	
Silo repair and maintenance		-	-	
Production insurance		-	4.25	
Silage inoculant		-	-	
Custom work	fertilizer applications (1; 1), mixing and delivery	17.00	17.00	
	pesticide applications (2; 2)	27.50	27.50	
	harvest	160.90	114.45	
	storage (bale wrapping)	78.60	48.50	
Land rent		-	-	
Operator labour (self or hired)		4.10	4.10	
Interest on operating		25.80	18.65	
<b>Total Operating Expenses</b>		<b>654.65</b>	<b>473.30</b>	
<b>REVENUE</b>				
Expected yield _____				
Expected price _____				
<b>Total Market Revenue (Yield x Price)</b>				
Program payment				
<b>Total Revenue</b>				
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>				
<b>OVERHEAD EXPENSES</b>				
Machinery	Depreciation	7.30	7.30	
	interest on investment	2.45	2.45	
Land		-	-	
Other overhead		1.35	1.35	
<b>TOTAL EXPENSES</b>		<b>665.75</b>	<b>484.40</b>	
Cost per tonne on your farm (total expenses/expected yield):				

## FLAX

<b>OPERATING EXPENSES</b> (costs based on projected yield of 0.59 tonnes/acre)			Sample Costs/ Acre	Your Farm Budget
<b>Expenses for Grain</b>				
Seed	49 kg/ha certified, treated		52.20	
Fertility	45 kg/ha N		40.10	
	crop removal	24 kg/ha P <sub>2</sub> O <sub>5</sub> (7.5 kg/tonne removal rate)	16.40	
		18 kg/ha K <sub>2</sub> O (5.8 kg/tonne removal rate)	10.50	
Herbicide	broadleaf weed control		7.90	
	grass weed control, if required		18.80	
	desiccant		10.10	
Fungicide			–	
Tractor and machine expenses	fuel (27 L) and lubricants		41.85	
	repairs and maintenance		30.15	
Production insurance			27.45	
Custom work	fertilizer applications (1), mixing and delivery		17.00	
	pesticide applications (2)		27.50	
	other		–	
Trucking (\$10.45/tonne)			6.15	
Storage			–	
Land rent			–	
Operator labour (self or hired)			14.25	
Interest on operating			13.15	
<b>Total Operating Expenses — Grain</b>			<b>333.50</b>	
<b>Expenses for Straw (costs based on projected yield of 2.21 tonnes/acre)</b>				
Fertility	crop removal	18 kg/ha P <sub>2</sub> O <sub>5</sub> (3.2 kg/tonne removal rate)	12.25	
		105 kg/ha K <sub>2</sub> O (19.0 kg/tonne removal rate)	60.25	
Tractor and machine expenses	fuel (7 L) and lubricants		10.25	
	repairs and maintenance		5.60	
Twine			13.50	
Other			16.40	
<b>Total Operating Expenses — Straw</b>			<b>118.25</b>	
<b>Total Operating Expenses</b>			<b>451.75</b>	
<b>REVENUE</b>				
Expected flax yield _____				
Expected flax price _____				
<b>Total Market Revenue (Yield x Price)</b>				
Program payment _____				
<b>Total Flax Revenue</b>				
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>				
<b>OVERHEAD EXPENSES</b>			<b>Flax Only</b>	<b>Flax &amp; Straw</b>
Machinery	depreciation		41.60	49.00
	interest on investment		13.35	14.45
Land			–	–
Other overhead			6.85	8.85
<b>TOTAL EXPENSES</b>			<b>395.30</b>	<b>524.05</b>
Break-even price on your farm (total expenses/expected yield):				

## OATS

OPERATING EXPENSES (costs based on projected yield of 1.26 tonnes/acre (81 bu/acre))			Sample Costs/ Acre	Your Farm Budget
Seed	1.1 million seeds/acre, certified treated		45.35	
Fertility	90 kg/ha N (196 kg/ha Urea)		80.20	
	crop removal	24 kg/ha P <sub>2</sub> O <sub>5</sub> (7.5 kg/tonne removal rate)	16.40	
		18 kg/ha K <sub>2</sub> O (5.8 kg/tonne removal rate)	10.50	
Herbicide	weed control, if required		7.90	
Fungicide			26.65	
Plant growth regulator			18.65	
Tractor and machine expenses	fuel (27 L) and lubricants		41.85	
	repairs and maintenance		30.15	
Production insurance			11.85	
Risk Management Program			10.30	
Marketing board fees (\$1.46/tonne)			1.85	
Custom work	fertilizer applications (1), mixing and delivery		17.00	
	pesticide applications (3)		41.25	
Trucking (\$10.45/tonne)			13.15	
Storage			-	
Land rent			-	
Operator labour (self or hired)			14.25	
Interest on operating			10.90	
<b>Total Operating Expenses — Grain</b>			<b>398.20</b>	
<b>Expenses for Straw (costs based on project yield of 2.21 tonnes/acre)</b>				
Fertility	crop removal	18 kg/ha P <sub>2</sub> O <sub>5</sub> (3.2 kg/tonne removal rate)	12.25	
		105 kg/ha K <sub>2</sub> O (19.0 kg/tonne removal rate)	60.25	
Tractor and machine expenses	fuel (7 L) and lubricants		10.25	
	repairs and maintenance		5.60	
Twine			13.50	
Other			16.40	
<b>Total Operating Expenses — Straw</b>			<b>118.25</b>	
<b>Total Operating Expenses</b>			<b>516.45</b>	
<b>REVENUE</b>				
Expected oat yield _____				
Expected oat price _____				
<b>Total Market Revenue (Yield x Price)</b>				
Program payment _____				
<b>Total Oats Revenue</b>				
Expected straw yield _____				
Expected straw price _____				
<b>Total Straw Revenue (Yield x Price)</b>				
<b>Total Revenue</b>				
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>				
<b>OVERHEAD EXPENSES</b>			<b>Oats Only</b>	<b>Oats &amp; Straw</b>
Machinery	depreciation		41.60	49.00
	interest on investment		13.35	14.45
Land			-	-
Other overhead			6.85	8.85
<b>TOTAL EXPENSES</b>			<b>460.00</b>	<b>588.75</b>
Break-even price on your farm (total expenses/expected yield):				



## SOYBEANS

<b>OPERATING EXPENSES</b> (costs based on projected yield of 1.36 tonnes/acre (50 bu/acre))		Tillage System			Your Farm Budget
		Non-GMO Soybeans Conventional	Non-GMO Soybeans No-Till	Roundup Ready No- Till	
		Sample Costs/Acre			
Seed	177,000 seeds/acre in 15-in. rows — drill (165,000 seeds/acre in 15-in. rows — planter)	66.10	66.10	93.20	
Fungicide seed treatment		13.00	13.00	13.00	
Additional seed treatments or inoculants, if required		–	–	–	
Fertility	crop removal 47 kg/ha P <sub>2</sub> O <sub>5</sub> (14.0 kg/tonne removal rate)	33.00	33.00	33.00	
	78 kg/ha K <sub>2</sub> O (23.0 kg/tonne removal rate)	44.80	44.80	44.80	
Herbicide	annual grass and broadleaf weeds	66.10	66.10	14.30	
	burndown	–	13.55	13.55	
	other weed control, if required	–	–	–	
Insecticide/fungicide	if required	–	–	–	
Tractor and machine expenses	fuel (27 L conventional, 20 L no till) and lubricants	41.85	30.45	30.45	
	repairs and maintenance	32.20	17.15	17.15	
Marketing board and Grain Financial Protection fees (\$1.48/tonne)		2.00	2.00	2.00	
Production insurance		13.95	13.95	13.95	
Risk Management Program		3.35	3.35	3.35	
Drying, if required		–	–	–	
Custom work	pesticide applications (1; 2; 2)	13.75	27.50	27.50	
	fertilizer applications (1; 1; 1), mixing and delivery	17.00	17.00	17.00	
Added expense for IP		–	–	–	
Trucking (\$10.45/tonne)		14.20	14.20	14.20	
Storage (\$2.35/month/tonne x 4 months)		12.75	12.75	12.75	
Land rent		–	–	–	
Operator labour (self or hired)		14.25	10.70	10.70	
Interest on operating		15.90	15.80	14.80	
<b>Total Operating Expenses</b>		<b>404.20</b>	<b>401.40</b>	<b>375.70</b>	
<b>REVENUE</b>					
Expected yield _____ (Soybeans following soybeans: 10% soybean yield decrease)					
Expected price _____					
<b>Total Market Revenue (Yield x Price)</b>					
Additional revenue from IP					
Program payment					
<b>Total Revenue</b>					
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>					
<b>OVERHEAD EXPENSES</b>					
Machinery	depreciation	42.90	19.30	19.30	
	interest on investment	14.80	6.00	6.00	
Land		–	–	–	
Other overhead		7.10	2.90	2.90	
<b>TOTAL EXPENSES</b>		<b>469.00</b>	<b>429.60</b>	<b>403.90</b>	
Break-even price on your farm (total expenses/expected yield):					

## SWITCHGRASS

<b>ESTABLISHMENT EXPENSES</b>		<b>Direct Seeded</b>		<b>Your Farm Budget</b>
		<b>Conventional</b>	<b>No-Till</b>	
		<b>Sample Costs/Acre</b>		
Seed	11.25 kg/ha switchgrass	160.00	160.00	
Fertility	nitrogen, if required	-	-	
	crop removal	P <sub>2</sub> O <sub>5</sub>	-	-
		K <sub>2</sub> O	-	-
Herbicide	annual grass and broadleaf control	16.70	16.70	
	burndown	-	13.55	
	other weed control, if required	-	-	
Insecticide/fungicide	if required	-	-	
Tractor and machine expenses	fuel (14 L conventional, 6 L no till) and lubricants	20.85	8.50	
	repairs and maintenance	24.55	6.60	
Custom work	pesticide applications (1; 2)	13.75	27.50	
	fertilizer applications, mixing and delivery	-	-	
Harvest and trucking		-	-	
Operator labour (self or hired)		11.50	5.05	
Establishment failure rate		-	-	
Interest on operating		9.65	9.55	
<b>Total Establishment Year Expenses</b>		<b>257.00</b>	<b>247.45</b>	
<b>ANNUAL OPERATING EXPENSES (costs based on projected yield of 4.0 tonnes/acre (4.4 tons/acre))</b>				
Establishment year expenses — over 7 years (less establishment year sales)		52.50	44.85	
Fertility	76 kg/ha nitrogen	68.85	68.85	
	crop removal	P <sub>2</sub> O <sub>5</sub>	-	-
		K <sub>2</sub> O	-	-
Tractor and machine expenses	fuel (26 L) and lubricants	39.70	39.70	
	repairs and maintenance	38.10	38.10	
Custom work	fertilizer applications (1; 1), mixing and delivery	17.00	17.00	
Trucking		-	-	
Removal and storage		102.30	102.30	
Twine		-	-	
Operator labour (self or hired)		15.55	15.55	
Interest on operating		13.70	13.40	
<b>Total Annual Operating Expenses</b>		<b>347.70</b>	<b>339.75</b>	
<b>REVENUE</b>				
Expected yield _____				
Expected price _____				
<b>Total Revenue (Yield x Price)</b>				
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>				
<b>OVERHEAD EXPENSES</b>				
Machinery	depreciation	42.75	42.75	
	interest on investment	16.40	16.40	
Land		-	-	
Other overhead		9.45	9.45	
<b>TOTAL EXPENSES</b>		<b>416.30</b>	<b>408.35</b>	
Break-even price on your farm (total expenses/expected yield):				

## SOFT RED WINTER WHEAT

<b>OPERATING EXPENSES</b> (costs based on projected yield of 2.42 tonnes/acre (89 bu/acre))			Tillage System		Your Farm Budget	
			Conventional	No-Till		
			Sample Costs/Acre			
<b>Expenses for Grain</b>						
Seed	1.4–1.8 million seeds/acre, certified seed		82.70	82.70		
Fertility	113 kg/ha N (224 kg/ha urea + 47 kg/ha ammonium sulphate) <sup>1</sup>		106.00	106.00		
	crop	59 kg/ha P <sub>2</sub> O <sub>5</sub> (9.8 kg/tonne removal rate)	41.00	41.00		
	removal	36 kg/ha K <sub>2</sub> O (6.0 kg/tonne removal rate)	20.85	20.85		
Herbicide	broadleaf weeds		10.55	10.55		
Fungicide	fusarium head blight		26.65	26.65		
	leaf disease, if required		10.50	10.50		
Plant growth regulator			18.65	18.65		
Tractor and machine expenses	fuel (27 L conventional, 20 L no till) and lubricants		41.85	30.45		
	repairs and maintenance		30.15	16.10		
Production insurance			12.55	12.55		
Risk Management Program			4.15	4.15		
Marketing board and Grain Financial Protection fees (\$0.86/tonne)			2.10	2.10		
Custom work	fertilizer applications (1; 1), mixing and delivery		17.00	17.00		
	pesticide applications (3; 3)		41.25	41.25		
Added expense for IP			–	–		
Trucking (\$10.45/tonne)			25.30	25.30		
Land rent			–	–		
Operator labour (self or hired)			14.25	10.70		
Interest on operating			34.40	32.45		
<b>Total Operating Expenses — Grain</b>			<b>539.90</b>	<b>508.95</b>		
<b>Expenses for Straw (costs based on projected yield of 2.41 tonnes/acre)</b>						
Fertility	crop	10 kg/ha P <sub>2</sub> O <sub>5</sub> (1.7 kg/tonne removal rate)	7.10	7.10		
	removal	72 kg/ha K <sub>2</sub> O (12.0 kg/tonne removal rate)	41.50	41.50		
Tractor and machine expenses	fuel (7 L) and lubricants		10.25	10.25		
	repairs and maintenance		5.60	5.60		
Twine			14.70	14.70		
Other			16.40	16.40		
<b>Total Operating Expenses — Straw</b>			<b>95.55</b>	<b>95.55</b>		
<b>Total Operating Expenses</b>			<b>635.45</b>	<b>604.50</b>		
<b>REVENUE</b>						
Expected wheat yield _____						
Expected wheat price _____						
			<b>Total Market Revenue (Yield x Price)</b>			
Additional income from IP						
Program payment						
			<b>Total Wheat Revenue</b>			
Expected straw yield _____						
Expected straw price _____						
			<b>Total Straw Revenue (Yield x Price)</b>			
			<b>Total Revenue</b>			
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>						
<b>OVERHEAD EXPENSES</b>			Conventional Tillage		No-Till	
			Wheat Only	Wheat & Straw	Wheat Only	Wheat & Straw
Machinery	depreciation		41.60	49.00	19.00	26.40
	interest on investment		13.35	14.45	5.95	7.05
Land			–	–	–	–
Other overhead			6.85	8.85	2.85	4.85
<b>TOTAL EXPENSES</b>			<b>601.70</b>	<b>707.75</b>	<b>536.75</b>	<b>642.80</b>
Break-even price on your farm (total expenses/expected yield):						

<sup>1</sup> 47 kg/ha ammonium sulphate (21-0-0-24) supplies 11 kg/ha sulphur.

## HARD RED WINTER WHEAT

<b>OPERATING EXPENSES</b> (costs based on projected yield of 2.3 tonnes/acre (85 bu/acre))			Tillage System		Your Farm Budget
			Conventional	No-Till	
			Sample Costs/Acre		
<b>Expenses for Grain</b>					
Seed	1.4–1.8 million seeds/acre, certified seed		81.20	81.20	
Fertility	165 kg/ha N (337 kg/ha urea + 47 kg/ha ammonium sulphate) <sup>1</sup>		152.30	152.30	
	crop removal	56 kg/ha P <sub>2</sub> O <sub>5</sub> (9.8 kg/tonne removal rate)	39.15	39.15	
		35 kg/ha K <sub>2</sub> O (6.0 kg/tonne removal rate)	19.90	19.90	
Herbicide	broadleaf weeds		10.55	10.55	
	other weed control, if required		–	–	
Fungicide	fusarium head blight		26.65	26.65	
	leaf disease, if required		10.50	10.50	
Plant growth regulator			18.65	18.65	
Tractor and machine expenses	fuel (27 L conventional, 20 L no till) and lubricants		41.85	30.45	
	repairs and maintenance		30.15	16.10	
Production insurance			15.25	15.25	
Risk Management Program			3.95	3.95	
Marketing board and Grain Financial Protection fees (\$0.86/tonne)			2.00	2.00	
Custom work	fertilizer applications (2; 2), mixing and delivery		34.00	34.00	
	pesticide applications (3; 3)		41.25	41.25	
Added expense for IP			–	–	
Trucking (\$10.45/tonne)			24.15	24.15	
Land rent			–	–	
Operator labour (self or hired)			14.25	10.70	
Interest on operating			38.50	36.55	
<b>Total Operating Expenses — Grain</b>			<b>604.25</b>	<b>573.30</b>	
<b>Expenses for Straw (costs based on projected yield of 2.41 tonnes/acre)</b>					
Fertility	crop removal	10 kg/ha P <sub>2</sub> O <sub>5</sub> (1.7 kg/tonne removal rate)	7.10	7.10	
		72 kg/ha K <sub>2</sub> O (12.0 kg/tonne removal rate)	41.50	41.50	
Tractor and machine expenses	fuel (7 L) and lubricants		10.25	10.25	
	repairs and maintenance		5.60	5.60	
Twine			14.70	14.70	
Other			16.40	16.40	
<b>Total Operating Expenses — Straw</b>			<b>95.55</b>	<b>95.55</b>	
<b>Total Operating Expenses</b>			<b>699.80</b>	<b>668.85</b>	
<b>REVENUE</b>					
Expected wheat yield _____					
Expected wheat price _____					
<b>Total Market Revenue (Yield x Price)</b>					
Additional income from IP					
Program payment					
<b>Total Wheat Revenue</b>					
Expected straw yield _____					
Expected straw price _____					
<b>Total Straw Revenue (Yield x Price)</b>					
<b>Total Revenue</b>					
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>					
<b>OVERHEAD EXPENSES</b>		Conventional Tillage		No-Till	
		Wheat Only	Wheat & Straw	Wheat Only	Wheat & Straw
Machinery	depreciation	41.60	49.00	19.00	26.40
	interest on investment	13.35	14.45	5.95	7.05
Land		–	–	–	–
Other overhead		6.85	8.85	2.85	4.85
<b>TOTAL EXPENSES</b>		<b>666.05</b>	<b>772.10</b>	<b>601.10</b>	<b>707.15</b>
Break-even price on your farm (total expenses/expected yield):					

<sup>1</sup> 47 kg/ha ammonium sulphate (21-0-0-24) supplies 11 kg/ha sulphur.

## HARD RED SPRING WHEAT

OPERATING EXPENSES (costs based on projected yield of 1.5 tonnes/acre (55.0 bu/acre))			Sample Costs/ Acre	Your Farm Budget
<b>Expenses for Grain</b>				
Seed	1.4–1.6 million seeds/acre, certified seed		85.50	
Fertility	101 kg/ha N (220 kg/ha Urea)		91.15	
	crop removal	36 kg/ha P <sub>2</sub> O <sub>5</sub> (9.8 kg/tonne removal rate)	25.25	
		22 kg/ha K <sub>2</sub> O (6.0 kg/tonne removal rate)	12.85	
Herbicide	broadleaf weeds		10.55	
	grass or wild oat control, if required		–	
	other weed control, if required		–	
Fungicide	fusarium head blight		26.65	
Tractor and machine expenses	fuel (27 L) and lubricants		41.85	
	repairs and maintenance		30.15	
Production insurance			20.35	
Risk Management Program			5.00	
Marketing board and Grain Financial Protection fees (\$0.86/tonne)			1.30	
Custom work	fertilizer applications (1), mixing and delivery		17.00	
	pesticide applications (2)		27.50	
	other		–	
Added expense for IP			–	
Trucking (\$10.45/tonne)			15.55	
Land rent			–	
Operator labour (self or hired)			14.25	
Interest on operating			17.40	
<b>Total Operating Expenses — Grain</b>			<b>442.30</b>	
<b>Expenses for Straw (costs based on projected yield of 2.14 tonnes/acre)</b>				
Fertility	crop removal	9 kg/ha P <sub>2</sub> O <sub>5</sub> (1.7 kg/tonne removal rate)	6.30	
		64 kg/ha K <sub>2</sub> O (12.0 kg/tonne removal rate)	36.80	
Tractor and machine expenses	fuel (7 L) and lubricants		10.25	
	repairs and maintenance		5.60	
Twine			13.05	
Other			16.40	
<b>Total Operating Expenses — Straw</b>			<b>88.40</b>	
<b>Total Operating Expenses</b>			<b>530.70</b>	
<b>REVENUE</b>				
Expected wheat yield _____				
Expected wheat price _____				
<b>Total Market Revenue (Yield x Price)</b>				
Additional income from IP				
Program payment				
<b>Total Wheat Revenue</b>				
Expected straw yield _____				
Expected straw price _____				
<b>Total Straw Revenue (Yield x Price)</b>				
<b>Total Revenue</b>				
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>				
<b>OVERHEAD EXPENSES</b>			<b>Wheat Only</b>	<b>Wheat &amp; Straw</b>
Machinery	depreciation		41.60	49.00
	interest on investment		13.35	14.45
Land			–	–
Other overhead			6.85	8.85
<b>TOTAL EXPENSES</b>			<b>504.10</b>	<b>603.00</b>
Break-even price on your farm (total expenses/expected yield):				

## WHITE/BLACK BEANS

<b>OPERATING EXPENSES</b> (costs based on projected yield of 25 cwt/acre)		<b>Sample Costs/ Acre</b>	<b>Your Farm Budget</b>
Seed	125,000–150,000 seeds/acre (67–78 kg/ha, 15–20-in. rows) certified, treated seed (with fungicide plus Cruiser insecticide)	106.15	
Fertility	40 kg/ha N	35.65	
	crop removal	27.55	
	40 kg/ha P <sub>2</sub> O <sub>5</sub> (14.0 kg/tonne removal rate) 40 kg/ha K <sub>2</sub> O (14.0 kg/tonne removal rate)	22.75	
Herbicide	annual grass and broadleaf weeds	83.10	
Crop pre-harvest		8.00	
Fungicide, if required	white mould	48.35	
	anthracnose	8.80	
Insecticide		–	
Tractor and machine expenses	fuel (35 L) and lubricants	52.90	
	repairs and maintenance	37.40	
Marketing board fees (\$6.50/tonne)		7.40	
Production insurance		28.70	
Risk Management Program		1.50	
Custom work	fertilizer applications (1), mixing and delivery	17.00	
	pesticide applications (5)	68.70	
Trucking (\$10.45/tonne)		11.95	
Drying		–	
Land rent		–	
Operator labour (self or hired)		18.60	
Interest on operating		23.95	
<b>Total Operating Expenses</b>		<b>608.45</b>	
<b>REVENUE</b>			
Expected yield _____			
Expected price _____			
<b>Total Market Revenue (Yield x Price)</b>			
Less pick charges (typically 2%–4%)			
Program payment			
<b>Total Revenue</b>			
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>			
<b>OVERHEAD EXPENSES</b>			
Machinery	depreciation	44.15	
	interest on investment	17.60	
Land		–	
Other overhead		9.20	
<b>TOTAL EXPENSES</b>		<b>678.80</b>	
Break-even price on your farm (total expenses/expected yield):			

## ORGANIC — GRAIN CORN AND SOYBEANS\*

<b>OPERATING EXPENSES</b> (costs based on projected yield of 3.07 tonnes/acre (121 bu/acre) grain corn; 0.93 tonnes/acre (34 bu/acre) soybeans)		Grain Corn	Soybeans	Your Farm Budget
		Sample Costs/Acre		
Seed	grain corn: 32,000 kernels, certified, organic; soybeans: 200,000 seeds/acre, certified, organic in 21–30-in. rows	114.00	113.55	
Seed inoculant		–	6.40	
Fertility	manure, compost**	100.00	–	
	dry fertilizer	50.00	50.00	
Herbicide		–	–	
Insecticide		–	–	
Fungicide		–	–	
Soil maintenance (cover crop, fallow etc.)**		40.00	20.00	
Tractor and machine expenses	fuel (40 L corn, 41 L soybeans) and lubricants	61.25	62.45	
	repairs and maintenance	41.80	57.70	
Marketing board and Grain Financial Protection fees (\$0.44/tonne (corn), \$1.48/tonne (soybeans))		1.35	1.35	
Certification fees		3.35	3.35	
Production insurance		41.75	41.55	
Risk Management Program		5.00	2.30	
Custom work		–	–	
Added expense for handling organic crops		–	–	
Trucking (\$11.35/tonne corn, \$10.45/tonne soybeans)		34.95	10.50	
Drying (\$23.75/tonne corn)		72.55	–	
Storage		9.00	9.00	
Land rent		–	–	
Operator labour (self or hired)		23.70	25.35	
Labour — hand weed		–	–	
Interest on operating		24.55	16.55	
<b>Total Operating Expenses</b>		<b>623.25</b>	<b>420.05</b>	
<b>REVENUE</b>				
Expected yield _____				
Expected price _____				
		<b>Total Market Revenue (Yield x Price)</b>		
Program payment				
		<b>Total Revenue</b>		
		<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>		
<b>OVERHEAD EXPENSES</b>				
Machinery	depreciation	52.90	71.40	
	interest on investment	17.10	26.10	
Land		–	–	
Other overhead		9.50	15.00	
<b>TOTAL EXPENSES</b>		<b>702.75</b>	<b>532.55</b>	
		Break-even price on your farm (total expenses/expected yield):		

\* Organic budget estimates do not include transition period costs.

\*\* Manure, compost and cover crop estimates are highly variable, depending on individual farm situations.

## ORGANIC — WINTER WHEAT AND SPELT\*

OPERATING EXPENSES (costs based on projected yield of 1.53 tonnes/acre (56 bu/acre) wheat; 1.35 tonnes/acre spelt)		Winter Wheat	Spelt	Your Farm Budget	
		Sample Costs/Acre			
Seed	wheat: 1.5–1.7 million seeds/acre, certified, organic; spelt: 180 kg/ha certified, organic	98.55	125.10		
Fertility	manure, compost**	100.00	100.00		
	dry fertilizer	50.00	50.00		
Herbicide		–	–		
Fungicide		–	–		
Soil maintenance (cover crop, fallow, etc.)**		40.00	40.00		
Tractor and machine expenses	fuel (32 L) and lubricants	48.30	48.30		
	repairs and maintenance	37.00	37.00		
Production insurance		50.00	29.65		
Risk Management Program		2.60	–		
Marketing board and Grain Financial Protection fee (\$0.86/tonne (wheat))		1.30	–		
Certification fees		3.35	3.35		
Custom work		–	–		
Added expense for handling organic crops		–	–		
Trucking (\$10.45/tonne)		16.00	14.05		
Storage		9.00	9.00		
Land rent		–	–		
Operator labour (self or hired)		18.75	18.75		
Labour — hand weed		–	–		
Interest on operating		32.30	32.35		
<b>Total Operating Expenses — Grain</b>		<b>507.15</b>	<b>507.55</b>		
<b>Expenses for Straw (costs based on projected yield of 2.41 tonnes/acre)</b>					
Fertility	crop	10 kg/ha P <sub>2</sub> O <sub>5</sub> (1.7 kg/tonne removal rate)	7.10	7.10	
	removal	72 kg/ha K <sub>2</sub> O (12.0 kg/tonne removal rate)	41.50	41.50	
Tractor and machine expenses	fuel (7 L) and lubricants		10.25	10.25	
	repairs and maintenance		5.60	5.60	
Twine		14.70	14.70		
Other		16.40	16.40		
<b>Total Operating Expenses — Straw</b>		<b>95.55</b>	<b>95.55</b>		
<b>Total Operating Expenses</b>		<b>602.70</b>	<b>603.10</b>		
<b>REVENUE</b>					
Expected yield _____					
Expected price _____					
<b>Total Market Revenue (Yield x Price)</b>					
Program payment					
<b>Total Revenue</b>					
Expected straw yield _____					
Expected straw price _____					
<b>Total Straw Revenue (Yield x Price)</b>					
<b>Total Revenue</b>					
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>					
<b>OVERHEAD EXPENSES</b>		<b>Wheat Only</b>	<b>Wheat &amp; Straw</b>	<b>Spelt Only</b>	<b>Spelt &amp; Straw</b>
Machinery	depreciation	43.35	50.75	43.35	50.75
	interest on investment	17.45	18.55	17.45	18.55
Land		–	–	–	–
Other overhead		8.10	10.10	8.10	10.10
<b>TOTAL EXPENSES</b>		<b>576.05</b>	<b>682.10</b>	<b>576.45</b>	<b>682.50</b>
Break-even price on your farm (total expenses/expected yield):					

\* Organic budget estimates do not include transition period costs.

\*\* Manure, compost and cover crop cost estimates are highly variable, depending on individual farm situations.



## ORGANIC — BARLEY AND OATS\*

OPERATING EXPENSES (costs based on projected yield of 1.2 tonnes/acre (56 bu/acre) barley; 1.0 tonnes/acre (65 bu/acre) oats)		Barley	Oats	Your Farm Budget	
		Sample Costs/Acre			
<b>Expenses for Grain</b>					
Seed	barley: 168 kg/ha certified, organic oats: 157 kg/ha certified, organic	112.50	106.40		
Fertility	manure/compost**	-	-		
	dry fertilizer	50.00	50.00		
Herbicide		-	-		
Fungicide		-	-		
Soil maintenance (cover crop, fallow etc.)**		40.00	40.00		
Tractor and machine expenses	fuel (32 L) and lubricants	47.30	47.30		
	repairs and maintenance	36.35	36.35		
Production insurance		11.85	11.85		
Risk Management Program		9.95	8.20		
Marketing board fee (\$1.38/tonne (barley), \$1.46/tonne (oats))		1.70	1.45		
Certification fees		3.35	3.35		
Custom work		-	-		
Added expense for handling organic crops		-	-		
Trucking (\$10.45/tonne)		12.75	10.50		
Storage		9.00	9.00		
Land rent		-	-		
Operator labour (self or hired)		18.20	18.20		
Labour — hand weed		-	-		
Interest on operating		24.00	23.30		
<b>Total Operating Expenses — Grain</b>		<b>376.95</b>	<b>365.90</b>		
<b>Expenses for Straw (costs based on projected yield of 1.89 tonnes/acre (barley), 2.21 tonnes/acre (oats))</b>					
Fertility	crop	P <sub>2</sub> O <sub>5</sub> (2.65 kg/tonne removal rate)	8.50	12.25	
	removal	K <sub>2</sub> O (20.0 kg/tonne removal rate)	54.25	60.25	
Tractor and machine expenses	fuel (7 L) and lubricants		10.25	10.25	
	repairs and maintenance		5.60	5.60	
Twine			11.55	13.50	
Other			16.40	16.40	
<b>Total Operating Expenses — Straw</b>		<b>106.55</b>	<b>118.25</b>		
<b>Total Operating Expenses</b>		<b>483.50</b>	<b>484.15</b>		
<b>REVENUE</b>					
Expected yield _____					
Expected price _____					
		<b>Total Market Revenue (Yield x Price)</b>			
Program payment _____					
		<b>Total Revenue</b>			
Expected straw yield _____					
Expected straw price _____					
		<b>Total Straw Revenue (Yield x Price)</b>			
		<b>Total Revenue</b>			
<b>CONTRIBUTION MARGIN (Revenue – Operating Expenses)</b>					
<b>OVERHEAD EXPENSES</b>		<b>Barley Only</b>	<b>Barley &amp; Straw</b>	<b>Oats Only</b>	<b>Oats &amp; Straw</b>
Machinery	depreciation	42.60	50.00	42.60	50.00
	interest on investment	17.15	18.25	17.15	18.25
Land		-	-	-	-
Other overhead		8.30	10.30	8.30	10.30
<b>TOTAL EXPENSES</b>		<b>445.00</b>	<b>562.05</b>	<b>433.95</b>	<b>562.70</b>
Break-even price on your farm (total expenses/expected yield):					

\* Organic budget estimates do not include transition period costs.

\*\* Manure, compost and cover crop cost estimates are highly variable, depending on individual farm situations.

## OMAFRA RESOURCES

### Selected Factsheets and Publications

*Agronomy Guide for Field Crops*, Publication 811

*Budgeting Farm Machinery Costs*, OMAFRA Factsheet

*Guide to Custom Farmwork and Short-Term Equipment Rental*, OMAFRA Factsheet

*Ontario Farm Record Book*, Publication 540

*Soil Fertility Handbook*, Publication 611

To obtain a digital copy of this publication, visit [ontario.ca](https://ontario.ca) and search for the publication number and title.

To obtain print copies of this or any other OMAFRA publication, please order:

- online at [ontario.ca/publications](https://ontario.ca/publications)

Crop protection information on pest management and products registered for use is available through the [Ontario Crop Protection Hub](#).

OMAFRA has excellent tools and information to help manage your farm business in the Agricultural Business Management section at [ontario.ca/agbusiness](https://ontario.ca/agbusiness). For results of the Custom Farmwork and Equipment Rental Rates survey, go to [ontario.ca/agbusiness](https://ontario.ca/agbusiness) and search for “Ontario cost of production and budgets.” The *Ontario Enterprise Budgets*, also found on the OMAFRA website, has budgets for cost of production, including field crops. You can download a Budgeting Tool Excel file, modify the numbers to reflect your operation, and the file will complete the calculations. The Budgeting Tool also lets you assess the potential effect of production and marketing risk factors and risk management strategies.

Publication 60, *Field Crop Budgets*, is updated by John Molenhuis, Business Analysis and Cost of Production Specialist, OMAFRA, Brighton ([john.molenhuis@ontario.ca](mailto:john.molenhuis@ontario.ca)), and the OMAFRA Field Crops Unit.

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## METRIC CONVERSION TABLES

### Application rate conversions (approximate)

#### Metric to Imperial

litres per hectare  $\times 0.09$  = gallons per acre  
 litres per hectare  $\times 0.36$  = quarts per acre  
 litres per hectare  $\times 0.71$  = pints per acre  
 millilitres per hectare  $\times 0.015$  = fluid ounces per acre  
 grams per hectare  $\times 0.015$  = ounces per acre  
 kilograms per hectare  $\times 0.89$  = pounds per acre  
 tonnes per hectare  $\times 0.45$  = tons per acre

#### Imperial to metric

gallons per acre  $\times 11.23$  = litres per hectare (L/ha)  
 quarts per acre  $\times 2.8$  = litres per hectare (L/ha)  
 pints per acre  $\times 1.4$  = litres per hectare (L/ha)  
 fluid ounces per acre  $\times 70$  = millilitres per hectare (mL/ha)  
 tons per acre  $\times 2.24$  = tonnes per hectare (t/ha)  
 pounds per acre  $\times 1.12$  = kilograms per hectare (kg/ha)  
 ounces per acre  $\times 70$  = grams per hectare (g/ha)

#### Liquid equivalents

**litres/hectare approximate gallons/acre**  
 50 L/ha = 5 gal/acre  
 100 L/ha = 10 gal/acre  
 150 L/ha = 15 gal/acre  
 200 L/ha = 20 gal/acre  
 250 L/ha = 25 gal/acre  
 300 L/ha = 30 gal/acre

#### Dry weight equivalents

**grams or kilograms/hectare ounces or pounds/acre**  
 100 g/ha = 1½ oz/acre  
 200 g/ha = 3 oz/acre  
 300 g/ha = 4¼ oz/acre  
 500 g/ha = 7 oz/acre  
 700 g/ha = 10 oz/acre  
 1.10 kg/ha = 1 lb/acre  
 1.50 kg/ha = 1¼ lb/acre  
 2.00 kg/ha = 1¾ lb/acre  
 2.50 kg/ha = 2¼ lb/acre  
 3.25 kg/ha = 3 lb/acre  
 4.00 kg/ha = 3½ lb/acre  
 5.00 kg/ha = 4½ lb/acre  
 6.00 kg/ha = 5¼ lb/acre  
 7.50 kg/ha = 6¾ lb/acre  
 9.00 kg/ha = 8 lb/acre  
 11.00 kg/ha = 10 lb/acre  
 13.00 kg/ha = 11½ lb/acre  
 15.00 kg/ha = 13½ lb/acre

#### Handy metric conversion factor

litres per hectare  $\times 0.4$  = litres per acre  
 kilograms per hectare  $\times 0.4$  = kilograms per acre

### Conversion tables — imperial to metric (approximate)

Area	Volume (dry)	Volume (liquid)	Weight
1 square foot = 0.09 m <sup>2</sup>	1 cubic yard = 0.76 m <sup>3</sup>	1 fluid ounce (imp.) = 28.41 mL	1 ounce = 28.35 g
1 square yard = 0.84 m <sup>2</sup>	1 bushel = 36.37 L	1 pint (imp.) = 0.57 L	1 pound = 453.6 g
1 acre = 0.40 ha		1 gallon (imp.) = 4.55 L	1 ton = 0.91 tonne
		1 gallon (U.S.) = 3.79 L	



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