



Fiji DAIRYNOTE 1.5 Calf and Heifer Rearing – Economics of Calf Rearing

Good Practice Guide for Fiji Dairy Farmers

Any population needs to replace itself with births and this is no different to the dairy industry where animals become less productive as they get older.

To replace these animals with a new generation requires attention to detail in the reproduction of the animal in the first place, and once the calf is born, attention to detail to ensure that this calf, particularly the female calf, grows well to be able to replace existing animals as soon as possible.

In the case of wanting to increase population, then we need also to have more animals than just to replace.

In both instances we need as many calves to survive from birth to weaning and then be able to have their first calf at two years old.

Good calf rearing takes time, attention to detail and money to achieve, so what are the economics of this?

Economics of calf rearing

In the first instance, when talking about the economics, calf rearing should be seen as an investment not a cost.

The money you put into calf rearing helps sustain your herd and make it more productive, which in turn will provide more income in the future for the farmer and their families.

By investing in calf rearing, you are securing your future. Good calf rearing results mean your investment achieves pay back quicker.

Getting heifers calving at two years old, rather than three or three and a half years old, means a year's extra income to offset the calf rearing investment.

Input costs

The main input costs for calf rearing will come in the first year, when the calf needs milk and in Fiji an added energy and protein supply because this is not supplied by the grass.

The milk required by the calf will be the same regardless of whether it is Calf Milk Replacer (CMR), whole milk or the shared teat method.

CMR is recommended as there is less risk of calves contracting diseases like TB and the amounts the calf is getting can be easily monitored. There are also extra vitamins and minerals added to the product.

Whole milk has a high risk of spreading disease, and if used should be milked from the cow, pasteurised and then fed.

The shared teat method is risky from a disease point of view and is less successful in achieving good calf rearing results, due to the calf not getting enough milk and less attention to calf welfare.

All calves should have access to a high protein supplement of 18-22% crude protein content, at least to 12 months of age, at 2kg calf/day. This is best provided by calf grower from a reputable supplier.



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CMR compared to Whole milk

At full prices for either product, there is no difference in costs associated with either system but these costs alter as input prices change up or down for various reasons. Use the template below to work out your costs.

Cost per calf using CMR and Calf Grower to 1 year old			
CMR at recommended rates for 80 days	2.5 bags	\$160.00	\$400.00
Calf grower 2kg/day for 365 days	30 bags	\$25.00	\$750.00
Total Cost per Calf			\$1,150.00

Cost per calf using Whole milk and Calf Grower			
Whole milk at 5 liters/calf/day for 80 days	400 liters	\$1.00/liter	\$400.00
Calf grower 2kg/day for 365 days	30 bags	\$25.00	\$750.00
Total Cost per Calf			\$1,150.00

Your costs under the recommended systems

Cost per calf using CMR and Calf Grower to 1 year old				
	Bags/calf	x	Cost/bag	Total/ Calf
CMR at recommended rates for 80 days	2.5 bags	x		
Calf grower 2kg/day for 365 days	30 bags	x		
Total Cost per Calf				

Cost per calf using Whole milk and Calf Grower to 1 year old				
	Liters/calf	x	Cost/liter	Total/ Calf
Whole milk at 5 liters/calf/day for 80 days recommended rates	400 liters	x		
	Bags/calf		Cost/bag	
Calf grower 2kg/day for 365 days	30 bags	x		
Total Cost per Calf				



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Your costs under your system

CMR under your system								
Grams/calf/day	X Days Fed	= Total Grams	Divided by 1000	= Kgs CMR	Divided by 20kg	= Bags used	X Cost/bag	= Cost/calf
Calf Grower under your system								
Kgs/calf/day	X Days Fed	= Total kgs			Divided by 25kg	= Bags used	X Cost/bag	= Cost/calf
Whole Milk under your system								
Liters /calf /day	X Days fed	= Total Liters			X Price per liter		= Cost/calf	
Rearing cost per calf								
Cost of milk or CMR	plus	Cost of calf grower			equals		Total Cost/Calf	

What are the returns from investing this money?

There is no doubt this is a big expense but the main aim is to get the heifers calving at 2 years old, which is a year earlier than what is common in Fiji. Assuming that a heifer will produce 5 litres of milk per day for 280 days, this equates to about \$1,400.00 of income a year earlier than normal, which more than covers the cost of the calf rearing.

Litres		Lactation Length days	Extra Production Liters	Price/liter	Total Income
5	x	280	1400	\$1.00	\$1,400.00

Use the table below to do your own calculation

Litres		Lactation Length days	Extra Production Liters	Price/liter	Total Income
	x				



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Extra benefits

A heifer that enters the herd earlier and is well grown will have a better chance of:

- Having a longer productive life
- Getting back in calf
- Potentially produce higher than expected
- Having higher quality milk
- Staying healthy

Remember calf rearing is an investment not a cost. It does not cost much more to do it right but the rewards are greater.