

LARGE INTENSIVE FLOCK MODEL

The following is a summary of the costs of establishing and operating a 1000 ewe, semi-confinement flock in Manitoba.

The assumptions are:

1. 320 acres of owned land in South Central Manitoba. The land is productive and is used for grazing adult sheep only from the end of May to the beginning of October.
2. Hay is also made on the property as a separate enterprise, and then sold to the sheep operation. Custom contractors are hired to cut and bale the hay.
3. All other feed is purchased and made into "Total Mixed Rations" which are based on hay, grain, salt and minerals. These are mixed on the premises with a bulk mixer/grinder.
4. Three T.M.R.s are manufactured:
 - T.M.R. # 1 (10% protein) used for dry ewes and adult rams
 - T.M.R. # 2 (16% protein) used for lactating ewes and ewe lambs
 - T.M.R. # 3 (16% protein) used for feeding market lambs
5. Bulk self-feeders are filled using the mixer/grinder.
6. One full-time operator and one half-time operator are required to manage the flock and mix rations.
7. Lambing is on a monthly basis with adult ewes synchronised to breed in groups of 80/month every 8 months. For their first lambing, ewe lambs are exposed to maternal type rams for 60 days, after they have reached 100 lbs.(120-150 days). Any which do not conceive, are shipped.
8. Ewes are maternal type crossbreds with at least 50% Rideau, Romanov, Outaouais or Finn genes. The top 30% of ewes would be bred with maternal type rams for the production of replacements. The remainder are bred to terminal type rams for finished lamb sales.
9. Ewes are managed in pens of 20 - 40 head during lactation and lambs have access to creep. Weaning takes place at 60 - 70 days. Lambs are marketed at 130 - 150 days when they weigh approximately 115 – 130 lbs.
10. Ewe mortality 3.0%
 Ram mortality 6.7%

11. The ewe replacement rate is high (25%) as the flock is being improved. The intended future option is to select from matings of the best young replacement ewes with the newest, highest-performing replacement rams. The objective is to increase weaned lambing percentage and accelerated lambing ability.
12. Lamb prices are relatively high for this flock which produces larger numbers of consistent lambs on a regular, year round basis, ensuring livestock buyers of a predictable product.
13. The performance levels achieved by this flock in terms of lambing frequency, lambing percentage, lamb growth rate and gross income per ewe are dependant on several factors:
 - Experienced management and personnel
 - Suitable facilities
 - Flock health program
 - The use and selection of superior genetics

Facilities

Insulated lambing barn	6,000sq.ft. @ 9.50/sq. ft.	57,000
Uninsulated feeder barn	14,000sq.ft. @ 6.50/sq.ft.	91,000
Feed storage	60,000sq.ft. @ 16c/sq.ft.	9,600
Handling system/extra feeders/ Scale/penning etc.		<u>5,000</u>
TOTAL		162,600

Flock Size

750 ewes exposed to the ram	Lambed 713 X 1.50	= 1070 lambings
250 ewe lambs exposed to the ram	Lambed 225 X 1.00	= 225 lambings
30 mature rams		
Lambs born alive	@ 1.85/lambing for adult ewes	1980
	@ 1.75/lambing for ewe lambs	<u>394</u>
TOTAL	born alive	<u>2374</u>
		(+ 119 born dead)
Less mortalities	@ 12%	- 285
Retained ewe lambs		- <u>250</u>
Lambs for sale		= 1839

Mortalities

0-10 days	11 days – weaning	Weaning – sale
228	43	14

<u>Ewe Feed</u>	(750 head)		
TMR (1)	500 kgs./ewe/year	@ \$45/T.	\$16,875
TMR (2)	405 kgs./ewe/year	@ \$75/T.	\$22,781
<u>Ram Feed</u>	(30 head)		
TMR (1)	1000 kgs./ram/year	@ \$45/T.	\$1,350
<u>Ewe Lamb Feed</u>	(250 head)		
TMR (2)	1095 kgs./ewe lamb/year	@ \$75/T.	\$20,531
<u>Lamb Feed</u>	(1839 head – after mortalities, replacement ewe lambs)		
TMR (3)	150 kgs./lamb	@ \$85/T.	<u>\$23,447</u>
TOTAL			\$84,984
<u>Salt/Minerals</u>	These are included in the cost of TMRs		
<u>Milk Replacer</u>			\$ 300
<u>Straw Bedding</u>	80 T.	@ \$22	\$1,760
<u>Shearing</u>			\$2,500
<u>Vet Expenses</u>			\$5,000
<u>Sheep Supplies</u>			\$1,389
<u>Building/Fence Repairs</u>			\$4,000
<u>Truck/Machinery operation & repairs</u>			\$7,500
<u>Office Expenses</u>			\$ 300
<u>Utilities</u>			\$6,760
<u>Property Taxes</u>			\$1,000

Investment Schedule (\$)

<u>Livestock</u>		Annual Interest Cost
1000 ewes/ewe lambs @ 175/head	= 175,000	14,000
30 rams @ 500/head	= 15,000	1,200
TOTAL	= 190,000	15,200

<u>Buildings & Improvements</u> (see page 2)	Annual Depreciation Cost	Annual Interest Cost
Total Cost 162,600		
Depreciation over 20 years	8,130	6,504

<u>Machinery & Equipment</u>		Useful Life	Annual Depreciation Cost	Annual Interest Cost
Tractor	150,000	15 years	9,000	5,400
Mixer/grinder	40,000	15 years	2,400	1,440
Pickup truck	20,000	7 years	2,571	720
Wagon	1,200	5 years	216	43
Manure Spreader	2,500	10 years	225	90
SUB TOTAL	213,700		14,412	7,693
(note salvage value @ 10% of original cost)				

TOTAL	22,542	29,397
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<u>Land & Residence</u>	Annual Interest Cost
320 acres + house (90% allocated to sheep)	
Total Value 240,000 X 90% = 216,000	
Mortgage over 25 years @ 8%	8,640
TOTAL INTEREST	38,037

Analysis of Contribution Margin

INCOME

<u>Lambs</u>	1839 @ \$115/head (115 lb. @ \$1/lb.)	\$211,485
<u>Cull ewes</u>	220 @ \$60/head	\$ 13,200
<u>Cull rams</u>	8 @ \$100/head	\$ 800
<u>Wool sales</u>	1030 X 5lbs. @ 20c/lb.	\$ 1,030
<u>Value of hay crop</u>	750 bales @ \$30/bale (net of custom haying costs)	<u>\$ 22,500</u>
TOTAL		\$249,015

EXPENSES

<u>Ram purchases</u>	10 @ \$500	\$ 5,000
<u>Feed</u>		\$84,984
<u>Milk Replacer</u>		\$ 300
<u>Straw Bedding</u>		\$ 1,760
<u>Shearing</u>		\$ 2,500
<u>Vet Expenses</u>		\$ 8,618
<u>Sheep Supplies</u>		\$ 1,389
<u>Building/Fence Repairs</u>		\$ 4,000
<u>Truck/Machinery operation & repairs</u>		\$ 7,500
<u>Office Expenses</u>		\$ 300
<u>Utilities</u>		<u>\$ 6,760</u>
TOTAL VARIABLE COSTS		\$123,111

Gross Income less Variable Costs equals Contribution Margin 249,015 - 123,111 = \$125,904
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Net Sheep Enterprise Income

Expenses		Revenue
Operating	123,111	Operating \$249,015
Interest on Term Debt	38,037	
Property Taxes	1,000	
Depreciation	22,542	
TOTAL	184,690	
Net income	64,325	
	(64.33/ewe)	
Net income	64,325	
+ Interest paid	38,037	
Adjusted net income	<u>102,362</u>	
Total sheep related assets	782,300	
Return to Total Capital	<u>102,362</u>	
	782,300 = 13.1%	

This is not adjusted for labour, which is estimated at 3600 hour/year.