Dairy Cost Study

The Economics of Milk Production in Alberta 2012

Alberta Government

AGDEX 821-1 July, 2013

ISSN 1707-5084 (print)
ISSN 1927-0674 (pdf)

THE DAIRY COST STUDY:

ECONOMICS OF MILK PRODUCTION

IN ALBERTA

2012

Volume 72

by

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Acknowledgements

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Questions or comments regarding this study or other related issues should be directed to:

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Introduction

The Dairy Cost Study is a valuable benchmark of cost and return information for individual dairy producers in Alberta. Participants in the study receive a detailed analysis of their farming operation which can be directly compared to the provincial profiles (e.g. average, top-third, bottom-third). Other dairy producers in the province can compare their own records and analysis with the provincial profiles. The Dairy Cost Study also provides vital information to other dairy industry participants, such as financial institutions, market analysts and policy analysts.

The Dairy Cost Study was introduced during World War II. Since then, the Economics Branch has added cost and return assessments for a wide range of crop and livestock production in Alberta.

In summary, the objectives of the study are as follows:

- to provide an annual account of the costs and returns of milk production in Alberta;
- to provide the participating dairy farmers with a personal business analysis for management purposes;
- to provide a benchmark for the evaluation of milk pricing; and
- to provide economic information for farm management, extension education, and service providers.

Table 1

2012 Sample Characteristics

Years in Dairy	Total Sample	Indebtedness		Herd Size (# of cows)	
	%	<30%	≥30%	<75	≥75
<10	13	3	4	2	5
≥10	87	30	18	8	40
Total (%)	**100**	**60**	**40**	**18**	**82**

Study Methodology

1. **Enterprise identification:** There are several different approaches for calculating the farm cost of producing fluid milk. Some studies use the total farm approach, which combines the dairy costs with those of other enterprises. This Alberta study examines only the dairy enterprise, which is defined as all activities associated with both milking cows and maintaining dry cows and young dairy stock. In most cases, the dairy operator uses home-grown feed in association with purchased feed. The costs of production of the homegrown feed are allocated to the crop enterprise portion of the farm, and are not considered in the dairy enterprise. Consequently, the final costs outlined in this report are only those associated with milk production.

2. **Inventory adjustment:** Since the cost of raising young dairy stock is included in the cost of milk production, the total income includes net cattle sales and net inventory changes. Cattle inventory changes, or herd growth, are determined by subtracting the beginning-year inventory value from the year-end inventory value. Gross income is thus composed of milk sales, net cattle sales, and the value of this net inventory adjustment. The net inventory adjustment may be negative or positive.

3. **Home grown feed:** Hay that is grown on the farm and fed to dairy livestock is priced at the regional market value of stacked hay on the farm. Similarly, feed grain is valued at regional

reporting the total annual interest paid. When both the total variable cost and the capital cost for the dairy enterprise are subtracted from gross income, the bottom line residual is the return to equity and management. When this residual is expressed as a percentage of the equity capital, then the percent return to equity can be compared with the returns from alternative investment opportunities such as Canada Savings Bonds or term deposits.

7. **Rent:** Rent charges are included in the cost of capital. The capital cost in this context represents the cost of ownership of resources. If resources are rented, there is a charge for their use. If, on the other hand, resources are owned, the owner must bear the cost of depreciation and interest on debt.

Dairy Enterprise Economic Overview

Tables 2 through 4 provide a summary of the costs and returns for dairy producers in Alberta. (Definitions of terms listed in the tables are provided on page nine. More detailed results are presented in Appendices A, B, and C.) In Table 2, the average results for the entire survey sample are listed in the centre column. As well, costs and returns are provided for two sub-groups of dairy producers based on their total production costs, namely the bottom 1/3 and the top 1/3. The bottom 1/3 are the highest cost producers and the top 1/3 the lowest cost producers. The total cost for the top 1/3 group is 24.5 percent or $21.19 per hL lower than the bottom 1/3. This has decreased 4.0 percent from 2011, mostly due to the gap in total feed costs becoming tighter. In 2012, it was $5.26 per hL, a drop from $7.65 per hL in 2011. The gap between gross income, however, has increased to a $2.60 (up from $1.00) with the lower cost producers receiving the higher gross income.

Table 3 compares the average costs and returns for 2011 and 2012. In 2012, total cost of production was $74.03 per hL, an increase of 5.8 percent or $4.30 per hL compared to 2011. The largest increase was in the price of grains, reflecting high market values in grains/oilseeds in 2012. The average purchase price for barley alone increased from $187.92 per tonne to $221.51 per tonne between 2011 and 2012 (an 18% increase). The price of roughage also increased and consumption was up due to an early winter and colder weather in 2012. Variable and capital costs have remained constant.

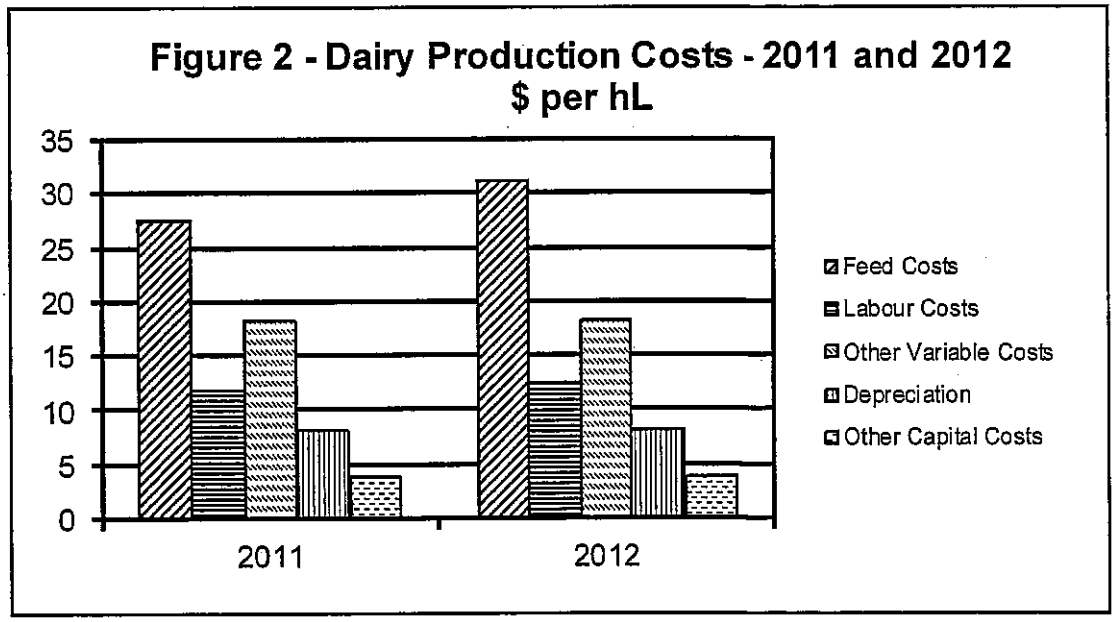
Finally, Table 4 compares average costs and returns for Northern and Southern Alberta.

Table 3

Dairy Enterprise Costs and Returns - $ Per hL Sold

2011 and 2012

	2011 (52 producers)	2012 (55 producers)
Milk Sales	79.15	79.14
Gross Income	**84.02**	**83.14**
Feed Costs	27.54	31.32
Main Feed Components:		
Grain	3.75	4.80
Complete Feed	11.87	12.14
Roughage	8.09	10.21
Labour Costs	11.89	12.44
Other Variable Costs	18.37	18.40
Depreciation	8.30	8.16
Other Capital Costs	3.90	3.97
Total Production Costs	**70.00**	**74.30**
Total Cash Costs	53.18	56.88
Gross Margin	**30.84**	**26.25**
Contribution Margin	**26.22**	**20.97**
Return to Investment	**16.26**	**11.05**
Return to Equity	**14.02**	**8.84**
Return to Investment (%)	**11.1**	**7.5**
Return to Equity (%)	**14.2**	**8.8**



Definitions for the Dairy Cost Study

In order of appearance in Appendix A (pg. 31)

Net Cattle Sales - revenues associated with the purchase and sale of dairy livestock (milking / dry cows, replacement heifers, bulls and young stock).

Gross Income - the value of what was produced by the dairy enterprise over the course of the production year. Includes cash and non-cash values of:

- milk sales,
- revenues from miscellaneous sources eg. colostrum sales, BSE test cow payments, environmental compliance and a milk quality bonus (if applicable),
- inventory adjustments relating to changes in the number & value of stock included in the enterprise, and
- net cattle sales.

Feed Costs - the cost of all feed used by the dairy enterprise, purchased or homegrown. (Homegrown feed is valued on the market value of the feed, **not** the cost of growing the feed.)

Complete Feed - includes all feed values given under dairy ration, calf feed and milk replacer.

Labour Costs - the sum of paid and contributed labour, as allocated to the dairy enterprise. Paid labour is valued at cost, while unpaid labour is valued at a standard or base cost per hour.

Other Variable Costs - total variable costs (such as bedding and supplies, veterinary and medicine, utilities, fuel, repairs) less feed and labour costs.

Depreciation - sum of depreciation and machinery/equipment/building lease payments on assets allocated to the dairy enterprise.

Other Capital Costs - total cash overheads, as allocated to the dairy enterprise (rent, property taxes, insurances, licences and term loan interest).

Total Cash Costs - total production costs less depreciation and family labour.

Total Production Costs - sum of all variable and capital production costs.

Contribution Margin - gross income less variable costs.

Gross Margin - gross income less total cash costs.

Return to Equity ($) - gross income less total production costs.

Investment - sum of assets allocated to the enterprise. Includes: dairy livestock, machinery, equipment, buildings/facilities and building site.

Return to Investment ($) - gross income less total production costs plus capital interest.

Debt/Capital Ratio - measures the extent of external financing on dairy farms and is calculated as the farm's debt divided by its total capital.

Median - the value of the middle item of a data set that has been arranged in an increasing order (lowest to highest).

Total Production Quota (TPQ) - single quota system (effective August, 2008).

Dry Matter Equivalent - conversion to dry matter from silage at 60% moisture and haylage at 56% moisture.

Dairy Characteristics by Herd Size Class

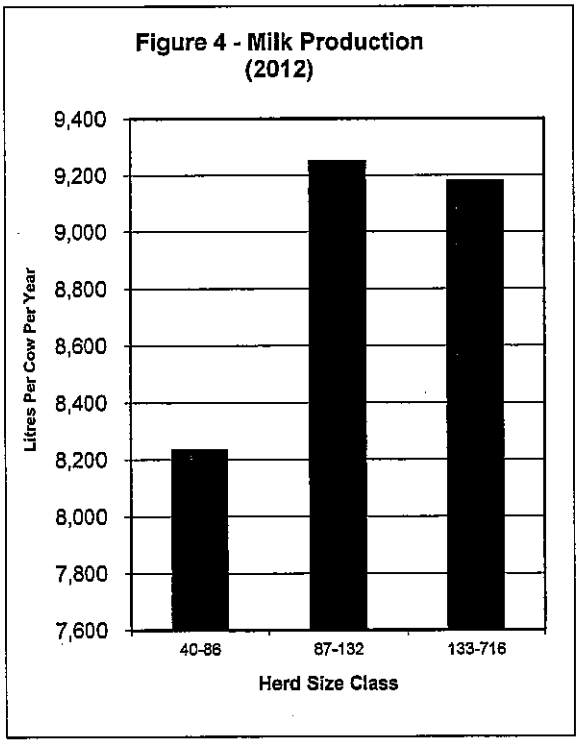
Herd Sizes ranged from 40 to 716 milking cows. For this analysis, the sample group was split into the following three size classes:

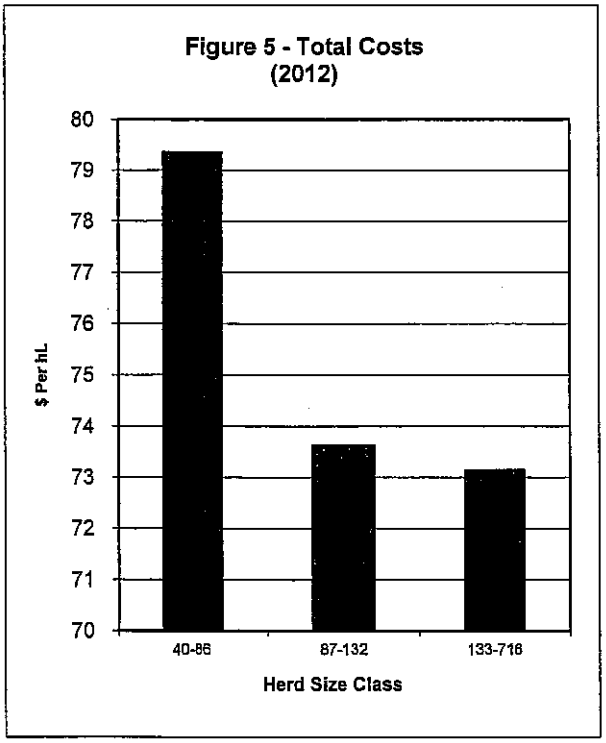
Bottom 1/3	40 - 86
Middle 1/3	87 - 132
Top 1/3	133 - 716

Table 5 - Dairy Enterprise Characteristics by Herd Size Class

	Bottom 1/3 40-86	Middle 1/3 87-132	Top 1/3 133-716
Years in Dairy	19.50	21.00	21.56
Milk Production (litres/yr)	**8,232.63**	**9,249.16**	**9,179.66**
Home Grown Feed (%)	77.2	71.5	72.0
Butterfat Test (kg/hL)	3.95	3.89	3.88
Gross Income ($/hL)	83.05	82.03	82.65
Total Costs ($/hL)	**79.35**	**73.63**	**73.14**
Feed Costs ($/hL)	29.73	29.93	30.82
Labour (hrs/cow)	63.76	58.82	47.72
Investment ($/cow)	12,442.10	11,988.97	13,605.60
Return to Equity (%)	6.6	12.8	13.0
Return to Investment (%)	5.3	8.9	7.7
Debt/Capital Ratio	0.26	0.33	0.35

Figures 4 and 5 illustrate Milk Production and Total Costs results for the bottom, middle and top 1/3 groups (sorted by Herd Size Class).





Dairy Characteristics by Gross Income Class

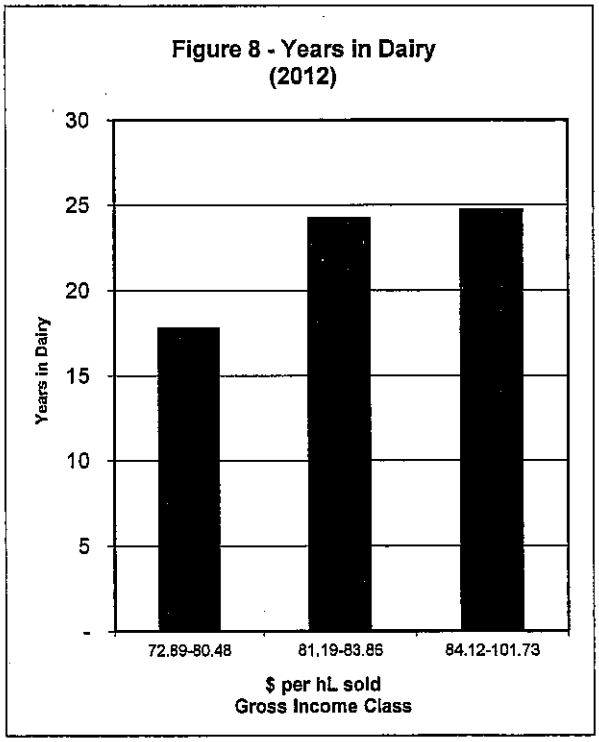
Gross Income ranged between $72.89 and $101.73 per hL sold. For this analysis, the sample group was split into the following three classes:

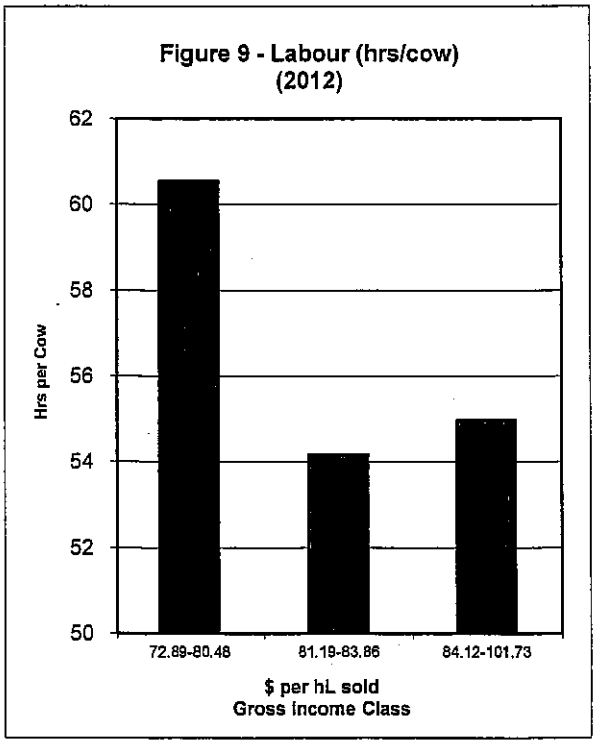
Bottom 1/3	72.89 - 80.48
Middle 1/3	81.19 - 83.86
Top 1/3	84.12 - 101.73

Table 7 - Dairy Enterprise by Gross Income Class

	Bottom 1/3 72.89-80.48	Middle 1/3 81.19-83.86	Top 1/3 84.12-101.73
Years in Dairy	**17.78**	**24.24**	**24.72**
Herd Size	109.86	126.70	165.19
Milk Production (litres/yr)	8,803.50	9,319.82	8,567.03
Home Grown Feed (%)	72.4	71.7	69.7
Butterfat Test (kg/hL)	3.83	3.87	4.01
Total Costs ($/hL)	78.44	74.91	74.21
Feed Costs($/hL)	32.63	30.83	29.75
Labour (hrs/cow)	**60.54**	**54.17**	**54.97**
Investment ($/cow)	13,202.92	13,738.42	11,942.10
Return to Equity (%)	0.9	10.0	17.9
Return to Investment (%)	1.2	6.8	12.2
Debt/Capital Ratio	0.26	0.28	0.25

Figures 8 and 9 illustrate Years in Dairy and Labour results for the bottom, middle and top 1/3 groups (sorted by Gross Income Class).





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The Dairy Cost Study

The Dairy Cost Study is an economic analysis of the costs and returns of a sample of Alberta dairy producers for a given production year. Study participants are required to complete monthly survey forms regarding their dairy production activities - dairy herd inventory, capital purchases, milk sales and farm use, feed use and purchase costs, labour costs, and other expenses related to the dairy enterprise - and an annual form on their dairy investments. (The survey forms are shown in Appendix E.) From this database, weighted sample averages are calculated which represent benchmarks for all dairy producers in the province. As well, study participants receive a confidential report on their dairy operation which can be compared with these provincial benchmarks.

Milk production in Canada is directed towards two categories, fluid milk and industrial milk, which comprises milk used for all dairy products such as cheese and yogurt. In 2012, approximately 48 percent of Alberta's total milk production was for fluid milk. In the past, dairy producers had separate quota allocations for fluid and industrial milk production. However, in August 2008, Alberta moved to a total production system (TPQ) and no distinction is made between fluid and industrial milk production at the farm level. Also, in August 2009, it became mandatory for Alberta milk producers to participate on the Canadian Quality Milk Program. The cost profiles in this report therefore represent all milk production in Alberta.

The Survey Group

Fifty-five dairy producers across the province submitted monthly business information for the 2012 calendar year. Two regional sub-groups were also identified for Northern Alberta (north of Ponoka) and Southern Alberta. Northern Alberta was represented by 23 producers while Southern Alberta had 32 participants complete the study.

The study was designed to represent a cross section of dairy farms by the size of their milk quota. Efforts were made to select study participants by systematic random sampling to provide better representation of the total population. Some characteristics of the sample are shown in Table 1. Appendix D presents charts showing individual results for the 55 dairy cost study participants.

Table 1

2012 Sample Characteristics

Years in Dairy	Total Sample	Indebtedness		Herd Size (# of cows)	
	%	<30%	≥30%	<75	≥75
<10	13	3	4	2	5
≥10	87	30	18	8	40
Total (%)	**100**	**60**	**40**	**18**	**82**

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1. **Enterprise identification:** There are several different approaches for calculating the farm cost of producing fluid milk. Some studies use the total farm approach, which combines the dairy costs with those of other enterprises. This Alberta study examines only the dairy enterprise, which is defined as all activities associated with both milking cows and maintaining dry cows and young dairy stock. In most cases, the dairy operator uses home-grown feed in association with purchased feed. The costs of production of the homegrown feed are allocated to the crop enterprise portion of the farm, and are not considered in the dairy enterprise. Consequently, the final costs outlined in this report are only those associated with milk production.

2. **Inventory adjustment:** Since the cost of raising young dairy stock is included in the cost of milk production, the total income includes net cattle sales and net inventory changes. Cattle inventory changes, or herd growth, are determined by subtracting the beginning-year inventory value from the year-end inventory value. Gross income is thus composed of milk sales, net cattle sales, and the value of this net inventory adjustment. The net inventory adjustment may be negative or positive.

3. **Home grown feed:** Hay that is grown on the farm and fed to dairy livestock is priced at the regional market value of stacked hay on the farm. Similarly, feed grain is valued at regional

elevator prices provided by the Alberta Canola Producers Commission. In other words, the dairy enterprise is charged the current market value for these home-grown inputs, just as if they were purchased from the cropping enterprise. The total value of home-grown feed is determined by multiplying the regional value or price by the actual quantity fed. This procedure adequately compensates for the production cost of home-grown feed. Alternatively, where feed is purchased, the actual purchase cost is used in the analysis.

4. **Value of investment and depreciation:** The information presented in this report is intended to reflect the average yearly production conditions in the dairy industry. Depreciation estimates are based on the original value of buildings and machinery. Current market value of owned assets is also estimated by updating the original value of the dairy investment with appropriate inflation factors, and then depreciating each item accordingly, based on the number of years in use. Original values and years in use are obtained from participants' farm records. With the exception of acreage for pasture, house, dairy buildings and corral location, farmland is not considered to be a dairy investment. The dairy livestock inventory is valued using the average annual market price. Value of investment is used for calculating the return to equity, and for determining the equity position of the dairy operation.

5. **Operator and family labour:** The operator's actual labour may vary from almost none on some dairy farms to the total input of labour on other farms. The procedure used in this study to put a value to operator labour is to multiply the operator's labour hours times the average hourly wage rate paid for dairy labour reported by the participants on the study. (All type of paid labour is included in this category from strictly feeding, to all general chores, to relief milking.) Assigning a value to operator labour is preferred over leaving it as unpaid labour because of the great variability in labour time between operators. Family labour is evaluated similar to the above, but a lower wage rate is applied to family members under the age of 16. Partners, spouses and other family members (16 years of age or older) receive the same wage rate as the operator.

6. **Interest on capital:** The actual interest paid on existing liabilities is included in the capital cost. To obtain this value, participating producers were asked to report their outstanding liabilities (excluding quota) and the interest rates charged. This method is more accurate than

reporting the total annual interest paid. When both the total variable cost and the capital cost for the dairy enterprise are subtracted from gross income, the bottom line residual is the return to equity and management. When this residual is expressed as a percentage of the equity capital, then the percent return to equity can be compared with the returns from alternative investment opportunities such as Canada Savings Bonds or term deposits.

7. **Rent:** Rent charges are included in the cost of capital. The capital cost in this context represents the cost of ownership of resources. If resources are rented, there is a charge for their use. If, on the other hand, resources are owned, the owner must bear the cost of depreciation and interest on debt.

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Finally, Table 4 compares average costs and returns for Northern and Southern Alberta.

Table 2

Dairy Enterprise Costs and Returns - $ Per hL Sold

Bottom 1/3 (Highest Cost Producers), Average Cost, Top 1/3 (Lowest Cost Producers)

	Bottom 1/3	Average	Top 1/3
Milk Sales	79.90	79.14	79.28
Gross Income	**81.68**	**83.14**	**84.28**
Feed Cost	33.30	31.32	28.04
Main Feed Components:			
Grain	2.78	4.80	4.40
Complete Feed	15.92	12.14	10.31
Roughage	11.21	10.21	9.01
Labour Costs	15.95	12.44	12.01
Other Variable Costs	21.47	18.40	16.03
Depreciation	10.70	8.16	6.50
Other Capital Costs	5.05	3.97	2.69
Total Production Costs	**86.47**	**74.30**	**65.28**
Total Cash Costs	61.08	56.88	49.14
Gross Margin	**20.60**	**26.25**	**35.14**
Contribution Margin	**10.96**	**20.97**	**28.19**
Return to Investment	**-2.00**	**11.05**	**20.11**
Return to Equity	**-4.79**	**8.84**	**18.99**
Return to Investment (%)	**-0.7**	**7.5**	**17.8**
Return to Equity (%)	**-3.4**	**8.8**	**22.5**

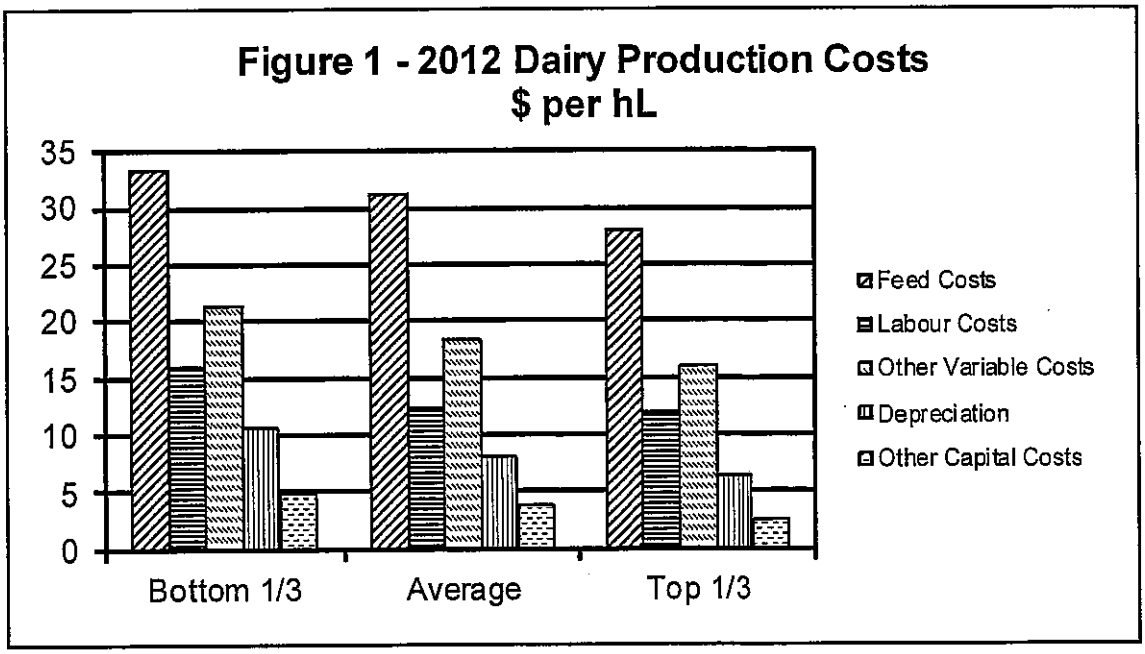

Table 3

Dairy Enterprise Costs and Returns - $ Per hL Sold

2011 and 2012

	2011 (52 producers)	2012 (55 producers)
Milk Sales	79.15	79.14
Gross Income	**84.02**	**83.14**
Feed Costs	27.54	31.32
Main Feed Components:		
Grain	3.75	4.80
Complete Feed	11.87	12.14
Roughage	8.09	10.21
Labour Costs	11.89	12.44
Other Variable Costs	18.37	18.40
Depreciation	8.30	8.16
Other Capital Costs	3.90	3.97
Total Production Costs	**70.00**	**74.30**
Total Cash Costs	53.18	56.88
Gross Margin	**30.84**	**26.25**
Contribution Margin	**26.22**	**20.97**
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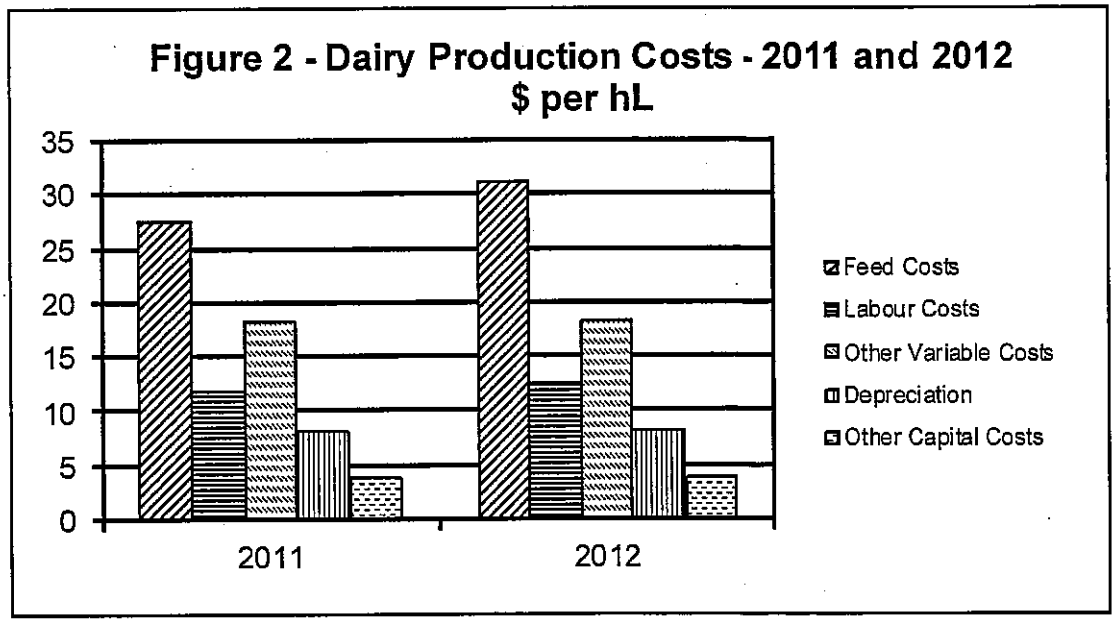
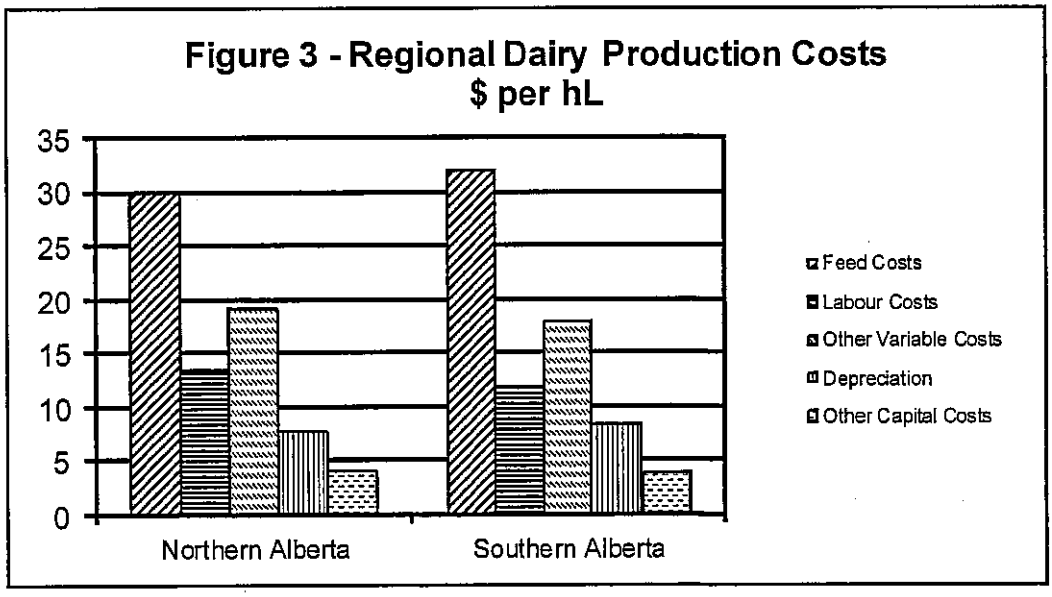


Table 4

Average Dairy Enterprise Costs and Returns - $ Per hL Sold

Northern and Southern Alberta

	Northern Alberta (23 Producers)	Southern Alberta (32 Producers)
Milk Sales	78.59	79.42
Gross Income	**82.88**	**83.28**
Feed Costs	30.10	31.96
Main Feed Components:		
Grain	4.88	4.76
Complete Feed	11.23	12.62
Roughage	9.83	10.41
Labour Cost	13.48	11.90
Other Variable Costs	19.29	17.93
Depreciation	7.81	8.35
Other Capital Costs	4.06	3.92
Total Production Costs	**74.74**	**74.06**
Total Cash Costs	56.49	57.09
Gross Margin	**26.38**	**26.19**
Contribution Margin	**20.01**	**21.49**
Return to Investment	**10.00**	**11.61**
Return to Equity	**8.13**	**9.21**
Return to Investment (%)	**7.1**	**7.6**
Return to Equity (%)	**8.4**	**9.0**



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- milk sales,
- revenues from miscellaneous sources eg. colostrum sales, BSE test cow payments, environmental compliance and a milk quality bonus (if applicable),
- inventory adjustments relating to changes in the number & value of stock included in the enterprise, and
- net cattle sales.

Feed Costs - the cost of all feed used by the dairy enterprise, purchased or homegrown. (Homegrown feed is valued on the market value of the feed, **not** the cost of growing the feed.)

Complete Feed - includes all feed values given under dairy ration, calf feed and milk replacer.

Labour Costs - the sum of paid and contributed labour, as allocated to the dairy enterprise. Paid labour is valued at cost, while unpaid labour is valued at a standard or base cost per hour.

Other Variable Costs - total variable costs (such as bedding and supplies, veterinary and medicine, utilities, fuel, repairs) less feed and labour costs.

Depreciation - sum of depreciation and machinery/equipment/building lease payments on assets allocated to the dairy enterprise.

Other Capital Costs - total cash overheads, as allocated to the dairy enterprise (rent, property taxes, insurances, licences and term loan interest).

Total Cash Costs - total production costs less depreciation and family labour.

Total Production Costs - sum of all variable and capital production costs.

Contribution Margin - gross income less variable costs.

Gross Margin - gross income less total cash costs.

Return to Equity ($) - gross income less total production costs.

Investment - sum of assets allocated to the enterprise. Includes: dairy livestock, machinery, equipment, buildings/facilities and building site.

Return to Investment ($) - gross income less total production costs plus capital interest.

Debt/Capital Ratio - measures the extent of external financing on dairy farms and is calculated as the farm's debt divided by its total capital.

Median - the value of the middle item of a data set that has been arranged in an increasing order (lowest to highest).

Total Production Quota (TPQ) - single quota system (effective August, 2008).

Dry Matter Equivalent - conversion to dry matter from silage at 60% moisture and haylage at 56% moisture.

Production Factor Analysis

This section provides a detailed analysis of the survey group based on six specific production factors:

- herd size
- milk production
- gross income
- total cost
- investment
- labour

For each analysis, the survey group is sorted into three separate classes (bottom 1/3, middle 1/3, top 1/3) based on the production factor being evaluated. For instance, on the next page the survey group has been divided into three sub-groups based on herd size. The bottom 1/3 group consists of the smallest dairy enterprises while the top 1/3 group consists of the largest producers. Production and management results are shown for each sub-group in the accompanying table and figures.

Dairy Characteristics by Herd Size Class

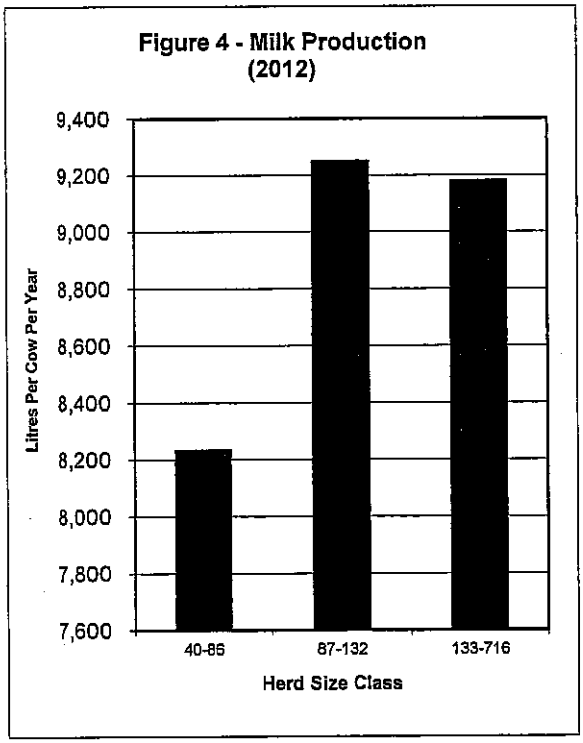
Herd Sizes ranged from 40 to 716 milking cows. For this analysis, the sample group was split into the following three size classes:

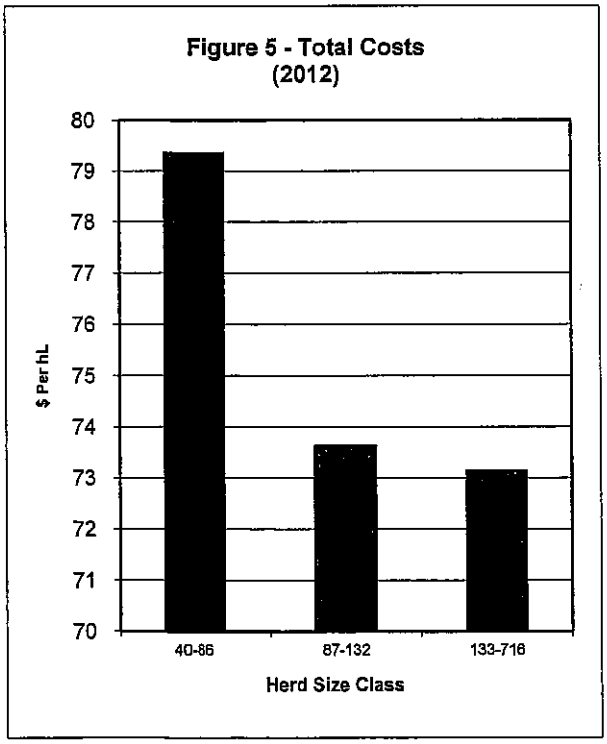
Bottom 1/3	40 - 86
Middle 1/3	87 - 132
Top 1/3	133 - 716

Table 5 - Dairy Enterprise Characteristics by Herd Size Class

	Bottom 1/3 40-86	Middle 1/3 87-132	Top 1/3 133-716
Years in Dairy	19.50	21.00	21.56
Milk Production (litres/yr)	**8,232.63**	**9,249.16**	**9,179.66**
Home Grown Feed (%)	77.2	71.5	72.0
Butterfat Test (kg/hL)	3.95	3.89	3.88
Gross Income ($/hL)	83.05	82.03	82.65
Total Costs ($/hL)	**79.35**	**73.63**	**73.14**
Feed Costs ($/hL)	29.73	29.93	30.82
Labour (hrs/cow)	63.76	58.82	47.72
Investment ($/cow)	12,442.10	11,988.97	13,605.60
Return to Equity (%)	6.6	12.8	13.0
Return to Investment (%)	5.3	8.9	7.7
Debt/Capital Ratio	0.26	0.33	0.35

Figures 4 and 5 illustrate Milk Production and Total Costs results for the bottom, middle and top 1/3 groups (sorted by Herd Size Class).





Dairy Characteristics by Milk Production Class

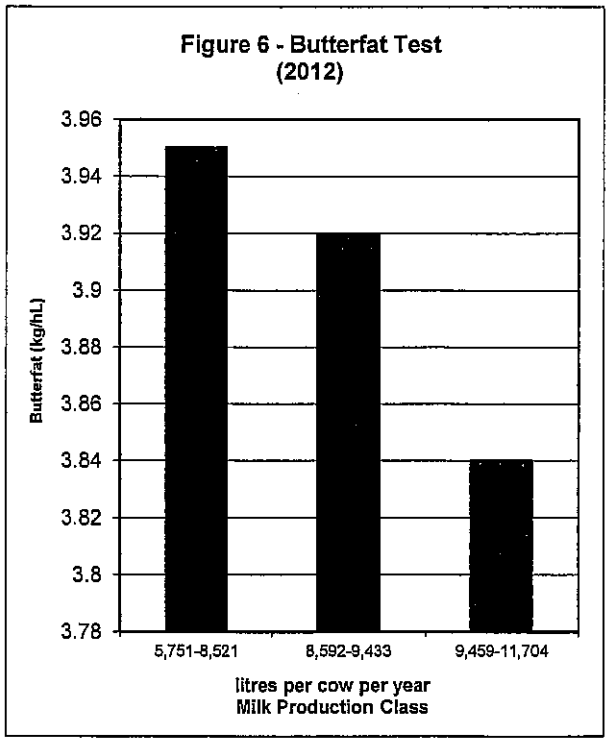
Milk Production ranged between 5,751 and 11,704 litres per cow per year. For this analysis, the sample group was split into the following three classes:

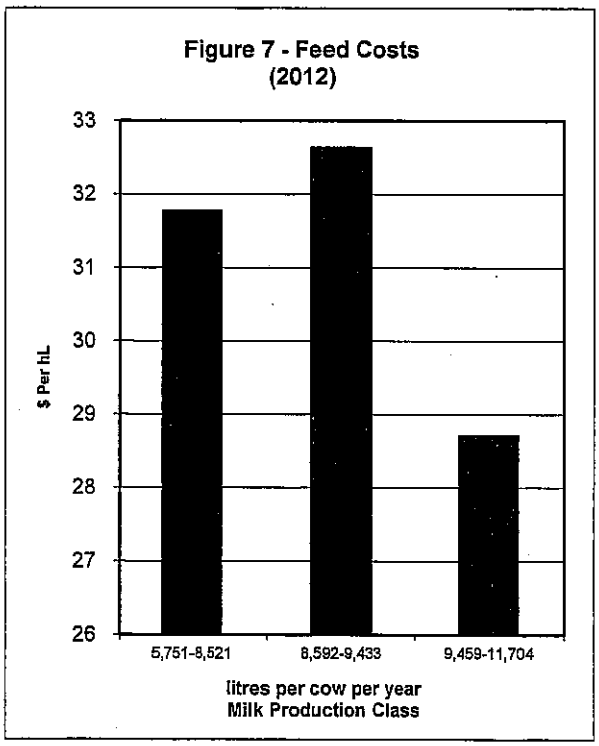
Bottom 1/3	5,751 - 8,521
Middle 1/3	8,592 - 9,433
Top 1/3	9,459 - 11,704

Table 6 - Dairy Enterprise by Milk Production Class

	Bottom 1/3 5,751-8,521	Middle 1/3 8,592-9,433	Top 1/3 9,459-11,704
Years in Dairy	21.08	22.97	22.75
Herd Size	146.98	112.56	143.01
Home Grown Feed (%)	69.6	64.9	79.6
Butterfat Test (kg/hL)	**3.95**	**3.92**	**3.84**
Gross Income ($/hL)	83.57	83.06	82.54
Total Costs ($/hL)	80.86	76.12	70.51
Feed Costs ($/hL)	**31.77**	**32.63**	**28.71**
Labour (hrs/cow)	56.29	54.77	58.59
Investment ($/cow)	12,303.70	12,841.84	13,787.71
Return to Equity (%)	5.6	9.2	14.0
Return to Investment (%)	3.2	6.1	11.0
Debt/Capital Ratio	0.25	0.29	0.26

Figures 6 and 7 illustrate Butterfat Test and Feed Costs results for the bottom, middle and top 1/3 groups (sorted by Milk Production Class).





Dairy Characteristics by Gross Income Class

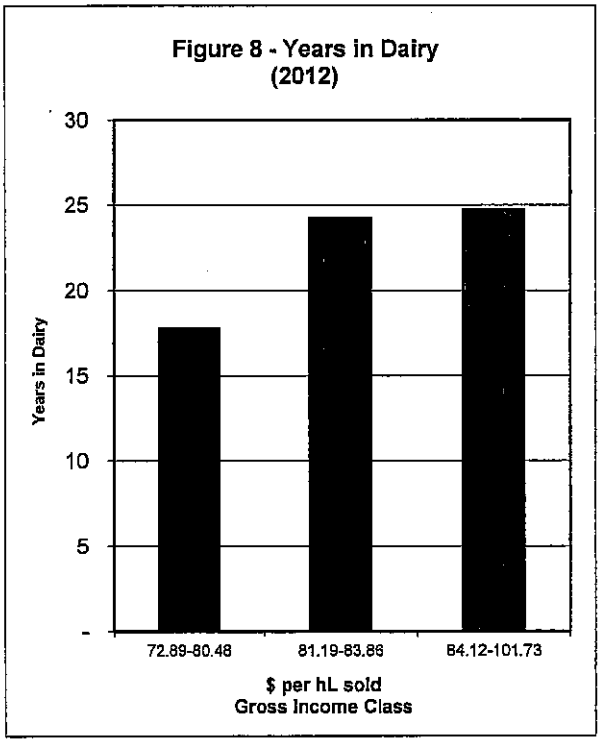
Gross Income ranged between $72.89 and $101.73 per hL sold. For this analysis, the sample group was split into the following three classes:

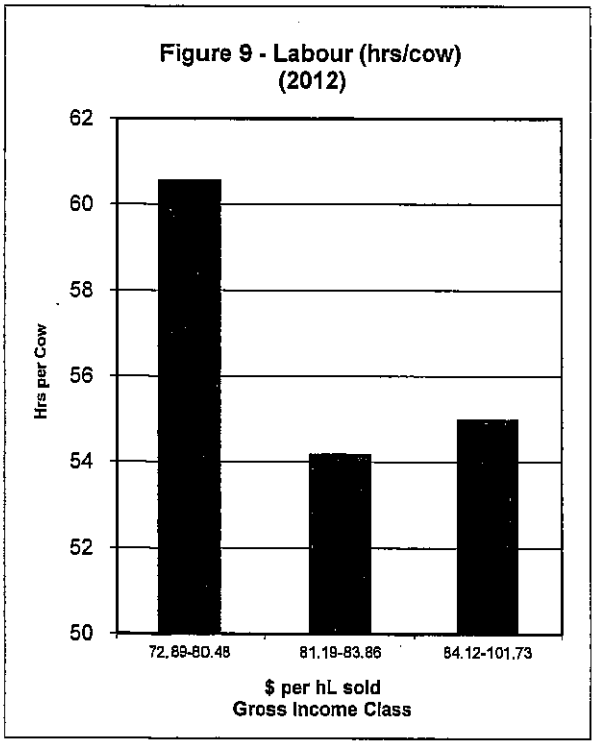
Bottom 1/3	72.89 - 80.48
Middle 1/3	81.19 - 83.86
Top 1/3	84.12 - 101.73

Table 7 - Dairy Enterprise by Gross Income Class

	Bottom 1/3 72.89-80.48	Middle 1/3 81.19-83.86	Top 1/3 84.12-101.73
Years in Dairy	**17.78**	**24.24**	**24.72**
Herd Size	109.86	126.70	165.19
Milk Production (litres/yr)	8,803.50	9,319.82	8,567.03
Home Grown Feed (%)	72.4	71.7	69.7
Butterfat Test (kg/hL)	3.83	3.87	4.01
Total Costs ($/hL)	78.44	74.91	74.21
Feed Costs($/hL)	32.63	30.83	29.75
Labour (hrs/cow)	**60.54**	**54.17**	**54.97**
Investment ($/cow)	13,202.92	13,738.42	11,942.10
Return to Equity (%)	0.9	10.0	17.9
Return to Investment (%)	1.2	6.8	12.2
Debt/Capital Ratio	0.26	0.28	0.25

Figures 8 and 9 illustrate Years in Dairy and Labour results for the bottom, middle and top 1/3 groups (sorted by Gross Income Class).





Dairy Characteristics by Total Cost Class

Total Cost ranged between $54.58 and $103.76 per hL sold. For this analysis, the sample group was split into the following three classes:

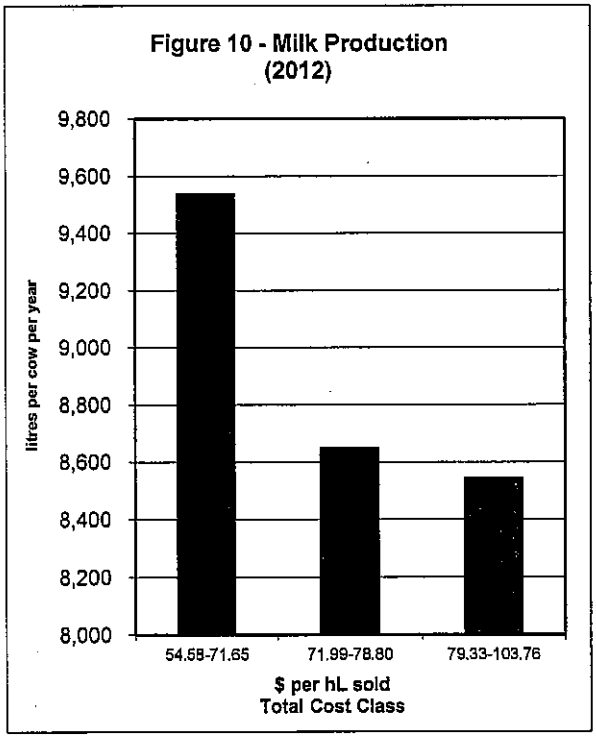
Top 1/3	54.58 - 71.65
Middle 1/3	71.99 - 78.80
Bottom 1/3	79.33 - 103.76

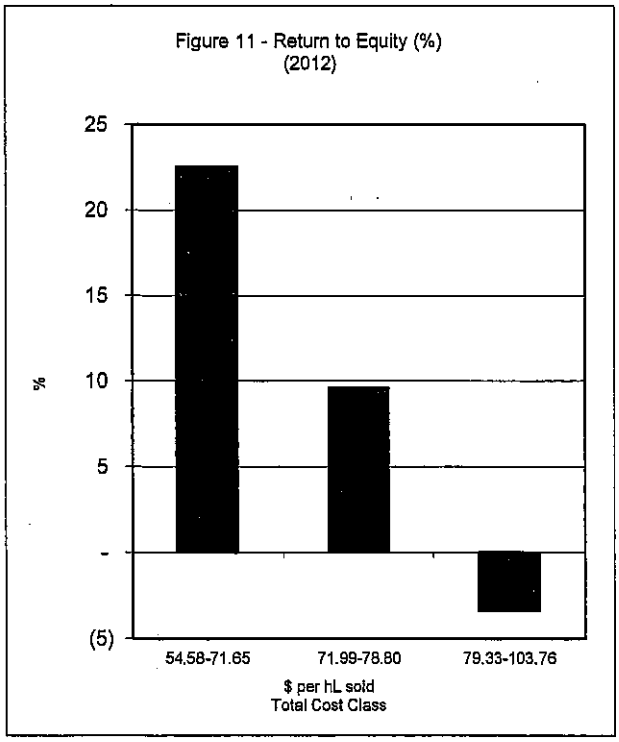
In this situation the top 1/3 are the lower cost producers and the bottom 1/3 are the higher cost producers.

Table 8 - Dairy Enterprise by Total Cost Class

	Top 1/3 54.58-71.65	Middle 1/3 71.99-78.80	Bottom 1/3 79.33-103.76
Years in Dairy	20.92	21.87	24.08
Herd Size	142.98	156.58	100.53
Milk Production (litres/yr)	**9,536.63**	**8,647.95**	**8,543.09**
Home Grown Feed (%)	92.6	67.7	53.7
Butterfat Test (kg/hL)	3.85	3.97	3.88
Gross Income ($/hL)	84.28	83.20	81.68
Feed Costs ($/hL)	28.04	31.81	33.30
Labour (hrs/cow)	52.38	54.20	63.10
Investment ($/cow)	10,943.74	12,018.66	16,016.58
Return to Equity (%)	**22.5**	**9.6**	**(3.4)**
Return to Investment (%)	17.0	5.5	(2.2)
Debt/Capital Ratio	0.19	0.30	0.31

Figures 10 and 11 illustrate Milk Production and Return to Equity results for the top, middle and bottom 1/3 groups (sorted by Total Cost Class).





Dairy Characteristics by Investment Class

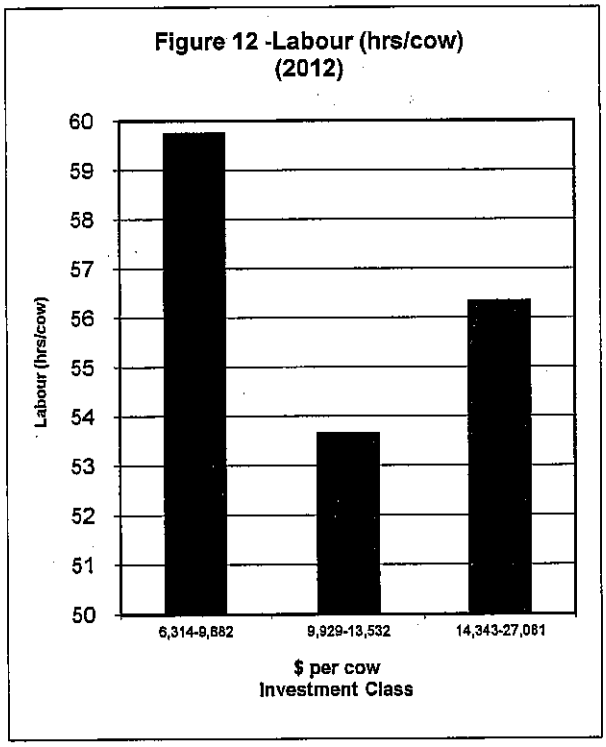
Investment per cow ranged between $6,314 and $27,081. For this analysis, the sample group was split into the following three classes:

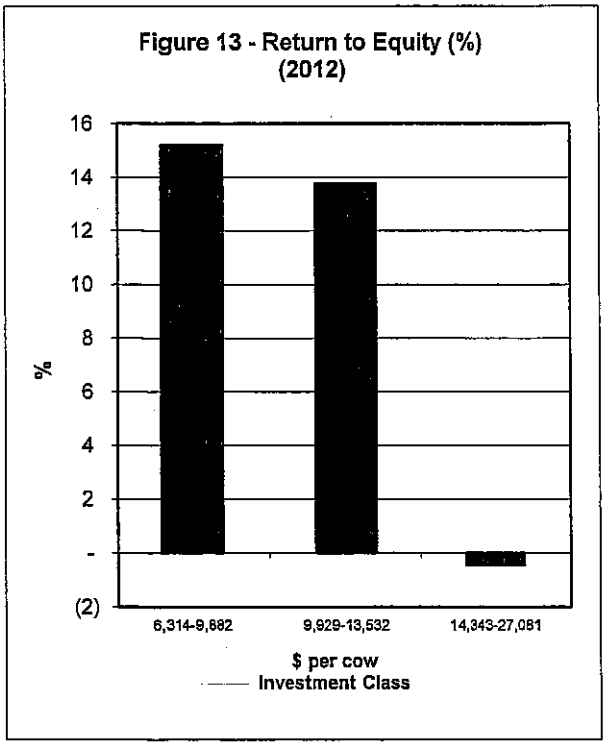
Bottom 1/3	6,314 - 9,882
Middle 1/3	9,929 - 13,532
Top 1/3	14,343 - 27,081

Table 9 - Dairy Enterprise by Investment Class

	Bottom 1/3 6,314-9,882	Middle 1/3 9,929-13,532	Top 1/3 14,343-27,081
Years in Dairy	20.97	23.68	22.11
Herd Size	138.04	140.50	122.44
Milk Production (litres/yr)	8,466.61	8,954.44	9,289.59
Home Grown Feed (%)	66.3	81.8	65.1
Butterfat Test (kg/hL)	3.92	3.93	3.86
Gross Income ($/hL)	83.14	83.96	82.02
Total Costs ($/hL)	71.64	73.06	82.96
Feed Costs ($/hL)	30.68	31.19	31.32
Labour (hrs/cow)	**59.74**	**53.64**	**56.33**
Return to Equity (%)	**15.2**	**13.8**	**(0.5)**
Return to Investment (%)	11.9	8.0	0.2
Debt/Capital Ratio	0.19	0.31	0.30

Figures 12 and 13 illustrate Labour and Return to Equity results for the bottom, middle and top 1/3 groups (sorted by Investment Class).





Dairy Characteristics by Labour (hrs/cow) Class

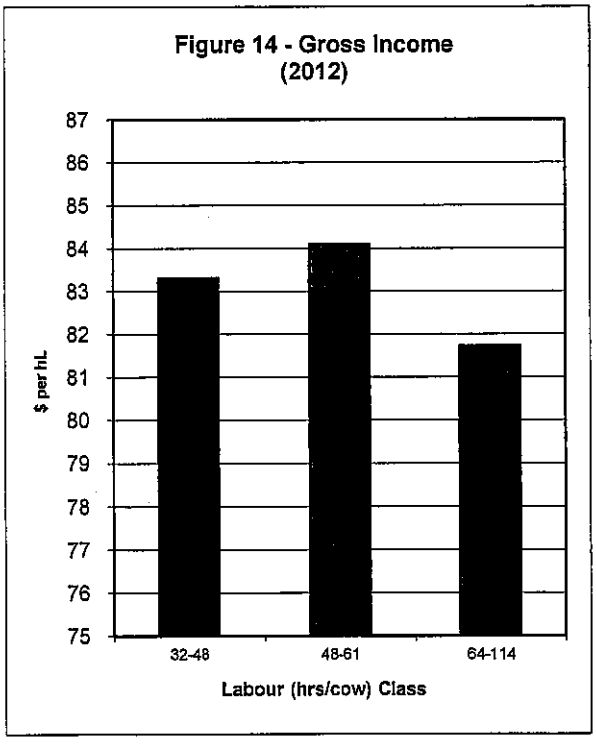
Labour (hrs/cow) ranged between 32 and 114.
For this analysis, the sample group was split into the following three classes:

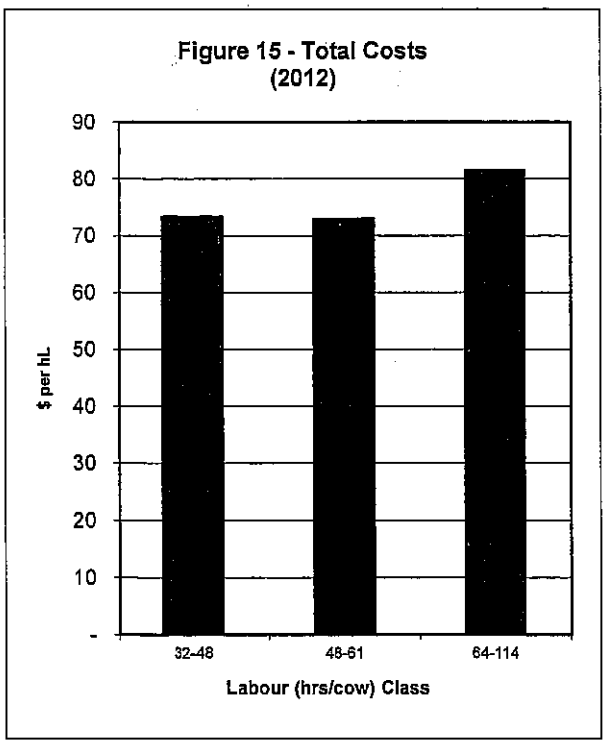
Bottom 1/3	32- 48
Middle 1/3	49 - 61
Top 1/3	64 - 114

Table 10 - Dairy Enterprise by Labour (hrs/cow) Class

	Bottom 1/3 32-48	Middle 1/3 48-61	Top 1/3 64-114
Years in Dairy	23.14	20.76	23.03
Herd Size	196.25	110.78	95.61
Milk Production (litres/yr)	8,897.65	8,865.86	8,952.05
Home Grown Feed (%)	78.6	67.7	67.7
Butterfat Test (kg/hL)	3.87	3.98	3.86
Gross Income ($/hL)	**83.31**	**84.09**	**81.72**
Total Costs ($/hL)	**73.33**	**72.92**	**81.41**
Feed Costs ($/hL)	31.52	29.65	32.10
Investment ($/cow)	13,734.52	12,421.70	12,800.37
Return to Equity (%)	12.9	14.6	0.9
Return to Investment (%)	8.5	9.4	2.1
Debt/Capital Ratio	0.33	0.28	0.18

Figures 14 and 15 illustrate Gross Income and Total Costs results for the bottom, middle and top 1/3 groups (sorted by Labour hrs/cow Class).





Detailed Management Factors, Northern and Southern Alberta

Table 11 provides a further examination of regional differences from a management perspective.

Table 11

Detailed Management Factors, Northern and Southern Alberta, 2012

	Northern Alberta	Southern Alberta
Herd Size	116	146
Milk Production (litres/cow/year)	8444.13	9,168.53
Feed Conversion (litres/kg concentrates)	2.04	2.20
Labour Productivity (litres/hr)	156.29	182.60
Labour Hours/Cow(hrs)	54.03	50.21
Investment/Cow ($/cow)	11,500.46	13,508.78
Milk Production/$ Invest (litres/$)	0.73	0.68
Feed Costs ($/cow)	2,469.55	2,835.99
Purchased Barley ($/tonne)	219.47	229.50
Cost of Purchased Hay ($/tonne)	102.67	132.34
Home Grown Roughage (%)	50.6	76.9
Butterfat Test (kg/hL)	3.91	3.90
Protein (kg/hL)	3.31	3.30
LOS (kg/hL)	5.70	5.72
Total Costs ($/hL)	74.74	74.06
Contribution Margin ($/hL)	20.01	21.49
Return to Investment (%)	7.1	7.6
Return to Equity ($/hL)	8.13	9.21
Return to Equity (%)	8.4	8.9
Debt to Asset Ratio	0.31	0.32

Historical Economic Trends

Figure 16 - Average Milk Price
($ per hL)

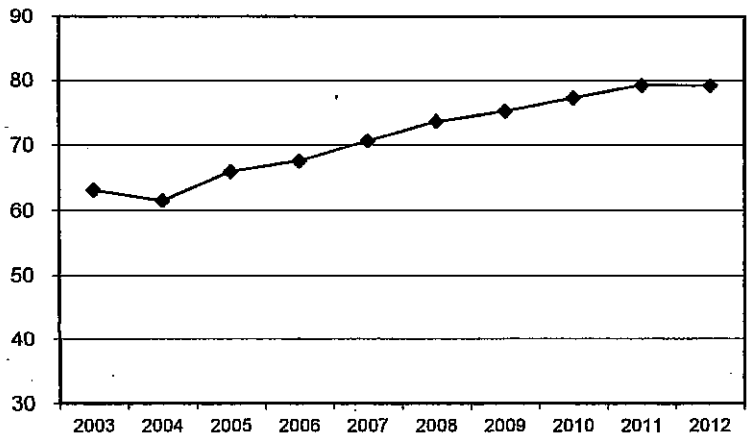


Figure 17 - Feed Cost
($ per hL)

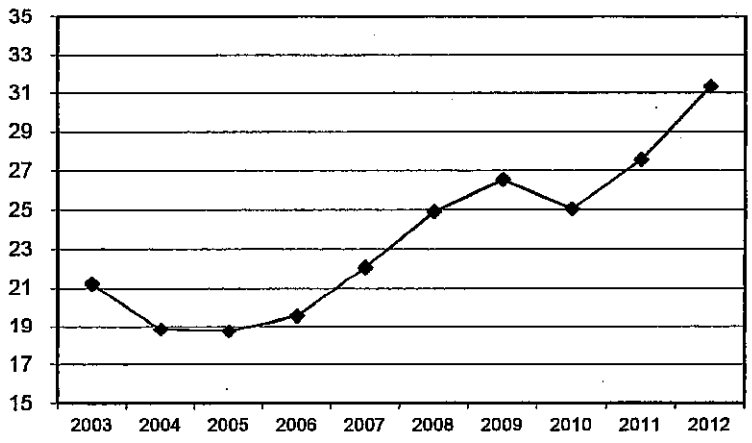


Figure 18 - Total Cost
($ per hL)

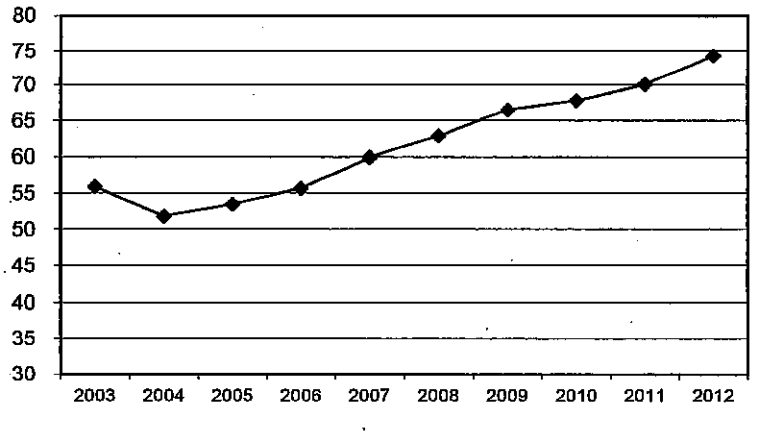


Figure 19 - Return to Equity
(%)

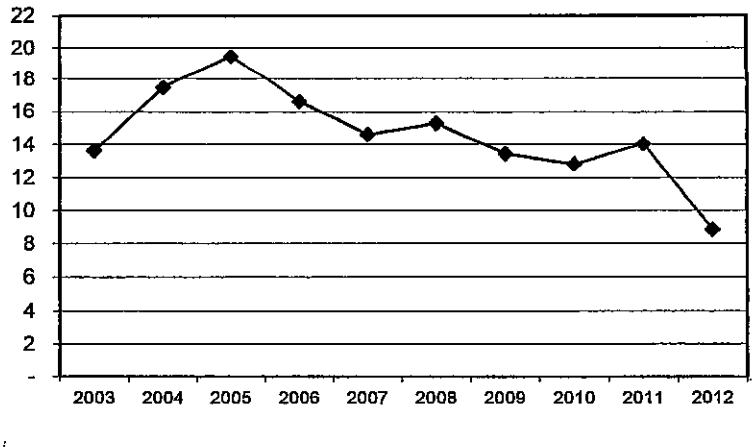


Figure 20 - Median Size of Dairy Herd

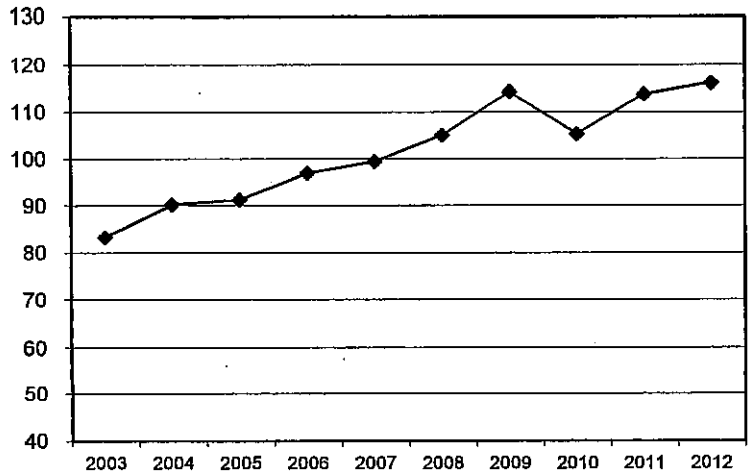


Figure 21 - Milk Production (litres/cow per year)

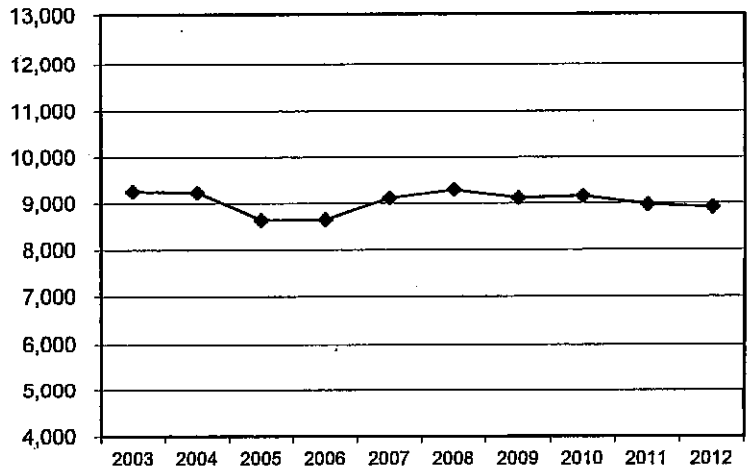


Figure 22 - Purchased Barley Cost ($ per tonne)

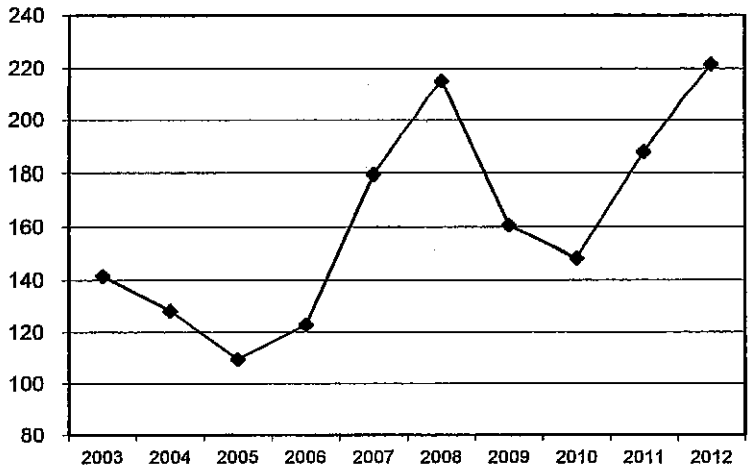
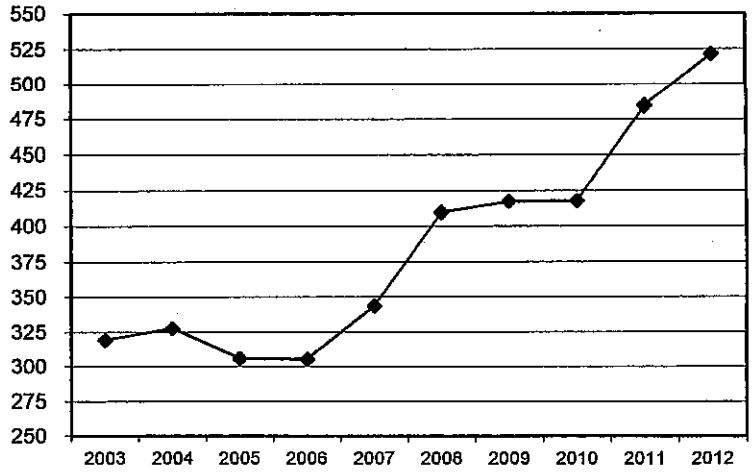


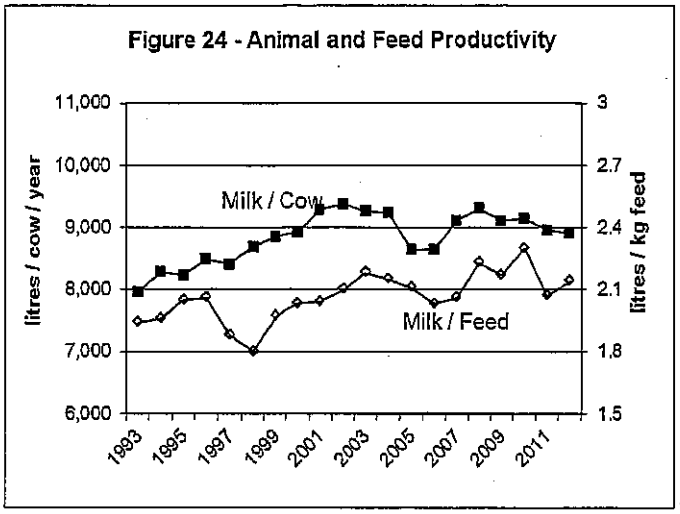
Figure 23 - Cost of Dairy Ration ($ per tonne)



Milk Productivity Factors

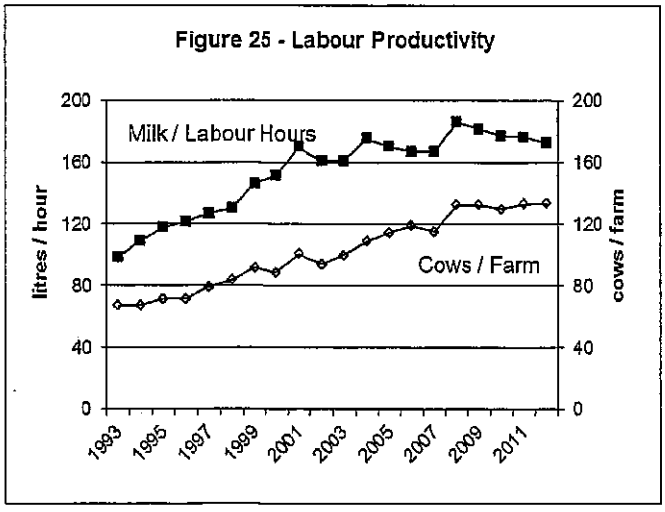
A number of management factors related to milk production are reported in Table 3 of Appendix A. They relate the amount of milk produced to three management inputs: feed, labour and capital. While these results reflect the participants in the study group, which changes over time, they are a fair representation of provincial averages.

Figure 24 shows that milk productivity per cow increased steadily from 1993 to 2001, with a total gain of 17 percent. After levelling off for four years, productivity dipped in 2005, rebounding in 2007. Many factors can affect milk productivity, including poor feed quality, housing changes, temperature/weather fluctuations, and cow stress. A decrease in quota allotment or adjusting to the daily quota system could also lead to management decisions to lower production for a period of time.

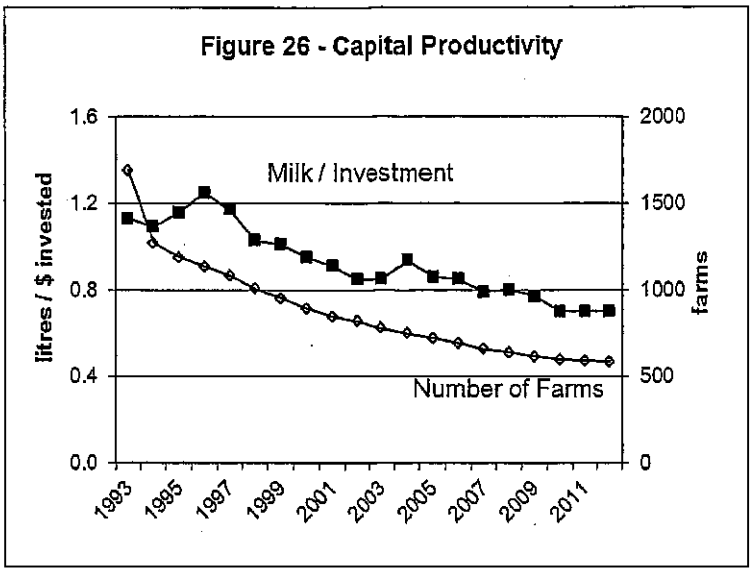


The feed conversion rates (or productivity) generally improved over the 20-year period, resulting in slightly higher milk production per unit of feed. However, there have been several dips in the feed conversion rates (1997, 2006 and 2011).

Figure 25 shows the amount of milk produced for each hour of labour on dairy farms. Labour productivity increased dramatically from 1993 to 2001. The figure also shows how the scale of dairy farms has increased. As farm size increased, each employee was able to manage a larger number of dairy cows. However, between 2001 and 2012, labour productivity rates have been relatively flat.



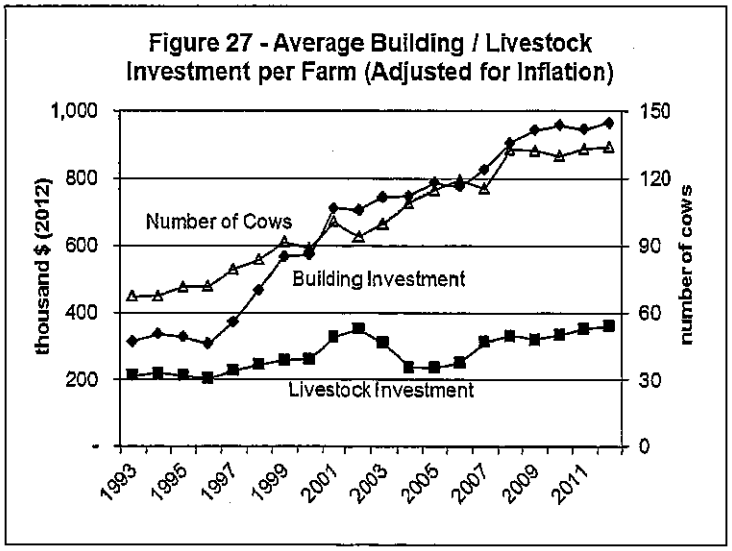
During the 1993 to 2001 period, labour intensity was gradually traded for capital intensity (Figure 26). While labour productivity increased through 2001, capital productivity declined. Dairy producers were investing in more capital equipment, which allowed them to handle greater herd sizes per employee. Since 2001, capital investment rates have been more stable.



Capital Investment Trends

Per Farm

Trends in capital intensity are shown more directly in Figures 27 and 28. The average value of dairy buildings (adjusted for inflation) was very stable in the early years. Then, between 1996 and 2001, total investment climbed dramatically, increasing by 132 percent.

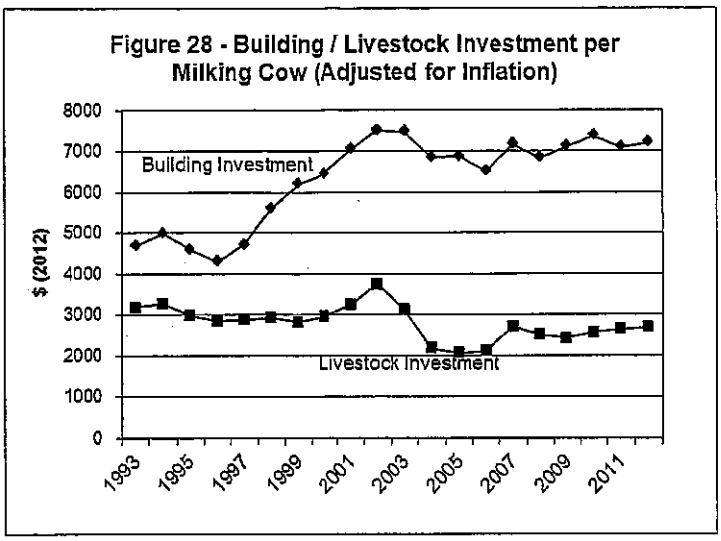


During this time, there was an increase in construction of new facilities, either by those already in Alberta or by those moving to the province from abroad. This was also the time of the first installation of robotic milkers on Alberta farms. This period coincided with a slightly higher rate in the expansion of herd sizes. After 2001, the average value of dairy buildings rose more slowly, in line with continued growth in the average herd size. Total building values rose again from 2007 to 2009, partly due to a significant jump in the Dairy Cost Study average herd size in 2008.

The total value of livestock per farm (adjusted for inflation) was flat during the mid 1990s. Livestock inventory values grew significantly through 2002. However, they dropped by one-third in the wake of the BSE crisis despite an increase in cows per farm. They rebounded in 2007 and 2008.

Per Milking Cow

Figure 28 shows average building and livestock investments per milking cow. It clearly shows how average building values per cow increased dramatically in the middle years, while remaining quite flat in the early and later years.



Between 1992 and 2001, livestock values (adjusted for inflation) were generally flat. They gained in value briefly in 2002. However, after the appearance of BSE in 2003, livestock values, especially for cull cows and replacement heifers, dropped dramatically. Livestock values increased in 2007 but continue to be slightly lower than the previous decade.

Dairy Enterprise Investment and Debt Levels

Total dairy farm investment (excluding quota) remained relatively stable at $1,709,692 per farm in 2012, compared to an average of $1,695,227 in 2011. On a per cow basis, this works out to $12,779 (Table 12). Of this total amount, 73 percent was comprised of buildings and equipment investment, 21 percent referred to livestock investment, the remaining 6 percent being invested in land and supplies. In 2012, there was once again an increase in the number of acres of pasture used for grazing the dairy cattle. This is partially due to the increased participation of producers in the southern part of Alberta where grazing is slightly more prominent and land more available.

Table 12

Annual Investment and Debt on Dairy Farms

	2010	2011	2012
	--- $ Per Cow ---		
Land	449	589	611
Buildings and Equipment	9,719	9,331	9,316
Livestock	2,700	2,694	2,687
Supplies	119	115	115
TOTAL	**12,987**	**12,729**	**12,779**
Debt	4,863	4,128	4,070
Equity	8,124	8,604	8,709
TOTAL	**12,987**	**12,729**	**12,779**

The debt/capital ratio measures the extent of external financing on dairy farms in Alberta. This ratio has remained the same as 2011 at 32 percent. Total investment per cow has also remained stable, showing only a slight increase of $50 per cow from 2011.

Debt Repayment Capacity

The acceptable debt load or repayment capacity of a dairy enterprise can be measured by the contribution margin. Contribution margin is the difference between gross income and variable costs. Therefore, it represents the amount of money available to pay for capital assets - rent, mortgage payments (principle and interest), and taxes. The amount of cash remaining after capital assets payments is the producer's return to owner equity, or profit. A summary of contribution margins for the dairy years 2010, 2011, and 2012 is presented in Table 13.

Table 13

Summary of Average Costs and Returns in Alberta

2010 - 2012

	2010	2011	2012	2010-2012
		------ $ Per Cow ------		
A. Gross Income	7141	7310	7174	7208
B. Feed Costs	2218	2397	2703	2439
C. Variable Costs	2624	2632	2663	2639
Contribution Margin (A - B - C)	2298	2281	1808	2129

The contribution margin can be used to determine the amount of debt load that a farm enterprise can carry. Table 14 shows the total debt load that a farm enterprise can carry on a per cow basis at various interest rates and various cow productivity levels. It is based on the average costs and returns between 2010 and 2012. The assumptions behind the analysis are that feed costs vary directly with the level of production and market values. The market value for grains/oilseeds was high in 2012 which is reflected by the increase in feed costs by $306 per cow or about 13 percent from 2011.

Table 14

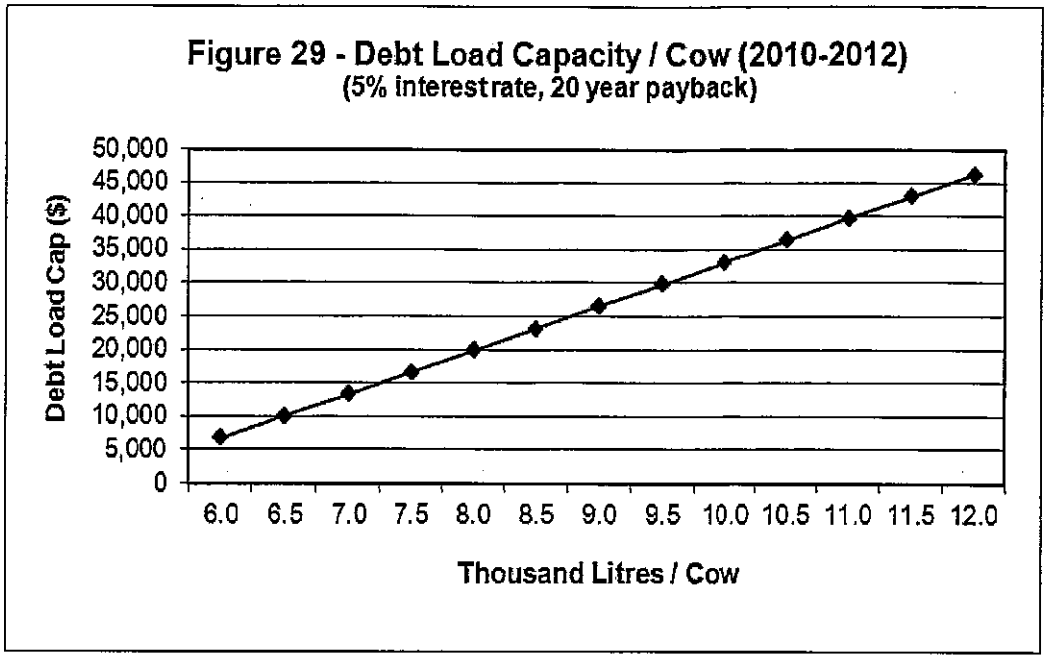
Acceptable Total Debt-Load per Cow in Alberta, 2010-2012

Milk Productivity (litres/cow)	Interest Rates 3%	4%	5%	6%	7%	8%
6000	8,001	7,309	6,702	6,169	5,698	5,280
6500	11,940	10,907	10,002	9,206	8,503	7,880
7000	15,879	14,506	13,302	12,242	11,308	10,479
7500	19,819	18,104	16,601	15,279	14,112	13,079
8000	23,758	21,702	19,901	18,316	16,917	15,678
8500	27,697	25,300	23,200	21,353	19,722	18,278
9000	31,636	28,899	26,500	24,390	22,527	20,878
9500	35,575	32,497	29,800	27,427	25,332	23,477
10000	39,514	36,095	33,099	30,464	28,137	26,077
10500	43,453	39,694	36,399	33,501	30,942	28,676
11000	47,392	43,292	39,698	36,537	33,747	31,276
11500	51,331	46,890	42,998	39,574	36,552	33,875
12000	55,270	50,489	46,298	42,611	39,357	36,475

* With a 20 year repayment period

For example, at a milk production level of 8,000 litres per cow, the contribution margin would be $1,597 per cow. This margin, if amortized over 20 years at 5 percent interest, results in a debt carrying capacity of $19,901 per cow.

Figure 29 shows the impact of milk productivity on the debt load carrying capacity of dairy enterprises given an interest rate of 5 percent. As productivity declines, the debt carrying capacity of each cow also declines. Conversely, the debt carrying capacity rises as productivity increases.



Another way to use this information is to measure the minimum level of productivity required to carry a given debt load at a specific interest rate. As an example, if a farm has a debt of $15,000 per cow, then at an interest rate of 5 percent, this amount of debt per cow would be supported at production levels of about 7,260 litres per cow and above (Table 14). In general, as productivity increases and/or interest rates fall, debt repayment or financing capacity increases.

To this point, the value of quota has not been included in the analysis. If externally financed quota valued at $32,138 per cow (the average value of total production quota for one cow in the 2012 Dairy Cost Study) is added to current debt of $4,070 per cow, the total amount of debt load per cow would be $36,208. The ability to carry this amount of debt per cow is dependent upon the prevailing interest rate and the productivity of each cow carrying debt. As illustrated in Table 14, this level of debt would require a production level of around 10,500 litres per cow, assuming an interest rate of 5 percent.

Impact of Quota Values on Dairy Returns

The cost and return analysis in this study does not include any value for milk quota. However, new entrants into the dairy business would have to purchase quota. When the financing of these quota purchases (at 2012 Dairy Cost Study total production quota average price) is taken into account, the average rate of return for new entrants would be a negative 8.6 percent (Table 15). This means that the borrowing costs of capital used to purchase quota exceeded the financial returns obtained from producing milk. The assumption in this analysis is that all funds needed to purchase quota were borrowed at 4.7 percent, the average interest rate in the study.

Table 15

Impact of Quota Value on Dairy Returns, 2012

	2012 Study Average	Including Quota Value*
	- - - $ per Farm - - -	
Dairy Investment	1,709,692	6,009.101
Debt	544,484	4,843.893
Equity	1,165,209	1,165,209
	- - - $ per hL Sold - - -	
Equity	100.93	100.93
Gross Income	83.14	83.14
Production Costs	74.30	74.30
Interest Cost for Quota		17.50
Potential Total Cost	74.30	91.80
Return to Equity($ per hL)	8.84	-8.66
Return to Equity (%)	8.8	-8.6

*Applicable to new entrants who borrow 100 percent of funds needed to purchase total production quota at the average value from the 2012 Dairy Cost Study of $36,218 per kg/day.

APPENDIX A

2012 Dairy Cost Study

Provincial Average

Alberta
2012 Dairy Cost Study - Business Analysis
55 Participants
Table 1 Dairy Enterprise Costs and Returns

	TOTAL ENTERPRISE	PER COW	PER HL SOLD	PERCENT FROM INCOME
INCOME:				
MILK SALES	913,608.34	6,828.94	79.14	
POOL ADJUSTMENTS (+ -)	(161.83)	(1.21)	(.01)	
MISCELLANEOUS RECEIPTS	5,695.44	42.57	.49	
NET CATTLE SALES (+ -)	33,465.42	250.14	2.90	
NET INVENTORY CHANGE (+ -)	7,191.91	53.76	.62	
GROSS INCOME	**959,799.28**	**7,174.20**	**83.14**	**100.00**
EXPENSES:				
GRAIN	55,454.79	414.51	4.80	
COMPLETE FEED	140,179.64	1,047.80	12.14	
SUPPLEMENT	37,233.83	278.31	3.23	
MINERALS & VITAMINS	8,517.19	63.66	.74	
ROUGHAGE	117,903.04	881.29	10.21	
PROCESSING COSTS	2,288.63	17.11	.20	
TOTAL FEED COSTS	**361,577.12**	**2,702.68**	**31.32**	**37.67**
BEDDING AND SUPPLIES	30,382.25	227.10	2.63	
BREEDING	10,777.59	80.56	.93	
VET. AND MEDICINE	20,015.53	149.61	1.73	
MILK HAULING	33,746.25	252.24	2.92	
PRODUCER'S FEES	22,469.01	167.95	1.95	
UTILITIES	19,690.37	147.18	1.71	
FUEL, OIL, LUBE	15,542.68	116.18	1.35	
BLDG. & MACH. REPAIRS	25,430.47	190.08	2.20	
MISCELLANEOUS	34,371.28	256.91	2.98	
TOTAL OTHER VARIABLE COSTS	**212,425.43**	**1,587.81**	**18.40**	**22.13**
HIRED LABOUR	36,851.86	275.46	3.19	
FAMILY LABOUR	106,819.33	798.44	9.25	
TOTAL LABOUR COSTS	**143,671.18**	**1,073.90**	**12.44**	**14.97**
TOTAL VARIABLE COSTS	**717,673.74**	**5,364.39**	**62.16**	**74.77**
RENT	1,429.32	10.68	.12	
TAXES AND INSURANCE	18,832.88	140.77	1.63	
DEPRECIATION	94,263.72	704.59	8.16	
INTEREST (CAP.DEBT)	25,583.81	191.23	2.22	
TOTAL CAPITAL COSTS	**140,109.74**	**1,047.28**	**12.14**	**14.60**
TOTAL PRODUCTION COSTS	**857,783.47**	**6,411.66**	**74.30**	**89.37**
CONTRIBUTION MARGIN ($)	242,125.54	1,809.81	20.97	
RETURN TO EQUITY ($)	102,015.80	762.54	8.84	10.63
MILK PRICE			79.12	
INVENTORY ADJUSTMENT			4.02	
RETURN TO EQUITY (%)			8.76	
AVERAGE CAP. DEBT INTEREST RATE (%)			4.70	

Alberta
2012 Dairy Cost Study - Business Analysis
55 Participants
Table 2 Statement of Investment

LAND BUILDINGS & EQUIPMENT	AGE	DEPRECIATION	DAIRY INVESTMENT
DAIRY BUILDINGS	11.71	38,968.16	964,176.03
POWER MACHINERY	8.09	19,981.12	133,694.46
DAIRY EQUIPMENT	10.63	23,069.76	93,695.18
OTHER EQUIPMENT	8.14	12,244.68	54,813.36
TOTAL EQUIPMENT	8.90	55,295.56	282,202.99
LAND			88,528.14
SUPPLIES			15,347.65
** SUBTOTAL **		94,263.72	1,350,254.81

DAIRY LIVESTOCK	--- BEGIN YEAR --- NUMBER	VALUE	--- END OF YEAR --- NUMBER	VALUE	AVERAGE VALUE
COWS	133.78	243,649.90	135.45	246,696.35	245,173.12
BRED HEIFERS	36.62	58,589.09	36.71	58,734.55	58,661.82
OPEN HEIFERS	43.33	43,327.27	47.07	47,072.73	45,200.00
HEIFER CALVES	37.44	7,487.27	41.18	8,236.36	7,861.82
BULL CALVES	6.31	415.45	6.60	330.00	372.73
BULLS	1.58	2,372.73	1.31	1,963.64	2,168.18
** SUBTOTAL **	261.05	355,841.72	268.33	363,033.62	359,437.67

TOTAL DAIRY INVESTMENT	1,709,692.48
CAPITAL LOANS	544,483.93
OPERATOR EQUITY	1,165,208.55
INVESTMENT PER COW	12,779.42
DEBT/CAPITAL RATIO	.32
CAPITAL TURNOVER (YR)	1.78

HERD SIZE	Average	Median
NUMBER OF DAIRY COWS	133.78	116.17
NUMBER OF ANIMAL UNITS	206.88	170.17
DRY COWS (%)	19.83	
CALF CROP (%)	102.89	
PASTURE PER COW (AC.)	.27	

CATTLE SALES & PURCHASES	NUMBER SOLD	SELLING PRICE	NUMBER PURCHASED	PURCHASE PRICE
COWS	38.42	907.97	2.04	2,202.48
BRED HEIFERS	.60	996.62	.56	2,076.73
OPEN HEIFERS	.33	1,188.10	.04	2,700.00
HEIFER CALVES	.42	342.17	.18	270.00
BULL CALVES	34.95	117.12	.00	.00
BULLS	.96	1,336.91	.80	2,656.55
TOTAL VALUE		41,393.49		7,928.07

Alberta
2012 Dairy Cost Study - Business Analysis
55 Participants
Table 3 Labour and Management

LABOUR

	HOURS	VALUE	HOURLY RATE
OPERATOR LABOUR	2,883.70	60,557.70	21.00
HIRED LABOUR	1,765.22	36,851.86	20.88
FAMILY UNPAID LABOUR	2,254.41	46,261.63	20.52
TOTAL	**6,903.33**	**143,671.18**	**20.81**

RETURN TO FAMILY LABOUR	15.70
MAN EQUIVALENTS	2.76
LABOUR HOURS PER COW	51.60
YEARS FARMING	22.28

MILK PRODUCTION

	HL.	% OF TOTAL	VALUE	AVERAGE PRICE / HL
MILK SALES	11,544.88	96.91	913,608.34	79.14
OTHER MILK PRODUCED	368.63	3.09		
TOTAL	**11,913.52**	**100.00**		

		AVERAGE COMPONENT PRICES ($ / KG)
BUTTERFAT TEST	3.90 KG / HL	11.60
PROTEIN	3.31 KG / HL	4.08
L.O.S.	5.71 KG / HL	3.59
MILK PRODUCTION PER COW	8,904.98 LITRES / YEAR	

QUOTA INFORMATION

TPQ HOLDINGS	118.71 KG / DAY
TPQ PRICE	36,217.75 $ / KG / DAY
CREDIT PRICE	8.35 $ / KG

MANAGEMENT FACTORS

COST PER HL	74.30
MILK/FEED (KG) RATIO	2.14 LITRES
MILK/LABOUR (HR) RATIO	172.58 LITRES
MILK/CAPITAL ($) RATIO	.70 LITRES

Alberta
2012 Dairy Cost Study - Business Analysis
55 Participants
Table 4 Feed Report

	— PURCHASED —		— HOMEGROWN—	
CONCENTRATES	**QUANTITY (TONNES)**	**PRICE**	**QUANTITY (TONNES)**	**PRICE**
OATS	1.70	160.98	2.00	173.71
BARLEY	64.19	221.51	89.13	237.19
WHEAT	.00	.00	4.91	254.01
MIXED GRAIN	.00	.00	.00	.00
BREW GRAIN (DRY EQ.)	7.75	230.71		
BEET PULP	3.58	254.24		
OTHER PURCHASED	42.78	363.01		
DAIRY RATION	246.52	521.30		
CALF FEED	17.85	503.36		
MILK REPLACER	.80	3,352.71		
SUPPLEMENT	65.22	567.41		
MOLASSES	.82	277.84		
SALT	.63	526.53		
MINERALS & VITAMINS	8.71	940.45		
SUBTOTAL - - - - - - - - -	**460.54**	**218,651.05**	**96.04**	**22,734.40**
ROUGHAGE				
ALFALFA HAY	133.32	120.73	145.85	125.56
ALFALFA PELLETS	.00	.00		
STRAW FED	4.21	53.03	12.61	57.55
GREENFEED	.00	.00	4.17	78.79
SILAGE/HAYLAGE (DRY EQ.)	193.83	117.01	511.60	116.38
SUBTOTAL - - - - - - - - -	**331.36**	**38,998.15**	**674.23**	**78,904.89**
GRINDING & PROCESSING		2,288.63		
GRAND TOTAL FEED COSTS - - - - - - - - -		**259,937.83**		**101,639.29**
BEDDING	136.86	60.90	62.04	50.34

AV. PRICE:	CONCENTRATE	433.69 $/TONNE
	ROUGHAGE	117.25 $/TONNE
FED PER COW:	CONCENTRATE	4.16TONNES
	ROUGHAGE	7.52 TONNES
% HOME GROWN:	CONCENTRATE	17.25 %
	ROUGHAGE	67.05 %

APPENDIX B

2012 Dairy Cost Study

Northern Alberta

Northern Alberta
2012 Dairy Cost Study - Business Analysis
23 Participants
Table 1 Dairy Enterprise Costs and Returns

	TOTAL ENTERPRISE	PER COW	PER HL SOLD	PERCENT FROM INCOME
INCOME:				
MILK SALES	750,414.37	6,447.34	78.59	
POOL ADJUSTMENTS (+ -)	(127.73)	(1.10)	(.01)	
MISCELLANEOUS RECEIPTS	5,192.87	44.62	.54	
NET CATTLE SALES (+ -)	34,331.61	294.97	3.60	
NET INVENTORY CHANGE (+ -)	1,492.44	12.82	.16	
GROSS INCOME	**791,303.56**	**6,798.65**	**82.88**	**100.00**
EXPENSES:				
GRAIN	46,625.13	400.59	4.88	
COMPLETE FEED	107,256.52	921.52	11.23	
SUPPLEMENT	29,120.39	250.19	3.05	
MINERALS & VITAMINS	5,081.78	43.66	.53	
ROUGHAGE	93,877.67	806.57	9.83	
PROCESSING COSTS	5,472.81	47.02	.57	
TOTAL FEED COSTS	**287,434.30**	**2,469.55**	**30.10**	**36.32**
BEDDING AND SUPPLIES	25,259.09	217.02	2.65	
BREEDING	9,617.10	82.63	1.01	
VET. AND MEDICINE	17,860.33	153.45	1.87	
MILK HAULING	28,651.36	246.16	3.00	
PRODUCER'S FEES	18,814.97	161.65	1.97	
UTILITIES	16,217.49	139.34	1.70	
FUEL, OIL, LUBE	11,531.20	99.07	1.21	
BLDG. & MACH. REPAIRS	19,170.82	164.71	2.01	
MISCELLANEOUS	37,030.83	318.16	3.88	
TOTAL OTHER VARIABLE COSTS	**184,153.18**	**1,582.19**	**19.29**	**23.27**
HIRED LABOUR	29,028.49	249.40	3.04	
FAMILY LABOUR	99,676.04	856.39	10.44	
TOTAL LABOUR COSTS	**128,704.53**	**1,105.79**	**13.48**	**16.26**
TOTAL VARIABLE COSTS	**600,292.01**	**5,157.53**	**62.87**	**75.86**
RENT	1,186.84	10.20	.12	
TAXES AND INSURANCE	19,718.39	169.41	2.07	
DEPRECIATION	74,580.17	640.77	7.81	
INTEREST (CAP.DEBT)	17,877.75	153.60	1.87	
TOTAL CAPITAL COSTS	**113,363.14**	**973.98**	**11.87**	**14.33**
TOTAL PRODUCTION COSTS	**713,655.15**	**6,131.52**	**74.74**	**90.19**
CONTRIBUTION MARGIN ($)	191,011.55	1,641.12	20.01	
RETURN TO EQUITY ($)	77,648.41	667.13	8.13	9.81
MILK PRICE			78.58	
INVENTORY ADJUSTMENT			4.30	
RETURN TO EQUITY (%)			8.38	
AVERAGE CAP. DEBT INTEREST RATE (%)			4.34	

Northern Alberta
2012 Dairy Cost Study - Business Analysis
23 Participants
Table 2 Statement of Investment

LAND BUILDINGS & EQUIPMENT	AGE	DEPRECIATION	DAIRY INVESTMENT
DAIRY BUILDINGS	13.04	28,847.93	721,427.47
POWER MACHINERY	8.03	16,400.61	109,834.88
DAIRY EQUIPMENT	10.56	19,472.49	79,312.13
OTHER EQUIPMENT	8.71	9,859.14	43,194.07
TOTAL EQUIPMENT	**8.96**	**45,732.24**	**232,341.08**
LAND			70,950.98
SUPPLIES			16,731.38
** SUBTOTAL **		74,580.17	1,041,450.91

DAIRY LIVESTOCK	--- BEGIN YEAR --- NUMBER	VALUE	--- END OF YEAR --- NUMBER	VALUE	AVERAGE VALUE
COWS	116.70	207,153.85	117.00	207,694.12	207,423.99
BRED HEIFERS	27.83	44,521.74	25.91	41,460.87	42,991.30
OPEN HEIFERS	35.35	35,347.83	39.09	39,086.96	37,217.39
HEIFER CALVES	38.00	7,600.00	41.39	8,278.26	7,939.13
BULL CALVES	9.87	493.48	8.30	415.22	454.35
BULLS	.83	1,239.13	.61	913.04	1,076.09
** SUBTOTAL **	228.57	296,356.03	232.30	297,848.47	297,102.25

TOTAL DAIRY INVESTMENT	**1,338,553.16**
CAPITAL LOANS	411,498.82
OPERATOR EQUITY	927,054.34
INVESTMENT PER COW	11,500.46
DEBT/CAPITAL RATIO	.31
CAPITAL TURNOVER (YR)	1.69

HERD SIZE	Average	Median
NUMBER OF DAIRY COWS	116.39	83.92
NUMBER OF ANIMAL UNITS	176.90	112.25
DRY COWS (%)	19.95	
CALF CROP (%)	102.73	
PASTURE PER COW (AC.)	.37	

CATTLE SALES & PURCHASES	NUMBER SOLD	SELLING PRICE	NUMBER PURCHASED	PURCHASE PRICE
COWS	33.43	986.55	.91	2,819.33
BRED HEIFERS	.74	1,159.08	.61	2,853.57
OPEN HEIFERS	.43	956.70	.04	3,500.00
HEIFER CALVES	1.00	342.17	.00	.00
BULL CALVES	39.13	117.05	.00	.00
BULLS	.61	1,042.17	.43	2,345.00
TOTAL VALUE		**39,814.47**		**5,482.86**

Northern Alberta
2012 Dairy Cost Study - Business Analysis
23 Participants
Table 3 Labour and Management

LABOUR	HOURS	VALUE	HOURLY RATE
OPERATOR LABOUR	2,645.85	55,562.80	21.00
HIRED LABOUR	1,489.29	29,028.49	19.49
FAMILY UNPAID LABOUR	2,153.28	44,113.24	20.49
TOTAL	**6,288.42**	**128,704.53**	**20.47**
RETURN TO FAMILY LABOUR	15.70		
MAN EQUIVALENTS	2.52		
LABOUR HOURS PER COW	54.03		
YEARS FARMING	21.89		

MILK PRODUCTION	HL.	% OF TOTAL	VALUE	AVERAGE PRICE / HL
MILK SALES	9,547.97	97.15	750,414.37	78.59
OTHER MILK PRODUCED	280.27	2.85		
TOTAL	**9,828.24**	**100.00**		

		AVERAGE COMPONENT PRICES ($ / KG)
BUTTERFAT TEST	3.91 KG / HL	11.60
PROTEIN	3.31 KG / HL	4.08
L.O.S.	5.70 KG / HL	3.60
MILK PRODUCTION PER COW	8,444.13 LITRES / YEAR	

QUOTA INFORMATION	
TPQ HOLDINGS	99.70 KG / DAY
TPQ PRICE	37,578.44 $ / KG / DAY
CREDIT PRICE	8.93 $ / KG

MANAGEMENT FACTORS	
COST PER HL	74.74
MILK/FEED (KG) RATIO	2.04 LITRES
MILK/LABOUR (HR) RATIO	156.29 LITRES
MILK/CAPITAL ($) RATIO	.73 LITRES

Northern Alberta
2012 Dairy Cost Study - Business Analysis
23 Participants
Table 4 Feed Report

	— PURCHASED —		— HOMEGROWN—	
CONCENTRATES	**QUANTITY (TONNES)**	**PRICE**	**QUANTITY (TONNES)**	**PRICE**
OATS	3.17	194.53	1.06	158.82
BARLEY	122.32	219.47	47.57	219.21
WHEAT	.00	.00	.00	.00
MIXED GRAIN	.00	.00	.00	.00
BREW GRAIN (DRY EQ.)	14.29	198.17		
BEET PULP	2.03	245.83		
OTHER PURCHASED	15.44	338.99		
DAIRY RATION	204.10	496.89		
CALF FEED	8.51	510.60		
MILK REPLACER	.47	3,169.71		
SUPPLEMENT	58.57	497.15		
MOLASSES	.00	.00		
SALT	.61	565.02		
MINERALS & VITAMINS	3.65	1,297.75		
SUBTOTAL - - - - - - - - -	**433.17**	**177,487.94**	**48.63**	**10,595.88**
ROUGHAGE				
ALFALFA HAY	124.72	102.67	115.30	100.23
ALFALFA PELLETS	.00	.00		
STRAW FED	7.02	53.19	.00	.00
GREENFEED	.00	.00	6.89	70.57
SILAGE/HAYLAGE (DRY EQ.)	311.76	123.47	331.33	91.04
SUBTOTAL - - - - - - - - -	**443.50**	**51,672.32**	**453.52**	**42,205.34**
GRINDING & PROCESSING		5,472.81		
GRAND TOTAL FEED COSTS - - - - - - - - -		**234,633.08**		**52,801.22**
BEDDING	138.44	64.23	65.51	41.05

AV. PRICE:	CONCENTRATE	390.38 $/TONNE
	ROUGHAGE	104.66 $/TONNE
FED PER COW:	CONCENTRATE	4.14 TONNES
	ROUGHAGE	7.71 TONNES
% HOME GROWN:	CONCENTRATE	10.09 %
	ROUGHAGE	50.56 %

APPENDIX C

2012 Dairy Cost Study

Southern Alberta

Southern Alberta
2012 Dairy Cost Study - Business Analysis
32 Participants
Table 1 Dairy Enterprise Costs and Returns

	TOTAL ENTERPRISE	PER COW	PER HL SOLD	PERCENT FROM INCOME
INCOME:				
MILK SALES	1,030,904.00	7,047.16	79.42	
POOL ADJUSTMENTS (+ -)	(186.33)	(1.27)	(.01)	
MISCELLANEOUS RECEIPTS	6,056.65	41.40	.47	
NET CATTLE SALES (+ -)	32,842.86	224.51	2.53	
NET INVENTORY CHANGE (+ -)	11,348.32	77.58	.87	
GROSS INCOME	**1,080,965.50**	**7,389.37**	**83.28**	**100.00**
EXPENSES:				
GRAIN	61,801.12	422.47	4.76	
COMPLETE FEED	163,843.13	1,120.02	12.62	
SUPPLEMENT	43,065.36	294.39	3.32	
MINERALS & VITAMINS	10,986.39	75.10	.85	
ROUGHAGE	135,171.27	924.02	10.41	
PROCESSING COSTS	.00	.00	.00	
TOTAL FEED COSTS	**414,867.28**	**2,835.99**	**31.96**	**38.38**
BEDDING AND SUPPLIES	34,064.53	232.86	2.62	
BREEDING	11,611.70	79.38	.89	
VET. AND MEDICINE	21,564.58	147.41	1.66	
MILK HAULING	37,408.20	255.72	2.88	
PRODUCER'S FEES	25,095.35	171.55	1.93	
UTILITIES	22,186.49	151.66	1.71	
FUEL, OIL, LUBE	18,425.92	125.96	1.42	
BLDG. & MACH. REPAIRS	29,929.60	204.60	2.31	
MISCELLANEOUS	32,459.74	221.89	2.50	
TOTAL OTHER VARIABLE COSTS	**232,746.12**	**1,591.03**	**17.93**	**21.53**
HIRED LABOUR	42,474.90	290.35	3.27	
FAMILY LABOUR	111,953.56	765.30	8.62	
TOTAL LABOUR COSTS	**154,428.46**	**1,055.65**	**11.90**	**14.29**
TOTAL VARIABLE COSTS	**802,041.86**	**5,482.68**	**61.79**	**74.20**
RENT	1,603.61	10.96	.12	
TAXES AND INSURANCE	18,196.42	124.39	1.40	
DEPRECIATION	108,411.28	741.09	8.35	
INTEREST (CAP.DEBT)	31,122.55	212.75	2.40	
TOTAL CAPITAL COSTS	**159,333.85**	**1,089.19**	**12.28**	**14.74**
TOTAL PRODUCTION COSTS	**961,375.71**	**6,571.87**	**74.06**	**88.94**
CONTRIBUTION MARGIN ($)	278,923.64	1,906.69	21.49	
RETURN TO EQUITY ($)	119,589.79	817.50	9.21	11.06
MILK PRICE			79.41	
INVENTORY ADJUSTMENT			3.87	
RETURN TO EQUITY (%)			8.95	
AVERAGE CAP. DEBT INTEREST RATE (%)			4.86	

Southern Alberta
2012 Dairy Cost Study - Business Analysis
32 Participants
Table 2 Statement of Investment

LAND BUILDINGS & EQUIPMENT	AGE	DEPRECIATION	DAIRY INVESTMENT
DAIRY BUILDINGS	11.09	46,242.07	1,138,346.76
POWER MACHINERY	8.12	22,554.62	150,836.40
DAIRY EQUIPMENT	10.67	25,655.29	104,033.11
OTHER EQUIPMENT	7.85	13,959.29	63,162.79
TOTAL EQUIPMENT	**8.88**	**62,169.20**	**318,034.31**
LAND			101,161.72
SUPPLIES			14,353.09
** SUBTOTAL **		108,411.28	1,571,895.88

DAIRY LIVESTOCK	--- BEGIN YEAR --- NUMBER	VALUE	--- END OF YEAR --- NUMBER	VALUE	AVERAGE VALUE
COWS	146.06	269,865.44	148.72	274,773.14	272,319.29
BRED HEIFERS	42.94	68,700.00	44.47	71,150.00	69,925.00
OPEN HEIFERS	49.06	49,062.50	52.81	52,812.50	50,937.50
HEIFER CALVES	37.03	7,406.25	41.03	8,206.25	7,806.25
BULL CALVES	7.19	359.38	5.38	268.75	314.06
BULLS	2.13	3,187.50	1.81	2,718.75	2,953.13
** SUBTOTAL **	**284.41**	**398,581.07**	**294.22**	**409,929.39**	**404,255.23**

TOTAL DAIRY INVESTMENT	**1,976,151.11**
CAPITAL LOANS	640,066.97
OPERATOR EQUITY	1,336,084.13
INVESTMENT PER COW	13,508.78
DEBT/CAPITAL RATIO	.32
CAPITAL TURNOVER (YR)	1.83

HERD SIZE	Average	Median
NUMBER OF DAIRY COWS	146.29	129.92
NUMBER OF ANIMAL UNITS	228.42	213.71
DRY COWS (%)	19.76	
CALF CROP (%)	102.99	
PASTURE PER COW (AC.)	.22	

CATTLE SALES & PURCHASES	NUMBER SOLD	SELLING PRICE	NUMBER PURCHASED	PURCHASE PRICE
COWS	42.00	863.00	2.84	2,060.13
BRED HEIFERS	.50	824.00	.53	1,436.97
OPEN HEIFERS	.25	1,477.35	.03	1,900.00
HEIFER CALVES	.00	.00	.31	270.00
BULL CALVES	31.94	117.18	.00	.00
BULLS	1.22	1,442.72	1.06	2,748.18
TOTAL VALUE		**42,528.42**		**9,685.56**

Southern Alberta
2012 Dairy Cost Study - Business Analysis
32 Participants
Table 3 Labour and Management

LABOUR

	HOURS	VALUE	HOURLY RATE
OPERATOR LABOUR	3,054.66	64,147.78	21.00
HIRED LABOUR	1,963.54	42,474.90	21.63
FAMILY UNPAID LABOUR	2,327.10	47,805.78	20.54
TOTAL	**7,345.29**	**154,428.46**	**21.02**

RETURN TO FAMILY LABOUR	15.71
MAN EQUIVALENTS	2.94
LABOUR HOURS PER COW	50.21
YEARS FARMING	22.56

MILK PRODUCTION

	HL.	% OF TOTAL	VALUE	AVERAGE PRICE / HL
MILK SALES	12,980.17	96.78	1,030,904.00	79.42
OTHER MILK PRODUCED	432.14	3.22		
TOTAL	**13,412.31**	**100.00**		

		AVERAGE COMPONENT PRICES ($ / KG)
BUTTERFAT TEST	3.90 KG / HL	11.60
PROTEIN	3.30 KG / HL	4.08
L.O.S.	5.72 KG / HL	3.58
MILK PRODUCTION PER COW	9,168.53 LITRES / YEAR	

QUOTA INFORMATION

TPQ HOLDINGS	132.37 KG / DAY
TPQ PRICE	35,111.26 $ / KG / DAY
CREDIT PRICE	8.18 $ / KG

MANAGEMENT FACTORS

COST PER HL	74.06
MILK/FEED (KG) RATIO	2.20 LITRES
MILK/LABOUR (HR) RATIO	182.60 LITRES
MILK/CAPITAL ($) RATIO	.68 LITRES

Dairy Cost Study 2012

Individual Results (55 Participants)

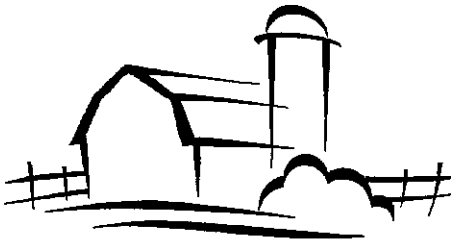
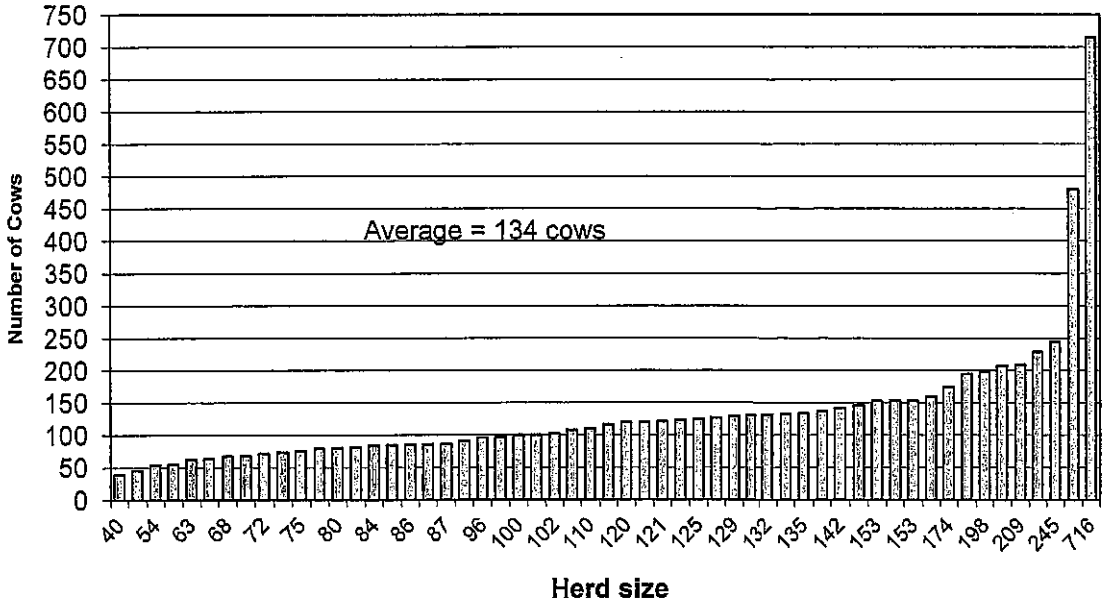


Figure 1 - Herd Size



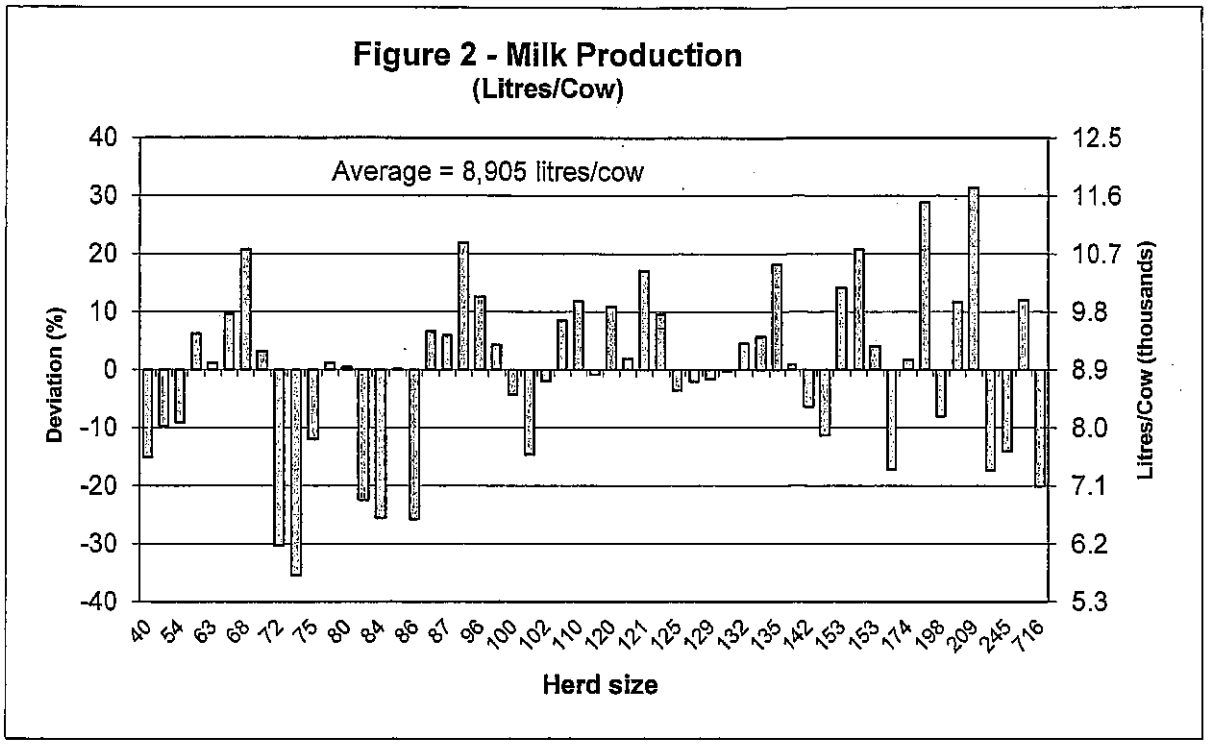


Figure 2 - Milk Production
(Litres/Cow)
Average = 8,905 litres/cow
Deviation (%)
Litres/Cow (thousands)
Herd size
40
30
20
10
0
-10
-20
-30
-40
12.5
11.6
10.7
9.8
8.9
8.0
7.1
6.2
5.3
40 54 63 68 72 75 80 84 86 87 96 100 102 110 120 121 125 129 132 135 142 153 153 174 198 209 245 716

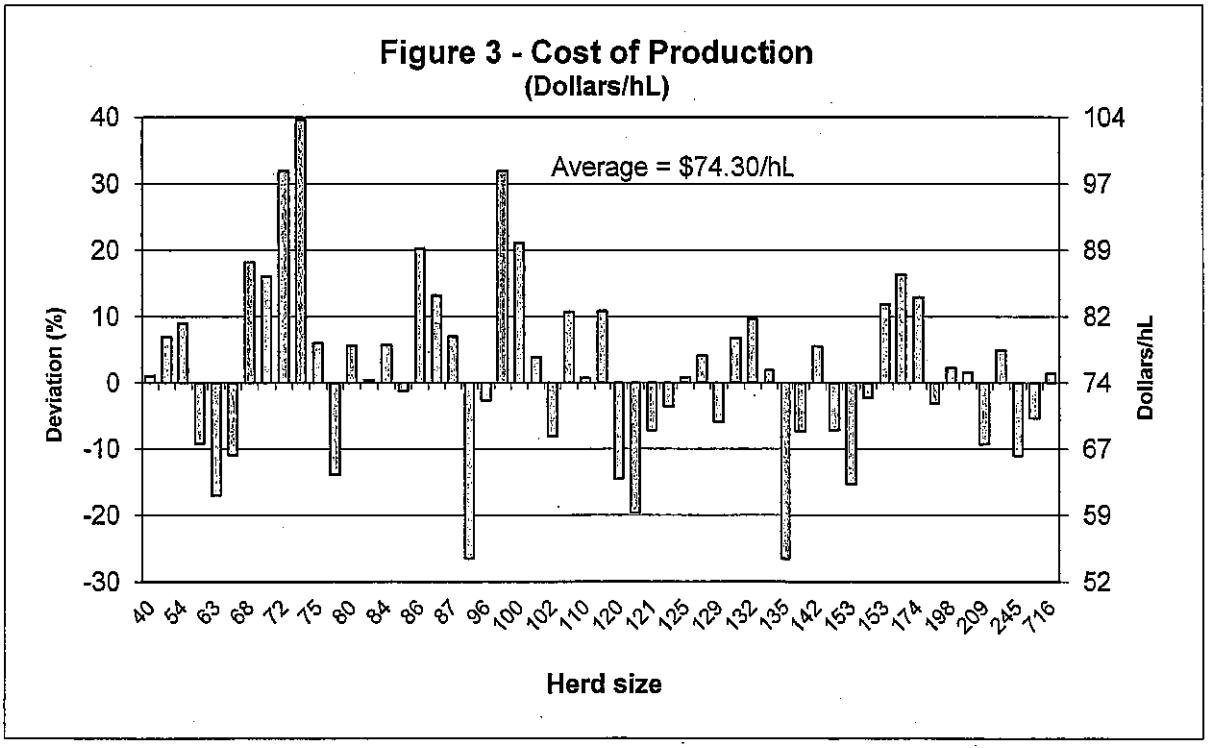


Figure 3 - Cost of Production
(Dollars/hL)
Average = $74.30/hL
Deviation (%)
Dollars/hL
Herd size
40
30
20
10
0
-10
-20
-30
104
97
89
82
74
67
59
52
40 54 63 68 72 75 80 84 86 87 96 100 102 110 120 121 125 129 132 135 142 153 153 174 198 209 245 716

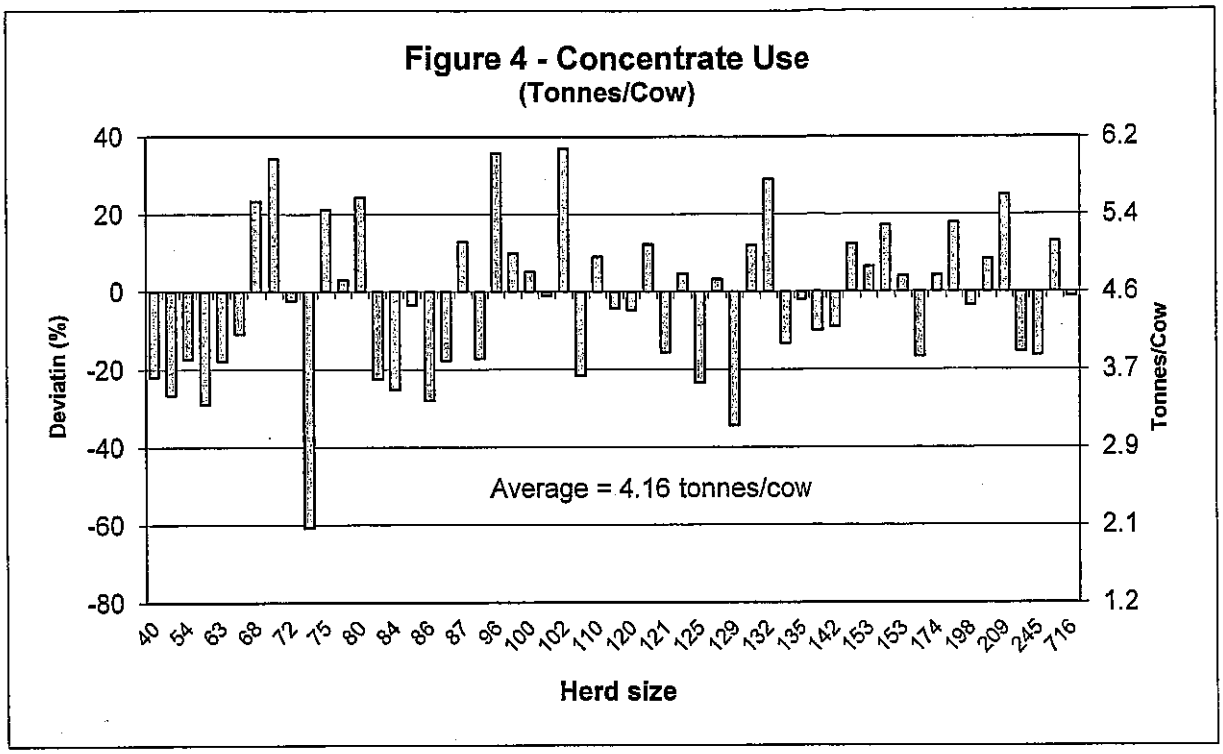


Figure 4 - Concentrate Use
(Tonnes/Cow)
Deviatin (%)
Tonnes/Cow
Average = 4.16 tonnes/cow
Herd size
40
20
0
-20
-40
-60
-80
6.2
5.4
4.6
3.7
2.9
2.1
1.2
40 54 63 68 72 75 80 84 86 87 96 100 102 110 120 121 125 129 132 135 142 153 153 174 198 209 245 716

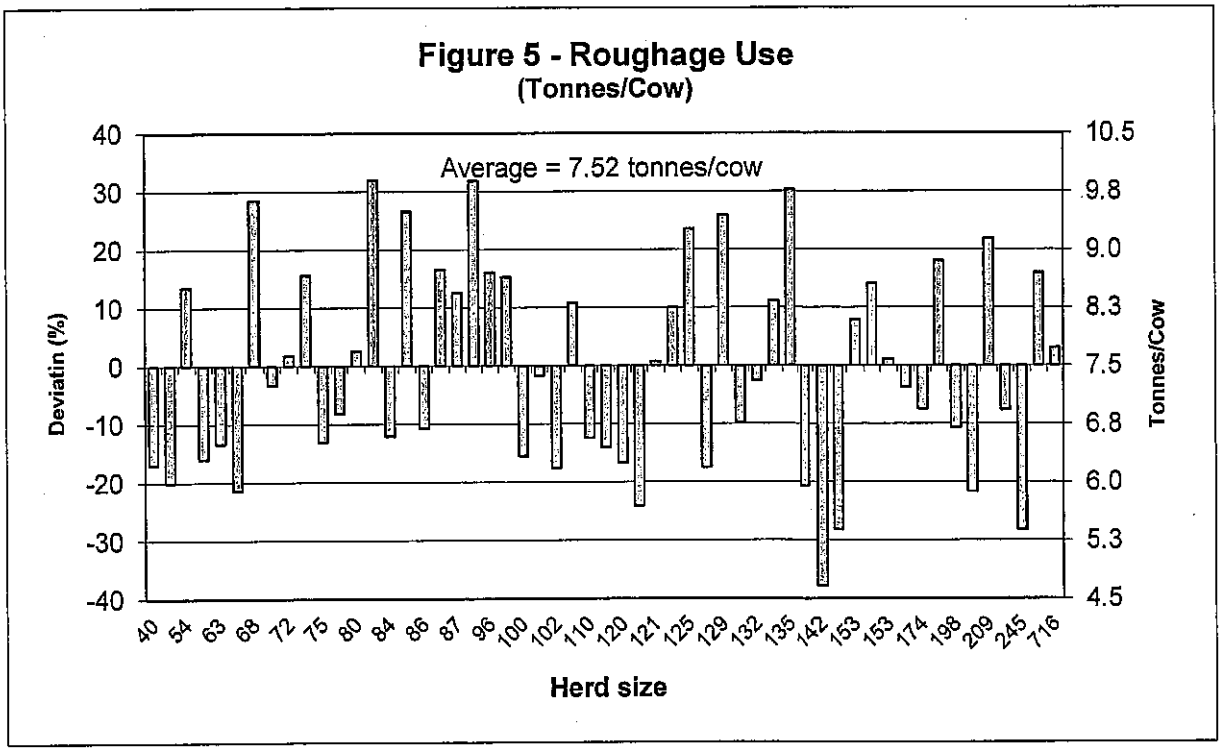


Figure 5 - Roughage Use
(Tonnes/Cow)
Deviatin (%)
Tonnes/Cow
Average = 7.52 tonnes/cow
Herd size
40
30
20
10
0
-10
-20
-30
-40
10.5
9.8
9.0
8.3
7.5
6.8
6.0
5.3
4.5
40 54 63 68 72 75 80 84 86 87 96 100 102 110 120 121 125 129 132 135 142 153 153 174 198 209 245 716

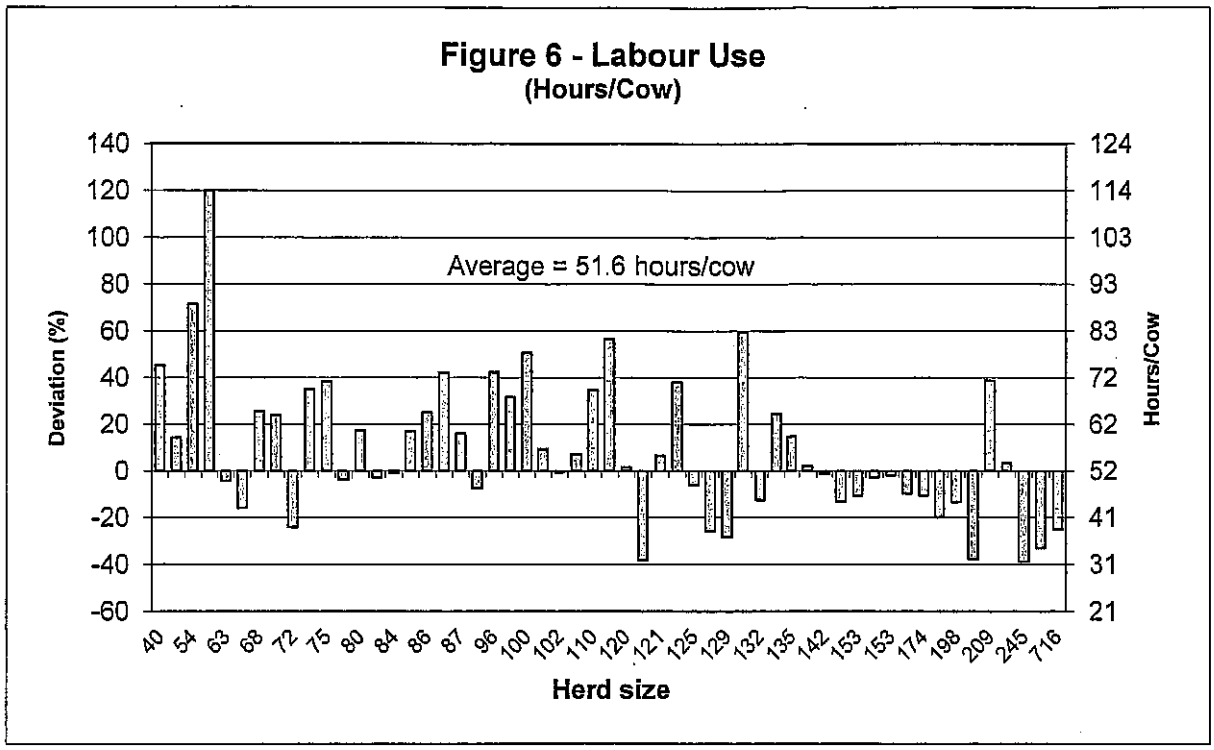


Figure 6 - Labour Use
(Hours/Cow)
Average = 51.6 hours/cow
Deviation (%)
Hours/Cow
Herd size
140
120
100
80
60
40
20
0
-20
-40
-60
124
114
103
93
83
72
62
52
41
31
21
40 54 63 68 72 75 80 84 86 87 96 100 102 110 120 121 125 129 132 135 142 153 153 174 198 209 245 716

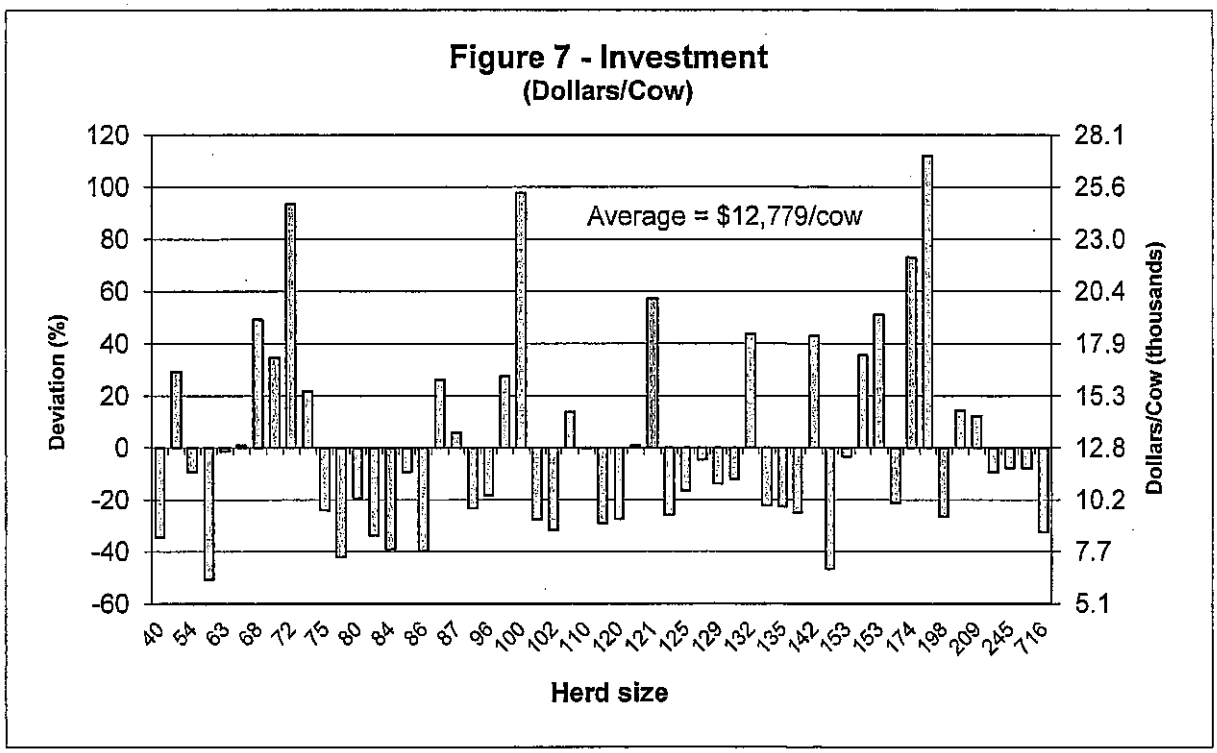


Figure 7 - Investment
(Dollars/Cow)
Average = $12,779/cow
Deviation (%)
Dollars/Cow (thousands)
Herd size
120
100
80
60
40
20
0
-20
-40
-60
28.1
25.6
23.0
20.4
17.9
15.3
12.8
10.2
7.7
5.1
40 54 63 68 72 75 80 84 86 87 96 100 102 110 120 121 125 129 132 135 142 153 153 174 198 209 245 716

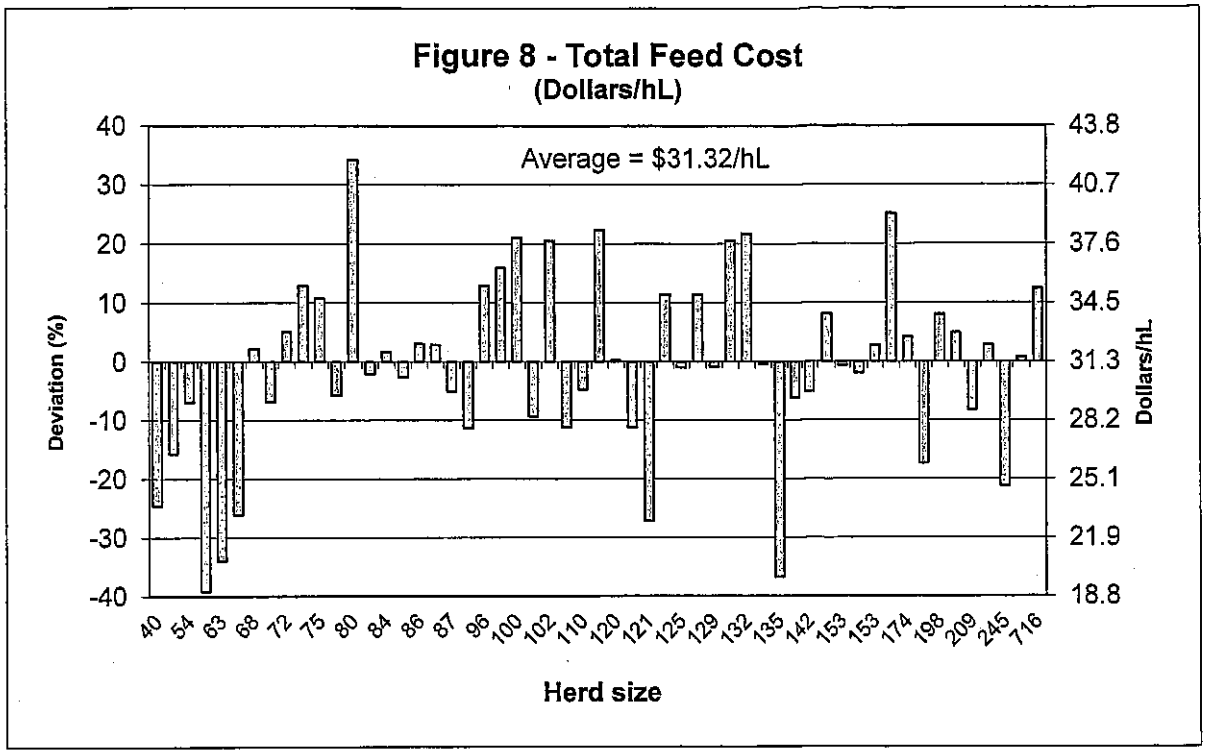


Figure 8 - Total Feed Cost
(Dollars/hL)
Average = $31.32/hL
Deviation (%)
Dollars/hL
40
30
20
10
0
-10
-20
-30
-40
43.8
40.7
37.6
34.5
31.3
28.2
25.1
21.9
18.8
40 54 63 68 72 75 80 84 86 87 96 100 102 110 120 121 125 129 132 135 142 153 153 174 198 209 245 716
Herd size

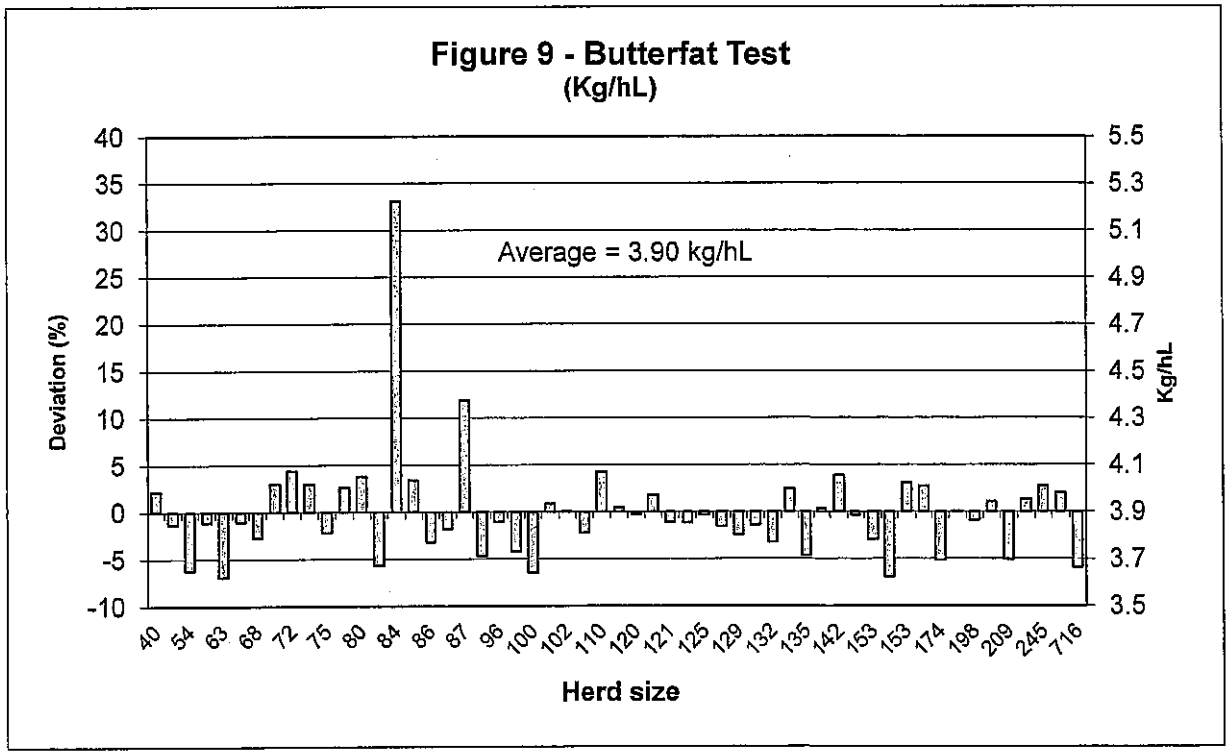


Figure 9 - Butterfat Test
(Kg/hL)
Average = 3.90 kg/hL
Deviation (%)
Kg/hL
40
35
30
25
20
15
10
5
0
-5
-10
5.5
5.3
5.1
4.9
4.7
4.5
4.3
4.1
3.9
3.7
3.5
40 54 63 68 72 75 80 84 86 87 96 100 102 110 120 121 125 129 132 135 142 153 153 174 198 209 245 716
Herd size

APPENDIX E

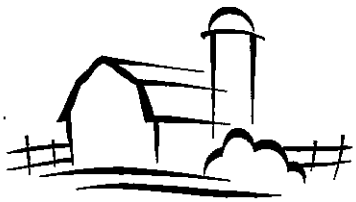
2012 Dairy Cost Study

Data Collection Forms

DAIRY COST STUDY, 2013

Investments and Liabilities

Confidential



General Information

Name:	TPQ Holdings kg/day: (January 2013)	
E-Mail:	Number of Years in Dairy	
Fax:		

Land Information

	Total Acres	$ per Acre	% to Dairy	% to Other Farm
Building Site				
Pasture				
Crop / Hay Land				

Farm Loans

		Balance: Jan. 1, 2013	Interest Rate	% to Dairy	% to Other Farm
1	Land:				
1					
2	Building:				
2					
3	Livestock:				
3					
4	Machinery:				
4					
5	Other:				

Supplies Inventory

		Value: Jan. 1, 2013	% to Dairy	% to Other Farm
1	Gas, Oil & Grease			
2	Vet., Semen, Etc			
3	Bedding			
4	Dairy Livestock Supplies (ie. pails)			
5	Rations & Supplements			
6	Other Supplies (ie. filters, soaps, etc.)			

If you have any questions, please call Pauline Van Biert at 780-415-2153, toll free by first dialing 310-0000

DAIRY COST STUDY, 2013

Machinery and Buildings on Jan.1, 2013 **Name:** _____

	Buildings Used for Dairy:	Purchased Price	Year Purchased	% to Dairy	% to Other Farm
1					
1					
1					
1					
1					
1					
1					
1					
1					

Examples: barns, machine shed, hay sheds, bunkers, shop, calf hutches, corrals

Tractors & Trucks Used for Dairy:

2					
2					
2					
2					
2					
2					
2					
2					

Dairy Equipment:

3					
3					
3					
3					
3					
3					
3					
3					
3					
3					

Examples: bulk tank, pipeline, milk meters, washer, vacuum pump, generator, buckets



see over

Other Equipment Used for Dairy:		Purchased Price	Year Purchased	% to Dairy	% to Other Farm
4					
4					
4					
4					
4					
4					
4					
4					
4					
4					
4					
4					
4					
4					
4					

Examples: manure spreader, barn cleaner, manure pump, cattle trailer, quad, bale feeders, silo unloader, scraper, feed mixers, sawdust blowers, semen tank, fencers, fans, crowd gate, small tools (table saw, drill press, welder, power tools), fuel tanks, wheel barrows, computer feeding system, home computer

DAIRY COST STUDY, 2013

Monthly Reporting Sheet

Confidential

Name: _____

Month: _____

If you have any questions, please call Pauline Van Biert at 780-415-2153, toll free by first dialing 310-0000

Dairy Herd

		Beginning No.	Purchases		No. Born	Died or Trans/Out	Sales		End No.
			No.	Total Value			No.	Total Value	
1	Milking Cows								
2	Dry Cows								
3	Bred Heifers								
4	Open Heifers								
5	Heifer Calves								
6	Bull Calves*								
7	Herd Bulls								

***less than 6 months**

Capital Purchases

			Specify	Total Value ($)	% to Dairy	% to Other Farm
1	Equipment	*Purchases:*				
2		*Sales:*				
3	Tractor/Truck	*Purchases:*				
4		*Sales:*				
5	Buildings	*Purchases/Const:*				
6		*Sales:*				
13	TPQ	*Purchased:*	(kgs/day)			
14		*Sold:*	(kgs/day)			
16	Credit Transfers		($/kg)			

Milk Produced / Sold *

		Litres	Total $ Value
2	Milk Fed To Livestock		
3	Milk Used in the Home		
4	Unuseable Milk (dumped)		
5	Miscellaneous Dairy Income (i.e. colostrum sales, BSE program pmts.)		

*** All Plant Sales will be recorded from Milk Statement provided by Alberta Milk**

	FEED Used by Dairy Herd	Office Use	Unit Type*	Bale Weight	Amount Used	Unit Price (if purchased)	Cd		Office Use	Unit Type *	Amount Used	Unit Price
1	Barley						21	Dairy Ration				
2	Oats						22	Supplement				
3	Wheat						23	Brew Grain				
6	Hay (homegrown)						24	Beet Pulp				
6	Hay (purchased)						25	Alfalfa Pellets				
7	Silage						26	Calf Feed				
8	Haylage						27	Milk Replacer				
9	Greenfeed						28	Salt				
10	Straw - Fed						29	Min. & Vit.				
11	Straw-Bedding											
11	Sawdust											
12	Other:						31	Grinding & Processing				

* T = Imperial Ton, t = Metric tonne, bu = bushels, kg = kilograms,
ba = bales (please provide bale weight), bags (20 or 25 kg)

	LABOUR for Dairy Activities *		Total Hours	Wages & Board
1	Operator			
2	Wife, Partner, 2nd Operator			
3	Family Labour	*16 yrs and Over*		
4		*Under 16*		
5	Hired Labour	*1*		
5		*2*		

* do not include hours doing fieldwork

	EXPENSES	Total Farm ($)	% to Dairy	% Other Farm
1	Veterinary and Medicine			
1	Breeding			
2	Livestock & Barn Supplies			
3	Building & Fence Repair			
4	Machinery & Equipment Repair			
5	Fuel, Oil, Lube (for equipment, not heating)			
13	Natural Gas			
14	Electricity			
15	Other Utilities (phone, propane, heating oil, etc.)			
7	Insurance, Licences & Taxes			
8	Cash Rental (pasture, equipment, leases, etc.)			
9	Operating Loan Interest			
10	Custom Work (i.e. manure hauling, parlour cleaning)			
11	Silage Bags (hay tarps, plastic, etc.)			
12	Misc. (legal, acct, D.H.I., hooftrimming, etc)			
12				

Confidential when Completed