



# Guidelines for Estimating Leafcutting Bee Costs 2012

in Manitoba



# Guidelines For Estimating Leafcutting Bee Costs

**Date: June 2012**

This guide is designed to identify costs and present a format for calculating the costs of producing alfalfa leafcutting bees in Manitoba. These figures provide an economic evaluation of leafcutting bees and the estimated price required to cover all costs of production including operating costs, labour, investment, and depreciation. Management costs have not been accounted for in this budget. Revenue components such as crop sharing associated with custom pollination and surplus bee sales are referenced in the Operation Profile of this guide but are not included in the calculation of production costs.

This guide was developed from the information provided by leafcutting bee producers from different regions of Manitoba who have had years of experience in managing leafcutting bee operations.

This budget may be adjusted by putting in your own figures. As a producer, you are encouraged to calculate cost of production for your own leafcutting bee enterprise. On each farm, costs and yields differ due to agronomic practises and climatic conditions. A spreadsheet can be downloaded from the Manitoba Agriculture, Food and Rural Initiatives website.

**Disclaimer:** This information is only a guide and is not intended as an in depth study of the cost of production of the leafcutting bee industry. Interpretation and utilization of this information is the responsibility of the user. If you require assistance with developing your individual budget, please contact your local Manitoba Agriculture, Food, and Rural Initiatives office.

## Leafcutting Bees Production Costs - June 2012

	Cost per acre	Cost per gallon	Your Cost
<b>A. Operating Costs</b>			
1.01 Fuel	\$7.50	\$3.00	_____
1.02 Utilities	\$15.00	\$6.00	_____
1.03 Repairs	\$11.27	\$4.51	_____
1.04 Insurance	\$8.46	\$3.39	_____
1.05 Decontamination	\$0.50	\$0.20	_____
1.06 Cocoon Testing	\$0.83	\$0.33	_____
1.07 Interest on operating	\$1.09	\$0.44	_____
<b>Total Operating</b>	<b>\$44.65</b>	<b>\$17.86</b>	_____
<b>B. Fixed Costs</b>			
<b>2.0 Depreciation Costs</b>			
2.01 Buildings	\$7.50	\$3.00	_____
2.02 Machinery & Equipment	\$30.25	\$12.10	_____
<b>3.0 Investment Costs</b>			
3.01 Bees	\$4.69	\$1.88	_____
3.02 Buildings	\$2.29	\$0.92	_____
3.03 Machinery & Equipment	\$4.46	\$1.79	_____
<b>Total Fixed</b>	<b>\$49.19</b>	<b>\$19.68</b>	_____
<b>Total Operating &amp; Fixed</b>	<b>\$93.85</b>	<b>\$37.54</b>	_____
<b>C. Labour Costs</b>	<b>\$30.00</b>	<b>\$12.00</b>	_____
<b>Total Costs</b>	<b>\$123.85</b>	<b>\$49.54</b>	_____
<b>Number of Acres</b>		<b>300</b>	_____
<b>Total Farm Cost</b>		<b>\$37,153.61</b>	_____
<b>Stocking rate (gallons/acre)</b>		<b>2.5</b>	_____
<b>Gallons of Bees</b>		<b>750</b>	_____
<b>Bee Return Rate</b>		<b>1.5</b>	_____
<b>Gallons of Bees begin</b>		<b>750</b>	_____
<b>Gallons of Bees end</b>		<b>1125</b>	_____
<b>Surplus Bees for Sale (gallons)</b>		<b>375</b>	_____
<b>Price / Gallon</b>		<b>\$75.00</b>	_____
<b>Surplus Bee Revenue</b>		<b>\$28,125.00</b>	_____
<b>Net Pollination Cost</b>		<b>\$9,028.61</b>	_____

**Disclaimer:** 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.

## Assumptions

### Operation Profile

Number of Acres	<b>300</b> acres
Market Value of Bees	<b>\$0.0075</b> per bee
Market Value of Bees	<b>\$75.00</b> per gallon
Average Number of Bees per Acre <sup>1</sup>	<b>2.5</b> gallons
Increase in Bee Stock (bee return)	<b>150</b> %

<sup>1</sup> One gallon contains 10,000 bees.

### Operating Costs

Fuel	<b>\$2,250.00</b>
Utilities	
Hydro	<b>\$3,500.00</b>
Telephone	<b>\$1,000.00</b>
Repairs	
Truck Repairs	<b>\$1,000.00</b>
Building Repairs	<b>\$400.00</b>
Insurance	
Building & Equipment Insurance rate (/ \$100)	<b>\$0.75</b>
Bee Insurance Rate (/ \$100)	<b>\$0.50</b>
Vehicle Insurance	<b>\$1,000.00</b>
Decontamination	<b>\$150.00</b>
Cocoon Testing	<b>\$250.00</b>
Operating Interest Rate	<b>5.00%</b>
Investment Rate	<b>2.50%</b>

### Buildings, Machinery, and Equipment

	Original Value	Salvage Value	Years of Useful Life
Buildings	<b>\$50,000</b>	<b>\$5,000</b>	<b>20</b>
Equipment			
3/4 Ton Truck	<b>\$22,000</b>	<b>\$4,400</b>	<b>10</b>
Flatdeck Trailer	<b>\$7,000</b>	<b>\$700</b>	<b>20</b>
Shelters & Nests	<b>\$40,000</b>	<b>\$0</b>	<b>10</b>
Incubation & Fumigation	<b>\$30,000</b>	<b>\$3,000</b>	<b>10</b>

### Labour Costs

Hours per acre	<b>2.00</b>
Rate per hour	<b>\$15.00</b>

# Leafcutting Bees Production Cost Worksheet

Your Costs

**A. Operating Costs**

1.01	Fuel		
		\$2,250.00 annual cost	
		÷ 300 acres	
		<b>= \$7.50 cost/acre</b>	
1.02	Utilities		
		\$3,500.00 annual hydro	
		+ \$1,000.00 annual telephone	
		<b>= \$4,500.00 total utilities</b>	
		÷ 300 acres	
		<b>= \$15.00 cost/acre</b>	
1.03	Repairs		
		\$99,000.00 equipment cost	
		X 2.00% % of estimated cost	
		<b>= \$1,980.00 equipment repair costs</b>	
		+ \$1,000.00 truck repairs	
		+ \$400.00 building repairs	
		÷ 300 acres	
		<b>= \$11.27 cost/acre</b>	
1.04	Insurance		
		\$149,000.00 building & equipment value	
		X \$0.75 insurance rate/\$100	
		÷ 300 acres	
		<b>= \$3.73 cost/acre</b>	
		\$84,375.00 bee value	
		X \$0.50 insurance rate/\$100	
		÷ 300 acres	
		<b>= \$1.41 cost/acre</b>	
		\$1,000.00 vehicle insurance	
		÷ 300 acres	
		<b>= \$3.33 cost/acre</b>	
	<b>Total</b>	<b>= \$8.46 cost/acre</b>	
1.05	Decontamination		
		\$150.00 total cost	
		÷ 300 acres	
		<b>= \$0.50 cost/acre</b>	

1.06	Cocoon Testing		\$250.00 total cost	
		÷	300 acres	
		=	<b>\$0.83 cost/acre</b>	

1.07	Operating Interest		\$43.56 annual operating costs	
		÷	2	
		x	5.00% % operational interest	
		=	<b>\$1.09 cost/acre</b>	

**B. Fixed Costs**  
**2.0 Depreciation**

2.01	Buildings		\$50,000.00 original value	
		-	\$5,000.00 salvage value	
		÷	20 years of useful life	
		÷	300 acres	
		=	<b>\$7.50 cost/acre</b>	

2.02	Machinery & Equipment 3/4 Ton Truck		\$22,000.00 original value	
		-	\$4,400.00 salvage value	
		÷	10 years useful life	
		÷	300 acres	
		=	<b>\$5.87 cost/acre</b>	

	Flatdeck Trailer		\$7,000.00 original value	
		-	\$700.00 salvage value	
		÷	20 years useful life	
		÷	300 acres	
		=	<b>\$1.05 cost/acre</b>	

	Shelters & Nests		\$40,000.00 original value	
		-	0 salvage value	
		÷	10 years useful life	
		÷	300 acres	
		=	<b>\$13.33 cost/acre</b>	

	Incubation & Fumigation Equipment		\$30,000.00 original value	
		-	\$3,000.00 salvage value	
		÷	10 years useful life	
		÷	300 acres	
		=	<b>\$10.00 cost/acre</b>	

Total = **\$30.25 cost/acre**

**3.0 Investment**

3.01 Bees

25,000.00 bees per acre  
x \$0.0075 market value of bees  
x 2.50% % investment rate  
= **\$4.69 cost/acre**

3.02 Buildings

\$50,000.00 original value  
+ \$5,000.00 salvage value  
÷ 2  
x 2.50% % investment rate  
÷ 300 acres  
= **\$2.29 cost/acre**

3.03 Machinery & Equipment  
3/4 Ton Truck

\$22,000.00 original value  
+ \$4,400.00 salvage value  
÷ 2  
x 2.50% % investment rate  
÷ 300 acres  
= **\$1.10 cost/acre**

Flatdeck Trailer

\$7,000.00 original value  
+ \$700.00 salvage value  
÷ 2  
x 2.50% % investment rate  
÷ 300 acres  
= **\$0.32 cost/acre**

Shelters & Nests

\$40,000.00 original value  
+ 0 salvage value  
÷ 2  
x 2.50% % investment rate  
÷ 300 acres  
= **\$1.67 cost/acre**

Incubation & Fumigation  
Equipment

\$30,000.00 original value  
+ \$3,000.00 salvage value  
÷ 2

	x	2.50% % investment rate	
	÷	300 acres	
	=	\$1.38 cost/acre	

Total = **\$4.46 cost/acre**

**C. Labour Costs**

		2.00 hours/acre	
	x	\$15.00 per hour	
	=	<b>\$30.00 cost/acre</b>	

**For further information, contact your MAFRI office.**

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**For more information**

- Contact your local Manitoba Agriculture, Food and Rural Initiatives (MAFRI) Growing Opportunities (GO) Office.
- Visit us at [manitoba.ca/agriculture](http://manitoba.ca/agriculture).

