
2023 Cost of Production
Special Crops



Guidelines For Estimating
Special Crop Production Costs - 2023

Date: January, 2023

The following budgets are estimates of the cost of producing selected special field crops in Manitoba. General Manitoba Agriculture recommendations are assumed in using fertilizers and chemical inputs. These figures provide an economic evaluation of the crops and estimated yields required to cover all costs. Costs include labour, investment and depreciation, but do not include management costs, nor do they necessarily represent the average cost of production in Manitoba.

These budgets may be adjusted by putting in your own figures. As a producer you are encouraged to calculate your own costs of production for various crops. On each farm, costs and yields differ due to soil type, climate and agronomic practices.

This tool is available as an Excel worksheet at:



[The Farm Machinery Custom and Rental Rate Guide](#) is also available to help determine machinery costs.

The [CropPlan Production Cost Calculator](#) is also available for producers to estimate the cash cost of producing field crops on their farm on an annual basis. CropPlan calculates marginal returns, breakeven yields, breakeven crop prices on total production and remaining unsold inventory, land and machinery cost analysis and cash based financial ratios.

Contact Us

For more information, contact a Farm Management Specialist.

- manitoba.ca/agriculture
- mbfarmbusiness@gov.mb.ca
- 1-844-769-6224

Note: This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and use of this information is the responsibility of the user. If you need help with a budget, contact a Farm Management Specialist.

Special Crop Production Costs 2023 Guidelines (Dollars Per Acre)

	Black Bean	Kidney Bean	Hempseed	Fababean	Buckwheat	Canaryseed	Lentil	Your Farm
A. Operating Costs								
Seed & Treatment	\$115.00	\$166.50	\$58.75	\$54.00	\$25.00	\$33.00	\$70.00	
Fertilizer	\$113.24	\$113.24	\$113.24	\$54.81	\$61.14	\$97.95	\$28.35	
Crop Protection	\$124.52	\$124.52	\$52.13	\$15.50	\$6.50	\$30.67	\$30.35	
Fuel	\$37.89	\$37.22	\$38.72	\$35.05	\$33.60	\$36.84	\$31.90	
Machinery Operating & Lease	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	
Labour - Hired	\$5.20	\$5.20	\$5.20	\$5.20	\$5.20	\$5.20	\$5.20	
Crop Insurance	\$40.50	\$57.00	\$36.75	\$36.75	\$19.75	\$30.75	\$20.50	
Hail Insurance	\$21.88	\$21.88	\$25.00	\$21.88	\$31.25	\$12.50	\$16.25	
Drying & Other Costs	\$17.75	\$17.75	\$17.75	\$17.75	\$17.75	\$17.75	\$17.75	
Land Taxes	\$17.50	\$17.50	\$17.50	\$17.50	\$17.50	\$17.50	\$17.50	
Storage Costs	\$7.36	\$6.28	\$4.43	\$9.96	\$4.16	\$8.05	\$4.87	
Interest on Operating	\$20.38	\$22.94	\$15.29	\$11.37	\$9.57	\$12.21	\$10.37	
Total Operating	\$546.22	\$615.02	\$409.75	\$304.76	\$256.42	\$327.43	\$278.04	
B. Fixed Costs								
Land Costs	\$97.17	\$97.17	\$97.17	\$97.17	\$97.17	\$97.17	\$97.17	
Machinery Costs	\$96.73	\$96.73	\$86.37	\$86.37	\$86.37	\$86.37	\$86.37	
Total Fixed	\$193.90	\$193.90	\$183.54	\$183.54	\$183.54	\$183.54	\$183.54	
C. Owners - Labour & Living								
	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	\$26.00	
Total Costs	\$766.12	\$834.93	\$619.29	\$514.30	\$465.96	\$536.97	\$487.58	

Profitability Analysis

Estimated Farmgate								
Target Price \$ per unit	\$0.45	\$0.49	\$0.90	\$0.23	\$17.50	\$0.35	\$0.42	
Premium \$ per unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Target Yield per acre	1,700	1,450	750	2,300	16	1,550	1,125	
Unit type	lb	lb	lb	lb	bu	lb	lb	
Gross Revenue / acre	\$765.00	\$710.50	\$675.00	\$529.00	\$280.00	\$542.50	\$472.50	
Revenue Ranking	1	2	3	5	7	4	6	
Operating Expense Ratio	71.4%	86.6%	60.7%	57.6%	91.6%	60.4%	58.8%	
Marginal Returns								
Over Operating Costs	\$218.78	\$95.48	\$265.25	\$224.24	\$23.58	\$215.07	\$194.46	
Over Total Costs (Net Profit)	(\$1.12)	(\$124.43)	\$55.71	\$14.70	(\$185.96)	\$5.53	(\$15.08)	
Profitability Ranking	4	6	1	2	7	3	5	
Return on Investment (ROI)	(0.15%)	(14.90%)	9.00%	2.86%	(39.91%)	1.03%	(3.09%)	
Return on Asset (ROA)	3.60%	0.81%	4.73%	3.80%	(0.73%)	3.60%	3.13%	

Breakeven Analysis

Breakeven Price Per Unit								
Over Operating Costs	\$0.32	\$0.42	\$0.55	\$0.13	\$16.03	\$0.21	\$0.25	
Over Land Costs	\$0.06	\$0.07	\$0.13	\$0.04	\$6.07	\$0.06	\$0.09	
Over Machinery Costs	\$0.06	\$0.07	\$0.12	\$0.04	\$5.40	\$0.06	\$0.08	
Over Owners Labour & Living	\$0.02	\$0.02	\$0.03	\$0.01	\$1.63	\$0.02	\$0.02	
Over Total Costs	\$0.45	\$0.58	\$0.83	\$0.22	\$29.12	\$0.35	\$0.43	
Breakeven Yield (Bu or lb.)								
Over Operating Costs	1213.8	1255.2	455.3	1325.1	14.7	935.5	662.0	
Over Land Costs	215.9	198.3	108.0	422.5	5.6	277.6	231.4	
Over Machinery Costs	215.0	197.4	96.0	375.5	4.9	246.8	205.6	
Over Owners Labour & Living	57.8	53.1	28.9	113.0	1.5	74.3	61.9	
Over Total Costs	1702.5	1704.0	688.2	2236.1	26.7	1534.2	1160.9	
Breakeven Yield Risk Ratio	100%	85%	109%	103%	60%	101%	97%	
(Target Yield per Acre / BE Yield)								

Note: This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user.

AgrilInsurance Analysis

Based on 2022 MASC data	Black Bean	Kidney Bean	Hempseed	Fababean	Buckwheat	Canaryseed	Lentil	Your Farm
AgrilInsurance								
80% Insured Value	\$565	\$655	\$396	\$237	\$152	\$435	\$251	
Premium Cost (% of Insured)	7.2%	8.7%	9.3%	15.5%	13.0%	7.1%	8.2%	
Costs Not Covered By AgrilInsurance								
Operating Costs	\$0	\$0	\$14	\$67	\$105	\$0	\$27	
Operating & Fixed Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total Costs	\$201	\$180	\$223	\$277	\$314	\$102	\$237	
AgrilInsurance Risk Ratio	(AgrilInsurance Coverage / Cost)							
Operating Costs	103%	107%	97%	78%	59%	133%	90%	
Total Costs	74%	78%	64%	46%	33%	81%	51%	
Risk Ranking	5	6	4	2	1	7	3	
<small>(Lower number indicates increasing risk)</small>								

Risk & Sensitivity Analysis (Stress Test)

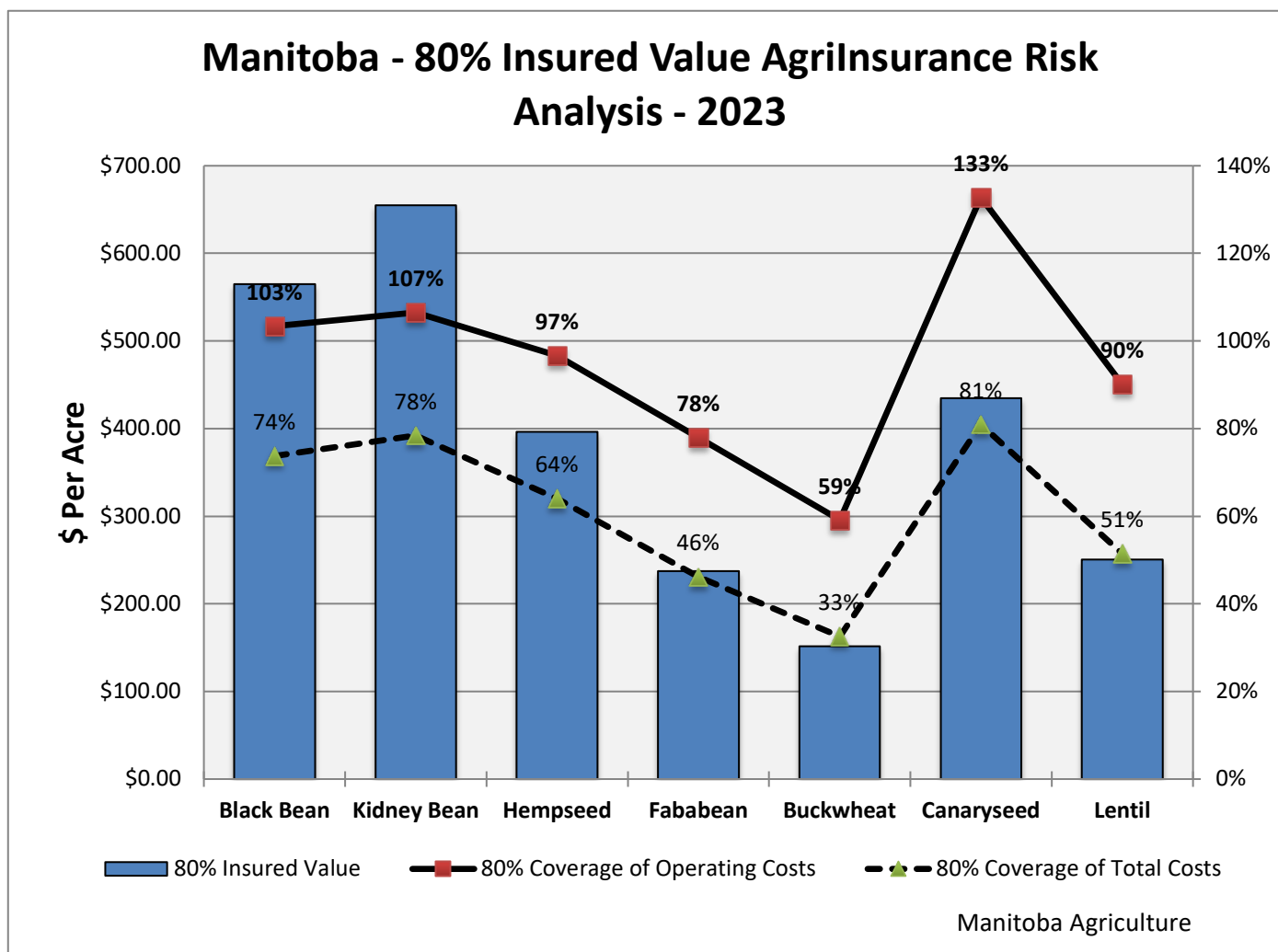
Percent Market Price Change	(20%)
Percent Crop Yield Change	(10%)

	Black Bean	Kidney Bean	Hempseed	Fababean	Buckwheat	Canaryseed	Lentil	Your Farm
Market Price (\$ per unit)	\$0.36	\$0.39	\$0.72	\$0.18	\$14.00	\$0.28	\$0.34	
Yield (per acre)	1530	1305	675	2070	14	1395	1013	
Stress Test Scenario = Market Price Down 20%, and Crop Yield Down 10%								
Gross Revenue / acre	\$550.80	\$511.56	\$486.00	\$380.88	\$196.00	\$390.60	\$340.37	
Marginal Returns								
Over Operating Costs	\$4.58	(\$103.46)	\$76.25	\$76.12	(\$60.42)	\$63.17	\$62.33	
Over Operating & Fixed	(\$189.32)	(\$297.37)	(\$107.29)	(\$107.42)	(\$243.96)	(\$120.37)	(\$121.21)	
Over Total Costs (Net Profit)	(\$215.32)	(\$323.37)	(\$133.29)	(\$133.42)	(\$269.96)	(\$146.37)	(\$147.21)	
Profitability Ranking	5	7	1	2	6	3	4	
Operating Expense Ratio	99.2%	120.2%	84.3%	80.0%	130.8%	83.8%	81.7%	

Acreage Analysis

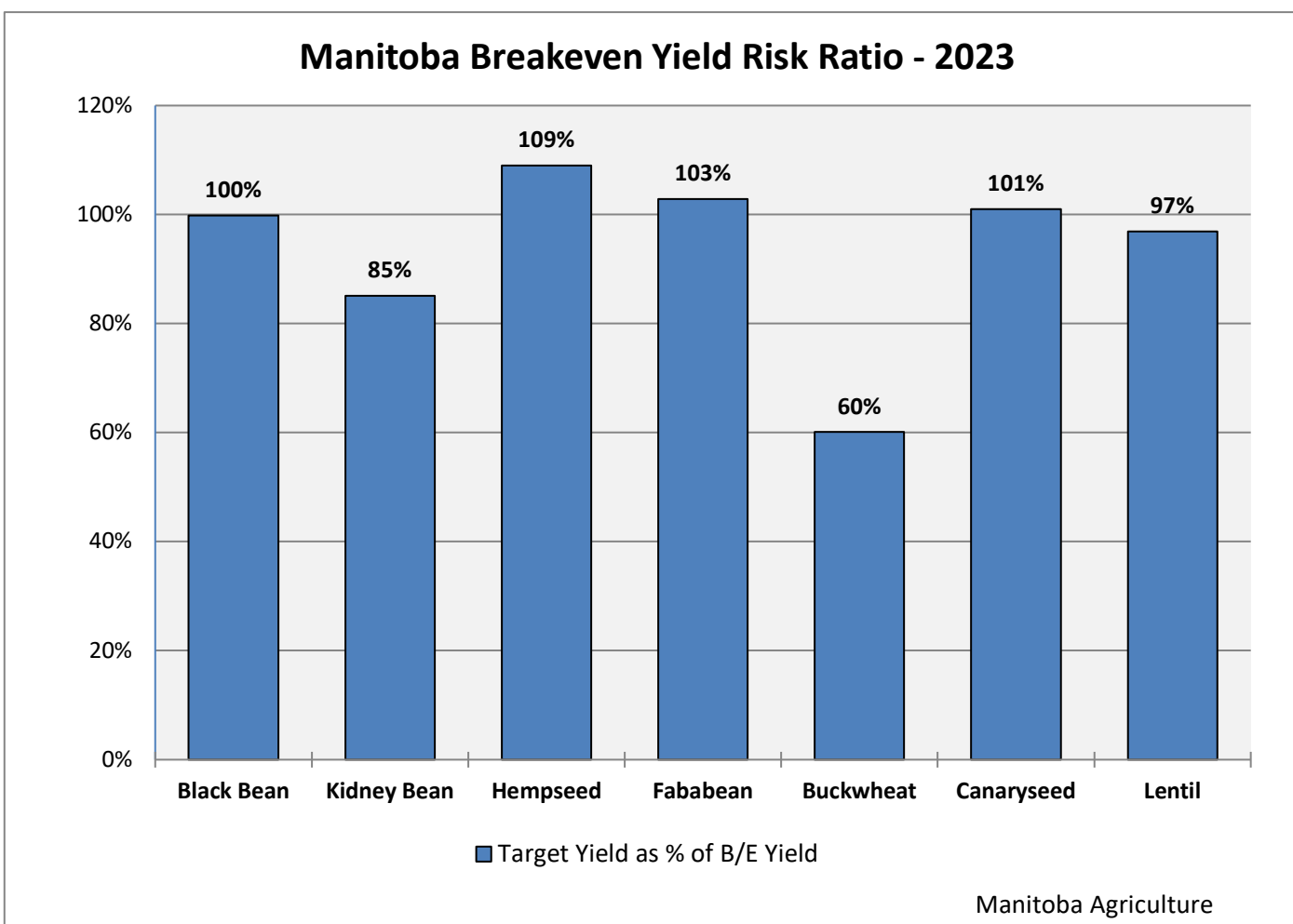
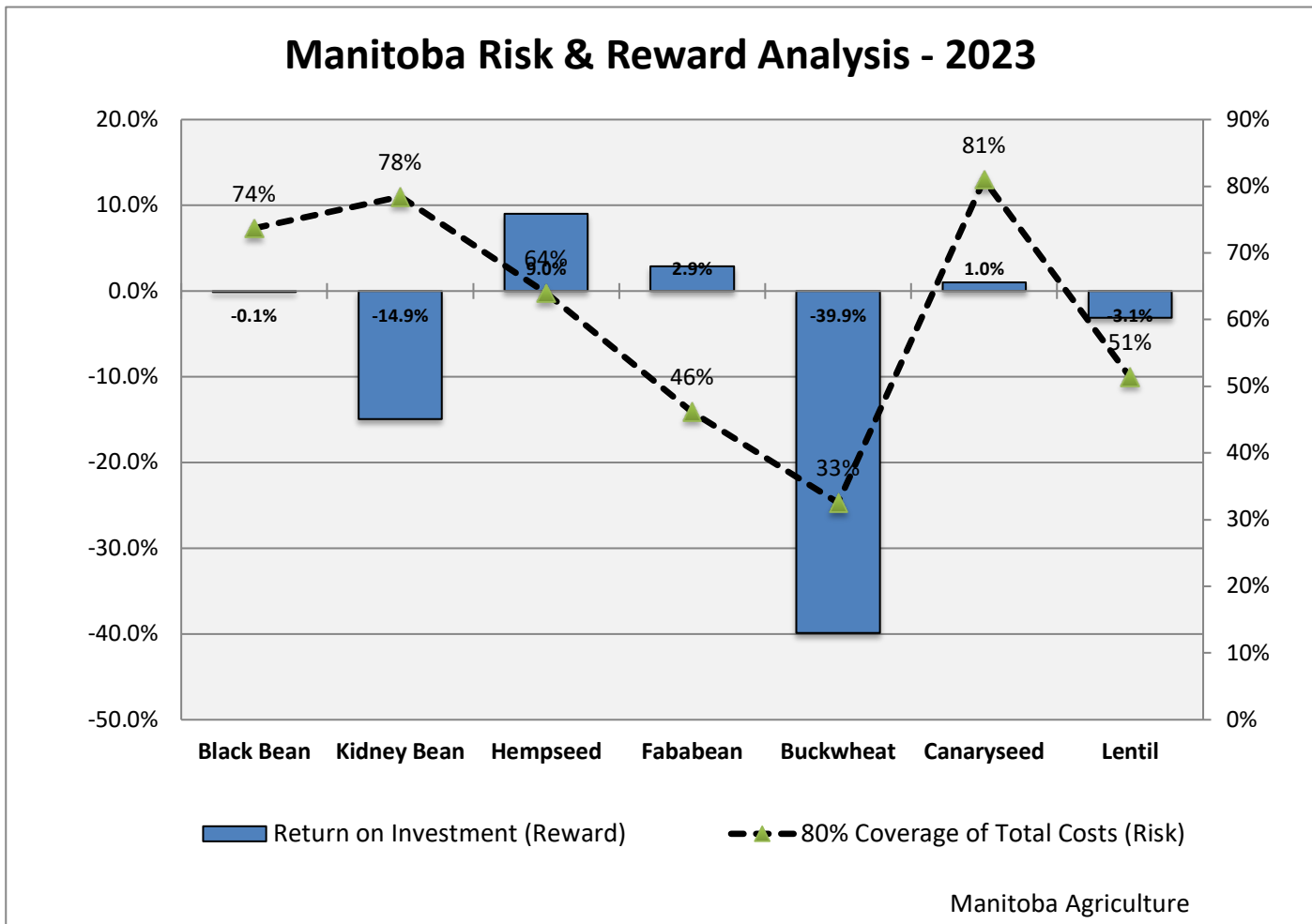
	Black Bean	Kidney Bean	Hempseed	Fababean	Buckwheat	Canaryseed	Lentil	Your Farm
MASC Seeded Acreage								
5 Year Average Acres	24,951	9,803	8,636	5,153	4,909	4,369	1,564	
Acre Ranking	1	2	3	4	5	6	7	
2022 Acres	21,053	4,300	5,604	0	2,834	4,990	1,003	
Acre Ranking	1	4	2	7	5	3	6	

Note: This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user.



Analysis of your AgrilInsurance Coverage of Operating and Total Costs is an important step in Risk Management Planning for your farm.

Analysis of ROI (Reward) and the associated AgrilInsurance Coverage of Total Costs (Risk) is useful in comparing the profitability and cost efficiency alongside the production cost risk when evaluating crops to include in your rotation and is an important step in Risk Management Planning for your farm.



Analysis of your Breakeven Yields compared to Target (or average) Yields gives an indication of how close to B/E (\$0 profit = 100%) each crop in your rotation is if faced with potential production or market price challenges and is an important step in Risk Management Planning.

Seed & Treatment

<u>Crop</u>	<u>Seeding Rate</u> <u>per Acre</u>	<u>Price</u> <u>per Unit</u>	<u>Cost</u> <u>per Acre</u>
Hempseed	25 lb	\$2.35 /lb	\$58.75
Black Bean	1.25 unit	\$92.00 /unit	\$115.00
Kidney Bean	0.8 unit	\$222.00 /unit	\$166.50
Buckwheat	1.0 bu	\$25.00 /bu	\$25.00
Canaryseed	44 lb	\$0.75 /lb	\$33.00
Fababean	180 lb	\$0.30 /lb	\$54.00
Lentil	2.0 bu	\$35.00 /bu	\$70.00

Fertilizer

<u>Fertilizer Type</u>	<u>Bulk Price</u> <u>\$/tonne</u>	<u>Actual Nutrient</u> <u>\$/lb</u>	<u>Nitrogen</u> <u>Usage</u>	<u>Sulphur</u> <u>Usage</u>
Nitrogen: (urea) 46-0-0	\$1,100	\$1.085	75%	-
Nitrogen: (NH3) 82-0-0	\$1,900	\$1.051	25%	-
Nitrogen: (liquid) 28-0-0	\$700	\$1.134	0%	-
Phosphorus: 11-52-0	\$1,300	\$0.905	-	-
Potash: 0-0-60	\$1,000	\$0.756	-	-
Sulphur: 20.5-0-0-24	\$700	\$0.396	-	100%
MES S15: 13-33-0-15	\$1,000	\$0.094	-	0%

Amount of Actual Pounds of Elements Applied Per Acre

<u>Crop</u>	<u>Nitrogen</u>		<u>Phosphorus</u>		<u>Potash</u>		<u>Sulphur</u>		<u>Total</u> <u>\$/acre</u>
	<u>lbs</u>	<u>\$/acre</u>	<u>lbs</u>	<u>\$/acre</u>	<u>lbs</u>	<u>\$/acre</u>	<u>lbs</u>	<u>\$/acre</u>	
Hempseed	80	\$79.22	30	\$34.02	0	\$0.00	0	\$0.00	\$113.24
Black Bean	80	\$79.22	30	\$34.02	0	\$0.00	0	\$0.00	\$113.24
Kidney Bean	80	\$79.22	30	\$34.02	0	\$0.00	0	\$0.00	\$113.24
Buckwheat	40	\$38.46	20	\$22.68	0	\$0.00	0	\$0.00	\$61.14
Canaryseed	70	\$69.60	25	\$28.35	0	\$0.00	0	\$0.00	\$97.95
Fababean	0	\$0.00	25	\$28.35	0	\$0.00	20	\$26.46	\$54.81
Lentil	0	\$0.00	25	\$28.35	0	\$0.00	0	\$0.00	\$28.35

- * The fertilizer recommendation will vary depending on the soil type, climate and crop rotation. MB Ag. recommends that soil test sampling and analysis be conducted each year to produce a better baseline for fertility. It costs \$1.00 to \$2.00/acre for custom sampling and analysis.
- * For more information on fertilizer rates and recommendations - [Nitrogen Rate Calculator](#)
- * Note: phosphorus amounts are allotted to each crop in the above examples. Sometimes this amount may not be practical or safe to apply with the seed of some crops like soybean or canola. Options for meeting these needs and phosphorus balance through the rotation are provided at: [Phosphorus Balance Calculator](#)

Crop Protection

<u>Crop</u>	<u>Weed</u> <u>Control</u> <u>\$/acre</u>	<u>Disease</u> <u>Control</u> <u>\$/acre</u>	<u>Insect</u> <u>Control</u> <u>\$/acre</u>	<u>Total</u> <u>Cost</u> <u>\$/acre</u>
Hempseed	\$52.13	\$0.00	\$0.00	\$52.13
Black Bean	\$84.02	\$40.50	\$0.00	\$124.52
Kidney Bean	\$84.02	\$40.50	\$0.00	\$124.52
Buckwheat	\$6.50	\$0.00	\$0.00	\$6.50
Canaryseed	\$14.42	\$16.25	\$0.00	\$30.67
Fababean	\$15.50	\$0.00	\$0.00	\$15.50
Lentil	\$16.00	\$14.35	\$0.00	\$30.35

Note:

- Pre-emergent burn off and/or pre-harvest desiccation not included in weed control costs.
- Chemical costs do not include year end rebates or bundling discounts.
- Disease Control costs do not include custom application costs.

Operating Costs

Interest Rate on Operating	7.75%
Land Taxes (\$/acre)	\$17.50
Labour rate (\$/hour)	\$26.00
Machinery Operating (\$/acre)	\$25.00
Other Costs (\$/acre)	\$17.75
Fuel Cost (\$/litre)	\$1.65
Owners - Labour & Living (hrs/acre)	1.0

<u>Grain Hauling</u>			
Distance to storage	6	miles roundtrip	
Distance to market	45	miles roundtrip	
Grain truck fuel use	5	Miles per Imp. Gallon	
Grain truck size	475	bushels	

Operating Cost (\$/Acre)

Crop	Labour (hrs/acre)	Fuel	Crop*		Hail Insurance	Drying Costs	Storage \$/acre**	Rental and Custom Costs					Total
			Insurance	Insurance				Seeding	Application	Swathing	Harvest	General	
Hempseed	0.2	\$38.72	\$36.75	\$25.00	-	\$4.43	-	-	-	-	-	\$0.00	
Black Bean	0.2	\$37.89	\$40.50	\$21.88	-	\$7.36	-	-	-	-	-	\$0.00	
Kidney Bean	0.2	\$37.22	\$57.00	\$21.88	-	\$6.28	-	-	-	-	-	\$0.00	
Buckwheat	0.2	\$33.60	\$19.75	\$31.25	-	\$4.16	-	-	-	-	-	\$0.00	
Canaryseed	0.2	\$36.84	\$30.75	\$12.50	-	\$8.05	-	-	-	-	-	\$0.00	
Fababean	0.2	\$35.05	\$36.75	\$21.88	-	\$9.96	-	-	-	-	-	\$0.00	
Lentil	0.2	\$31.90	\$20.50	\$16.25	-	\$4.87	-	-	-	-	-	\$0.00	

* 80% Insured Value - Based on MASC Risk Areas 2, 5, 6, & 12

** Storage costs are listed under Fixed Costs on the Summary Page.

Field Fuel Usage

Crop	Total L/acre	Number of Field Operations & Litres Fuel Per Acre Per Operation								Trucks L/acre	
		cultivator or tandem disk	high speed disk	harrow or land roller	air drill	row planter	SP sprayer	swather	combine & grain cart	3/4 ton pickup	grain hauling
		2.9	3.5	1.3	2.8	1.9	0.5	1.8	7.0	2.0	
Hempseed	23.46	1	1	2	1		2		1	2	1.66
Black Bean	22.97	1		2		1	4	1	1	2	2.77
Kidney Bean	22.56	1		2		1	4	1	1	2	2.36
Buckwheat	20.36	1		1	1		2	1	1	2	1.56
Canaryseed	22.33	1		1	1		3	1	1	2	3.03
Fababean	21.24	1		1	1		3		1	2	3.74
Lentil	19.33	1		1	1		3		1	2	1.83

Guidelines: Special Crop Production Costs

Fixed Costs				
Land				
Average Land value (\$/acre)	\$3,750			
Conventional Crop acres	2,000			
Special Crop acres	500			
Owned Land Equity	85%			
Land Financed	15%			
Land Opportunity Cost (Investment Rate)	1.50%			
Land cost (\$/acre)				
Finance Rate & Term	7.250%	25 Years		
Principle & Interest Cost	\$49.36			
Owned Land Opportunity Cost	\$47.81			
Total Cost	\$97.17			
Grain Storage				
	<u>Usage %</u>	<u>Cost</u>		
Non-aeration bins	15%	\$3.50 /bu		
Aeration bins	70%	\$4.50 /bu		
Hopper bins	15%	\$5.50 /bu		
Storage Financed	60%			
			Machinery	
			Conventional	Special
			Crop	Crop
			\$600.00	\$72.00
			25%	
			15	
			55%	
			45%	
			1.50%	
			Machinery Cost (\$/acre)	
			7.750%	7 Years
			\$51.42	\$6.17
			\$30.00	\$3.60
			\$4.95	\$0.59
			\$86.37	\$10.36
			Total Land & Machinery Debt (\$/acre)	
			\$865	
			Machinery Lease cost (\$/acre)	
			\$0.00	

Conventional Crop Equipment Inventory and Current Values							
	<u>Market</u>	<u>Grain</u>	<u>Grain</u>		<u>Market</u>	<u>Grain</u>	<u>Grain</u>
Power & Misc Equipment	<u>Value</u>	<u>Usage %</u>	<u>Allocation</u>	Harvest Equipment	<u>Value</u>	<u>Usage %</u>	<u>Allocation</u>
4WD Tractor 475HP	\$300,000	100%	\$300,000	Combine	\$300,000	100%	\$300,000
MFWD Tractor 150HP	\$120,000	100%	\$120,000	Swather 35 ft	\$36,000	100%	\$36,000
2WD Tractor 60HP	\$36,000	100%	\$36,000	Harvest Header	\$60,000	100%	\$60,000
ATV Quad	\$6,000	100%	\$6,000	Tandem grain truck	\$72,000	100%	\$72,000
	\$0	0%	\$0	Grain cart	\$40,000	100%	\$40,000
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
Total			\$462,000	Total			\$508,000
	<u>Market</u>	<u>Grain</u>	<u>Grain</u>		<u>Market</u>	<u>Grain</u>	<u>Grain</u>
Seeding & Tillage	<u>Value</u>	<u>Usage %</u>	<u>Allocation</u>	Spraying & Misc.	<u>Value</u>	<u>Usage %</u>	<u>Allocation</u>
Cultivator	\$18,000	100%	\$18,000	SP sprayer	\$210,000	100%	\$210,000
Harrow 80ft	\$32,000	100%	\$32,000	Miscellaneous	\$10,000	100%	\$10,000
Air tank	\$70,000	100%	\$70,000	PTO Auger 13x70	\$15,000	100%	\$15,000
Air drill	\$150,000	100%	\$150,000	Auger 8x35	\$5,000	100%	\$5,000
	\$0	0%	\$0	Farm Pickup truck	\$40,000	50%	\$20,000
	\$0	0%	\$0		\$0	0%	\$0
Total	\$270,000		\$270,000	Total			\$260,000
Owned Equipment TOTAL \$1,500,000							

Special Crop Equipment Inventory and Current Values							
	<u>Market</u>	<u>Grain</u>	<u>Grain</u>		<u>Market</u>	<u>Grain</u>	<u>Grain</u>
Seeding, Tillage, Spraying	<u>Value</u>	<u>Usage %</u>	<u>Allocation</u>	Harvest Equipment	<u>Value</u>	<u>Usage %</u>	<u>Allocation</u>
Planter	\$120,000	100%	\$120,000	Harvest Header	\$60,000	100%	\$60,000
	\$0	0%	\$0		\$0	0%	\$0
Total			\$120,000	Total			\$60,000
Special Equipment TOTAL \$180,000							

Leased Equipment Inventory							
	<u>Annual</u>	<u>Grain</u>	<u>Grain</u>		<u>Annual</u>	<u>Grain</u>	<u>Grain</u>
Seeding, Tillage, Spraying	<u>Lease</u>	<u>Usage %</u>	<u>Allocation</u>	Trucks & Trailers	<u>Lease</u>	<u>Usage %</u>	<u>Allocation</u>
enter equipment here	\$0	0%	\$0	enter equipment here	\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
Total	\$0		\$0	Total			\$0
Leased Equipment TOTAL \$0 \$0.00 per acre							

* Leased equipment costs are listed under Operating Costs on the Summary Page.

Other Assumptions

Fuel Costs: Includes fuel used for field work, trucking in inputs and trucking out production.

Machinery Operating Costs: Includes costs for maintenance, repairs, licenses and insurance, based on 3.2% of machinery investment cost.

Crop Insurance: (2022 rates)

80% Insured Value coverage, \$100/acre excess moisture Insurance, and additional hail insurance at \$400/acre coverage for all crops. Coverage and costs based on MASC Risk Areas #2, 5, 6, and 12.

Other Costs: Includes overhead expenses - hydro, telephone, accounting, buildings, supplies and insurance, etc.

Land Taxes: The average cost based on land tax assessment and mill rates of a sample of municipalities growing crops less provincial tax rebate.

Interest On Operating: Interest charges on operating costs are calculated at 7.75% for six months.

Land Cost:

Based on approximate average land values. Budget assumed 15% financed at 7.25% for 25 years, plus 1.5% land equity opportunity cost. Budget can be used to estimate cashflow by removing investment cost.

P&I Cost (based on \$1,406,250 Mortgage) = \$123,401 payments per year / 2500 acres = \$49.36/acre)

Investment = (Total Investment x Owned Equity %) x Investment Rate % (eg. ((\$3,750 x 85%) x 1.5%) = \$47.81/acre)

Machinery Cost:

Based on approximate average machinery values. Budget assumed 45% financed at 7.75% for 7 years, depreciation costs over 15 years with a 25% residual value, plus 1.5% machinery equity opportunity cost. Budget can be used to estimate cashflow by removing depreciation and investment cost.

P&I Cost (based on \$675,000 + \$81,000 Loans) = \$128,542 + \$15,425 payments per year / 2500 acres = \$51.42 and \$6.17/acre)

Depreciation (Useage Cost) = (Total Investment - Residual Value) / Years Useful Life (eg. (\$600.00 - (\$600.00 x 25%)) / 15 = \$30.00/acre)

Investment = (Total Investment x Owned Equity %) x Investment Rate % (eg. (\$600 x 55%) x 1.5%) = \$4.95/acre)

Depreciation Cost = $\frac{\text{Original Cost} - \text{Salvage Value}}{\text{Useful Life}}$

Investment Cost = $\frac{\text{Original Cost} + \text{Salvage Value}}{2} \times \text{Investment Rate}$

Estimated Farmgate Values:

Target crop prices are based on deferred delivery contract prices for fall 2023.

Target yields are estimated based on 5 year MASC average yields.

Storage Cost:

Storage costs for each crop are based on estimated yields entered on the Summary page.

Budget assumed 60% financed at 7.25% for 20 years.

Farm storage requirements were assumed to cost \$3.50/bushel for 15% of the storage, \$4.50/bushel for 70% aerated storage and \$5.50/bushel for 15% hopper storage.

Profitability, Breakeven & Risk Analysis Formulas:

Gross Revenue = Price per unit x Yield per acre (eg. kidney bean: \$0.90/lb x 750lb/ac = \$675.00/ac)

Net Profit = Gross Revenue - Total Cost (eg. kidney bean: \$675.00 gross revenue - \$619.29 total cost = \$55.71 per acre)

Operating Expense Ratio = (Operating Cost / Gross Revenue) x 100 (eg. kidney bean: \$409.75 operating expense / \$675 revenue = 60.7%)

Return on Investment (ROI) = (Gross Revenue - Total Cost) / Total Cost (eg. kidney bean: (\$675.00 - \$619.29) / \$619.29 = 9.0%)

Estimated Return on Asset (ROA) = (Margin Over Operating - Labour - Machinery Depreciation) / (Land Investment Cost + Machinery Investment Cost)

(eg. kidney bean: (\$265.25 margin - \$26.00 labour - \$33.60 dep.) / (\$3750 land cost + \$600.00 conv. machinery + \$72.00 special crop. mach.) = 4.73%)

Breakeven Price = Cost / Target Yield (eg. kidney bean cost \$619.29 / 750 lb = \$0.83 per lb)

Breakeven Yield = Cost / Target Price per Unit (eg. kidney bean cost \$619.29 / \$0.90 lb = 688.1 lb)

Breakeven Yield Risk Ratio = (Yield per Acre / Breakeven Yield) x 100 (eg. kidney bean yield 750 lb/ac / 688.1 lb BE = 109 %)

AgrilInsurance Risk Ratio = (AgrilInsurance Coverage / Operating Cost) x 100 (eg. kidney bean coverage \$396.24/ac / \$409.75 operating expense = 97 %)

Contact Us

For more information, contact a Farm Management Specialist.

- manitoba.ca/agriculture
- mbfarmbusiness@gov.mb.ca
- 1-844-769-6224



Contact us

- For more information, contact a Farm Management Specialist
- manitoba.ca/agriculture
- mbfarmbusiness@gov.mb.ca
- 1-844-769-6224