

SHEEP DAIRY COSTS OF PRODUCTION

The following is a summary of the costs of establishing and operating a sheep dairy enterprise in Manitoba. The figures contained in this document are based on North American data and on the experience and advice of Peter & Christiane Welkerling, original owners of Shepherd Gourmet Dairy.

The assumptions for this model are:

1. There is a current farming operation including a sheep enterprise.
2. The capital costs include modification of an existing structure for use as a dairy barn with a parlour and purchase of milking equipment.
3. Replacement ewes are purchased including 50 – 75% East Friesian genetics as well as purebred milk recorded rams, which breed the best ewes for replacements. The remaining ewes are bred to terminal sires (e.g. Texel, Ile de France, Suffolk, Charollais, Canadian).
4. Fencing, waterers and other facilities are adequate without more investment.
5. The objective is to milk 100 Friesian cross ewes and ewe lambs for approximately 140 days after lambing from March 15th to April 20th and weaning from May 1st. to May 20th. Post weaning lactation will be from early May until September 30th.
6. After weaning at 30 – 40 days (or a minimum of 35lbs.), the lambs will initially be fed a high quality grain based ration for 30 days, after which they will be finished on pasture with access to whole barley. The best 25 ewe lambs, based on ancestral milk records, will be retained as replacements with the remainder sold as finished meat lambs.
7. Milk will be marketed fresh (and/or frozen) to local processors at \$1.50/litre.
8. The ewe flock will lamb @ 220% with a 15% lamb mortality rate.
9. Lactating ewes graze reasonably productive pasture and are supplemented in the parlour with a 16% protein dairy ration.
10. 100 ewes are bred with 3% mortality and/or open ewes.
11. For budgetary purposes both an average and a selected, high-performance flock are demonstrated. There is the option of selling replacement breeding stock from the high performance flock. Females from ewes with superior documented lactations would sell for about \$700 with rams at about \$1000 each.
12. Dairy sheep can produce greater volumes of milk if their health status is maintained at a high level. Diseases such as Ovine Progressive Pneumonia (Maedi Visna) can seriously affect yields.

CAPITAL INVESTMENT SCHEDULE

<u>Livestock</u>	<u>Cost/head</u>	<u>Total</u>	<u>Annual Depreciation</u>	<u>Annual Interest (@ 8%)</u>
100 East Friesian cross ewes	400	40,000		3200
2 East Friesian rams	1000	2000		240
2 Terminal rams	500	1000		
Dairy Barn Improvements and Equipment (depreciated Over 20 years)		35,000	1750	2800
80 acres pasture @ \$700/acre		56,000		4480
Note; other capital items will be included as annual fixed costs in budget				
TOTALS		110,400	1750	10,720

REVENUE AND EXPENSES PROJECTIONS

Revenue

		<u>Flock Performance</u>	
		<u>Average</u>	<u>High</u>
Finished lambs	156 head (115lbs @ 1.00/lb = 115.00)	17,940	17,940
Cull ewes	20 head @ \$35	700	700
Cull rams	1 head @ \$50	50	50
Wool	600 lbs @ 25c	150	150
Milk: Average	(@ 250 litres/head) X 97 ewes @ 1.50/litre	<u>36,375</u>	<u>58,200</u>
High	(@400 litres/head) X 97 ewes @ 1.50/litre		
TOTAL REVENUE		55,215	77,040
		\$552/ewe	\$770/ewe

Variable Costs

Ewe Ration (including rams)

		<u>Flock Performance</u>	
		<u>Average</u>	<u>High</u>
16% Dairy Ration	(Average 126kgs/ewe @ \$240/T)		
	(High 252kgs/ewe @ \$240/T)	2933	5867
Barley	12.7T @ \$100/T.	1270	1270
1 st . cut hay	43.2T @ \$46/T.	1987	1987
2 nd .cut hay	13.5T @ \$75/T.	<u>1013</u>	<u>1013</u>
	Sub total	7203	10,137

Lamb Ration

Whole Barley	9T. @ \$115/T.	1035	
32% Protein Supplement	3T. @ \$330/T.	900	
1 st Cut Hay	4T. @ \$46/T.	180	
2 nd Cut Hay	4T. @ \$75/T.	<u>300</u>	
	Sub total	2415	2415
TOTAL FEED COSTS		9618	12,552
		(96.18/ewe)	(125.52/ewe)

Pasture Expenses (variable only)	250	
Salt/minerals	550	
Milk Supplement	300	
Straw Bedding	10T. @ \$22	220
Ram Replacement	2 @ \$850	1700
Veterinary Supplies/services	2000	
Sheep supplies	750	
Building/Fencing repairs	500	
Machinery/Equipment operating/repairs	1500	
Utilities	1250	
Shearing	315	
Custom work (manure)	600	
Dairy supplies	600	
For high performance flock: Dairy Herd Improvement expenses		1000
TOTAL OTHER VARIABLE COSTS:	<u>10,535</u>	<u>11,535</u>
TOTAL VARIABLE COSTS	<u>20,153</u>	<u>24,087</u>
	(201.53/ewe)	(240.87/ewe)

Enterprise Contribution Margin:

Revenue less Variable Costs = Contribution Margin
Average: 55,215 – 20,153 = 35,062 (350.62/ewe)
High: 77,040 - 24,087 = 52,953 (529.53/ewe)

Fixed Costs

Loan Interest (Dairy capital purchases)	10,720
15% of other farm loan interest	1200
15% of property taxes	200
15% of farm insurance	135
Depreciation: Dairy Barn/equipment	1750
15% of farm machinery/equipment	350

Total Fixed Costs: 14,355

Net Sheep Enterprise Income

AVERAGE PERFORMANCE:

Expenses		Revenue	
Operating	20,153	Operating	55,215
Fixed	14,355		
TOTAL	34,508		
Net Income	20,707 (207.07/ewe)		
Net Income	20,707	Return to Capital	
+ Interest Paid	<u>+11,920</u>	<u>32,627</u>	
Adjusted Net Income	32,627	110,400	= 29.6%
Sheep related assets	\$110,400		

HIGH PERFORMANCE:

Expenses		Revenue	
Operating	24,087	Operating	77,040
Fixed	14,355		
Additional interest & Depreciation for 4 Milk meters @ \$450 each	324		
TOTAL	38,766		
Net Income	38,274 (382.74/ewe)		
Net Income	38,274	Return to Capital	
+ Interest Paid	<u>+12,064</u>	50,338	
Adjusted Net Income	50,338	112,200	= 44.9%
Sheep related assets	\$112,200		

Labour requirements for dairy operations are between 4 hours/day in early & mid-lactation reduced to 2 hours/day in late lactation (once/day milking). In addition, about 1200 hours/year are required for other operations including winter feeding and lamb management. Therefore, total annual labour requirements are approximately 1710 hours.