
Cost of Production

Saskatoons



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Guidelines For Estimating Saskatoon Berry Production Costs

The following budget estimates the cost of producing Saskatoon Berries 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.

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

This tool is available as an Excel worksheet at:



Contact Us

For more information, contact a Farm Management Specialist.

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

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Saskatoon Berry - Cost of Production Summary				
Based on 20 acres				
	Establishment ¹	Picking Years		
	Cost \$/acre	Cost /acre	Cost/lb	Your Cost
Operating Costs				
A Establishment cost (amortized) ¹	–	\$813.95	–	
Seed & Treatment	\$2,116.00	–	\$0.3876	
Fertilizer	\$134.56	\$89.43	\$0.0426	
Pesticide	\$44.00	\$35.00	\$0.0167	
Fuel	\$86.63	\$43.44	\$0.0207	
Irrigation	\$10.64	\$5.32	\$0.0025	
Machinery Operating & Lease	\$25.00	\$25.00	\$0.0119	
Labour - hired	\$903.00	\$832.12	\$0.3962	
Crop Insurance (Establishment only)	\$116.60	–	–	
Hail Insurance	\$0.00	\$0.00	\$0.0000	
Land Taxes	\$20.00	\$20.00	\$0.0095	
Miscellaneous Cost	\$308.00	\$110.00	\$0.0524	
Rental and Custom Charges	\$300.00	\$0.00	\$0.0000	
Repairs & Maintenance Cost	\$253.16	\$253.16	\$0.1206	
Interest on Operating	<u>\$302.23</u>	<u>\$77.96</u>	<u>\$0.0371</u>	
Total Operating Costs	\$4,619.83	\$2,305.38	\$1.0978	
B. Fixed Costs				
Land Costs	\$296.29	\$296.29	\$0.1411	
Machinery Costs	\$2,012.09	\$2,012.09	\$0.9581	
Storage & Irrigation Costs	<u>\$1,483.05</u>	<u>\$1,483.05</u>	<u>\$0.7062</u>	
Total Fixed Costs	\$3,791.44	\$3,791.44	\$1.8054	
C. Total Costs	\$8,411.27	\$6,096.82	\$2.9032	
Profitability Analysis				
Estimated Farmgate				
Price per Unit		\$6.50		
Target Yield per acre (lbs)		2,100		
Gross Revenue / acre		\$13,650.00		
Operating Expense Ratio				
		17%		
Marginal Returns				
Over Operating Costs		\$11,344.62		
Over Total Costs (Net Profit)		\$7,553.18		
Breakeven Analysis				
Breakeven Price (\$ Per lb.)				
Operating Costs		\$1.10		
Over Fixed Costs		<u>\$1.81</u>		
Over Total Costs		\$2.90		
Breakeven Yield (lbs)				
Over Operating Costs		355		
Over Fixed Costs		<u>583</u>		
Over Total Costs		938		
Breakeven Yield Risk Ratio				
		2.24		
(Yield per acre/BE Yield)				

1. Saskatoon establishment net cost of \$8411.27 (total cost minus estimated gross revenue) were amortized over 16 sasakatoon picking years.

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Saskatoon Berry Planting

	Transplanting Rate (plants/ac)	Plant Cost/each	Cost per Acre
Saskatoon Plants	880	\$2.25	\$1,980.00
Grass Seed (lbs)	40	\$3.40	\$136.00
	TOTAL		\$2,116.00

Fertilizer

Fertilizer Type	Bulk Price \$/tonne	Actual Nutrient \$/lb
Nitrogen: (urea) 46-0-0	\$900	\$0.89
Phosphorus: 11-52-0	\$1,250	\$0.90
Potash: 0-0-60	\$650	\$0.49
Sulphur: 20.5-0-0-24	\$850	\$0.85

Amount of Actual Pounds of Elements Applied Per Acre

Crop	Nitrogen		Phosphorus		Potash		Sulphur		Total
	lbs	\$/acre	lbs	\$/acre	lbs	\$/acre	lbs	\$/acre	\$/acre
Saskatoon Planting	25	\$3.41	100	\$109.04	45	\$22.11	0	\$0.00	\$134.56
Saskatoon Picking	25	\$12.80	50	\$54.52	45	\$22.11	0	\$0.00	\$89.43

Crop Protection

	Weed Control \$/ac	Disease Control \$/ac	Insect Control \$/ac	Total Cost \$/ac
Planting	\$40.00	\$0.00	\$4.00	\$44.00
Picking	\$6.00	\$26.00	\$3.00	\$35.00

Note:

Pre-emergent burn off is 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.

Crop Rotations and Yields

Year	Acres 20	Prod'n lb. per acre	Total prod'n (lb)
1	planted	0	
2	2nd year establ.	0	
3	3rd year establ.	0	
4	1st year harvest	250	5,000
5	2nd year harvest	650	13,000
6	3rd year harvest	1,350	27,000
7	4th year harvest	1,900	38,000
8	5th year harvest	2,350	47,000
9	6th year harvest	2,800	56,000
10	7th year harvest	2,800	56,000
11	8th year harvest	2,800	56,000
12	renovated-no prod'n	0	
13	1st year harvest	450	9,000
14	2nd year harvest	1,000	20,000
15	3rd year harvest	1,900	38,000
16	4th year harvest	2,800	56,000
17	5th year harvest	2,800	56,000
18	6th year harvest	2,800	56,000
19	7th year harvest	2,800	56,000
20	8th year harvest	2,800	56,000

Total Production (lb) - Years 4 to 20

645,000

Average production per acre (lb) - years 4 to 20

2,100

Market Price per Pound

\$6.50

(\$32.50 per 5lb basket or pail)

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Operating Costs

Interest Rate on Operating	7.00%
Land Taxes (\$/acre)	\$20.00
Labour rate (\$/hour)	\$20.00
Machinery Operating (\$/acre)	\$25.00
Cost per roll of plastic mulch	\$300.00
Fuel Cost (\$/litre)	\$1.10

Field Fuel Usage

<u>Operation</u>	<u>Times Over</u>	<u>Width Feet</u>	<u>Speed MPH</u>	<u>Tractor HP</u>	<u>Fuel Per Acre</u>	<u>Capacity Ac/Hr</u>	<u>Time Hr./Ac.</u>	<u>Maint & Lub</u>
Transplanting	1	5	1	50	\$20.63	0.50	2.00	2.06
Cultivate	2	5	5	50	\$8.25	2.50	0.80	0.83
Mowing	9	6	5	50	\$30.94	3.00	3.00	3.09
Spray	1	25	4	50	\$1.03	10.00	0.10	0.10
Mulch application	1	4	2	100	\$25.78	0.80	1.25	2.58
Total Establishment Field Operation Fuel Costs (\$/acre)					\$86.63			

Spray	5	25	4	50	\$5.16	10.00	0.50	0.52
Mowing	6	6	4	50	\$25.78	2.40	2.50	2.58
Harvesting	2	16.5	2	100	\$12.50	3.30	0.61	1.25
Total Picking Field Operation Fuel Costs (\$/acre)					\$43.44			

Irrigation Cost

<u>Irrigation Fuel Costs</u>	<u>Establishment</u>	<u>Picking</u>
Inches water applied	2	1
Hours/acre for 1" of water	4	4
Hourly pumping costs	\$1.33	\$1.33
Total Cost (\$/acre)	\$10.64	\$5.32

Labour Cost

	<u>Establishment Hours Required per Acre</u>					<u>Total (\$/acre)</u>
	<u>Est 1</u>	<u>Est 2</u>	<u>Est 3</u>	<u>Est 4</u>	<u>Total</u>	
Weed Control	2.0	0.5	0.5	0.5	3.5	
Pest control	0.0	2	2	3	7.0	
Mowing	0.0	1.5	1.5	1.5	4.5	
Irrigation	4.0	3.0	3.0	3.0	13.0	
Mulch application	10.0	0.0	0.0	0.0	10.0	
Field Operations	7.2	0.0	0.0	0.0	7.2	
Total Labour Hours	23.2	7.0	7.0	8.0	45.2 hrs	\$903.00
	<u>Production Hours Required per Acre</u>					<u>Total (\$/acre)</u>
						<u>Total</u>
Weed Control	1.0				1.0	
Pest control	3.0				3.0	
Mowing	1.5				1.5	
Irrigation	3.0				3.0	
Pruning	20.0				20.0	
Harvesting	4.5				4.5	
Initial processing	5.0				5.0	
Field Operations	3.6				3.6	
Total Labour Hours	41.6				41.6 hrs	\$832.12

Miscellaneous Cost

	<u>Establishment</u>	<u>Picking</u>
Plant (total \$)	\$150.00	\$150.00
Advertising (total \$)	\$500.00	\$500.00
Utilities (total \$)	\$1,150.00	\$1,150.00
Mulch rolls per acre	0.66	\$3,960.00
Other Costs (\$/acre)	\$20.00	\$400.00
Total Miscellaneous Cost (\$/20 acres)	\$6,160.00	\$2,200.00
Total Miscellaneous Cost (\$/acre)	\$308.00	\$110.00

Repairs & Maintenance Cost

% rate of investment	1.50%
Total Repair & Maintenance Costs	\$253.16

Rental and Custom Charges

<u>Rental & Custom Charges</u>	<u>Transplanting</u>	<u>Mulch</u>	<u>Harvest</u>	<u>General</u>	<u>Total</u>
Establishment	\$100.00	\$200.00	-	-	\$300.00
Picking	-	-	-	-	\$0.00

Crop & Hail Insurance

Crop Insurance	\$117
Establishment	\$117

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Fixed Costs**Land**

Average Land Value	\$5,000
Saskatoon berry Acres	20
Owned Land Equity	30%
Land Financed	70%
Land Opportunity Cost	1.50%

Land cost (\$/acre)

Finance Rate & Term	6.00%	25 Years
Principal & Interest Cost	\$273.79	
Owned Land Opportunity Cost	\$22.50	
Total Cost	\$296.29	

Saskatoon Establishment

Establishment cost (\$/acre)	\$8,411
Saskatoon Berry Acres	20
Establishment Equity	10%
Establishment Financed (\$7,570 per acre)	90%
Establishment Opportunity Cost (Investment Rate)	1.50%

Establishment cost (\$/acre)

Finance Rate & Term	7.000%	16 Years
Principle & Interest Cost	\$801.33	
Owned Land Opportunity Cost	\$12.62	
Total Cost	\$813.95	

Machinery

Total Investment (\$/acre)	\$9,128
Residual Value (End of Useful Life)	10%
Useful Life (years)	15
Owned Equipment Equity	20%
Equipment Financed	80%
Machinery Opportunity Cost	1.50%

Machinery Cost (\$/acre)

Finance Rate & Term	7.00%	7 Years
Principal & Interest Cost	\$1,354.91	
Machinery Depreciation Cost	\$547.65	
Owned Machinery Opportunity Cost	\$109.53	
Total Cost	\$2,012.09	

Storage & Irrigation

Total Investment Storage (\$/ac)	\$6,250
Total Investment Irrigation (\$/ac)	\$1,500
Residual Value (End of Useful Life)	25%
Useful Life Storage (years)	20
Useful Life Irrigation (years)	15
Owned S & I Equity	20%
S & I Financed	80%
S & I Opportunity Cost	1.50%

Storage & Irrigation Cost (\$/acre)

Finance Rate & Term	7.00%	7 Years
Principal & Interest Cost	\$1,150.43	
Storage Depreciation Cost	\$234.38	
Irrigation Depreciation Cost	\$75.00	
Owned S & I Opportunity Cost	\$23.25	
Total Cost	\$1,483.05	

Total Debt (\$/acre) **\$24,571.90**

Storage & Irrigation

	Market Value	Saskatoon Usage %	Saskatoon Allocation
Storage Shed	\$60,000	100%	\$60,000
Quick Freeze Unit	\$30,000	100%	\$30,000
Holding Freezer	\$15,000	100%	\$15,000
Sorting Table & Sizer	\$20,000	100%	\$20,000
Irrigation Equipment	\$30,000	100%	\$30,000
Storage & Irrigation TOTAL	\$155,000		\$155,000
Storage & Irrigation Total per acre	\$7,750		\$7,750

Equipment Inventory and Current Values

	Market Value	Saskatoon Usage %	Saskatoon Allocation		Market Value	Saskatoon Usage %	Saskatoon Allocation
Power Equipment				Harvest Equipment			
Tractor - 50 HP	\$60,000	100%	\$60,000	Harvester	\$60,000	100%	\$60,000
Truck	\$15,000	100%	\$15,000	Pruning Equipment	\$4,000	100%	\$4,000
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
Total Inventory	\$75,000		\$75,000	Total Inventory	\$64,000		\$64,000
Seeding & Tillage				Spraying & Misc.			
Mechanical Transplanter	\$5,000	100%	\$5,000	Sprayer - 25 ft	\$10,000	100%	\$10,000
Rotovator	\$8,000	90%	\$7,200	Fertilizer Spreader	\$15,000	100%	\$15,000
Cultivator	\$1,500	90%	\$1,350	Mower	\$5,000	100%	\$5,000
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
Total Inventory	\$14,500		\$13,550	Total Inventory	\$30,000		\$30,000
Owned Equipment TOTAL	\$337,550		\$182,550				
Owned Equipment TOTAL / acre	\$16,877.50		\$9,128				

Leased Equipment Inventory and Current Values

	Annual Lease	Saskatoon Usage %	Saskatoon Allocation
Seeding, Tillage, Spraying etc			
	\$0	0%	\$0
	\$0	0%	\$0
	\$0	0%	\$0
Lease Equipment TOTAL	\$0		\$0
Leased Equipment TOTAL / acre	\$0		\$0

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Saskatoon Berry Production in Manitoba

The projected saskatoon berry production costs in this publication have been prepared to assist you in developing your own production costs.

The investment and cash input costs of growing saskatoon berries in Manitoba are substantial. Detailed budgeting and good financial planning are essential ingredients for success. The capital investment to establish and operate a 20 acre orchard are substantial. The establishment costs are incurred in the first 4 years and production doesn't begin until year 5. Saskatoons do not reach peak yield levels until 6-8 years after transplanting. However, a properly maintained orchard should maintain uniform yields for 20-30 years.

Commercial saskatoon production in Manitoba has been an important part of diversification in the province. The majority of the saskatoon orchards are harvested by hand for U-Pick sales and pre-picked direct farm sales; but mechanical harvesting for sales into processing has increased over the past few years.

Growers entering the industry need these basic requirements: (1) suitable land with adequate drainage and shelterbelts, (2) access to an adequate quantity and quality of water for irrigation, (3) financial resources that permit a significant level of investment on infrastructure and input costs, (4) the ability to apply management skills to the crop in a precisely timed manner, (5) the ability to determine market potential, and (6) the willingness to accept risk.

It is advised that new growers assess their potential customer base and marketing opportunities prior to establishing a saskatoon orchard and that they should start small and expand their orchards over several years.

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.

Crop Insurance:

Establishment coverage is available through MASC.

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% for six months.

Land Cost:

Based on approximate average land values. Budget assumed 70% financed at 6% 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 \$70,000 Mortgage) = \$5,476 payments per year / 20 acres = \$273.79/acre

Investment = (Total Investment x Owned Equity %) x Investment Rate % (eg. ((\$5,000 x 30%) x 1.5%) = \$22.50/acre)

Machinery Cost:

Based on approximate average machinery values. Budget assumed 80% financed at 7% for 7 years, depreciation costs over 15 years with a 10% 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 \$270,040 Loans) = \$27,098 payments per year / 20 acres = \$1354.91/acre

Depreciation (Useage Cost) = (Total Investment - Residual Value) / Years Useful Life (eg. (\$9127.5 - (\$9127.5 x 10%)) / 15 = \$547.65/acre)

Investment = (Total Investment x Owned Equity %) x Investment Rate % (eg. (\$9127.5 x 20%) x 1.5%) = \$109.53/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 \$6.50 value per pound sold.

Target crop yields are based on historical yield from Manitoba crop average of 2,100 lbs/ac.

Plant Costs:

Plant cost based on Prairie Fruit Growers Association member plant discount price.

Miscellaneous Costs:

Includes: plant costs, advertising, utilities, and rental & custom charges.

Profitability, Breakeven & Risk Analysis Formulas:

Gross Revenue = Price per unit x Yield per acre (eg. picking years: \$6.50/lbs x 2100lbs/ac = \$13650.00/ac)

Net Profit = Gross Revenue - Total Cost (eg. picking years: \$13650.00 gross revenue - \$6096.82 total cost = \$7553.18 per acre)

Operating Expense Ratio = (Operating Cost / Gross Revenue) x 100 (eg. picking years: \$2305.38 operating expense / \$13650.00 total cost = 16.9%)

Breakeven Price = Cost / Target Yield (eg. picking years: \$6096.82 / 2100 lbs = \$2.90 per lbs)

Breakeven Yield = Cost / Price per Unit (eg. picking years: \$6096.82 / \$6.50 lbs = 938.0 lbs)

Breakeven Yield Risk Ratio = (Yield per Acre / Breakeven Yield) x 100 (eg. picking years: 2100 lbs/ac / 938.0 bu BE = 224%)

June, 2025

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