



# Dairy Briefs

The Latest Information  
on Dairy Cattle Nutrition



## Optimizing Profits with Fewer Cows Laura Martin, M.Sc



With incentive days winding down, after a long 9 months, producers are once again facing the question what to do with extra milk. Now that cows have been ramped up for higher production, or more cows have been brought into the herd to meet incentives, is it better to sell extra animals or to milk less per cow by lowering nutrition, and therefore feed costs? Potential economic impacts of the TPP agreement make the answer to

this question more important than ever.

The simplest way to figure this out is to look at diets formulated for different production levels using a Return over Feed Costs (ROFC) program. ROFC programs calculate how much income the average cow generates after accounting for the cost of feed. These programs can help producers monitor how diet changes, and any changes in milk production that result, affect farm profitability.

A ROFC comparison of a low production (28 kg) diet against a high production (33 kg) diet can be seen in Table 1. While the lower production diet clearly has a lower feed cost per animal per day at \$5.38 (versus \$5.91 per day for the high production), the extra \$0.53 per day invested in feed yields a higher ROFC of \$17.00 versus \$14.05 per day. The extra litres of milk from the high production diet result in almost \$3 more return per cow per day, that's over a 5:1 return on investment. These numbers show

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*Optimizing Profits with Fewer Cows*

By: Laura Martin, M. Sc, Nutritionist

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Volume 8, Issue 7  
October 2015

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it makes more financial sense to produce more milk per animal than to feed less and save a bit on feed costs.

If it does not make economic sense to drop production per cow then there is still the issue of over-producing milk. Selling cows to lower herd milk production would be a good way to get production down quickly so milk is not being dumped. There is the short-term profit that comes from the actual selling of cows, but there are also long-term savings that should be considered.

Comparing the 28 kg and 33 kg production example again, Table 2 shows a higher producing herd would need 15 fewer cows to meet the same milk production as the lower producing herd. By feeding for 85 cows instead of 100 cows the whole herd is actually consuming less feed per day due to its smaller number of cows, even though each cow is eating more per day and the diet is more expensive than the lower production herd. Even with 15 less cows contributing to profits, the whole herd ROFC is \$40 higher than the herd with lower milk production. This adds up to over \$14,500 per year in ROFC for the higher producing herd.

There are ways to reduce feed costs without sacrificing production. Grains and proteins make up a significant portion of feed costs, and often have to be purchased off farm. Producers have the opportunity to experiment with these components to optimize feed costs. Protein blends, taking advantage of the less expensive co-products that are now readily available, can be a good alternative to feeding just one protein source. Feeding a mix of grains or higher energy co-products rather than dry corn can also be a good way to reduce feed costs. There are challenges associated with feeding co-products on farm but if managed properly they can be excellent alternatives to the more expensive, traditional feeds.

Another benefit of feeding co-products is that the mineral profile has been condensed in many of them. Corn distillers with solubles or wet brewer's grains, for example, have concentrated levels of phosphorous. Feeding co-products with higher levels of phosphorous and other minerals can allow for vitamin/mineral changes that may lower the price of this off-farm feed.

After crunching the numbers it looks like investing a little more each day in feed can increase farm profitability in the end. Keeping feed costs low is not the final objective, profitability is. Getting more milk from each cow makes the herd efficient and provides a better return. Selling cows nets immediate profits but also has the benefits lowering feed costs on the herd level. Rather than feeding for lower production talk to your nutritionist about getting the most out of your cows.



**Table 1: Low Production Diet Compared to a High Production Diet**

	<b>28 kg</b>	<b>33 kg</b>
Hay (kg)	1.00	1.00
Haylage (kg)	14.19	13.59
Corn Silage (kg)	14.19	13.59
Dry Corn (kg)	4.58	6.33
Soybean Meal (kg)	1.28	1.94
DDGS (kg)	0.96	0.97
Canola Meal (kg)	0.96	0.97
Vitamin/Mineral Premix (kg)	0.671	0.671
Dry Matter Intake	20.34	21.98
Crude Protein (% DM)	17.00	17.50
NDF (% DM)	34.06	31.47
ADF (% DM)	20.88	19.10
Starch (% DM)	22.40	25.00
NE Lactation (Mcal/kg)	1.60	1.65
Milk Production (L)	28	33
Milk Value	\$ 0.694	\$ 0.694
Feed Cost per Head per Day	\$5.38	\$5.91
Return Over Feed Cost	\$ 14.05	\$ 17.00

\* Costs derived from OMAFRA Weekly Hog Market Facts (Oct 5, 2015), Corn Silage \$50/T; Haylage \$135/T; Hay \$175/T; assuming no difference in milk value.

**Table 2: Impact of Herd Size on Return over Feed Cost**

<b>Number of Cows</b>	<b>Milk Production (kg)</b>	<b>Herd Milk Production (kg)</b>	<b>DMI (kg)</b>	<b>Herd DMI (kg)</b>	<b>Feed Cost (\$/herd/day)</b>	<b>ROFC (\$/herd/day)</b>
100	28	2800	20.34	2034.0	\$ 538.00	\$ 1405.00
85	33	2805	21.98	1868.3	\$ 502.35	\$ 1445.00
Difference	+5kg	+5kg	+1.64kg	-165.7kg	-\$ 35.65	+\$ 40.00



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