



Guidelines for Estimating Lamb Production Costs 2017

in Manitoba



Guidelines for Estimating
Lamb Production Costs
Based on a 500-Ewe Flock

May, 2017

This guide is designed to provide you with planning information and a format for calculating costs of production of a ewe lamb enterprise in Manitoba. General Manitoba Agriculture recommendations are assumed in using feed and veterinary inputs. These figures provide an economic evaluation of the livestock and estimated prices 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. Good management is assumed in that a balanced ration is being fed, and livestock are on a flock health program.

This tool is available as an Excel worksheet at: www.manitoba.ca/agriculture
or at your local [Manitoba Agriculture GO Office](#).
[The Farm Machinery Custom and Rental Rate Guide](#) is also available to help determine machinery costs.

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 your local Manitoba Agriculture GO Office.

Lamb Production Cost Summary - May, 2017
Based on 500 Ewes - Marketing 894 Lambs

A. Operating Costs	<u>\$/Ewe</u>	<u>\$/Lamb Marketed</u>	<u>\$/lb</u>	<u>Total Cost</u>	<u>Your Cost</u>
1. Feed Costs					
1.01 Ewe Ration	\$41.10	\$22.99	\$0.22	\$20,550	_____
1.02 Ram Ration	\$1.24	\$0.69	\$0.01	\$620	_____
1.03 Lamb Ration	\$60.38	\$33.77	\$0.32	\$30,190	_____
1.04 Salt-Mineral Mix	<u>\$18.42</u>	<u>\$10.30</u>	<u>\$0.10</u>	<u>\$9,210</u>	_____
Total Feed Cost	\$121.14	\$67.75	\$0.65	\$60,570	_____
2. Other Operating Costs					
2.01 Straw	\$15.41	\$8.62	\$0.08	\$7,705	_____
2.02 Vet Medicine and Supplies	\$14.38	\$8.04	\$0.08	\$7,190	_____
2.03 Fuel, Maintenance & Repairs	\$8.45	\$4.73	\$0.04	\$4,225	_____
2.04 Hydro, Water and Telephone	\$2.39	\$1.34	\$0.01	\$1,195	_____
2.05 Death Loss	\$6.99	\$3.91	\$0.04	\$3,497	_____
2.06 Insurance	\$2.93	\$1.64	\$0.02	\$1,465	_____
2.07 Flock Replacement	\$19.98	\$11.17	\$0.10	\$9,990	_____
2.08 Marketing & Transportation	\$22.83	\$12.77	\$0.12	\$11,413	_____
2.09 Shearing Costs	\$5.26	\$2.94	\$0.03	\$2,630	_____
2.10 Predator Control	\$1.63	\$0.91	\$0.01	\$813	_____
2.11 Professional Fees	\$0.70	\$0.39	\$0.00	\$350	_____
2.12 Manure Removal	\$4.68	\$2.62	\$0.02	\$2,340	_____
2.13 Miscellaneous	<u>\$1.00</u>	<u>\$0.56</u>	<u>\$0.01</u>	<u>\$500</u>	_____
Subtotal Operating Costs	\$227.76	\$127.39	\$1.21	\$113,883	_____
2.14 Operating Interest	<u>\$5.12</u>	<u>\$2.86</u>	<u>\$0.03</u>	<u>\$2,560</u>	_____
Total Operating Costs	\$232.88	\$130.25	\$1.24	\$116,443	_____
B. Fixed Costs					
3. Depreciation					
3.01 Buildings	\$9.91	\$5.54	\$0.05	\$4,955	_____
3.02 Equipment & Improvements	\$9.80	\$5.48	\$0.05	\$4,900	_____
4. Investment					
4.01 Buildings	\$4.02	\$2.25	\$0.02	\$2,010	_____
4.02 Equipment & Improvements	\$1.55	\$0.87	\$0.01	\$775	_____
4.03 Breeding Flock	\$5.24	\$2.93	\$0.03	\$2,621	_____
5. Pasture Costs	<u>\$3.86</u>	<u>\$2.16</u>	<u>\$0.02</u>	<u>\$1,932</u>	_____
Total Fixed Costs	\$34.39	\$19.23	\$0.18	\$17,193	_____
Total Operating and Fixed Costs	\$267.27	\$149.48	\$1.42	\$133,636	_____
C. Labour	\$45.00	\$25.17	\$0.24	\$22,500	_____
Total Cost of Production	\$312.27	\$174.65	\$1.66	\$156,136	_____

Profitability and Breakeven Analysis

Estimated Farmgate	<u>\$/Ewe</u>	<u>\$/Lamb</u>	<u>Total</u>
Price (\$ per cwt)		\$200	_____
Market Weight (shrunk lbs.)		107	\$190,780
Wool Value	<u>\$3.85</u>	<u>\$2.15</u>	<u>\$1,924</u>
Gross Revenue	\$385.41	\$215.55	\$192,704
Marginal Returns			
Over Operating Costs	\$152.52	\$85.30	\$76,261
Over Operating & Labour Costs	\$107.52	\$60.13	\$53,761
Over Operating & Fixed Costs	\$118.14	\$66.07	\$59,068
Over Total Costs (Net Profit)	\$73.14	\$40.90	\$36,568
Operating Expense Ratio	60.4%	60.4%	
Breakeven Selling Price		<u>\$/cwt</u>	
Operating Costs		\$120.05	_____
Operating & Labour Costs		\$143.64	_____
Operating & Fixed Costs		\$138.08	_____
Operating, Fixed & Labour Costs		\$161.67	_____

Note: This budget is only a guide and is not intended to be an in-depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user. No liability for decisions based on this publication is assumed.

Risk & Sensitivity Analysis

	<u>Per Ewe</u>	<u>Per Lamb</u>
A. Operating Costs	\$232.88	\$130.25
B. Fixed Costs	\$34.39	\$19.23
C. Labour	\$45.00	\$25.17
Total Costs	\$312.27	\$174.65

Estimated Farmgate

Lamb Price (\$ per cwt)	\$200
Lamb Crop %	190
Lamb Market Weight (shrunk lbs)	107

	Up	Down
Percent Lamb Price Variation	5%	15%
Percent Lamb Crop Variation	20%	20%
Percent Lamb Weight Variation	5%	0%

Higher Price (\$ per cwt)	\$210.00		
Lower Price (\$ per cwt)	\$170.00		
Higher Lamb Crop %	210	=	988 Lambs Marketed
Lower Lamb Crop %	170	=	800 Lambs Marketed
Higher Lamb Weight	112.0		
Lower Lamb Weight	106.7		

Higher Margin Scenario - Price Up 5%, Lamb Crop Up 20% and Lamb Weight Up 5%

	<u>Per Ewe</u>	<u>Per Lamb</u>
Gross Revenue	\$468.60	\$237.15
Marginal Returns		
Over Operating Costs	\$235.72	\$119.29
Over Operating & Labour Costs	\$190.72	\$96.52
Over Operating & Fixed Costs	\$201.33	\$101.89
Over Total Costs (Net Profit)	\$156.33	\$79.12
Operating Expense Ratio	49.7%	

Lower Margin Scenario - Price Down 15%, Lamb Crop Down 20% and Lamb Weight Down 0%

	<u>Per Ewe</u>	<u>Per Lamb</u>
Gross Revenue	\$294.07	\$183.80
Marginal Returns		
Over Operating Costs	\$61.19	\$38.24
Over Operating & Labour Costs	\$16.19	\$10.12
Over Operating & Fixed Costs	\$26.80	\$16.75
Over Total Costs (Net Profit)	(\$18.20)	(\$11.37)
Operating Expense Ratio	79.2%	

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.

Lamb Production Costs - Input

1. This budget outlines the cost of production for a sheep enterprise.
2. Buildings and equipment are valued at new cost.
3. All feed is valued at fair market value.
4. Replacements are purchased at fair market value.

Flock Profile	Total
Number of Ewes (Avg 170 lbs)	500
Number of Rams (Avg 200 lbs)	13
Lamb Crop (born alive) %	190
Ewe and Ram Mortality Rate (%)	3
Ewe Cull Rate (%)	15
Lamb Mortality Rate - Pre-Weaning %	4
Lamb Mortality Rate - Post-Weaning %	2
Lambs Marketed	894
Lambs per Ewe to Market	1.79
Average Lamb Market Weight (lbs)	110
Shrink	3%
Shrunk Weight (lbs)	106.70
Average Lamb Market Price (\$ per cwt)	\$200
Average Wool Production per animal (lbs)	5
Average Value of Wool (\$/lb)	\$0.75

Feed Requirements and Costs

<u>Ewe Feeding Period</u>	<u>Feed type</u>	<u>Amount lbs/day</u>	<u>Cost \$/tonne</u>
October 1-November 1 (off pasture and flushed for breeding)			
Days	30	Grass hay	2.8 \$85.00
	30	Barley	0.6 \$3.25
November 1-March 1 (early to mid gestation)			
Days	115	Grass hay	4.1 \$85.00
	115	Barley	0 \$3.25
March 1-April 1 (late gestation)			
Days	30	Grass/alfalfa hay	3.6 \$100.00
	30	Barley	0.9 \$3.25
	30	Canola Meal	0.2 \$325.00
April 1-June 1 (lactation)			
Days	60	Alfalfa	4.2 \$120.00
	60	Barley	1.3 \$3.25
<u>Ram Feeding Period</u>	<u>Feed type</u>	<u>Amount lbs/day</u>	<u>Cost \$/tonne</u>
October 1- June 1			
Days	240	Barley	0.75 \$3.25
	240	Grass hay	5.1 \$85.00

Lamb			Amount	Cost
			lbs/day	\$/tonne
Pre-weaning				
Days	50	Creep	0.5	\$245.00
	50	Hay	0.5	\$120.00
Weaning				
Days	30	Creep/grower	1	\$195.00
	30	Hay	1	\$120.00
Finishing				
Days	100	Finisher	2.5	\$150.00
	100	Hay	1.5	\$120.00

Salt-Mineral- vitamin Mix			Amount	Price
			Fed (lbs)	\$/lb
Ewes (365 days @ 0.06lb/hd/day)			22	\$0.65
Rams (365 days @ 0.06lb/hd/day)			22	\$0.65
Lambs (included in pre-mixed rations)			6	\$0.35

Other Operating Costs

Straw Bedding		
tonnes/ ewe		0.20
tonnes/lamb		0.10
tonnes/ ram		0.25
cost/tonne		\$40.00

Veterinary Medicine & Supplies

Medication		
Lamb		
	clostridial (two shots 4cc then 2cc booster) @ \$.58/	\$0.87
	internal parasiticide (1x)	\$0.53
	injectable vitamins	\$0.20
	RFID tag	\$4.50
	miscellaneous	\$0.50
Ewe		
	clostridial (annually @ \$.29/shot)	\$0.29
	Caseous Lymphadenitis (annually@\$.26/shot)	\$0.26
	internal parasiticide (3x)	\$1.06
	injected vitamins	\$0.40
	miscellaneous	\$0.50
Ram		
	clostridial (annually @ \$.26/shot)	\$0.29
	Caseous Lymphadenitis (annually@\$.26/shot)	\$0.26
	internal parasiticide (2x)	\$1.06
	injected vitamins	\$0.40
	miscellaneous	\$0.50

Professional Services

Total Yearly Hours	2
Charge per Hour	\$141.00
Total Kilometers (round trip)	80
Charge per km	\$0.85
Number of yearly visits	1

Fuel, Maintenance & Repairs

Diesel Fuel Cost	\$0.85 /litre
a) Machinery Fuel Costs - Feeding	
Tractor with Loader PTO hp	120
Tractor Hours Per Day (average)	1.0 hours
b) Machinery Repair (% of investment cost)	1.5 %
c) Building maintenance (% of investment cost)	1.0 %

Utilities

Hydro	15 kWh per ewe @	\$0.0793 / kWh
Water		\$0
Telephone		\$600

Marketing & Transportation

Custom Trucking		per lamb	\$6.25
Marketing Charges			
Commission	\$ 6.00		
Insurance - Manitoba	\$ 0.50		
Feed on arrival/day	\$ -		
		per lamb	\$6.50

Replacement Costs

		<u>\$/cwt</u>	
Ewe replacement rate			15.0%
Ewe replacement cost			\$220.00
Ewe cull value	170 lbs	\$60	\$102.00
Ram replacement rate			25.0%
Ram replacement cost			\$500.00
Ram cull value	200 lbs	\$60	\$120.00

Predator Control

Stock dog	\$750.00 / each
Guard dogs (2 required)	\$250.00 / each
Years	4
Annual maintenance costs (feed, vet, etc.)	\$500.00

Manure Removal

Manure volume produced	0.00171 m ³ /ewe/day
Manure volume produced	0.060 ft ³ /ewe/day
Manure & bedding volume shrinkage	80 %
Cost for manure removal & application	\$10.00 /cubic yard

Insurance

Cost per \$100 Capital Invested in	
a). Livestock	\$0.45
b). Building & Equipment	\$0.40
Add'l Coverage for liability (\$/year)	\$49.00

Shearing Costs

Ewe shearing cost (\$/head)	\$5.00
Ram shearing cost (\$/head)	\$10.00

Miscellaneous

Total yearly office expenses	\$500.00
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Interest

Investment Rate (%)	2.25%
Operating Loan (%)	4.50%

CAPITAL INVESTMENT

Buildings	<u>Value</u>	<u>Useful</u>	<u>Salvage</u>
		<u>Life</u>	<u>Value</u>
Pole Barn (36' x 144') with Lambing/Shearing room (24' x 36')	\$150,000	30	10.0%
Wintering Lots	\$5,700	30	0.0%
Well	\$8,000	30	0.0%
Total Building Cost	\$163,700		
Equipment & Improvements			
Water System (2 waterers & installation)	\$3,000	10	10.0%
Miscellaneous Machinery & Equipment:	\$5,000	10	20.0%
Tractor & Loader -allocated to sheep	\$36,000	10	20.0%
Truck - allocated to sheep	\$15,000	10	10.0%
Total Equipment & Improvements	\$59,000		
Total Buildings & Equipment Investment	\$222,700		
Breeding Flock			
Value of Ewes	\$110,000		
Value of Rams	\$6,500		
Total Breeding Flock Investment	\$116,500		
Land Investment			
Acres required	80		
Value per acre (Marginal pasture land)	\$625		
Total Land Investment	\$50,000	Useful	Salvage
Land Taxes (per acre)	\$2.00	<u>Life</u>	<u>Value</u>
Fence 7 strand electric (miles)	2	20	0.0%
Fence cost (per mile)	\$5,280		
Total Fence Cost	\$10,560		
Total Land & Fence Investment	\$60,560		
Total Capital Investment	\$399,760		
Labour			
Hours per ewe	2.25		
Rate per hour	\$20.00		

Assumptions

1. This budget outlines the cost of production for a sheep enterprise.
2. Buildings and equipment are valued at new cost.
3. All feed is valued at fair market value.
4. Replacements are purchased at fair market value.

Lamb Production Costs Worksheet

Flock Profile

Number of Ewes	500
Number of Rams	13
Lamb Crop (born alive) %	190
Ewe Mortality Rate (%)	3
Lamb Mortality Rate - Pre-Weaning %	4
Lamb Mortality Rate - Post-Weaning %	2
Lambs Marketed	894
Average Lamb Market Weight (lb)	106.7
Average Wool Production per animal (lb)	5
Average Value of Wool (\$/lb)	\$0.75

Feed Requirements and Costs

<u>Ewe Feeding Period</u>	<u>Feed type</u>	<u>Amount lbs/day</u>	<u>Cost \$/tonne</u>
October 1-November 1 (off pasture and flushed for breeding)			
Days	30	Grass hay	2.8
		Barley	0.6
			\$85.00
			\$3.25
November 1-March 1 (early to mid gestation)			
Days	115	Grass hay	4.1
	115	Barley	0.0
			\$85.00
			\$3.25
March 1-April 1 (late gestation)			
Days	30	Grass/alfalfa hay	3.6
	30	Barley	0.9
	30	Canola Meal	0.2
			\$100.00
			\$3.25
			\$325.00
April 1-June 1 (lactation)			
Days	60	Alfalfa	4.2
	60	Barley	1.3
			\$120.00
			\$3.25

<u>Ram Feeding Period</u>	<u>Feed type</u>	<u>Amount lbs/day</u>	<u>Cost \$/tonne</u>
October 1- June 1			
Days	240	Barley	0.75
	240	Grass hay	5.1
			\$3.25
			\$85.00

Lamb

Pre-weaning

Days	50	Creep	0.5	\$245.00
	50	Hay	0.5	\$120.00

Weaning

Days	30	Creep/grower	1	\$195.00
	30	Hay	1	\$120.00

Finishing

Days	100	Finisher	2.5	\$150.00
	100	Hay	1.5	\$120.00

<u>Salt-Mineral Mix</u>	<u>Amount Fed (lbs)</u>	<u>Price \$/lb</u>
Ewes	22	\$0.65

Rams	22	\$0.65
Lambs (included in ration)	6	\$0.35

A. OPERATING COSTS

Your Cost

1. Feed Costs

1.01 Ewe Flushing Ration

Barley

	30	days per year	_____
x	0.6	lbs barley/day	_____
x	\$3.25	/tonne barley	_____
÷	<u>2205</u>	<u>lbs/tonne</u>	_____
=	\$0.03	/ewe	_____

Grass hay

	30	days/year	_____
x	2.8	lbs grass hay/day	_____
x	\$85.00	/tonne grass hay	_____
÷	<u>2205</u>	<u>lbs/tonne</u>	_____
=	\$3.24	/ewe	_____

1.02 Ewe Early to Mid Gestation Ration

Barley

	115	days/year	_____
x	0	lbs barley/day	_____
x	\$3.25	/tonne barley	_____
÷	<u>2205</u>	<u>lbs/tonne</u>	_____
=	\$0.00	/ewe	_____

Grass hay

	115	days/year	_____
x	4.1	lbs grass hay/day	_____
x	\$85.00	/tonne of grass hay	_____
÷	<u>2205</u>	<u>lbs/tonne</u>	_____
=	\$18.18	/ewe	_____

1.03 Ewe Late Gestation Ration

Barley

	30	days/year	_____
x	0.9	lbs barley/day	_____
x	\$3.25	/tonne barley	_____
÷	<u>2205</u>	<u>lbs/tonne</u>	_____
=	\$0.04	/ewe	_____

Grass/alfalfa hay

	30	days/year	_____
x	3.6	lbs grass/alfalfa hay/day	_____
x	\$100.00	/tonne of grass/alfalfa hay	_____
÷	<u>2205</u>	<u>lbs/tonne</u>	_____
=	\$4.90	/ewe	_____

Canola Meal

	30	days/year	_____
x	0.2	lbs canola meal/day	_____
x	\$325.00	/tonne of alfalfa hay	_____
÷	<u>2205</u>	<u>lbs/tonne</u>	_____
=	\$0.88	/ewe	_____

1.04 Ewe Lactation Ration

Barley

	60	days/year	_____
x	1.3	lbs barley/day	_____
x	\$3.25	/tonne barley	_____
÷	<u>2205</u>	<u>lbs/tonne</u>	_____
=	\$0.11	/ewe	_____

Alfalfa		60	days/year	_____
	x	4.2	lbs alfalfa hay/day	_____
	x	\$120.00	/tonne of alfalfa hay	_____
	÷	<u>2205</u>	lbs/tonne	_____
	=	\$13.72	/ewe	_____
Total	=	\$41.10	/ewe	_____

**1.05 Ram Ration
Barley**

		240	days/year	_____
	x	0.75	lbs barley/ram/day	_____
	x	\$3.25	/tonne barley	_____
	÷	<u>2205</u>	lbs/tonne	_____
	=	\$0.27	/ram	_____
	x	13	rams	_____
	÷	<u>500</u>	ewes	_____
	=	\$0.01	/ewe	_____

Grass hay

		240	days/year	_____
	x	5.1	lbs alfalfa brome/ram/day	_____
	x	\$85.00	/tonne alfalfa brome	_____
	÷	<u>2205</u>	lbs/tonne	_____
	=	\$47.19	/ram	_____
	x	13	rams	_____
	÷	<u>500</u>	ewes	_____
	=	\$1.23	/ewe	_____

Total	=	\$1.24	/ewe	_____
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1.06 Lamb Ration

Pre Weaning Ration		50	days/year	_____
		0.5	lbs creep feed/lamb/day	_____
	x	912	lambs weaned	_____
	x	\$245.00	/ tonne commercial feed cost	_____
	÷	<u>2205</u>	lbs/tonne	_____
	÷	<u>500</u>	ewes	_____
	=	\$5.07	/ewe	_____

Pre Weaning Forage		50	days/year	_____
		0.5	lbs hay/day	_____
	x	912	lambs weaned	_____
	x	\$120.00	/tonne of hay	_____
	÷	<u>2205</u>	lbs/tonne	_____
	÷	<u>500</u>	ewes	_____
	=	\$2.48	/ewe	_____

Weaning Ration		30	days/year	_____
		1	lbs creep feed/lamb/day	_____
	x	912	lambs weaned	_____
	x	\$195.00	/ tonne commercial feed cost	_____
	÷	<u>2205</u>	lbs/tonne	_____
	÷	<u>500</u>	ewes	_____
	=	\$4.84	/ewe	_____

Weaning Forage		30	days/year	_____
		1	lbs hay/day	_____

	x	912	lambs weaned	_____
	x	\$120.00	/tonne of hay	_____
	÷	<u>2205</u>	lbs/tonne	_____
	÷	<u>500</u>	ewes	_____
	=	\$2.98	/ewe	_____
Finishing Ration		100	days/year	_____
		2.5	lbs creep feed/lamb/day	_____
	x	894	lambs weaned	_____
	x	\$150.00	/ tonne commercial feed cost	_____
	÷	<u>2205</u>	lbs/tonne	_____
	÷	<u>500</u>	ewes	_____
	=	\$30.41	/ewe	_____
Finishing Forage		100	days/year	_____
		1.5	lbs alfalfa hay/day	_____
	x	894	lambs weaned	_____
	x	\$120.00	/tonne of alfalfa hay	_____
	÷	<u>2205</u>	lbs/tonne	_____
	÷	<u>500</u>	ewes	_____
	=	\$14.60	/ewe	_____
Total	=	\$60.38	/ewe	_____

1.07 Salt-Mineral Mix

Ewes		22	lbs salt-mineral/ewe/year	_____
	x	<u>\$0.65</u>	/lb	_____
	=	\$14.30	/ewe	_____
Lambs (incl. in ration)	x	6	lbs salt-mineral/lamb/year	_____
	x	\$0.35	/lb	_____
	x	894	lambs marketed	_____
	÷	<u>500</u>	ewes	_____
	=	\$3.75	/ewe	_____
Rams		22	lbs salt-mineral/ram/year	_____
	x	\$0.65	/lb	_____
	x	13	rams	_____
	÷	<u>500</u>	ewes	_____
	=	\$0.37	/ewe	_____
Total	=	\$18.42	/ewe	_____

2. Other Operating Costs:

2.01 Straw

Ewes		0.20	tonnes/ewe/year	_____
	x	<u>\$40.00</u>	/tonne	_____
	=	\$8.00	/ewe	_____
Lambs		0.10	tonnes/lamb/year	_____
	x	\$40.00	/tonne	_____
	x	894	lambs	_____
	÷	<u>500</u>	ewes	_____
	=	\$7.15	/ewe	_____
Rams		0.25	tonnes/ram/year	_____
	x	\$40.00	/tonne	_____

	x	13	rams	_____
	÷	<u>500</u>	<u>ewes</u>	_____
	=	\$0.26	/ewe	_____
Total	=	\$15.41	/ewe	_____

2.02 Veterinary Medicine & Supplies

Lamb Medication

		\$0.87	/lamb clostridial vaccine	_____
	+	\$0.53	/lamb internal parasiticide	_____
	+	\$0.20	/lamb injected vitamins	_____
	+	\$4.50	/RFID tag	_____
	±	<u>\$0.50</u>	<u>/lamb miscellaneous medicine</u>	_____
	=	\$6.60	/lamb	_____
	x	894	lambs	_____
	÷	<u>500</u>	<u>ewes</u>	_____
	=	\$11.80	/ewe	_____

Ewe Medication

		\$0.29	clostridial. vaccine	_____
	+	\$0.26	caseous lymphadenitis	_____
	+	\$1.06	internal parasiticide	_____
	+	\$0.40	injected vitamins	_____
	±	<u>\$0.50</u>	<u>miscellaneous medicine</u>	_____
	=	\$2.51	/ewe	_____

Ram Medication

		\$0.29	clostridial. vaccine	_____
	+	\$0.26	caseous lymphadenitis	_____
	+	\$1.06	internal parasiticide	_____
	+	\$0.40	injected vitamins	_____
	±	<u>\$0.50</u>	<u>miscellaneous medicine</u>	_____
	=	\$2.51	/ram	_____
	x	<u>13</u>	<u>rams</u>	_____
	=	\$32.63	total medication	_____
	÷	<u>500</u>	<u>ewes</u>	_____
	=	\$0.07	/ewe	_____

Total = \$14.38 /ewe

2.03 Fuel, Maintenance & Repairs

Machinery fuel cost - Tractor with Loader

		120	PTO hp	_____
	÷	2.5	avg HP required	_____
	x	0.1665576	litres fuel/hour/hp	_____
	x	1.0	hours per day	_____
	x	\$0.85	diesel / litre	_____
	x	<u>235</u>	<u>days on feed</u>	_____
		\$1,596.95	annual fuel cost	_____
	÷	<u>500.00</u>	<u>ewes</u>	_____
	=	\$3.19	/ewe	_____

Machinery repair & maintenance

		\$59,000	machinery capital cost	_____
	x	<u>1.50</u>	<u>% repair rate</u>	_____
	=	\$885.00	oil, repairs & maintenance	_____
	÷	<u>500.00</u>	<u>ewes</u>	_____
	=	\$1.77	/ewe	_____

Building repair & maintenance

		\$174,260	building capital cost	_____
	x	<u>1.00</u>	% repair rate	_____
	=	\$1,742.60	repairs & maintenance	_____
	÷	<u>500.00</u>	ewes	_____
	=	\$3.49	/ewe	_____
Total	=	\$8.45	/ewe	_____

2.04 Hydro, Water and Telephone

		\$594.75	hydro	_____
	+	\$0	water	_____
	+	\$600	telephone	_____
	=	\$1,195		_____
	÷	<u>500</u>	ewes	_____
	=	\$2.39	/ewe	_____

2.05 Death Loss

Ewe		\$220.00	/ewe	_____
	x	<u>3</u>	death loss %	_____
	=	\$6.60	/ewe	_____
Ram		\$500.00	/ram	_____
	x	3	death loss %	_____
	÷	<u>38</u>	ewes/ram	_____
	=	\$0.39	/ewe	_____
Total	=	\$6.99	/ewe	_____

2.06 Insurance

Building and Equipment		\$222,700	bldg. & equipment investment	_____
	x	\$0.40	/\$100 capital	_____
	÷	100	100	_____
	÷	<u>500</u>	ewes	_____
	=	\$1.78	/ewe	_____
Breeding Flock		\$116,500	herd investment	_____
	x	\$0.45	/\$100 capital	_____
	÷	100	100	_____
	÷	<u>500</u>	ewes	_____
	=	\$1.05	/ewe	_____
Additional Coverage		\$49.00	additional coverage for liability	_____
	÷	<u>500</u>	ewes	_____
	=	\$0.10	/ewe	_____
Total	=	\$2.93	/ewe	_____

2.07 Flock Replacement

Ewe Replacement		500	ewes	_____
	x	<u>0.15</u>	replacement rate	_____
	=	75	number replaced/year	_____
		\$220	/replacement ewe	_____
	-	\$102	/cull ewe	_____
	x	75	number replaced/year	_____
	÷	<u>500</u>	ewes	_____
	=	\$17.70	/ewe	_____

Ram Replacement

		13	rams	_____
x		<u>0.25</u>	<u>replacement rate</u>	_____
=		3	rams replaced/year	_____
		\$500	replacement ram value	_____
-		\$120	cull ram value	_____
x		3	rams replaced/year	_____
÷		<u>500</u>	<u>ewes</u>	_____
=		\$2.28	/ewe	_____
Total	=	\$19.98	/ewe	_____

2.08 Marketing & Transportation

Trucking		\$6.25	trucking per lamb	_____
x		<u>1.79</u>	<u>lambs marketed/ewe</u>	_____
=		\$11.19	/ewe	_____
Commission, fees, etc.		\$6.50	cost per lamb	_____
x		<u>1.79</u>	<u>lambs marketed/ewe</u>	_____
=		11.64	/ewe	_____
Total	=	\$22.83	/ewe	_____

2.09 Shearing Costs

		\$10.00	\$/ram	_____
÷		38.46	ewes/ram	_____
±		<u>\$5.00</u>	<u>\$/ewe</u>	_____
=		\$5.26	/ewe	_____

2.10 Predator Control

		\$750	stock dog	_____
+		\$500	guard dog	_____
÷		4	years	_____
+		\$500	annual maintenance	_____
÷		<u>500</u>	<u>ewes</u>	_____
=		\$1.63	/ewe	_____

2.11 Professional Fees

Herd Veterinarian		\$2	Total Yearly hours	_____
x		<u>\$141</u>	<u>charge per hour</u>	_____
=		\$282	Vet Fees	_____
÷		<u>500</u>	<u>ewes</u>	_____
=		\$0.56	/ewe	_____

Mileage

		80	Total Kilometers (round trip)	_____
x		\$0.85	Charge per km	_____
x		<u>1</u>	<u>Number of yearly visits</u>	_____
=		\$68	Mileage charges	_____
÷		<u>500</u>	<u>ewes</u>	_____
=		\$0.14	/ewe	_____

Total = \$0.70 /ewe

2.12 Manure Removal

0.00171 manure m³/ewe/day (0.06 ft³/ewe/day)

+	0.00590	bedding m ³ /ewe/day	(0.21 ft ³ /ewe/day)
x	<u>235</u>	feeding days	
=	1.79	m ³ manure volume	
x	80	% volume shrink	
x	1.30795	yd ³ per m ³	
<u>x</u>	<u>\$10.00</u>	<u>yd³ manure removal cost</u>	
=	\$4.68	/ewe	

2.13 Miscellaneous

	\$500.00	total office expenses	_____
÷	<u>500</u>	<u>ewes</u>	_____
=	\$1.00	/ewe	_____

2.14 Operating Interest

	\$227.76	subtotal operating costs	_____
÷	2	average	_____
<u>x</u>	<u>4.5%</u>	<u>operating interest rate</u>	_____
=	\$5.12	/ewe	_____

B. FIXED COSTS

CAPITAL INVESTMENT

Buildings

Pole Barn (36' x 144') with Lambing/Shearing room (24' x 36')	\$150,000	_____
Wintering Lots	\$5,700	_____
Well	\$8,000	_____
Total Building Cost	\$163,700	_____

Equipment & Improvements

Water System (3 waterers & installation)	\$3,000	_____
Miscellaneous Machinery & Equipment:	\$5,000	_____
Tractor & Loader -allocated to sheep	\$36,000	_____
Truck - allocated to sheep	\$15,000	_____

Total Equipment & Improvements	\$59,000	_____
Total Buildings & Equipment Investment	\$222,700	_____

Breeding Flock

Value of Ewes	\$110,000	_____
Value of Rams	\$6,500	_____

Total Breeding Flock Investment	\$116,500	_____
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Land Investment

Acres required	80	_____
Value per acre	625	_____
Total Land Investment	\$50,000	_____
Land Taxes (per acre)	\$2.00	_____
Fence 7 strand electric (miles)	2	_____
Fence cost (per mile)	\$5,280	_____
Total Fence Cost	\$10,560	_____
Total Land & Fence Investment	\$60,560	_____

Total Capital Investment	\$399,760	_____
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3. Depreciation:

$$\frac{\text{Original Value} - \text{Salvage Value}}{\text{Useful life}}$$

3.01 Buildings:

	\$163,700	original value	_____
-	\$15,000	salvage value	_____
÷	30	years useful life	_____
÷	<u>500</u>	<u>ewes</u>	_____
=	\$9.91	/ewe	_____

3.02 Equipment & Improvements

	\$59,000	original value	_____
-	\$10,000	salvage value	_____
÷	10	years useful life	_____
÷	<u>500</u>	<u>ewes</u>	_____
=	\$9.80	/ewe	_____

4. Interest on Investment

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

4.01 Buildings:

	\$163,700	original value	_____
+	\$15,000	salvage value	_____
÷	2	average	_____
x	2.3%	investment rate	_____
÷	<u>500</u>	<u>ewes</u>	_____
=	\$4.02	/ewe	_____

4.02 Equipment & Improvements

	\$59,000	original value	_____
+	\$10,000	salvage value	_____
÷	2	average	_____
x	2.3%	investment rate	_____
÷	<u>500</u>	<u>ewes</u>	_____
=	\$1.55	/ewe	_____

4.03 Breeding Stock

	\$116,500	herd investment	_____
x	2.3%	investment rate	_____
÷	<u>500</u>	<u>ewes</u>	_____
=	\$5.24	/ewe	_____

5. Pasture Costs

Land Investment	\$50,000	land value	_____
x	2.3%	investment rate	_____
÷	<u>500</u>	<u>ewes</u>	_____
=	\$2.25	/ewe	_____

Taxes	\$160	total taxes	_____
÷	<u>500</u>	<u>ewes</u>	_____
=	\$0.32	/ewe	_____

Fence depreciation	\$10,560	fence value	_____
-	0	salvage value	_____
÷	20	useful life	_____
÷	<u>500</u>	<u>ewes</u>	_____
=	\$1.06	/ewe	_____

Fence investment	\$10,560	fence value	_____
+	0	salvage value	_____
÷	2	average	_____

	x	2.3%	investment rate	_____
	÷	<u>500</u>	<u>ewes</u>	_____
	=	\$0.24	/ewe	_____
Total	=	\$3.86	/ewe	_____

C. Labour

		2.25	hours/ewe	_____
	<u>x</u>	<u>\$20.00</u>	<u>/hour</u>	_____
	=	\$45.00	/ewe	_____

Wool Value

		513	total breeding animals	_____
	x	5	average lbs wool production	_____
	x	\$0.75	\$/lb	_____
	÷	<u>500</u>	<u>ewes</u>	_____
	=	\$3.85	/ewe	_____

Profitability and Breakeven Analysis:

Gross Revenue per lamb = lamb weight (110lbs) x 3% shrink x \$200/cwt

Operating Expense Ratio = (\$130.25 operating cost / \$215.55 gross revenue) x 100

Breakeven Price \$/cwt = Cost - \$2.15 wool value ÷ shrunk lamb market weight (1.067 cwt)

May, 2017

Created and maintained by [Manitoba Agriculture Farm Management](#)

For more information, contact your local [Manitoba Agriculture GO Office](#) or:

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