"Comparison of the Chilean and New Zealand Milk Production Costs"

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Daniela Karin Winkler

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To Richard

Abstract

This research concludes that Chilean farmers have lower or competitive winter milk production costs, measured as the cost per unit of production and per unit of production factor.

This research highlights Chilean and New Zealand advantages, being the formers lower labor cost and lower value of land, and the latter's existence of the veal market and a completely vertically integrated industrial organization. This industrial organization provides "tacit protection" to NZ dairy farmers, this protection provides the necessary stability to permit complete specialization by dairy farmers, which increases efficiency. The "tacit protection" explains the higher prices paid to New Zealand winter milk producers in comparison to Chilean farmers. Finally NZ's Industrial Organization (I.O.) (farmers, companies and NZDB, completely vertically integrated) eliminates the additional cost of having predominantly even year round milk production and having a lower reception & elaboration (processing) capacity.

Finally the research shows Chilean disadvantages: the political economic environment and the Industrial Organization. The first disadvantage is related the use of the exchange rate as an economic tool, which has reduced its real value by 40% since 1990. And the second disadvantage is the pressure on farmers from elaborating companies to produce more during the winter in order to avoid a larger plant reception/elaboration capacity investment, which has a high cost if the seasonal production system were predominantly used instead. Another disadvantage for Chilean farmers is that companies keep farmers convinced this is the best production system, and that they are not able to compete with countries such as New Zealand. Companies like Soprole (controlled by the NZDB) and Nestle, greatly benefit out of the winter production system, by having lower infrastructure costs and by having all the imports controlled in their hands. This creates monopolic powers in the final product market. NZDB and the NZ I.O. benefit by maintaining through Soprole the beliefs of Chilean farmers that they are unable to compete, otherwise they would be a threat in the International Market.

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Chapter 1 Introduction

1.a. Hypothesis

Chilean dairy farmers are as efficient as New Zealand dairy farmers, in year round milk production. Efficiency is measured by the relation between cost and production.

1.b. Definitions

Efficiency: "The lowest cost level a firm can reach at any output level is that represented by the long-run cost curve. The long-run cost curve shows what we might call the optimum combination of factors. This is often referred to as ***economic efficiency***. The firm may be combining factors in a way that is *technically* efficient but still be inefficient economically. This would arise if it was using large amounts of expensive factors and small amounts of cheaper factors. It would be more economically efficient to switch to a technique which used fewer expensive factors and more cheap factors." ("Economics and changing economies", M.Mackintosh,V.Brown, N.Costello,G.Dawson, G.Thompson and A.Trigg, 1996)

Competitive Firm: "Under perfect competition, the firm is a pure *price taker*. It has no choice but to accept the price that has been determined in the market." "Because it is a price taker, the *equilibrium* of a profit-maximizing firm in a perfectly competitive market must occur at an output level at which marginal cost is equal to price. This is because a horizontal demand curve makes price and MR (Marginal Revenue) equal and, therefore, both equal to marginal cost (MC). The MC =P condition gives us the output that maximizes the perfectly competitive firm's profit. It does not, however, tell us whether the firm is making a profit or incurring a loss. To determine this, we must compare price with average cost." "In long-run competitive equilibrium, every firm produces at the minimum point on its average cost curve. Thus the outputs of competitive industries are produced at the lowest possible cost to society." ("Economics, principles and policy" William J. Baumol & Alan S. Blinder, 1994.)

1.c. Objectives

The objective of this study was to compare cost of production for Chilean year round farmers with New Zealand year round dairy farmers. Therefore the objective of this work was to determine if Chilean farmers can produce as efficiently and competitively as their New Zealand counterparts, in year round production. An additional aspect of this research is to investigate if Chilean farmers may increase their milk production and/or change to seasonal production.

1.d. Importance of the thesis

This topic is important because if the hypothesis is accepted then Chilean producers may have been misinformed with the idea that Chilean dairy farmers are not competitive in the world market, but in reality they are competitive, if compared to the similar, NZ year round production. Comparisons done in New Zealand as well as in Chile consider only the largest section of the industry: in New Zealand this is seasonal production and in Chile, year round production. Comparison between these countries compared different production systems, which led to incorrect conclusions. This research compared both countries considering only one production system year round production. Therefore the results compared the real characteristics of both countries, rather than differences between two production systems.

This research is also important because it unfolds the competitive advantages and disadvantages of both countries. By comparing the costs plus describing the source of those costs, it was possible to uncover and isolate the key advantages from both countries, as well as the disadvantages. This study is very meaningful because it presents the strengths and weaknesses of both countries, and likewise it highlights aspects that need to be maintained and developed, and also which aspects need to be changed and worked on. This could indicate the needed changes on how the dairy industry is structured and how it performs today in each country.

This research raises the important question: why the companies, drive farmers through price regulations to produce with the year round production system eliminating

any possibility to produce milk in a seasonal way.

This research was also very relevant because it created a database, of a particular subject that has not been researched in such a way before. This database (contained in the appendix), shows the values obtained from the 18 farmers and also in all currencies. There are sheets that present each particular farmer and the values per liter, per hectare and per cow, in New Zealand currency, US. Currency and Chilean currency. Then there are sheets that summarize the results per liter for all farmers in New Zealand currency, other sheets in US. Currency and Chilean currency, being this also for results per hectare and per cow. Finally there are additional sheets that present the different results utilizing the estimated exchange rate. In those cases it was not necessary to re-write the whole data but only that affected by the exchange rate. Therefore in Chilean currency the results for the New Zealand farms needed to be written again, and for New Zealand currency only the results for the Chilean farms had to be presented. The most important aspect of this database is that it gives a starting point for further research. Also for completion or comparison of those researches done in New Zealand about the winter milk farming production system. This database provides information about twelve other NZ cases that could amplify those investigations mentioned in the literature review.

1.e. Methodology

The methodology was a simple accounting comparison between production costs in both countries, and also a calculation of ratios of production units per production factor units. The major aspect involved here was to obtain reliable and accurate data for those costs, which are unpublished. This research also included interviews and direct contact with people involved, in order to obtain that information.

An alternative exchange rate was calculated because of suspicions of distorted conclusions with the official exchange rate, which is used in Chile as an economic controlling tool. The alternative exchange rate was calculated in both countries by determining the real exchange rate of 1990, and then applying the inflation growing rate to the nominal exchange rate in order to maintain the value of the real exchange rate

from 1990. This permitted a comparison of both countries with the actual reality but with the terms of trade both countries had in 1990. Therefore external shocks to the US dollar were eliminated, such as the Russian economic collapse, the Asian crisis and the Brazilian crisis among others.

1.f. Limitations

This research has some limitations and the most important is that it only included 18 farms, 12 in New Zealand and 6 in Chile. This is a big limitation because it does not allow any possibility to make general conclusions in relation to the countries, it does not allow any statistical conclusions because of lack of statistical significance, and finally this does not permit any econometrical modeling of the production systems in either of the countries.

There was also a limitation in conclusions because the number of Chilean farms was half of New Zealand's. And in some cases half of New Zealand had one pattern and half had another, and the Chilean results pattern was similar to one of the NZ groups. But because the number of cases was half it was clear conclusions were not possible. It was not possible to see if Chile had another 6 cases if those would have had the same pattern than the first lot, or like the NZ results having a split of half in each "group".

Finally this limitation was caused because the number of New Zealand farmers that produce only during winter is very small (only 45 were contacted). So it was very difficult to find farmers that were willing to give their information (21, from which 12 were useful). And in the Chilean side the problem was a very poor response, over 97 questionnaires were sent from which only 12 were returned and only 6 were useful.

1.g. Further Research

Further research could be done in this subject by utilizing more cases in each country and doing statistical inference. It would be very productive for both countries to be able to generalize about the reality and production systems, because it would allow to draw more general conclusions and not particular ones as in this research.

Econometric modeling of the hypothesis of all Chilean farmers producing under a seasonal system could also be further research. Also develop econometric models, under the hypothesis of New Zealand dairy farming without the New Zealand Dairy Board, could be also done as further research.. And then compare the possible scenario and check whether it gives the same results than this research.

Research could also be done with a journalistic perspective by researching, if it is coincidental that most of the latest articles and bulletins published point towards quality as the key to increase dairy sectors competitiveness, without any mention of the industrial organization and the reduction of the value of the exchange rate. Example of these articles are "Quality of Milk: Price of quality" Nestle Bulletin Sept / Dec 1996,[1] which does not mention the exchange rate neither the industrial organization and focuses in quality. "How milk is being paid in Argentina"[1], The farmer Agricultural Bureau of the Chilean Embassy of Buenos Aires Argentina, is also an example which mentions only quality drawing away any attention to the other important issues like exchange rate and industrial organization. The article "Triangle of the Currencies"[1] Fedagro, also mentions that in discussions between government and farmer organizations about the present agricultural crisis, elements as exchange rate values are avoided. So considering that the Chilean dairy elaborating industry is handled by four main companies, Nestle , Soprole (50% New Zealand Dairy Board owned/controlled), Parmalat and Loncoleche, it would be interesting to investigate whether it is beneficial for the companies to attract the attention from the farmers towards the quality issue and away from exchange rate value problems, and for the government to attract the attention towards quality and away from the Industrial Organization disadvantage. It would be very interesting in terms of journalism to find out if there is any connection or pure coincidence that government and companies are driving the attention towards quality and away from governmental and company issues, and not against each other.

[1] See Literary Review.

Chapter 2 Literary Review

This research was based on four years of work in this topic, by the researcher. The researcher studied this subject during her last two years at university in Chile, compiling a thesis about Chilean dairy industry, for the completion of her five year economics degree. That research was the basis for her application to the New Zealand O.D.A. scholarship to continue her investigation on the subject, including New Zealand industry structure and dairy prodction.

The literature related to the subject was / is very scarce in Chile as well as in New Zealand. There was no reliable information available in Chile about the costs of milk production. There was some information but it only considered average values and avoided items like cost of invested capital, therefore not useful. There was / is good information available in New Zealand about the costs of milk production ("1995/1996 Economic Survey of Factory Supply Dairy Farmers", Livestock Improvement), but it is only concerned with seasonal milk production. So this lack of data motivated the necesity to obtain data from the primary source, through questionnaires.

There were several articles about dairying in both countries, especially in New Zealand, due to the size and importance of this industry in the total New Zealand economy. But there is no complete study about the costs of production in both countries with the winter milk production system, or any similar investigation.

Some of the articles were...

- " Chile and New Zealand, and the deceiving average values" "Chile versus Nueva Zelandia o los engañosos valores 'promedio'.", Overo Colorado, Red German magazine, Bruno Winkler, April 1997. This article is about the issue of comparisons made between Chile and New Zealand, where it has been continuously said that New Zealand farmers receive less money for their milk than Chilean, implying with this that they are more competitive. This article stated that the conclusion about prices is

only a result of average values. It uses an example of Chilean being paid $100 Chilean pesos for year round milk and $65 pesos for seasonal milk, while New Zealand receives $120 pesos for year round milk and $70 pesos for seasonal milk. Then it considers the industries structure, where Chilean seasonal farmers are a 30% and year round are 70% of the total, while in New Zealand seasonal farmers are 90% and year round are 10% of the total farmers. Then the weighed average prices in both countries are; $65 x 0.3 + $100 x 0.7 = $89.5 for Chile and $70 x 0.9 + $120 x 0.1 = $75 for New Zealand. This type of comparison is used by companies like Nestlé, writing that Chile gets paid a higher price than New Zealand, $89.5 > $75, while in reality $70 is higher than $65 (seasonal) and $120 is higher than $100 (year round). So if prices are compared individually New Zealand gets paid higher prices than Chile, while if compared with average prices the conclusion is opposite.

This article was useful to the research by supporting the issue of comparing both countries in terms of one particular production system rather than comparing them using industries averages.

- "Financial Indicators and management indicators for dairy farms" "Indicadores Financieros y de Gestión para Lecherías", Cooprinforma, Bulletin of Cooprinsem, José Luis de la Barra & Patricio Pantoja Sept / Oct 1998. 'The objective of this article is to present the most important financial parameters and to revise them and to propose new productivity parameters applicable to a dairy farm.'

This article was used to understand the accounting used by this agricultural cooperative to analyse the dairy farms profitability. It was also used as a point of comparison of the methodology used in this research to analyse dairy farms profitability.

- "Profitability of the dairy business" "Rentabilidad de la gestión lechera", Accion Ganadera, Cattle Action, Roberto Aichele 1997.

  This article analyses different elements and relevant items that need to be kept in control in order to increase the profitability of a dairy business. It also explains that complete reduction of costs does not necessarily mean increase in profitability if the wrong item is cut back. On the other hand an increase in investment or production factor does not mean an increase in costs and a reduction of profits. This article

explains the use of production factors and costs management that would increase the business profitability, and also reveals reasons why this is the case.

This article was used to compare with the analysis done in this research. It also supports the issue described about the faces of production and how levels of investment can increase, maintain or reduce the total income.

- " Triangle of the currencies", "El triángulo de las monedas", Fedagro, Federation of Agriculture Osorno, Luis Momberg. This article is about the use of three different currencies in Chile and the way Agricultural problems have been faced by the government.

  '...this country is being managed with three different currencies ($ - US $ - UF)

  $ The peso helps us to move around the streets, but we do not use it for anything else.

  US $ Based in this currency all the big international agreements are managed, but for us is the ruin, because it has lost its internal inflation since 1988.

  UF The UF suffers the internal inflation. This UF is the one that is leaving us without working capital (poorer in the international context). Because it raises and raises every day, and our products are valued in another currency.'

(All the bank credits, loans and overdraft facilities are in UF, while all the products are valued in terms of US dollars). This article shows then a table comparing UF and US dollars :

'I will next give an example of values:

Date	1 UF	1 US $	Ratio
30-03-1988	4,118.59	243.33	16.93 U$/1UF
31-12-1993	10,623.18	425.73	24.95 U$/1UF
31-12-1994	11,533.17	402.23	28.67 U$/1UF
02-06-1997	13,595.20	417.00	32.60 U$/1UF

With this calculation draw your own conclusions. Could you imagine, if today with 1 UF equal to $13,595.20 we could buy only $16.93 US$, we would have a dollar of $803, we would obtain the following prices for our products!

Milk 1 Liter	US $	0.20	$	160
Beef, 1 Kg.	US $	1.00	$	803

1 Ton Sugarbeet	US $ 59.00	$ 47,377
1 Ton Wheat	US $ 213.00	$ 171,039

If this were true, **would you have any fear to the international agreements ?'**

This article was used as an argument to use the UF currency to account the inflation effects in the Chilean economy. It was also used as an argument to develop an alternative exchange rate, to analyse the results with an US $ exchange rate that does include the inflation of the past 11 years.

- "Quality of milk: price by quality" "Calidad de Leche : Pago por Calidad", Nestle Bulletin, Sept / Dec 1996;

  This article speaks about the Chilean Dairy industry itself and in relative terms to the international market. Once this is stated, the article explains the need to increase quality control of the milk. This bulletin states that the company has implemented a quality policy where the milk of each plant is going to be analysed in a more thorough way than it has been done until now. It also says that this analysis is going to affect the pricing system including more items to price negotiation. Finally the company (Nestlé) supports this policy by arguing that this is what is done in other countries, and that it would make the industry more competitive.

This article was a key point for the explanation, of what the relationship between farmers and companies is. This article says that the way Chile is producing (70% year round production system) is the best way and that quality is the key to competitiveness. At the same time it says explicitly that Chilean farmers get paid higher prices than countries like New Zealand. In counter part this reseach "Comparison of the Chilean and New Zealand milk production costs" showed that the price received by farmers was lower than New Zealands, and that companies benefit out of having the farmers convinced that year round production system is the best option, when in reality it is the best option only for the company rather than for the industry. Finally the article mentions how companies are increasing the complexity of the pricing system, with examples like quality, which leads to an individual negotiation by each farmer and the company. This article shows how the companies try to impose a reality in one way, while the same reality can be understood in a different way, and it also shows that the

dairy industry does not benefit as the companies say indicate in such articles.

- "How milk is getting paid in Argentina", "Cómo se paga la leche en Argentina" El Campesino, The Farmer, Agricultural Bureau of the Chilean Embassy in Buenos Aires, Argentina.

  'For the growing Chilean dairy industry, as well as for other agricultural sectors, to project itself with strength in the international commerce, it has to center its preoccupations in quality. The information that this article provides could be useful for the national dairy sector, because it shows how milk is getting paid in Argentina in 8 of its main industries : Abolio & Rubio, Gándara, La Serenísima, Nestlé, Milkaut, Parmalat, Sancor and Williner.'

This article was of no direct use in relation to the research, just as a reference. It was interesting to see that this information provided by the Chilean Embassy in Argentina (Governmental Agency) as well as the one provided by the Nestle Bulletin, emphasises in the quality aspect of the industry rather then the industrial organisation's structure. Something else that was of interest in this article was the coincidence of Nestle and Parmalat being the main companies in Argentina as well as in Chile, which could led to the question whether it is "coincidental" or not that quality is a concept in milk pricing.

All these articles were of use in one way or another, mostly presenting sustainable evidence of the problems the dairy industry is facing, rather than providing constructive information. All the articles address the profitability issue in one way or another and mention that something needs to be done. But none of them give any general database on costs because the Chilean dairy farms' figures are unknown, and have not been published or collected by anyone before. Because of this fact, several interviews were made in order to obtain information from people related to the subject. The people interviewed were Mr. Victor Esnaola, dairying specialist of Odepa, Oficina de Desarrollo y Planificacion Agraria, Office of Agricultural Development and Planification, Ministerio de Agricultura (Agricultural Ministry), and Mister Jorge Prado, Chilean Agricultural Minister from 1982 to 1990. Both agricultural authorities were interviewed during the completion of the research for the Chilean thesis. Both of them mentioned the lack of information about the Chilean dairy costs, and lack of information

about the dairying system in New Zealand. They also mentioned the need of doing something about the dairy industry, because it is not sustainable in the long run as it is working today, due to its lack of competitiveness.

In the case of New Zealand there was / is information about the costs of milk production available.

- "1995/96 Economic Survey of Factory Supply Dairy Farmers", Livestock Improvement,

  "This report contains the results of the 1995/96 Economic Survey of Factory Supply Dairy Farmers, conducted by Livestock Improvement on behalf of the New Zealand Dairy Board. The purpose of the survey is to estimate dairy farmers' financial performance for 1994/95 and 1995/96.

  This survey is based on actual farm accounts for both years with additional accounts being included to update the 1994/95 year. Accounts are collected from farmers by Consulting Officers.

  Separate analyses have been conducted for the two major operator types: owner-operators and 50/50 sharemilkers. The analyses were split into six sections: milk income, cash flow, revenue and expenditure, farm profitability (including economic farm surplus), debt levels and servicing, and financial structure."

This report was very useful for designing the necessary questionnaire and also to structure the results statements. This report was only about seasonal milk and sharemilkers, without including winter milk producers, so the actual data could not be used.

This led to the interview with Professor Warren Parker and Professor Colin Holmes (of Massey University) and they directed towards the recent researches done in relation to winter milk production. Those researches were

- "Calving Date Systems Comparison", No. 1 Dairy Farm Massey University. "The concept and drive for this trial came from a group of local interested farmers. Their concern was initiated by the changing environment of the winter milk industry coupled with a demand for off-peak milk production from the milk processing facilities. They also identified farm management advantages such as increased

income, spread workload, and the suitability of summer-dry areas to autumn calving. In order to make informed decisions about options for milk production, there was a need for sound comparative production and financial data for 100% autumn, 100% spring and 50%:50% autumn/spring calving systems."

This research was very interesting as to understanding the issues concerned with winter milk production. The data of this investigation was highly interesting as a reference base for the analysis, but the data was not utilised because these were investigation farmlets and there is certain scepticism by Chilean farmers torwards that sort of information. So the values of real farms were used, farms that any Chilean farmer can come and visit (if the farmer permits an organised visit), and talk to the farmer about the agricultural problems of a year round production system farm.

- "Lessons from South Auckland Winter Milk Programme, 1989- 1997", New Zealand Dairy Group and Agriculture New Zealand, G.P. Jones & M.W Auld & W.J. Hanson.

  " The performance of Winter Milk production systems, represented by between 7 and 17 New Zealand Dairy Group suppliers in the South Auckland area, have been assessed for seven consecutive years. The monitoring programme has enable comparison of winter milk systems with typical seasonal supply systems, and identification of management issues facing winter milkers."

This research was also of interest to know the reality of the South Auckland dairying area, and the comparison between its winter and seasonal milk production systems. Mr. G.P Jones was contacted, and asked to help with more information. Mr. Jones explained that individual information of the farms monitored could not be provided, but he gave the names and addresses of the farmers involved. So the researcher approached those farmers as explained in the methodology, 3.A. Information Sourcing. This article was used as general background of the South Auckland reality and also as a source of contacts of farmers for the research questionnaires and interviews.

- "Autumn Calving, the Northland Advantage", Northland Dairy,

  " This technical bulletin is designed to assist Northland Dairy Suppliers to evaluate the place of autumn calving in their dairy farming businesses. The information is

based on the experience and analysis of management systems on farms where autumn calving has been practiced for a number of years. Although each farm and farmer will have their own individual circumstances, the information contained in this bulletin should serve as a very good first reference providing basic practical guidelines for any supplier considering a change to autumn calving".

This bulletin as the two mentioned before provided information about winter milk production in comparison to seasonal production, but they did not provide any specific information required for this research. These three items were the only recent publications about winter milk production available in New Zealand. This shows that there is an increasing concern about the advantages and disadvantages of both systems. Actually after reading the three of them it was interesting to find that the conclusions were opposing to each other. In relation to the research done these articles only provided background information, but no actual figures that could be used. This reality highlighted the need to obtain the information required directly from the source, the farmers.As in the case of Chile

In New Zealand also other articles were revised in order to obtain a clear picture of the Dairy Industry as a whole rather then only as winter milk producing system farms.

- "Reminder from Chile about NZ Strengths", Dairy Exporter, June 1998, Prof. Colin Holmes. This article was about a general comparison between Chilean and New Zealand Dairy Industry. After describing similarities and differences two statements were drawn, first the former country was not competitive, while the latter was competitive and the following statement was the key factor of New Zealand's success: "Dairyfarmer control of the industry. The people who manage and work on the dairyfarms." (Existence of a sharemilking possibility) This article showed the Chilean reality as a reminder of New Zealand's strengths by showing what happens when those key factors do not exist any more.

This article was very interesting for the research because it showed the insights of Prof. Colin Holmes, (associate professor, department of animal science, Massey University, N.Z.) of the Chilean reality and the disadvantage Chilean dairy farmers have by not

having control over the processing industry. It was also interesting because the key elements of competitiveness mentioned were not exclusively to New Zealand, they were elements that any country could adopt if it "develops" or "adopts" a farmer controled industry.

- "Supplier News July 1998, the Blue Book", New Zealand Dairy Group of Companies.

  This booklet contains articles and advertisements and all sorts of helpful information in different elements of the content list: News Briefs; Anchor Milk Round -Up; Around the Sites; Milk Quality; Milkline; International Market Update; Voice from the Field; Comparative Farms; Rural Studies; Positions Available; Positions Wanted; Mailbox; Classified Ad Order Form; Contact List.

This suppliers booklet was very useful to find out the issues that interest farmers and industry. This booklet showed from first hand what was happening in the Industry, and which was the information provided, and required concerning the farmers. It had articles about milk quality, winter underfeeding of cows, information overload, pre-calving management, and update of what was happening with the legal elimination of the New Zealand Dairy Board, and the interest of New Zealand Dairy Group and Kiwi, of maintaining the single seller condition. This booklet was of no direct use for the research but it gave a clear insight to the researcher in relation to what was happening in the Industry.

Chapter 3 Methodology

This research has been done with information obtained directly from the primary source, and the methodology utilized was to contact the farmers directly and ask them to fill in a questionnaire with the data requested.

3.A. - Information Sourcing

3.A. I. - New Zealand Farmers

3.A. I. a.) Search

The first stage of this research consisted in searching for farmers who produce during winter. To find names of dairy farmers the search was done in three different ways, through personal contacts, through Chilean contacts and through agricultural organization consultants.

The search through personal contact was done by asking friends, lecturers and acquaintances in New Zealand, if they knew dairy farmers. From these personal contacts, (16 in total), the result was of 7 names of dairy farmers (only 2 winter milk producers), a Consultant Officer of Livestock Improvement Advisory, a production Officer of Northland Dairy Company and a Field Officer of New Zealand Dairy Group.

The search through Chilean contacts consisted in asking Chilean people (3 friends) related to New Zealand if they knew dairy farmers or agriculture related people. The result was of 4 people; all of them related to agriculture but none of them a winter milk farmer.

The search through consultants was done asking a total of 11 people of different organizations, Agriculture New Zealand, Livestock Improvement Advisory, Northland Dairy Company, New Zealand Dairy Group, New Zealand Grasslands Association, and Kiwi Co-operatives Dairies Limited, if they could provide some dairy farmers names. The result was 28 names of winter milk farmers, and an invitation to participate in a Livestock Improvement Advisory meeting with winter farmers in Otaki. [2]

[2] Most of the consultants were reluctant to provide any name or address of farmers because of the Privacy Act.

3.A.I. b.) Approach

The next stage of the research was to send research packages to the farmers. This package contained a questionnaire, an explanatory letter and an envelope already addressed and stamped, for the farmers to return the questionnaire back to the researcher. The letter explained the purpose and reason of the research, and it also requested the filling of the questionnaire, with the data and the costs of milk production. The questionnaire was developed and designed specifically for this investigation, containing all the relevant information needed for the completing of this research, it was also designed to be easy to fill in by the farmers. (See appendix B pages 112)

Once the questionnaires were received back another letter was sent back thanking farmers for the completion and the time spent on it. This letter also asked the farmers if they knew other farmers who could be interviewed. The result was another 16 names of winter milk farmers. Research packages were sent to them too.

3.A.I.c.) Results

The result of this stage was 45 farmers approached, from which 21 answered from which only 12 were useful for the research. From those 21 farmers who answered some did not want to participate in the research, other did not have all the information and others did not fill the questionnaire completely. So the research was done with those 12 farmers who answered the questionnaire completely and were willing to help in this research.

3.A. II. - Chilean Farmers

3.A.II. a.) Search

The search for Chilean farmers was done in the same way as with the New Zealand farmers, through personal contacts and through consultants.

Through personal contact, Mr. Bruno Winkler provided names of 11 farmers of the Xth region in Chile (See Appendix A page 110). He also helped by contacting those farmers and by sending the filled questionnaires back to New Zealand.

Several consultants and researchers were asked for help with names of dairy farmers. Those consultants and researchers are members of Austral University, INIA La

Pampa[3] (National Agricultural Research Institute), INIA Remehue, INIA Carillanca, INIA Quilamapu, Agricultural Ministry, and La Frontera University. The result was a list of 80 farmers from the IX and X Region. All of them contacted through Mr. Ignacio Lanuza (INIA Remehue) and also 6 farmers from the VIII Region contacted by Mr. Ernesto Jahn (INIA Quilamapu).

3.A.II. b.) Approach

A research package, consisting in an explanatory letter, a questionnaire and a returning envelope, was sent to all 97 farmers. The questionnaire was the same as the one used in New Zealand, it was translated into Spanish, keeping everything else exactly the same. The only difference to the NZ research package was that the return envelope was addressed with Mr. Winkler's address so that the farmers did not need to pay international postage but only national. So Mr. Winkler collected all the questionnaires returned to his address and then he sent them as parcels to New Zealand so that the research could be continued.

3.A.II. c.) Results

From those 97 questionnaires sent only 12 were returned from which only 6 were useful, the other included 3 questionnaires returned without any answer or comment, 2 were only partially filled, and the last was a case where the farmer had sold the farm. So the reply was 12% percent and only 5% percent of the total sent were useful. (See appendix A page 106)

[3] La Pampa, Remehue, Carillanca, Quilamapu, are different research stations through out Chile, all part of the National Agricultural Research Institute.

3. B. - Data Definition & Calculation

3.B. a. - Income

3. B. a. i) Milk

The farmer's income has three origins, sales of milk, stock and calves; where milk represents over 85% of the incomes for all the winter milk farmers.

B.a.i.1.) New Zealand farmers

For the months between August and April the income was calculated as kilos of Milk Solids, "times" payout of the Company. This payout has two components, one is the payout of the New Zealand Dairy Board to all farmers due to its performance in the international market, - its exports. The second component is the payout, that companies give to farmers due to their performance in the national market. The farmers in the research deliver their milk to New Zealand Dairy Group or to Kiwi Co-operatives Dairies Limited. Their payouts for 96/97 season were 3.69 $/kg MS and 3.5 $/kg MS respectively and for 97/98 season were 3.51$/kg MS and 3.74 $/kg MS, respectively. In the case of those farmers who provide milk to Kiwi Co-operatives Dairies Limited and provided milk to Tui before the merger, they receive 20 cents $/kg MS less due to the terms of the merger, so their payout was $3.30 /kg MS and $3.54 /kg MS in the seasons 96/97 and 97/98 respectively. Therefore the income of each farmer was calculated as the Kilos of Milk Solids provided each month times the payout of the company supplied to, and for those months from January to April it was multiplied by the payout of the season 96/97 and for those from August to December it was by the payout of the season 97/98.

The winter milk income is calculated in a different way than the seasonal. It is first regulated by an individual contract made by the company and the farmers, where the quota (in liters) is fixed. The second difference is that the price of that milk is paid as dollars per liter per day, and any amount provided above the quota is paid as the seasonal milk, $/kg MS. The premiums paid by New Zealand Dairy Group and Kiwi Co-operatives Dairies Limited were 0.276 $/liter/day and 0.32 $/liter/day respectively. The questionnaire asked the liters, kilos milk solids, quota (number of liters), premium, and months supplied by each farmer. The winter milk income was calculated as follows:

1. - Divide kilos of milk solids by liters to get the percentage of protein plus fat.
2. - Divide liters per month by 31 days in May, July and 30 in June to get liters supplied per day.
3. - Calculate liters per day minus the quota (liters/day).
4. - Multiply the result of step 3.- times the percentage calculated in step 1.- to transform the difference of the milk supplied and the contracted quota (in liters) from liters into kilos of milk solids. There are four cases where the liters of milk were not supplied, so the percentage was assumed to be 7,6%, which is common for the Friesian breed (Prof. Colin Holmes), and was also a common answer of those who did fill in that question. Therefore deemed a reliable assumption.
5. - Multiply the amount above (kilos of milk solids/day) (result of step 4.-) times 30 or 31 to get the amount per month.
6. - The winter milk income has two components, quota and the difference above the quota. The quota part is equal to the quota (liters/day) times the premium (dollars/liter) times 30 days in June and 31 days in May & July, to get a monthly result. The income of the difference above the quota is the amount resulting from step 5.- (kilos MS / month) times the seasonal payout ($/Kilos MS), where payout of season 96/97 was used for May and June, and payout of season 97/98 was used for July. The winter milk income equals the sum of both of the above, added together to give the income.

The values used in the results statements, are the seasonal and winter milk incomes, they are not added together, in order to show the relative importance of winter milk contracts in relation to the whole milk production. Seasonal milk is the addition of incomes of January to April and August to December. Winter milk is the addition of incomes of May to July.

B. a. i . 2.) Chilean Farmers

In Chile the milk is paid for by the companies in a different way than in New Zealand, it is paid per liter of milk the whole year round rather than kilos of milk solids. One base price and several factors compose the price. The base price per liter is negotiated individually by each farmer with a representative of the company supplied

to, every year. It depends on the negotiating abilities of the farmer, in relation to things as location, production and quality, how much he/she will get paid by the company. This is why all Chilean farmers show different prices for their milk.

The factors which have a certain value in pesos per liter, that are added to the base milk price are:

- Count of somatic cells <3.000.000 cells / ml
- Colony forming units <90.000 col./ml
- Volume supplied
- Winter bonus
- Protein > 3.2 %
- Fat > 3%
- Ratio summer/ winter (closer to 1 higher the benefit) [4]
- Cooling tank
- Companies / Private tank
- And in the case of the suppliers of Colún (only Cooperative Company) they have also an extra value added related to their shareholder condition.

The milk income was calculated as milk production measured in liters times the price each farmer receives, where this price includes all the different factors listed above.

B. a. ii) Stock Sales

The income component "stock sales", is the return of the sales of old cows, cull cows, or cows that have any other problem for producing milk at the farms required standards. The amount of cows sold is equal to the replacement rate (asked in the questionnaire) times the size of the herd (if the size of the herd is not being increased). The replacement rate fluctuated between 19 % and 26%, with an average of 23%. There was only one case where that question was not answered, then it was assumed to be 25%, because this is the most frequent answer.

Stock sales income is the multiplication of number of cows sold times market

[4] Winter = Total supplied in May, June, July, August
Summer = Total supplied in October, November, December, January.

price, also asked to each farmer in the questionnaire. The answers of market value of sold cows fluctuated between $270 and $450 (NZ dollars); where the average price was $358 per cow. Some farmers gave a range of prices, so their stock sales income was calculated with the average of the price range they gave, times the number of cows sold. This was applied to all farmers in the same way, Chilean and New Zealand farmers.

B.a. iii) Calves

Calves are a necessary condition for milk production, and have characteristics that they could be considered as milk's 'by-product'. As they are sold to the veal industry, they create an income for the farmer. The number of calves sold/ raised and their price were asked in the questionnaire. In some cases the answer given about price was a range, therefore the income was calculated with the average of the figures provided by the farmer.

Prices given by farmers fluctuated between $31.5 dollars per calf to $100 per calf, with an average of $49. But these figures were split in two ranges one between $30 and $50 and another between $70 and $100. These ranges are related to the age of the calves sold and this depends on what calving period those calves were born. All the farmers of this research have a split calving system, calving in autumn and spring. Most answers included April/May and August/September, and some had also calving in months besides those mentioned, but it was not frequent. Those calves sold in spring had a price around $40 per calf, and those sold in autumn had a price near $80. Because of New Zealand's milk industry seasonality, prices of calves rise over a 100% during the autumn in relation to its value in spring. About 80% of the dairy farms have spring calving so that milk production is at its peak during the summer. Therefore the supply of calves for the veal industry is very high during spring and consequently the price per calf is low. On the other hand because the winter milk has a low demand, only to supply local market, the amount of farms that have autumn calving are only a few. This creates a small supply of calves for veal industry, therefore the price reaches over twice the value than during spring.

Calve sales income is only about 2% to 5% of the total farmer income. Still it is an important aspect of dairy production because calves are necesary, and as a 'by product' of milk production they need to be taken care of. It is positive for this industry

that this 'by-product' can be sold increasing the total income by 2% to 5%. Other industries have to pay to eliminate their by-products, and so it turns into a cost. So the calf's sales income is not important in relation to the total income, but it is important when compared to other industries.

In Chile there is no veal industry, therefore calves have to be sold once they are between 9 and 12 month old, or once they are finished for beef, weighing 450Kgs, 18 to 22 months old. The price and number of calves was provided by farmers in the questionnaires and in those cases where no price was given, the average of all the others was used, $122,000.- Chilean pesos, or $440.54 New Zealand dollars. This value is so high in relation to New Zealand's because there is no veal market in Chile, so all calves have to be grown for the beef market. The fact that it is not possible to sell calves when they are juvenile has affected the choice of breed used for dairy. One of the common breeds used is German Red which does not have such dairy qualities as Jersey or Friesian, but it has a very good balance between milk and meat production,(which the others do not have). Because calves are commonly grown and sold for the beef market their good meat producing characteristic is very important. Then there is the trade-off between the lower milk production and higher meat production, forced by the lack of veal market. Finally the fact that the price received per head is higher than in NZ, does not mean that the profit of this 'by-product' is higher than New Zealand's.

B. b.- Depreciation

Depreciation is a financial cost but not a cash outflow of the farm. This is the main reason why this particular cost is often neglected. Depreciation can be calculated in many different ways, straight- line, service of hours (for tractors for example), units of output, declining balanced and sum of the year's digits ("Principles of Accounting: A Managerial Approach", Robert E. Seiler, University of Houston 1967). Considering this farmers were not asked for these figures, avoiding miscalculations. A common standard was devised for all the cases for depreciation values. Consequently the questionnaire asked all the information necessary to calculate the depreciation of the farms.

The questionnaire asked for values of all buildings and machinery in a very detailed format. All farmers were asked the value of each element composing their infrastructure and machinery utilized for milk production. Also the number of years

each element is going to last, was asked. The Chilean law does not allow to depreciate the value of land, this is why this was not calculated nor in Chile nor in New Zealand, to keep the same standards in both countries. The same reason applies to the herd, which can not be depreciated, because it is supposed that it keeps its value through the years. Consequently depreciation is calculated for the infrastructure and machinery only.

Depreciation was calculated in a linear basis, by dividing the value of each item by the number of years it is going to last. The final cost of depreciation is the sum of all results of all divisions. In most farms the data needed for all calculations was provided so the depreciation cost calculations were straight forward. But there were some farmers that did not include the amount of years their infrastructure and machinery was going to last, so it was assumed that buildings were going to last 20 years, machinery 10 years and vehicles 5 years. These numbers were chosen because they were the most frequent answers in the other questionnaires.

The same calculations and assumptions were made for Chilean farmers.

B. c.- Capital

The cost of capital is another financial cost, that is not a cash outflow of the farm. Two elements, cost of debt and return of equity compose this cost. Because it is almost impossible to obtain an answer from farmers of how much their debts and liabilities are, because of its private characteristic, the cost of capital was considered as the interest rate over all the invested capital. In this way it did not make any difference whether the origin of the investment was the bank through a loan, or through single proprietorship by the farmer. If the origin of finance was the bank loan then the capital cost is a cash outflow, interest paid on the debt. If the origin of finance was owner capital then the cost of it could be a cash outflow as equity return or profits withdraw, or could also be reinvested in the farm, increasing the capital. As explained before, how much of the capital cost is equity and how much is debt, could not be asked, so it was assumed to be bank loans. Therefore capital cost was equivalent to a 8% percent interest over all investment, or alternatively that all the capital is owned by the farmer and equity return is equivalent to a 8% percent. Only the farmer knows whether he/she is paying this amount to the bank or if it is being kept as profit. All the capital considered here is equivalent to buildings, machinery, herd, land and shares of companies.

B. c. i.) Machinery and Buildings

The capital invested in Machinery and Buildings was calculated as the sum of the values of all the items used to calculate depreciation. There were two exceptions where the value answered in the questionnaire was the book value of machinery and buildings, after they have depreciated through the years. In these cases it was also answered how many years the machinery and buildings is going to last, until it has a zero book value. Applying the same assumptions than for the calculations of depreciation, and to keep consistency, the machinery was thought to last 10 years, vehicles 5 years and buildings 20 years. Then book value was divided by the years that it is going to last, which gave depreciation value, then this value times the difference between the years it is going to last and the assumed life span gives the amount of capital invested originally. For example if the book value of the cow shed was $3,000.- and it was going to last 2 more years until its value is zero, then depreciation is $1,500.- per year, consequently the original capital invested was $1,500.- times 18 years, $27,000.-. This example was applied to those cases where the answers were book values, and so this kept the consistency with the calculation of depreciation. Therefore capital invested in machinery and buildings was equal to the sum of all the answers in each item of depreciation calculation, or the amount calculated through the book value and the years that capital has already been used.

B.c ii.) Cows

The herd is also capital invested in the dairy farm. The way herds were valued was through the market price of cows bought. This question in the questionnaire was meant to be price of cows if they were bought, but only a few farmers gave a figure most farmers answered that they do not buy any cows. Those farmers that gave a figure all answered the same value, $800.- per cow, so this price was assumed for all farmers. Capital invested in cows was equivalent to the number of cows in herd times $800.- dollars.

Same situation happened with the Chilean farmers, only a few of them gave a price, then the average was used which was $1,429.6 New Zealand dollars, equivalent to $395,895.- Chilean pesos per cow. The rest of the calculation was done in the same

way than New Zealand farmers values.

B.c iii.) Land

Land is the most important element of the capital invested in the farm, constituting between 53% to 87 % of the total investment of the farms analyzed. The evaluation of the land is very arguable because there are other elements that distort the market value. For example tourism has affected the price of land in Otaki[5] in New Zealand and in Puerto Octay in Chile. Both areas have particular agricultural characteristics that do not match the actual price per hectare that is being paid, because tourism has turned those places into land for vacation or resort. Because of this, the evaluation of land was done through the leasing price. Each farmer was asked how much would he/she be paid if that particular land would be leased for farming. This amount is closely related with the quality of the land, the agricultural characteristics of it, and the agricultural market itself, without any distortion caused by any other non agricultural element. The total value of land was considered as the price paid for leasing multiplied by the number of hectares times twenty years, which would be a reasonable amount of years to buy a farm under such hypothetical conditions. Some farmers gave price and number of hectares in terms of acres, which were converted into hectares with this ratio, acres : hectares = 0.4047.[6]

B.c iv.) Shares

The New Zealand dairy industry is structured as a fully vertical integrated industry, where farmers are owners of the dairy companies, which have a cooperative ownership structure, and companies own the New Zealand Dairy Board (NZDB), which is the international commercializer of New Zealand's milk. In this way all New Zealand dairy farmers own shares of cooperatives. There is no dairy farmer who produces milk and has no shares, because these are a requisite for the collection of milk by the company. The number of shares owned by the farmer are in relation to the milk supplied per year. The farmer has to own so many shares as kilos of milk solids produced. In some cases the shares are equivalent to a certain ratio of kilos milk solids, for example

[5] People from Wellington buy land there for holiday or weekend houses.
[6] The same calculations were made for Chilean Farmers.

in New Zealand Dairy Group each share is equivalent to 0.625 kilos of milk solids, and next year (1999) it is going to be 0.5 kilos of MS., per share. In this way if a farmer wants to increase its dairy production, he/she will need to buy the number of shares equivalent to the forecasted increase in milk solids production. The shares of companies have different prices in relation to their relative importance in the total dairy exports done by the NZDB. For example the prices of shares are $1.5 for Kiwi Dairy Companies (Kiwi), and $1.00 for New Zealand Dairy Group (NZDG). For the farmer this also affects how many Kg. MS one share is equivalent to, or how much he/she needs to invest in shares. If considering for example that each share is equivalent to 1Kg MS, then the prices of shares would be $1.5 for Kiwi, and $1.6 for the NZDG. (0.625 Kg. MS = 1 Share NZDG = $1.00 => 1 Kg. MS = 1.6 Shares NZDG = $1.6; so 1Kg MS = $1.6 in NZDG and $1.5 in Kiwi.)

This shows that comparing both companies, New Zealand Dairy Group charges less per share than Kiwi, only $1.00 per share and $1.50 per share respectively, but the shares are equivalent to different amounts of milks solids. Therefore if the comparison is made in production terms, considering the price of 1 kilo of milk solids, the result is the opposite, NZDG's value of shares is higher than Kiwi's, $1.60 per share to $1.50 per share respectively.

The capital invested by farmers is equivalent to the number of shares times its price. All New Zealand farmers provided that information, so the calculation was based on this. The only similar case in Chile was a farmer that provides milk to Colún, the only cooperative structured company in Chile. All the other farmers provide to either Nestle, Soprole, Loncoleche or Soalva, which have a limited ownership structure. There is no other relationship with farmers then input supplier (producer) and input demander (company), and the only relating elements between them are milk production and negotiated price.

B.c v.) Interest Rate

"...The farm business is made up of two 'profit centers': the farming business that utilizes resources to achieve profit, and the property business that provides the majority of the resources required by the farming business and whose performance is measured by not only the 'rent' it receives from farming business but also capital gains

from the revaluation of the land." (Nicola M. Shadbolt, "Economic Efficiency in Dairy Farm Businesses".)

As the previous paragraph quotes there is a 'rent' paid to the property business. The capital gains from revaluation of land were not considered here because this analysis was done only with information of one year (1997), so there was no change in its value. On the other hand the value of 'rent' (or capital cost) was considered equal to the interest rate. It was not possible to ask farmers to give information about their debts and liabilities, due to the private characteristic of this information. Therefore the capital cost was considered to be equal to the interest rate, it made no difference, whether the capital was owned by a bank (totally or partially) or owned by the farmer. Under these conditions only the farmer would know how much of that capital cost was effectively paid to the bank as interests and how much of that capital cost was kept by him/her as 'dividend' of his/hers own capital.

The calculation of capital cost was made by adding together the values of capital invested in machinery & buildings, cows, land and shares, and then an 8% per cent interest rate was applyed. The same calculation was made for the Chilean farmers with the only difference that most of them did not have any capital invested in shares.

C. - Result Statement

All information obtained from farmers was summarized and condensed in result statements. Due to the Privacy Act names of farmers were changed into NZ A, NZ B, etc and Ch A, Ch B, for New Zealand and Chilean farmers respectively. The main reason why all farmers were coded in this way was because this research compares cases and not averages. There were not enough questionnaires to make statistically significant averages or generalizations of both countries, so it was a comparison of individual cases.

The result statements were divided into six parts, incomes, farm cash expenses, farm overheads, financial costs, business overheads and results.

C. I.) Income

The income section was composed by milk sales (seasonal), winter milk, stock sales and calves sales. All these elements were explained in the section above *B. Data description and calculation, a.- income* .

C. II.) Farm Cash Expenses

Replacement, pasture and supplements, fertilizer, animal health and wages compose farm cash expenses. Replacement is the cost involved in buying cows to replace those culled (sold). All farmers said that they do not buy any cows, they use heifers raised on the farm. Then the way this cost was calculated was assuming that those heifers had the same value than the rest of the herd. Therefore the evaluation of those heifers was with the price used to value the herd. The reason for this was that if those heifers were sold into the market, the price that would be paid for them is the cost of not having them sold and kept as replacement. It is quite likely that farmers would say that they raise those heifers for a lower cost than for what they were valued, but this would be part of a different activity related to raising animals either for replacement, or the meat market and not part of the dairying activity. Any difference of the real cost and the value applied would be a benefit of the animal raising activity rather than from the milk producing activity. Replacement cost was calculated as the number of calves risen times $800.00.- price in New Zealand or $1,426.3 price in Chile, which gave the value of the heifers once they were included in the milking herd.

Farm cash expenses or variable costs were composed by the costs of replacement, pasture & supplements, fertilizers, animal health and wages. The replacement was explained above, and the others are going to be explained in the following paragraphs.

- Pasture and Supplements is the cost composed by silage, alfalfa, paddock regrassing, alfalfa hay, concentrate, mineral salts, hay, meal, cropping, pasture renovation, grazing, feed, contractor costs, agronomist and weed & pest control. Pasture and supplements is the cost of feeding the herd, which includes cost of feed and cost of producing it.
- Fertilizers is the cost of all the chemicals utilized to maintain or improve soil's fertility.

- Animal health is composed by veterinary products, herd testing, semen, insemination and veterinarian costs.
- Wages cost is formed by salaries paid to milkers, inseminator, tractor driver, feeders, courses and/or instructions.

C. III.) Farm Overheads.

Shed expenses, fences, repairs and maintenance, ditches and vehicle expenses form farm overheads. Shed expenses include all the costs like disinfectant, dipping, paper towels, detergents, etc. Fences and ditches are only those values, they do not include anything else. Repairs and maintenance is the cost of maintaining all the installations plus the costs of repairing the milking equipment. Vehicle expenses also include the freight costs, which could be the cost of transport related to purchase and sale of stock, feeding, and fertilizers. The total is the sum of all the items listed above.

C. IV.) Financial Costs

These costs are depreciation and capital costs. Calculation of them was explained in sections *B.- Data description and calculation;* item *b.- Depreciation* and section *B.- Data descr....;* item *c.- Capital; v.)Interest Rate.*Total is the addition of both previous items.

C. V.) Business Overheads

These costs are constituted by fire & earthquake insurance, administration costs, farm manager wage, accountant, taxes (rates), general costs and accident compensation corporation (ACC). All the items listed above are basically self-explained, except of General Costs, which includes bills like phone, power, water[7], fax, post, and personal computer. In Chile ACC is included in the wages, it is deducted directly form the wages based on Chilean laws. Total business overheads is just the sum of the above.

[7] In Chile water gets charged in the same way as power does.

C. VI.) Results

The results elements are: total costs, total income, gross profit, gross profit without interests, taxes, net profits, and profitability.

- Total cost is the sum of totals of farm cash expenses, farm overheads, financial costs and business overheads.
- Total Income is the sum of milk sales, winter milk, stock sales, and calves sales.
- Gross profit is the difference between total costs and total incomes.
- The next item is unorthodox, because all farmers except one had a negative figure as gross profit. This would mean that no one pays any taxes, which is incorrect. It is possible that farmers were not receiving any profit of the 'capital property profit center', probably the 'rent' or cost of capital was not covered. This would mean that farmers were not making any profits by owning capital, but it still remained to find out if they were doing any profits on the farming business activity. Therefore the item gross profit without interest (GP- Int) was created. It is the value of gross profit without considering the cost of capital in the total costs. This item shows more likely the cash reality of farmers rather then the economic reality of them.
- Taxes were not considered in the analysis because of complexities with the Chilean taxing system as relates to farmers (agriculture). All the analysis was done until the item of gross profits without interest, because this was the only posibility to keep consistency with Chilean farmer and NZ farmer comparison. This issue did not change the results, by the contrary. The taxes are different for each Chilean farmer therefore it would give different results to each farmer that are not related to the farmers management performance. To make this point clearer it is necessary to first explain the taxing system and then the performance issue is going to be addressed again.

In New Zealand taxes are aproximately 33% percent for all farmers and so the analysis of the net profit gives the same conclusions than the gross profit, if comparing NZ farmers. Taxes in Chile are not a fixed percentage, they are progressive, so they are different percentages in different ranges of income. It depends in what range of income the person is, what tax percentage he/ she pays. The problem about taxes is even more complex with farmers, because there is an exception in the law. Some farmers pay "presumed rent", this means that they do not have official accountancy and it is

assumed that they earn a certain return per year per hectare and they pay a certain percentage over that "presumed rent". The decision whether the farmer pays taxes over real rent or over presumed rent depends on number of hectares, number of cows, total capital and membership in any limited ownership company or any corporate company through shares. Then some farmers are in a group that pay taxes based on presumed rent and other that pay based on real rent. Finally what makes it absolutely impossible to calculate this item is the fact that the rent is considered as the total rent of the farm, and the Chilean farms do not produce only one product, but at least five, so dairy is not the only activity. In most farms of the research the number of hectares of the farm were about 300 or 350 [8], where only 150 were used for dairy, and the other were used for potatoes, beef, sugarbeets, wheat or any other agricultural product. Even if all the values were known, any comparison between farms would be impossible. For example if two farms pay the same tax (which is almost impossible under the structure explained before), and the net profits were compared, the conclusion would not say anything about the performance of each farmer in one particular activity. Continuing this example, if both farms have a gross profit of 100 and pay a 20% of taxes, it may be possible that farm A made $ 80 as gross profit in the dairy activity and $20 in the beef activity, while farm B made $20 as gross profit in the dairy activity and $80 in beef activity. Now if the dairy activity is compared between A and B, the result would show that both pay the same 20%, which would not be the case if both farms produce only dairy, the 100% of the farm used for this activity. Farm B would pay a lower percentage than farm A because the range of the income of farm B would be lower than the range of income of farm A, because A's performance in dairying is better ($80/$100) than B's ($20/$100). Going back to the point above, any comparison of net profits between Chilean farms would include their performance in other activities, which distorts the main idea of this research, to find out the dairying performance of each farm.

- Profits: is the difference left after subtracting the taxes of the gross profit, but as taxes were not calculated net profits were not available.
- Finally profitability: is the percentage represented by dividing net profits by total capital invested. But because net profits were not available, profitability was

[8] The researcher knows some of the farmers and their farms.

calculated with gross profits minus interests. This percentage shows the amount of dollars/cents earned before taxes per each dollar invested.

D. - Standardization

This research has results from different farms, some large, some quite small, with differing amounts of cows, hectares, and technology. It also includes two different countries, which have different currencies, economies and realities, so some type of standardization was needed to make the comparison possible.

D. I.) Currencies

D. I. 1.)Official Exchange Rate

The first step to compare costs of milk production, between Chile and New Zealand was to turn all the data into the same currency. Because Chile and New Zealand are not each other's most important trader, there is no exchange rate between the New Zealand dollar and Chilean pesos. On the other hand Chilean exchange rate to other currencies like German mark, Japanese yen, or French franc are all calculated in relation to the US dollar. Therefore they are of no individually, the only possibility left was the US dollar. Calculation of the hypothetical exchange rate between Chilean pesos and New Zealand dollars was made as follows.(See appendix C):

1.) Obtain the values of the exchange rate, US dollars per $1 New Zealand dollar, for 1997.
2.) The average $0.663033 $US / $NZ was used to transform all the values into US dollars.
3.) Turn NZ exchange rate (E.R) from US dollars per one NZ, into NZ dollars per one US dollar.
4.) List Chilean E. R. in Chilean pesos per one US dollar.
5.) Divide Chilean pesos / $1US by NZ / $1US, to obtain Chilean pesos / $1 NZ dollar.
6.) The average of the year, was $277.8935 Ch pesos per $1 NZ dollar.

Because Chilean exchange rate policy of utilizing a basket of currencies, other

currencies were also included, to increase the spectrum of the Chilean / NZ ER.

7.) Obtain the values for U.K (£) and German mark (DM) per $1 NZ dollar.

8.) Turn those E.R. into NZ dollars per £1 and DM$1.

9.) Obtain Chilean relationship of UK £ per $1 US, and DM per $1US dollar.

10.) Through point 9.) it was possible to obtain the ER of Chilean pesos per £1 and per $1 DM.

12.) Divide the column Chilean pesos per £1 by the column NZ dollar per £1.

13.) Execute the same exercise as in point 12.) in relation to the columns of german DM.

14.) Through points 12.) and 13.) new E.R.s of Chilean pesos per $1 NZ dollar were obtained. These results were averaged. Using the UK £, the year's average (1997) of Chilean pesos per $1 NZ, was $274.8049. And using the German mark the years average (1997) of Chilean pesos per $1 NZ dollar was $278.1036.

15.) Finally all three results (277.8935; 274.8049; 278.1036) were averaged to obtain the closest relationship between Chilean and New Zealand's currencies. The result was $276.9341 Chilean pesos per $1 NZ dollar.

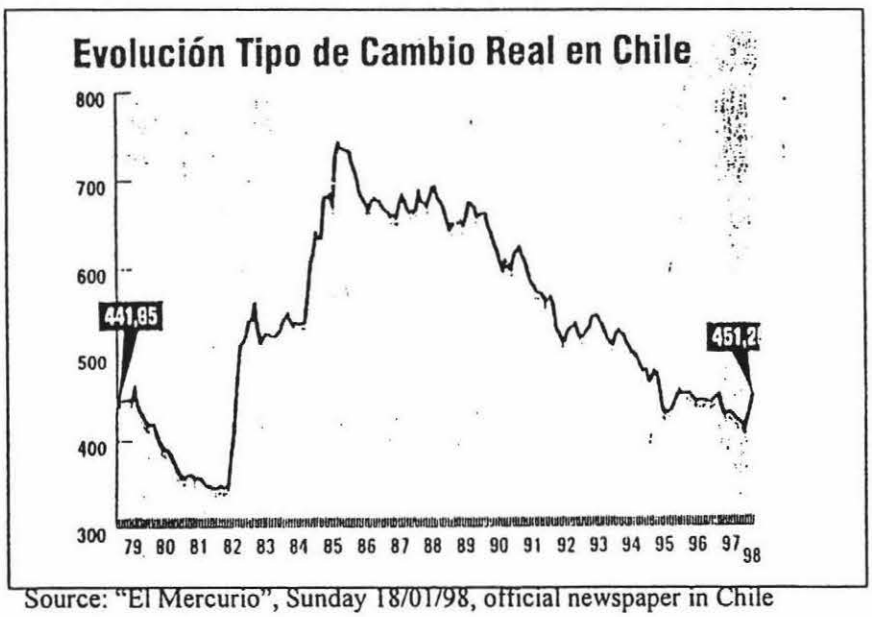
All statements of New Zealand farmers were transformed into US dollars by multiplying the values by $0.663033 (value of 1997) and to transform those NZ values into Chilean pesos they were multiplyed by $276.9341. All the Chilean statements were changed into NZ currency, dividing by $276.9341 and transformed into US currency by multiplying the NZ result by $0.663033. Then all results are in the three currencies, which permited comparisons between them.

D. I. 2.) Optional Exchange Rate

Different Chilean farmers have expressed their concern about the exchange rate Chilean pesos per $1 US dollar, because this has been used in the past years as an economic tool to control the national product and consumer prices index (or inflation). This concern was also strongly supported by an article "Triangle of currencies" written by Luis Momberg, Director of FEDAGRO (Agricultural Federation Osorno) magazine. It gave the researcher an idea of what to do to get a more realistic way to compare both

countries without using this political and economical tool, $/U$. The instrument farmers advised to use was the foment unit, which is an official economic measure, which is used by Chilean banks for loans, interests and credits re-adjustable purposes. The main reason to use this tool, was that this comparison was about productivity and real producing capability of farmers. If the official E.R was used the result could be seriously distorted because the exchange rate does not match the reality underneath, when used as an economic tool. In this study the official exchange rate was used as explained in the section before, because it was necesary to keep it with official information. But also an alternative tool was used, estimated exchange rate, in order to state whether the farmers suspicions about the distortions caused by the official E.R. were valid. If the results were the same with both measures then the actual dairy farmers' productivity was stated. But if the results were different by using this alternative tool, this would mean that the economical environment and the official exchange rate was/is tainting the real competitiveness of Chilean farmers.

Picture: Evolution of the Real exchange rate in Chile



Source: "El Mercurio", Sunday 18/01/98, official newspaper in Chile

The farmers were / are concerned about a constant dropping of the "Tipo de Cambio Real" (TCR) real exchange rate value, which is the "Tipo de Cambio Nominal" (TCN) nominal exchange rate divided by the "Indice de Precios al Consumidor" (IPC) consumer price index, (inflation variable). This means that Chile was / is reducing its competitive terms. The necessary data was obtained, on a monthly basis since 1990; nominal exchange rate, consumer price index, and "Unidad de Fomento" (UF) foment unit. (See Appendix C).

The real exchange rate (TCR) was calculated by dividing the nominal exchange rate (TCN) by the consumer price index (IPC). The result was a seriously declining TCR. In order to determine how much the decline was, the 'growing rate' was calculated. The formula used was ($TCR_{02,90}$ - $TCR_{\underline{01,90}}$) / $TCR_{\underline{01,90}}$ where the subscripts are month, year, and the underline means that they are fixed, the first element changes every month and it is always compared to the value of January 1990. The real exchange rate (TCR) has declined 40%. Calculating the growing rate it was possible to see that the value of the TCR is only 40.6% of what it was in 1990 (See graph TCR, Appendix C, page 122). By doing the same procedure with the UF, and IPC, the conclusion was that UF and IPC rised 156.7% and 148.5% percent respectively in relation to their values in 1990, while the nominal exchange rate, TCN had risen only 47.7% in the same period of time. (See graphs UF; UF, TCR and UF, IPC, TCN, TCR in Appendix C, page 122). In this way it was possible to conclude that the UF and IPC variables moved in the same direction. On the other hand the nominal exchange rate has risen only 47.7% which made the real exchange drop to 40.6%. This strongly supports the suspicions of Chilean farmers that their terms of trade have been seriously harmed by economic policies. Therefore, because this is a research of production capacities rather than economic environments, the results were also analyzed under a hypothetical environment.

The way this alternative exchange rate was calculated was by first determining the real exchange rate of 1990, in Chile and in New Zealand, then applying the growing rate of the inflation rate to the nominal exchange rate of 1990, and finally calculate the average of 1997. In this way elements like domestic economic policies and international fluctuations affecting the US dollar, caused by the effects like Russian economic collapse, and Asian crisis, were avoided. In this way the estimated nominal exchange rate would maintain the real exchange rate in terms of the 1990, constant. This showed the realities with the terms of trade from 1990, and it also included all the national economic circumstances that have affected the inflation rate since 1990 until 1997.

To calculate the alternative exchange rate New Zeland real exchange rate was necessary. Obtain the nominal exchange rate (US $ / $1 NZ dollar) (see Appendix C, page 129) turn the E. R. from U$ / 1 NZ dollar into NZ $ / $1 US dollar, were the first

two steps. Then the Consumer Price Index (IPC) was used to find the values in real terms. The IPC was in a quarterly data, so the TCN (Nominal Exchange Rate) was transformed into a quarterly base. (See columns 1 - 2, Table Exchange rates, Appendix C, page 130). There was a difficulty with the IPC because in 1993 the monetary authority changed the base in which it was calculated, from 1980 to 1993. In order to use this data it was essential to have all values based on the same year, so for this a change of base was needed. For this the growing rate of values based on 1980 were calculated and applied to the values based on 1993 in the reverse, in order to obtain all the values in terms of 1993. (See columns 3,4, 5, table Exchange Rates, Appendix C, page 130). The growing rate of the IPC was then calculated and applied to the nominal exchange rate of June 1990, to have an estimated exchange rate that keeps the real exchange rate of 1990, using the same methods as in the Chilean case.

To calculate the estimated exchange of New Zealand dollars and Chilean pesos, a conversion was still needed, because until this stage the estimated exchange rates calculated were of Chilean pesos per one US dollar and New Zealand dollars per one US dollar. The second table in Appendix C page 130 shows the quarterly values of NZ per $1 U$, for 1997(2nd column), the third column shows the monthly values of Chilean pesos per $1 U$ and the fourth column shows the quarterly values of Chilean pesos per $1 U$. The bold column in this table (Appendix C, page 130) shows the results of Chilean pesos per one New Zealand dollar. And finally at the bottom the average was calculated, being $371.6507 pesos per $1 New Zealand dollar. This was the estimated alternative exchange rate utilized, and it is the ER that shows the costs with an scenario of the real terms of trade of both countries in 1990.

D. II.) Ratios

The farms of the research have highly differing characteristics, besides the facts resulting from the two different countries. These characteristics were number of hectares, number of cows and technology level. In order to compare these farms standardization was needed. The way these farms were compared was through ratios, figures divided by the output, and by the productive factors, per liter, per cow, and per hectare. In this way all farms were standardized by their own reality, they were

normalized, so that comparison was possible. Another tool was used, this was to calculate the weight of each cost item in the total costs. This was achieved by dividing each cost by the total cost, which gave the percentage of the total costs spent on that item.

All the incomes, costs and profits were divided by liter, by hectares and by cows in order to compare each farm. It was impossible to compare absolute values and get any conclusive results about this. To clarify this idea refern to example 1, in this case farm A spends less than farm B in fertilizer and animal health. But now comparing values per cow and per hectare the results are very different, farm A spends more fertilizer per hectare than farm B. This example shows the comparison in absolute values can lead to erroneous conclusions, and does not show anything about production strategies. For example the calculation of cows per hectare shows that farm B uses the land in a more intensive way than A by having a higher animal load on the paddocks. The same practice was used in the analysis of all farms in the research.

Example 1: Comparison of two hypothetical farms

		Fertilizer	A. Health	
A	100 cows	$8,000	$300	
	50 hectares	$160/ ha	$3/ cow	2 cows / ha
B	300 cows	$9,000	$2,400	
	120 hectares	$75/ ha	$ 8/ cow	2.5cows / ha

Source: Daniela Winkler

Chapter 4 Comparison

A.) Feature Comparison between Farms

Feature comparison is a section specifically developed for general knowledge about the farms involved, their size, production system, quality standards and technology. The first two sections are a general description of both countries, their similarities and differences and the third section is a comparison of the 18 cases involved in the research.

A. 1.) Chilean general farming and dairying system, a general description

The Chilean farming system is completely different than New Zealand's. Because of a highly competitive environment, no tariffary protection or industry protection, and the domestic agricultural prices are highly unstable, relying on international market's instabilities. The other factor that influences the domestic price is national market; the supply variations, and weather conditions, which increase market price instabilities. These two conditions create a domestic price with highly unstable characteristics, which has forced farmers to have "their eggs in different baskets". This means that each farm produces about five different products, under normal "risk taker" conditions. These products include beef, dairy, wheat, corn, oats, potatoes and sugarbeet or any combination of them. Therefore each farmer has a year that has main features like those shown in table 1 (following page), besides of productions that are year round like beef and dairy.

Table 1: Main activities of a Chilean farmer's year.

Month	Activity
January	Hay, cleaning cut
February	Wheat, oats harvest, sugarbeet weeding, fertilizing
March	Calving (highest %) , calve raising, straw baling, finish harvests, fertilizing
April	Calving, fertilizing, potatoes harvest, sugarbeet harvest, sugarbeetleaves feeding, potato selection and dispatch.
May	Calving, calve raising, sugarbeet harvest, leaves feeding, potatoes harvest, silage feeding, wheat sewing.
June	Calve raising, sugarbeet harvest, leaves feeding, silage feeding, insemination
July	Calve raising, sugarbeet harvest, leaves feeding, silage feeding.
August	Calving, Calve raising, sugarbeet harvest, leaves feeding, silage feeding, wheat sewing, sales fattened cows and bullocks.[9]
September	Calving, Calve raising, fertilizing, wheat & sugarbeet sewing, sales fat cows and bullocks[9] weed control in wheat & sugarbeet & potatoes fields
October	Fertilizing, Calve raising, potato sewing, sales of fattened cows and bullocks[9] weed control in wheat & sugarbeet & potatoes fields
November	Calve raising, weed control in wheat & sugarbeets & potatoes fields, sales fattened cows and bullocks [9] Silage making.
December	Calves rising, weed control in wheat & sugarbeets & potatoes sewing, silage making, hay making.

Source: Bruno Winkler.

This characteristic of Chilean farming has not permitted and hindered the necessary developments for export production. The international theory of trade explains that in an absolute open and competitive environment, specialization is the result of increments on efficiency and production. Once that specialization is achieved then the down turns of national price fluctuations, are compensated by the volume sold in the international market, and so the risk of one product is spread into two markets. With the second market being international, which can be subdivided into several individual markets, as each importing country. The situation of risk minimization is a portfolio of products in one market, and the future ideal situation would be of one product in a portfolio of several countries. The present problem is to change production

[9] These cattle are sold for the beef industry, and are all the calves borne the year before, minus the replacement.

systems without getting caught by a down turn in prices. This requires the specialization of all farmers, it is not going to work if only a few change from multiproduct system into a complete one product specialization. The final aspect that does not allow this change to occur, is that farmers as well as the industry do not believe in the competitiveness of farming, because farms and industry have constantly been compared to situations in other countries where specialization is in place. It is certainly not right, after having done these type of comparisons, to conclude lack of competitiveness in the unspecialized country (Chile). It can also be said that if the specialized country produces several products its competitiveness and efficiency would not be as high, as it is at present. Until Chilean farmers, industry, and politicians believe that Chile is able to export agricultural products, no individual agent will take the risk by himself/ herself and try to change it. It is necessary to compare specialized countries with Chilean truth potential under the hypothesis of specialized environment, before making any conclusions about its competitiveness.

Chilean dairy production has four very important characteristics, which form the whole production strategy. The characteristics are:

- Elaborating companies do not have any other relationship with farmers than demander and supplier of milk, there is no cooperation between both agents;
- Two leading companies, three medium sized companies, and several small companies form the industrial organization;
- The milk suppliers are strongly differentiated in two types, large and small, farms.
- Veal market does not exist;

The first characteristic about lack of cooperation between elaborating companies and farmers has as a consequence almost all farmers producing during winter. It is cheaper for the industry to increase the price paid to farmers than invest in a drying tower. By paying a certain amount as a benefit for having a milk production related 1:1 during winter and summer, the company pushes farmers to produce higher amounts during winter and less during summer. With this pricing strategy the elaborating companies avoid the investment necessary for a full seasonal production, avoiding all the excess of reception and elaboration capacity without use during winter. This is the most cost efficient policy for the elaborating company, without regarding that this

forces farmers to produce more expensive milk during winter, and forces consumers to pay higher prices because of the higher production costs. Because farmers and companies do not cooperate with each other or are not positively related, the industry does not have the necessary investments for a seasonal supply. This forces farmers to do the necessary investment like silage and other winter milk feeding supplements. Finally the consumer is forced to pay higher prices than if the whole industry would produce predominantly during summer.

Another aspect of the lack of positive relationship between farmers and companies, is regarding the poor technology transference. Farmers have to search for information themselves, there is no team work with companies in relation to the transfer of information about technology or alternative production methods, or information of how to improve production and product quality. All this transference of information has a cost and companies do not produce it unless there is a clear benefit of doing so. This slows down or halts, any possible change of the dairying industry as a whole, because not all farmers seek the same information at the same time, and this could be transmitted as a higher price paid by consumers.

The industrial organization severely affects the dairy sector. The industry is formed by five main companies, Soprole (New Zealand Dairy Board), Nestle (Swiss Enterprise), Parmalat (Italian Enterprise), Colún (Chilean Enterprise) and Cafra (Chilean Enterprise). Soprole handles about the 45 % of the domestic market, Nestle about 35% , and the other 30% between the rest of the companies. There are strong signs of collusion between Soprole and Nestle, which leads to a leader - follower industrial organization's structure. The leading company / companies decide the market price which would maximize their benefit, and in its decisions the response from the followers is also taken into account, which does not leave any "decision space" for the 'following' companies. ("Dairy Sector Industrial Organization" thesis by Daniela Winkler, for fulfillment for the Economics Degree, University of Santiago, Chile, 1995). This results in the setting by Soprole and Nestle of the outline for the base price paid to farmers. Other companies have to set their prices in that level because they are unable to pay a higher price, due to the low share in the domestic market as a whole.

At the same time farmers do not have a choice because of farm location the companies have monopsonic powers. Farmers have not the choice to supply to other

companies than those close to where they produce. So farmers are price takers, and they have to negotiate a price with the company each year in order to try and get a better deal, but the companies set the range in which the price is negotiated.

The third factor concerning this Industrial Organization is that these companies are the only importing agents. They import cheese, butter and milk powder, which is sold in the domestic market under their brand names. The most critical example is Soprole, which imports directly from New Zealand. Because Soprole is a New Zealand Dairy Board subsidiary, it sells the products under Sorpole's brand names. Companies set the prices paid to farmers, and have direct access to the international market, so they arbitrate between national price, international price and exchange rate in order to maximize their benefits. This causes a situation of monopolic prices in some products, like milk, milk powder, butter, yogurt, condensed milk and whey, with the only exception of cheese, which has a price close to the competitive price. The high number of small sized cheese factories in Chile causes this special situation, which affects the whole market supply. But the other products mentioned above have a strong monopolic characteristic. Therefore even if the market is open to international trade, the products come through only a few agents that turn them into monopolic goods. And because there are about 5 companies, and no collusive documentation 'against' Nestle and Soprole, it has not been possible to charge them with the antimonopoly laws. This is a very important issue if analyzing the competitiveness of Chilean farmers, which are involved in a very distorted national market.

The third element, strong differentiation between farmers (large and small farms), is affecting the further development of the dairying sector. The definition of big and small is in relation to the number of cows, technology and animal health. Big farms have above 100 cows, have a mechanized milking system and are in control, or free of bovine tuberculosis and bovine brucellosis. On the other hand small farms have about 50 cows, have a "hand" milking system[10] and are not able to afford to control bovine tuberculosis or bovine brucellosis. It is necessary to state that 80 % of company suppliers are small scale farmers and only 20% of suppliers are large scale farmers,

[10] The milking system by hand, can be from cows- bucket- 50 liter milk can, which are picked up by trucks. Or from cows - bucket - 50 liter milk cans - cooling tank in a collecting center, to company. Or finally from cow – bucket - cooling tank in the farm, to company.

which highlights how important this difference is. Also 20% of farmers produce 80% of the total national milk production and the 80% of small farmers supply only 20% of the national milk production. This is a very important fact because it affects any governmental development policies. For example Tuberculosis is an unsolved issue in Chile, and policies concerning it have been really hard to impose because of the number of people / farms involved. For the 80% of small-scale farmers, milk is their main and almost only source of income. [11] So eliminating their entire herd would have catastrophic consequences, because Chile has a very low level of social benefits, resulting in a strong push of those farmers into poverty. On the other hand governmental help for these farmers in order to increase their production standards would have a high economical cost, and does not have a very high national priority.[12] This strong difference between farmers, small and large scale, is also increasing each year. Because that 20% formed by big farmers continue improving their farm's health standards, and also increasing technology and production methods, while at the same time the other 80% remains in the same position year in year out, without having enough returns to do any change to improve conditions. In national terms it is a social and economic issue, social because of a high number of people that are on the edge of falling into poverty. It is also an economic issue, because it does not allow the industry to develop and raise its standards, as for example in technology and animal health.

The last characteristic of the Chilean dairy sector is that the veal market is non-existent, which means that all calves have to be raised, male and female. All calves are grown and then a selection is made, female calves (heifers) kept for reposition, the rest are sold, after they have been fattened for the beef market. This affects the decision on the breed of the herd. A common example is the use of German Red, which has not as high milk producing qualities as Friesian or Jersey, but it has better meat producing qualities. So there is a trade off between milk and meat production, which is also consistent with the multi-products system explained earlier.

Finally there being no veal market, with all calves having to be raised, it means beef and dairy market decisions are very close related. If one year the meat price is high and there is a higher return in beef than in dairy, then farmers can switch partially more

[11] Other products need more capital for its production, so they are not viable possibilities.
[12] Elimination of extreme poverty, health and schooling nation wide has higher priorities.

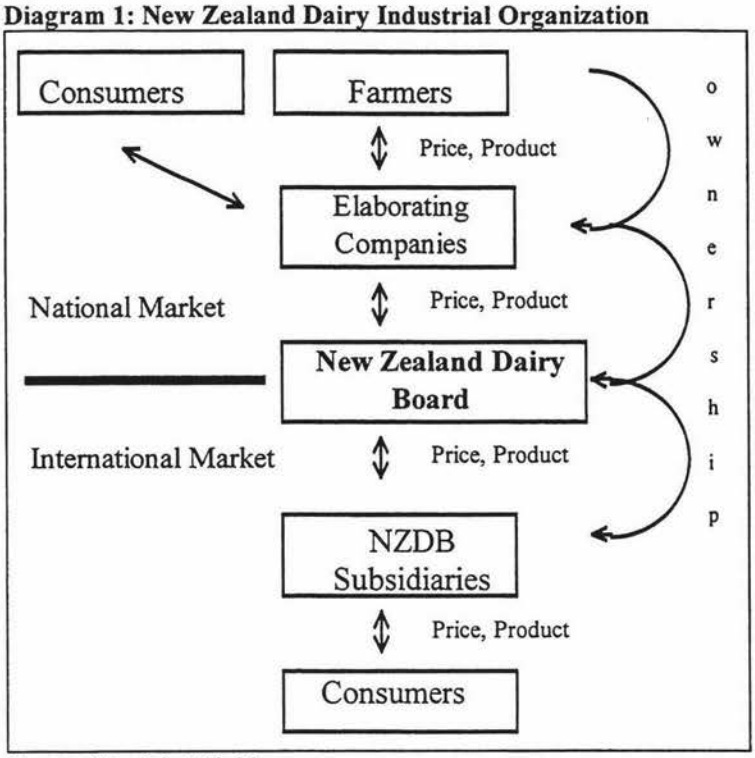
towards beef, by keeping fewer heifers for replacement and sell them as fat cows for the beef market. As a difference to most specialized countries, where any change from dairy to beef market is a long-term decision, in the Chilean case it can be both a long term as well as a short-term decision. Selling more fattened cows and keeping fewer heifers for milk production is a decision that can be reversed the year after. Therefore beef and dairy market are much more related, an increase in the beef price can cause an increase in beef supply, which can cause a drop in milk supply. Because of the lack of veal market, the relationship between beef and dairy is a short term one. This causes instability in their prices and volumes, and it depends whether the agents equilibrate those differences with the national or international market, whether or not the adjustment is in volume or in price.

4.A. 2.) New Zealand general farming and dairying system, a general description

New Zealand's agriculture has strong characteristics of an International Market focused country, with fully specialized in order to increase competitiveness and efficiency. Every New Zealand dairy farmer produces only one product, which permits him/her to focus in that production, its efficiency to the smallest detail. This condition is possible because the price paid per product is stable due to the industrial organization structure and the diversification of markets, reducing the risk by supplying a portfolio of countries worldwide.

The Industrial Organization in the New Zealand dairy sector is completely vertically integrated, which means farmers, elaborating companies, and distributing agents are all linked together and working in a common direction, that maximizes the benefits of all of them. Farmers have cooperatives that elaborate dairy products, and these cooperatives have members in the single selling board, which commercializes all the products in the international market. Finally the NZDB owns several subsidiaries in different countries, which provide each domestic market, directly to consumers, Sorpole being a relevant example.

Diagram 1: New Zealand Dairy Industrial Organization



Source: Daniela Winkler

Diagram 1 shows the structure of the N.Z. dairy industry, which is completely vertically integrated. In this diagram it is possible to see that farmers and companies have a supplier- demander relationship in terms of product and price, but they are also linked in terms of ownership, where farmers own the companies through shares. The same type of relationship occurs between companies and NZDB, as well as from NZDB to subsidiaries. The elaborating companies are also those who supply the national market. This fact combined with the condition of the NZDB of being a single seller (by law) creates protection in the domestic market. Imports are not undertaken unless there is an agent interested in doing them and locating them in the market. Therefore the only possibility would be that a elaborating company imports products and locates them in the domestic market. But this would threaten the conditions of equilibrium and stability in the production sector, which could threaten the whole structure and principally the NZDB. With the NZDB at the same time being the only "door" to the international market. Then no elaborating company would risk their international market positioning established by the NZDB, by trying to get a few more dollars out of the local market with imports. Then imports are not undertaken. It does not happen because of the market structure, this creates a comfortable situation for the farmers, where there is no instability caused by international price changes. This is as effective as any tariff while being is completely legal in terms of World Trade Organization and the GATT agreement (General Agreement of Tariffs and Trade).

The issue about vertical integration explained above has permitted an outstanding development of the N.Z. dairy sector. As farmers, companies, and

commercializer (NZDB) are all working together, the maximum efficiency and quality possible is being achieved. Benefit maximization decisions are taken on a complementary basis rather than in an individual basis. One clear example is the production system, whether or not to produce during winter.

Equation System 1: Economic decisions about production systems.

Chile

Farm:

(1) $P^c_s * Q^c_s - C^c_s * Q^c_s = \pi_{f1}$

(2) $P^c_s * Q^c_s + P^c_w * Q^c_w - C^c_s * Q^c_s - C^c_w * Q^c_w = \pi_{f2}$; $\pi_{f1} < \pi_{f2}$

Company:

(3) $P^{c'}_t * X^{c'}_t - C^{c'}_t * X^{c'}_t - \beta = \pi_{c1}$

(4) $P^{c'}_t * X^{c'}_t - C^{c'}_t * X^{c'}_t = \pi_{c2}$ $\pi_{c1} < \pi_{c2}$

New Zealand:

Farm:

(5) $P^n_s * Q^n_s - C^n_s * Q^n_s = \pi_{f1}$

(6) $P^n_s * Q^n_t - C^n_s * Q^n_s - C^n_w * Q^n_w = \pi_{f2}$ $\pi_{f1} > \pi_{f2}$

Company:

(7) $P^{n'}_t * X^{n'}_c - C^{n'}_t * X^{n'}_c - \beta = \pi_{c1}$

(8) $P^{n'}_t * X^{n'}_c - C^{n'}_t * X^{n'}_c = \pi_{c2}$ $\pi_{c1} < \pi_{c2}$

(9) $\pi_{f1} + \pi_{c1} > \pi_{f2} + \pi_{c2}$

(10) $(\pi_{f1} + \pi_{c1}) - (\pi_{f2} + \pi_{c2}) = \alpha$

Farm Winter Milk Contracted:

(11) $P^n_s * Q^n_s + P^n_p * Q^n_w - C^n_s * Q^n_s - C^n_w * Q^n_w = \pi_{f2}$ $\pi_{f1} < \pi_{f2}$; P_p = Winter Price (premium)

^{c} = Superscript, Chile
P_s = Price milk Season
Q_s = Quantity Season
Q_t = Total Quantity (Q_s+Q_w)
C_s = Cost Season
C_w= Cost Winter
C_t = Total Cost
' = Market of elaborated products
$P^{i'}_t$ = Price elaborated product
$X^{i'}_t$ = Quantity elaborated product
$C^{i'}_t$ = Total cost elaborated prod.
^{i} = {^{c}, Chile, ^{n}, New Zealand }
π_{f1} = Benefit farm case 1
P_w = Price Winter (Chile)
Q_w = Quantity Winter
π_{f2} = Benefit farm case 2
^{n} = Superscript, New Zealand

Q_c = Quantity Consumer
β = Cost of excess Capacity
π_{c1} = Benefit Company case 1
π_{c2} = Benefit Company case 2
α = Difference in benefits between both strategies

Source: Daniela Winkler

It turns out to be cheaper and benefit maximizing strategy to produce on a seasonal basis, and have all the installed capacity in the plant[13], than to produce milk during summer and winter and to not have that unemployed capacity in the elaborating company. See equation (9), the total benefits ($\pi_f + \pi_c$) in the first case (subscript 1,

[13] Even if it is not used to full capacity during three months.

seasonal) benefits are higher than in the second case (subscript 2, relation 1:1 summer : winter). The key element here is that companies and farmers work together and maximize the global benefit. This issue is the major difference with the Chilean case, where farmers do produce milk during winter, and companies do not have such huge reception capacity. Companies in Chile maximize their own benefits, and it is less profitable for the companies to have all that capital invested and unused during winter. (See equation (3) and (4), the company saves β if it does not have that installed capacity) Resulting with companies pushing the farmers to produce during winter, imposing a believe making them believe that this is the best strategy for everyone's benefit.

"The internal price level of the countries with whom we have to compete are shown in picture '2'". "The increase in produced volume should not only be done with bigger seasonal production, (spring - summer) because that would oblige the industries to make investments in plant expansions that would permit processing that additional milk. This inversion is very hard to turn into profit with the value of product obtained. What has already been achieved should not be neglected, the achievement of the relation summer / winter of a near 1:1 ratio, an aspect that has always been translated into better price." "Quality of milk: Payment by Quality" Nestle Bulletin, September - December 1996. As this article shows the companies are trying to convince producers that producing during winter is what maximizes farmers benefits, but they do not include the possibility of producing seasonal milk, which would truly maximize farmers benefits. Additionally they are not showing farmers the real price received in New Zealand by year round milk producers, as shown in table 2:

Picture 2: Dairy: Prices to Producer

	US $ cents / lt.
New Zealand	13 - 18
Uruguay	15 - 18
Australia	15 - 18
Ireland	18
Chile	20 - 25
U.S.A.	29
E.U.	31
Canada	48
Switzerland	76

Source: USDA 1994

Table 2: Summary of prices

	$ NZ	$ US	$US *
NZ	29 c	19 c	15 c
Ch	35 c	23 c	
Ch* [14]	26 c		13 c

Source: Daniela Winkler

[14] Ch* and US * were calculated with the alternative exchange rate.

The farmers maximization of benefit strategy would be to produce during winter months, including the bonus price they get paid if producing in winter. (See equations (1) and (2), $P_w * Q_w > C * Q_w$, farmers benefit out of producing during winter by the difference of incomes and costs of that production). So Chilean industry is paying a economical cost because of the lack of cooperation between the agents. (See equation (10) Chile has α as an extra cost because of the non-cooperative behavior). At the same time New Zealand industry is increasing its efficiency and international competitiveness by minimizing the total industry costs. New Zealand receives α as net benefit for its efficiency, and this amount is shared with the farmers at the end of each season by readjusting the price, and giving that difference as a lump sum to farmers. Finally equation (11) shows the case of winter milk producers, who provide only enough milk to supply the local market of the companies. Because they have higher costs for producing in winter, they get paid a different price than during the season, a winter milk premium. In order to keep a close control of the amount of milk produced during the 3 winter months, farmers are tied to contracts. In this way the industry is ensuring that the benefit maximizing strategy of producing milk during the summer season, is not harmed, or threatened by the winter milk situation.

The cooperative behavior of the NZ system explained before also has an additional advantage, technology transference. The companies and the board are interested in the highest efficiency as well as highest quality in the production of farmers. This reduces costs, and increase efficiency in the whole industry. The cheapest way to achieve this is by having the technology information centralized with a information distribution net. The New Zealand Dairy Research Institute and Livestock Improvement, are two organizations that search for information and technology. N.Z.D.R.I searches for information in the final product and L.I. searches for information about raw milk supply. They also have information distribution nets, where NZ Dairy Research Institute distributes their information through seminars in centers like Massey University. Livestock Improvement Advisory distributes its information through magazines and through its field consultants. These consultants visit small groups of farmers on a regular basis in order to keep close touch of what is happening on the farm, with the production as well as give information and knowledge about what is happening

in the industry, technology transference, and improving production methods. [15]

There is also another very important characteristic about the dairy industry in New Zealand. Because all the agents work together on a cooperative basis, then all members of the industry can achieve changes or developments in the sector. For example the elimination of Bovine Tuberculosis was achieved by a common effort of all farmers, industry and government. The unfortunate situation in Chile is where each farmer tries their best by himself/herself having no advantage of sharing the effort with all other members involved in achieving that particular common goal. This is the same situation in relation to technology[16], basically all New Zealand dairy farmers move in the same direction at a very similar speed, which is not the case in Chile.

Finally because of the structure of the NZ Industry, and its importance in the national economy [17], this gives a powerful tool in terms of negotiations with the government. New Zealand has a social benefit policy, that eliminates poverty, and the country has the resources, being a developed country. Therefore any policy that affects the dairy industry will not cause a social issue, related to poverty, because the social benefit policies already provide for such situations. At the same time the industry has the necessary "pressure tools", to push for rewards by the government if any policy were to harm the actual situation of the dairy farmers. Therefore such a policy would cause economic effects but not social. This gives the possibility to eliminate Bovine Tuberculosis, by killing the infected animals, while not pushing the affected farmers into poverty. The industry (NZDB), through the government, ensures that the farmers get subsidized or compensated for loss of cows or herd.

The last aspect that is of analytical interest is the existence of a veal market. This allows farmers to reduce their burden of taking care of those calves from when they are born, until they are grown enough for the beef market. The existence of the veal market has several benefits besides that stated above, one benefit being price paid for the calves is net profit, without any risk involved. Another benefit relates to the profit of calve sales. Newborn calves have hardly any cost, because they are a 'by-product' of milk production. The only cost being the food and supplements provided from when they

[15] The researcher participated in one of these meetings in April 1998 in Otaki, and the subject treated was winter-feeding budgeting, as well as issues about the winter milk contracts.
[16] For example all farmers have mechanized milking equipment and almost all have cooling tanks.

were born until they were sold, which is a very short period of time, considering it is veal industry. So any price higher than that feeding cost is net profit. The difference with the Chilean case is that growing those calves for beef, has a greater costs; also uncertainty about the price that will be received in a further 12 months, and the risk of any disease like diarrhea, (very common in calves). Therefore even if Chilean farmers get sometimes higher returns for those calves, it is not constant, nor certain. Clearly the veal industry is a benefit for the whole N.Z. dairy industry. Finally a last benefit, not affecting the farmer directly, is that the existence of a veal market separates beef and milk production. Without the possibility of selling the calves so young, the relationship between beef and dairy is stronger, causing price instabilities for Chilean farmers.

4. A. 3.) Chilean and New Zealand farms description, and comparison.

The 18 farms involved in this research are located in a very narrow range of latitudes, (37°,0` - 41°,45` South in New Zealand and 40°,0`- 41°,30` South in Chile) even if the distance between both countries is enormous. Coincidentally both countries have very similar weather conditions, temperate. Cool wet winters and dry warm summers characterize this climate, where rain is excessive during winter and insufficient during summer. The rainfall is about 1,000 mm per year, with some exceptions occasionally. These exceptions being a higher summer drought potential in Chile and also a higher number of frosts with a slightly more defined seasonal change. All farms answered climate conditions in the questionnaire and answers supported the conclusion stated above. (See Appendix G page 261)

Concerning soil type is nothing conclusive, because they were all different types of answers and interpretations, including sandy loam, or silt, or clay even peat. But there was something about soil that was conclusive to almost all farmers, Chilean and New Zealand farms have moderate to good drainage with some having only a few hectares that do not match this characteristic.

In relation to the herd it is possible to see a clear difference between Chile and New Zealand, most Chilean farmers use German Red, one case had a hybrid of German

[17] "..20% of New Zealand's Exports income" ("New Zealand Illustrated road atlas" AA)

Red and Angus, and only case Ch F has Friesian (See Appendix G, page 278). On the other hand almost all New Zealand farmers had Friesian or Jersey as their breed of the herd. This difference is a result the fact that Chilean farmers raise all calves and those not kept for replacement are sold for beef. German Red has better characteristics than Friesian or Jersey if considering beef production. Pedigree was also a characteristic asked of in the questionnaires, and it was possible to see that in both countries there were farms registering their herd, in order to guarantee the quality of the cows. There were 3 farms in New Zealand and 2 farms in Chile with pedigree. This means that after reaching a certain level of development and/or technology, farmers try to register their herd. On the other hand there was a sanitary condition that is still an issue in Chile, but not in New Zealand. Chile still has Bovine Tuberculosis (TB.), while New Zealand does not. All N.Z. farms are free of TB, as a result of a strong governmental campaign controlling it, even possums (medium size marsupial) are controlled in order to avoid any outbreak of this disease. In the 18 cases studied there was one Chilean farm that was not quite TB. clear, but there was at least something being done about it. Therefore the differences of quality in the Chilean herds is greater than in NZ, having herds with TB and others with pedigree (meaning maximum quality), while in NZ all are TB free and some have pedigree.

Questions of production methods and technology were raised in the questionnaires. A result for example was that the calving period, is very clear in the New Zealand farms, while in the Chilean much less defined. The New Zealand calving period is in March, April, May, and then again in August, September and October, (there are some exceptions). But in the Chilean farms researched the answers were quite vague, some farmers wrote February, March and August, September and other wrote the whole year round. So the production system with split calving period is very clear for the 12 NZ farms and only some Chilean farms. Other Chilean farms having calving as all year round.

Other questions were about the technology used, and the results were that most New Zealand farms use herringbone and rotary types milk sheds. Chilean farms use herringbone, and individual cages and traps. It depended on the size and development of

the farm. It was also clear that none of the Chilean farms have rotary type milk sheds. [18] It was also asked whether the farm had automatic cup removers, in order to measure how advanced the technology is in both countries. The result was that there were 2 farms in NZ and 1 farm in Chile with this technology. Another question was the elimination of effluents, and in this case both countries had similar replies. There were only two types of answers, twin pond and irrigation to the paddock or long ditch 'disposal'. Nine New Zealanders and three Chilean answered the first type and three of each country answered the second. The twin pond irrigation system reduces the costs of fertilizers, due to the mineral/nutrients content of the manure. In some cases mixed with straw it also increases the level of organic matter in the paddock, being also a very environmentally friendly practice and beneficial to long term pasture and soil health. On the other hand the long ditch effluent elimination type does not benefit the farm in any way, it wastes the mineral content of the manure and it is very environmentally harmful, because it pollutes streams and rivers. This practice is going to be strongly attacked in new environmental laws, both in New Zealand as well as Chile.

The final item compared in both countries was fertilization of paddocks, what fertilizers are used. The result is in table 3

Table 3: Fertilizers utilized in the 18 cases analyzed

New Zealand	Chile
Urea	Urea
DAP, (DiAmmonic Phosphate)	DAP
Lime	Lime
Potash; Super potash 15%; 20%	K Cl
Phosphate Nitrogen	Super triple Phosphate
Nitrogen	N, 20.5%
Super S.	$Ca\ CO_3$
K, Potassium	
Fowl Manure	Manure
N, P, K and Ca	N, P, K, and Ca

Source: Daniela Winkler & Bruno Winkler

The conclusion was clear, both countries apply Nitrogen (N), Phosphorus (P) and Potassium (K) to the soil, plus Calcium (Ca) to control the pH or acidity of the soil. The only difference in some cases was the form in which these elements are supplied to the soil, this depended on the particular characteristics of each farm, and prices of the different fertilizers involved. This point is going to be reviewed again in terms of amounts, later in this chapter.

[18] And the researcher has never seen any in any of Chilean farms visited before.

B.) Quantitative Comparison between Farms

B. 1.) Comparison between farms in terms of product, production factor and production strategies.

This section is a comparison of the farmers and farms not in terms of costs or incomes, but on production, production strategies, and use of production factors. Production was measured as the amount of liters, production strategies were measured as animal load on the paddocks and amounts of capital utilized per hectare. Finally production factors were mainly capital, and this was divided into two different types, variable capital and fixed capital, depending on the facility and length of time it takes of turning it into cash. Fixed capital is the value invested in land, and variable capital is composed by the values of buildings & machinery, plus the value of cows, plus the value invested in shares. All the elements of variable capital could be turned into cash in a relatively short term. The decision could also be reverted in a short period of time, but with the capital invested in land the decisions are long term, this is why it is fixed.

Page 277 in Appendix G shows the milk production of all farmers during the year. A clear conclusion is that New Zealand farms have a much higher variance during summer and winter milk production than Chilean farms. As explained before the pricing policies of Chilean companies puts pressure on farmers, to produce more during winter and make milk production as even as possible. This is a clear difference in production strategy between both countries, even the New Zealand farmers that do produce during the winter, still keep a seasonal production strategy.

Graph 1 in Appendix G (page 265) shows production of liters of milk of all the farms of the research. All New Zealand farms produce above 500,000 liters a year, and only two Chilean farms produce above this amount. The averages of both countries were 1,110,524 liters in New Zealand and 610,047 liters in Chile, the former being 82% higher than the latter. This comparison was only of the farmers researched; it is not a generalization of all Chilean farms. What can be clearly seen is that in these examples, Chilean farms produce less milk per year than New Zealand farms. The reason for this

could be that New Zealand farms are generally 100% dairy farms while Chilean farms are only about 30% involved with milk production, and the rest of the land being used for other agricultural activities.

Graph 2 shows capital invested in each farm, and averages have the same pattern than the item above. But because it is a nominal value it needs to be compared in relative terms and not in absolute terms, and this is going to be covered next.

Graph 3 solves the problem from above, by showing values of capital per liter. The graph presents a reality that is very similar in both countries, Chilean and New Zealand farmers invest about the same amount of money per liter produced. That is also confirmed with the averages, which were $2.430 in Chile and $2.015 in New Zealand, so both countries invest about two dollars per liter produced.

Graph 4 also shows capital in relative terms but in this case instead of using straight production, production factor per hectare is used instead. The result was very different than the case of graph 3, New Zealand farmers invest much more per hectare than Chilean farmers. Almost all New Zealand farms spend over $10,000 dollars per hectare, with the exception of farm NZ H $7,461, while almost all Chilean farms invest less than $10,000 per hectare, with the exception of farm Ch F $14,247. The averages [19] also confirm this result, with New Zealand average being $18,648 dollars per hectare while Chilean average is only $8,002 dollars per hectare, being the former 133% higher than the latter.

Graph 5 shows the amount of capital invested in relative terms to number of cows on the farm. Here the result was the same as in the analysis per liter, where both countries invest about the same amount per cow. The averages were, in New Zealand $8,306 dollars per cow and in Chile $8,144 dollars per cow. This was because the average of milk production per cow in both countries is very similar. See table 5 (page 78) "summary of results per cow with official exchange rate". Even if production of

[19] Average is only of the researched farms, it is NOT a generalization.

liters per cow was lower in Chile than in New Zealand, the case of farm Ch F raises the total average (see graph 35 Appendix H). Therefore Chilean investment per cow and per liter was in average very similar, but when measured per hectare the result was very different, with New Zealand having a much higher value than Chile.

As explained at the beginning of this section capital is divided into two types, fixed and variable and graphs 6 to 10 analyzed the utilization and intensity of these factors. Graph 6 shows the value of land per hectare and the difference between countries as dramatic. The average of Chilean farm values per hectare was $4,393 per hectare, while New Zealand's average was $12,045, almost three times higher than the previous. This is illustrated in the graph with all the individual farms, where only one Chilean farm had a value above $6,000 while there was only one New Zealand farm under that value. This is consistent with the price behavior of most developed countries, where the price of land is much higher than in undeveloped countries or developing countries. This is one of the main reasons for land intensive agriculture in countries like Germany and extensive agriculture in countries like Argentina.

Graph 7 shows the relationship between variable capital and value of land. The result was that Chilean farmers invest relatively more in variable capital than in land, in comparison to New Zealand farms. The average shows that Chilean farms have higher values than New Zealand farms. This means that even if the invested capital is similar in both countries, New Zealand farmers invest more in land than in building & machinery, cows, and shares in comparison to Chilean farms. This can have two causes, lower value of Chilean land than New Zealand's, or because Chilean farmers invest more in machinery & buildings, cows and shares than NZ farmers in absolute terms. Therefore it is necessary to clarify which is the main cause of this investment practice.

Graph 8 shows the variable capital per liter, where variable capital is the amount invested in buildings & machinery, plus cows, and plus shares. The conclusion of this graph was that Chilean farms invest more in these items per liter than New Zealand farms. The Chilean average is 50% higher than New Zealand's. New Zealand invests about 70 cents per liter produced while Chile invests a $1.05 dollars per liter produced.

Therefore the result of graph 7 is due to both causes, Chilean invest more in variable capital than New Zealand, and Chilean value of land is lower than New Zealand's. So the ratio Variable Capital / Value of Land is higher in Chile than in New Zealand.

Graph 9 (page 267) shows the variable capital per hectare and its results were opposite than in the paragraph above. The reasons were production of liters per hectare, New Zealand produces about 9,460 liters per hectare while Chile produces only 4,236 liter per hectare. This was caused by the number of cows per hectare, New Zealand uses 2.34 cows per hectare while Chile uses only 1.05 cows per hectare. See graphs 13 and 14. If the variable capital is divided by liters New Zealand had lower values than Chile, but if divided by hectare New Zealand has higher values than Chile. Another reason for this, was that Chilean farmers do not have capital invested in shares, so even if they had the same amount invested in machinery & buildings and animals, New Zealand also has the large investment in shares, which makes the value of variable capital higher than Chile's. And a last reason why variable capital per hectare is lower in Chile than in NZ is the number of cows per hectare, New Zealand has an average of 2.3 cows per hectare while Chile has only 1.05 cows per hectare. Therefore the investment in cows per hectare in New Zealand is higher than in Chile. Consequently New Zealand has a higher variable capital per hectare than Chile.

Finally variable capital is also analyzed in terms number of cows, but as the value of cows is also included in the value of variable capital it was then subtracted from it, to avoid distortions. The result in graph 10 shows the values of 'variable capital minus cows', per cow. The conclusion was that both countries have similar averages, both countries have the same patterns of investment per cow. Therefore the conclusions about variable capital were that New Zealand invests more in land than in variable capital, invests less per liter, more per hectare and the same per cow than Chile. This means that both countries have the same practices about variable capital and the whole issue is about the production strategies, related to cows per hectare and liters per hectare. The whole point being the intensity in which land is used, and because the value of land is lower in Chile than in New Zealand, it is then used more extensively than in the latter.

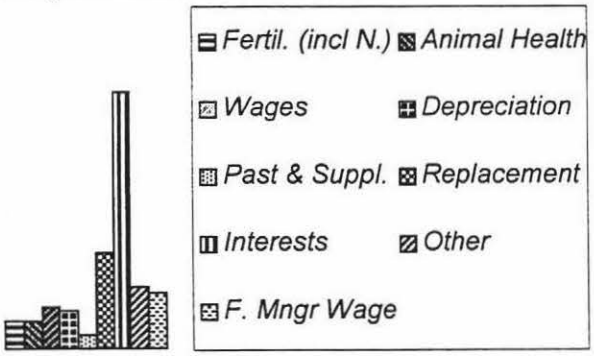
Graphs 11 and 12 show the number of cows and hectares in farms, but they are absolute values, so they are presented only as reference and no relevant conclusion can be drawn from them.

Graphs 13, 14 and 15 show production strategies, how product and production factors relate. Graph 13 shows liters per cow, and Chilean farms produce on average less per cow than New Zealand. The type of breed used by Chilean farmers, mostly German Red rather than Friesian or Jersey, could cause this value.[20] Graph 14 shows liters per hectare where Chile has much lower results than New Zealand cows. The reason for this is shown in graph 13 of cows per hectare. Chile uses less cows per hectare than NZ, and those cows also produce less milk than NZ so the production of liters per hectare is very low, because of the combined effect of both factors discussed above.

B. 2.) Comparison between farms in terms of costs structure.

This section is about the way farmers do their spending, what are the main costs or items where money is spent. Pages 269 and 270 in Appendix G show graphs of the costs structure in percentages of the total cost, of all farms involved in the research.

Example 2: Costs structure of a farm



Source: Daniela Winkler

This example shows the different items in which the money was spent. The right hand box shows all relevant items in the result statement of each farmer. The item "other" is the addition of all costs that have a lower than 5% relative importance. The calculation of these items was done by dividing the value of each item by the total costs

[20] This is explained in section A.) Qualitative Comparison Between farms, section 1) Chilean general farming and dairying system, a general description.

and multiplying by 100.

The results show that all farmers in both countries spend between 25% and 45% of their total costs in interests, with the exception of farmer Ch F, 24%. Therefore if the farmer owns the total capital this is not a cost but an equity return, but if the capital is owned by the bank this would be spending on interests on a loan.

The second and third most important expenses are replacement and "other". It depends on each farm, which of them is higher. All the other costs, such as fertilizers, animal health, wages, depreciation, pasture & supplements, and farm manager wage had values between 5% and 15% percent of the total costs.

All the farms had the same pattern in their costs structure, they were different in values but in the same ranges. The only exception was farm Ch F where pasture & supplements was the highest cost, followed by replacement and then interests.

B. 3.) Comparison of feeding costs components between farms.

As explained in sections before Chilean farms try to produce the same amount of liters of milk during summer as well as in winter, because in this way they maximize their benefits. This production strategy affects decisions about the feeding of the herd, affecting the total costs. In page 271 in appendix G, the table about feeding costs shows that farmers have different ways to provide the feeding demands of the herd. Some use silage as the principal source of feed, others use pastures and a last group uses concentrate. The table has cells with different patterns, in order to differentiate those items used more intensively than others, and the results show that some farms rely on up to 82% of one particular feeding source. The results were also summarized for types of food, silage made on the farm with own equipment or contracted, paddocks (pasture), hay, and concentrate. Four different graphs present the results of each of the feeding items. Graph 15 shows silage and it can be seen that almost all farms use this source of feeding, but in different percentages. The averages show that New Zealand farms use up

to 38% of silage as a source of feeding; while Chilean farms use it a 28%. Graph 16 shows paddocks (pasture) and the difference between both countries was very large, while 32% of NZ farms used paddocks (pasture), Chilean farms used paddocks (pasture) only a 5%, as source of feed. Graph 17 shows hay, here some farms use hay and some do not use it at all, and the averages were NZ 9% and Chile 15%. Finally graph 18 shows concentrate and the difference between both countries was absolute, not even one New Zealand farm uses it as a source of feed. The averages were 0 % for New Zealand and 31% for Chile. This shows that Chileans use a feeding source that is more expensive than New Zealand. The reason for this is the price structure of Chilean companies, and concentrate is the most efficient feeding source in terms of milk production. With Chilean farms using an expensive source of feed, because the companies and farmers do not cooperate for mutual benefit and so the benefit maximization practice was to increase winter milk production. A possible example of this was farm Ch F, which was the farm that used the biggest mount of concentrate (55% of the feed) and on the other hand its production did not drop dramatically during winter, the milk production had only smooth variations through the year.

4. C.) Quantitative Comparison between countries

4. C. i.) Per liter

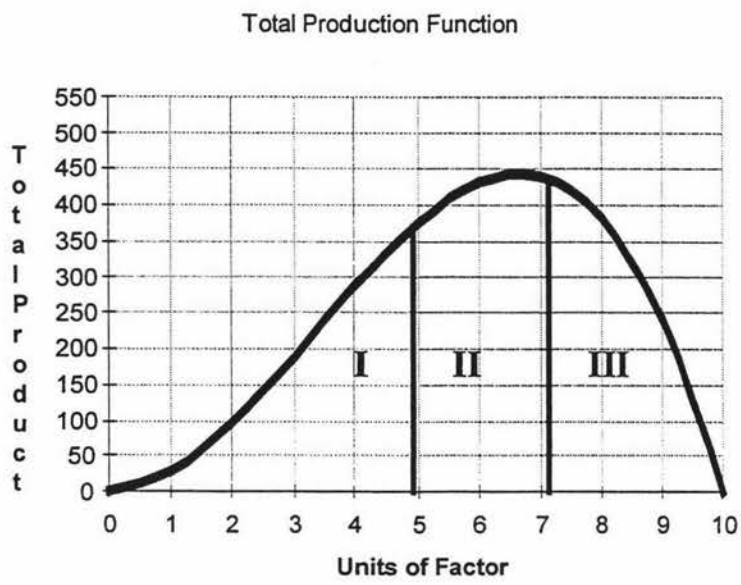
The first comparison was made by dividing the total milk income, by the total of liters produced. The results shown in graph 1 of Appendix H page 280 (H,280), show that all Chilean farmers receive over 30 cents per liter as the price for their milk. On the other hand all New Zealand farmers receive only a price over 25 cents, and only two of them reach a price above 30 cents. One of them was farmer NZ C who received 40.6 cents per liter and had an exceptional percentage of milk solid mater, ranging between 11.11% and 12.62%.

Comparing capital per liter did not have such straight conclusions as in the case above, because there was no clear pattern between countries. (see graph 2, H, 280). New

Zealand farm's capital invested per liter varied between $1.10 dollars, to $3.20 dollars per liter. On the other hand Chilean farms invest from $1.30 dollars to $3.90 dollars of capital per liter. The only thing that could be concluded was that the range of Chilean investment is higher than New Zealand's.

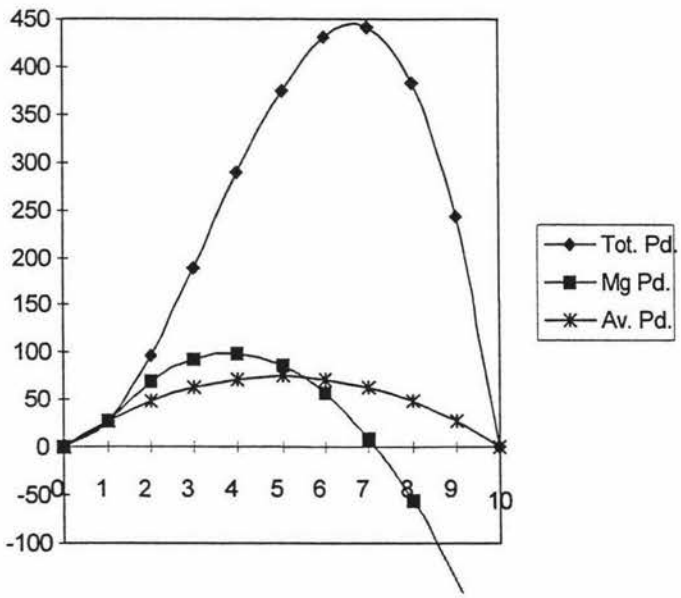
Capital is invested in order to raise production through an increase of productivity of other factors. Because of this reason it was important to contrast the graph about capital per liter (graph 2, H, 280), with income per liter, to see whether those farmers who have invested more capital per liter get compensated by higher income per liter. The result is shown in graph 3 of Appendix H, page 280, and there was no clear relationship between investment and return. The return, measured as gross profit minus interests before taxes, ranges between $ -0.16 and $0.09 dollars per liter for New Zealand farms, and between $ -0.05 and $0.18 dollars per liter for Chilean farms. On the other hand the invested capital ranges between $1.06 and $3.16 dollars per liter for NZ. and between $1.40 and $3.80 dollars for Chile. The conclusion was that there was a tremendous difference between the invested capital per liter, and the gross profit obtained per liter. Another conclusion was that there was no relationship between investment and return, in terms of output (liters). The graph shows that some farmers invest big amounts and get a positive return, while others invest the same amount and have losses, the same applies for those who invest less, with some getting high returns, and others having loses. Therefore investment in capital was different for each farmer depending on what stage they were in terms of the total production curve, which increases in decreasing rate. Some farmers have crossed the point where an increase in capital results in an increase in returns per unit of output, meaning that the total return received for that extra unit of capital was not superior to the unit of capital invested, stage III of production.

Figure 1 : Total production Function



Source: "Economics of The Firm", A. Thompson Jr. & J. Formby

Figure 2 : Production Stages



Source: "Economics of The Firm", A. Thompson Jr. & J. Formby

This figure shows a situation where an increase from 3 to 4 units (ú-c) of capital increases the product in 99 (ú), but an increase from 4 to 5 (ú-c.) only increases total production by 87 (ú) which is less than the capital unit 4. And finally an increase from 7 to 8 (ú-c) decreases the total production by 57 (ú) and so the total return, by 57 * Price.

Figure 2, shows the total product, marginal product, and average product of the capital production factor. This shows how the total product increases in a crescent rate until an increase in capital factor increases the total product but, in a decrescent rate. (After the 4th unit of capital) And finally after the 7th unit of capital the total product starts to decrease. So this production can be separated in three stages, "Stage I covers that range of variable input usage over which average product increases" (from 0 to the 5th unit of capital), "Stage II over the range of variable input usage from maximum average product to zero marginal product"

(between the 5th and 7th unit of capital) "Stage III is defined as the range of negative marginal product or declining total product". "In stage III the variable input is combined with the fixed input in uneconomically large proportions. In terms of agriculture, land is cultivated too intensively. Indeed, the point of zero marginal product of the variable input is called *intensive margin.* Similarly, in suggestive terminology, at the point of maximum average product the cultivation of land is extensive; and the point of maximum average product is called *extensive margin.*" "Production must occur in Stage II - between the extensive margins, or over the range of variable input usage from maximum average product to zero marginal product." ("Economic Analysis", C.E Ferguson & S.C. Maurice, 1970). (Between 5 and 7 units of capital)

Graph 4 in appendix H page 281 shows gross profits minus interests before taxes. This graph shows that there is no real difference between Chile and New Zealand, some farms had returns around 6 cents and 8 cents per liter, and there were farms that had losses between 4 and 6 cents per liter. There were two exceptions, one Chilean farm that had returns about 18 cents per liter, and a New Zealand farm that had 16 cents of loss per liter. Basically there was no difference between countries, and there was no clear pattern.

The expenses relating pasture and supplements are in graph 5, (H, 281). It was clear that spending of Chilean farmers were higher than spending of New Zealand farmers. From New Zealand farmers 6 of them (12) spent between 1 and 3 cents per liter, while there was only one Chilean farmer spending 3 cents per liter. There were 4 New Zealanders that spent 6 cents per liter, while there was only one Chilean spending that amount, all the other Chilean spent more than this.

The expenses on fertilizers were very similar in both countries, all farmers spent between 2 and 3 cents per liter, on fertilizers. There was only one exception, Chilean farmer Ch C, who spends 10 cents per liter on fertilizers. See graph 6. (H, 281)

Chilean farmers, use in general the same amount of resources on animal health than New Zealander farmers, the figure ranges between 1 and 3 cents per liter produced.

See graph 7 (H, 281). The only exception was farmer Ch B, who spent less because he is a veterinarian himself, so veterinarian services cost, was less than on any other farm.

Chilean and New Zealand wages differ in only small amounts, Chilean farmers spend between 3 and 8 cents per liter produced while New Zealand farmers spend between 2 and 7 cents per liter. The size of the range in which expenses fluctuate was the same while the starting point of those ranges was higher in the Chilean case. See graph 8 (H, 282).

Graph 9 (H, 282) shows shed expenses per liter produced, and there were differences between farms, but because the values were so low, less than a cent per liter, it was not possible to draw any reliable conclusion.

Expenses in fencing graph 10 (H, 282) showed New Zealand farms spending generally more than Chilean farms. But as in the case before the values were to low to make clear conclusions about this item. This problem was solved when these items were analyzed in terms of production factors, per cow and per hectare, later in this research. The same situation happened with costs of repair and maintenance/per liter (p.l.) (Graph 11, H, 282), costs of ditches/ p.l. (Graph 12, H, 283), vehicle expenses / p.l. (Graph 13, H, 283), depreciation/ p.l. (Graph 14, H, 283), earthquake and fire insurance / p.l. (Graph 16, H, 284), administration / p.l. (Graph 17, H, 284) farm manager wage / p.l. (Graph 18, H, 284), accountant / p.l. (Graph 19, H, 284) taxes or rates/ p.l. (Graph 20, H, 285), and general costs / p.l. (Graph 21, H, 285).

Graph 15, (H, 283) shows the cost of interests per liter, and as explained in the methodology, this cost was the cost of capital and because the value used was interest rate of 8% over the capital invested, the item was called 'interests'. The values of this item fluctuated between 8 cents per liter and 31 cents per liter. New Zealand farms spent between 8 and 25 cents per liter, while Chilean spent between 10 cents and 31 cents per liter produced. The only conclusion was that the Chilean range was slightly higher than New Zealand's.

Income per liter is shown in graph 22 (H, 285), and the result was very clear, Chilean farmers received a higher income per liter produced, than New Zealand farmers do. This item, income includes payments per liter, plus incomes from sales of stock (cull cows and calves). New Zealand farms received between 29 and 34 cents per liter produced, with the exception of farm NZ C who received 46 cents / p.l., while Chilean farms received between 43 and 58 cents per liter produced. Production variables as well as economic variables affect income per liter, so this is going to be analyzed in depth again later in this research. The production variables that affect income, are amount of liter produced per cow, and the economic variable that affects income is exchange rate. This affects the price paid per liter. At this stage of the analysis the conclusions about income were merely in absolute terms, Chilean farms received more income than New Zealand farms, but it was not possible at this stage to explain where this difference rises from. Income is going to be analyzed again in terms of production in the section related to 'cows as the production factor', and also in economic terms, in the section about the alternative exchange rate.

Total costs per liter presented in graph 23 (H, 285), show that New Zealand costs fluctuate between 31 and 65 cents per liter, while Chilean costs fluctuate between 43 and 84 cents per liter. Chilean range was therefore higher than New Zealand's. So Chilean incomes (as stated in above paragraph) and costs were higher than New Zealand incomes and costs.

Gross profit is the difference between total incomes and total costs. As it was possible to establish from graph 24, (H, 286) the result was the same for all farmers, with only one exception, all farmers had a negative result, except Ch D. Although both paragraphs above suggest a clear difference between Chile and New Zealand, in relation to this item there was no difference. The Chilean farmers as well as New Zealand farmers did not have profits, with the only exception of farmer Ch D who had only 7 cents per liter of return.

Graph 25, (H, 286) shows results of gross profits minus the costs of interests. Because of the results revealed in the previous paragraph the creation of this item (gross profits minus the costs of interests) was necessary. Here the results show that most New Zealand farms had gross profits that were in the range of 5 to 9 cent p.l. produced, with

two exceptions that made losses of 16 and 6 cents p.l. On the other hand Chilean results were not so clear, there were two farms that made losses of 5 and 4 cents p.l. which were less than the negative New Zealand cases. There were also three other Chilean farmers that had gross profits of 8, 6, and 2 cents p.l., which was close to the general New Zealand pattern. And last there was the case of Ch D which had 18 cents p.l. of gross profits, which would be concordant with results described in the above paragraph, of having 7 cents of profits including the costs on interests.

After the above findings it was necessary to analyze each element of the result statements, incomes, total costs, variable costs, (farm cash expenses), and fixed costs (farm overheads, financial costs and business overheads). As incomes were analyzed in graph 22 (H, 285), it is unnecessary to cover this again.

The variable costs were summarized in item total farm cash expenses, they were different between Chile and New Zealand, where the former was higher than the latter. Chilean farms range between 21 cents p.l. to 38 cents p.l, being Ch D the farm with the lowest value, and New Zealand farms had lower farm cash expenses, ranging between 13 and 26 cents p.l. See graph 26 (H, 286).

The fixed costs have three different elements, total farm overheads, total financial costs, total business overheads and total fixed costs, shown in graphs 27, 28, 29 & 30 (H, 286 & 287). In the item 'total farm overheads', the opposite situation than in the previous paragraph can be observed. Chilean farmers had a lower cost than New Zealand farmers, being the former between 1 and 3 cents p.l. while the latter was between 1 and 8 cents p.l. see graph 27 (H, 286).

Graph 28 (H, 287) shows the total financial costs/ p.l. and results are not clear because half of Chilean farms had the same costs than New Zealand farms, while the other half had values above. Chilean farmers had values of 13, 17, 27, 30 and 38 cents p.l., while New Zealand's farmers have had 10, 12, 16, 17, 18, 19, 20, 23, 26 and 28 cents p.l.

The last item of the results statements section is the 'total business overheads', and here Chileans had higher costs than New Zealanders, with a Chilean range of 4 to 18 cents p.l., while NZ range was from 1 to 12 cents p.l. See Graph 29 (H, 287) Even if of some fixed costs elements had opposite patterns than variable cost item above mentioned, it was not sufficient to compensate the general result, of Chilean total costs

being higher than New Zealand's.

Graph 30 (H, 287) presents total fixed cost per liter and the result is not conclusive, as some Chilean farms had the same values as New Zealand while others had values that were much higher than New Zealand's. New Zealand fixed costs per liter were between \$0.17 and \$0.29 with two exceptions farm NZ C \$0.39 and NZ D \$0.44. In Chile three farms had values between \$0.20 and \$0.24 which was in the range of New Zealand values, while the other three Ch A, C, E had values between \$0.43 and \$0.46 which was higher than the New Zealand general pattern. So the result was not conclusive, because coincidentally half of Chilean farms had one pattern while the other half had a different pattern, so more cases would be necessary to draw conclusions.

Graph 31 (H, 287) shows variable cost per liter. Chilean farms had clearly higher costs than New Zealand farms. Almost all Chilean farms had costs in a range between \$0.27 and \$0.38 per liter, with the exception of farm Ch D of \$0.21. On the other hand New Zealand values range between \$0.14 and \$0.26. So clearly Chilean farms had higher variable costs per liter than New Zealand farms.

Finally graph 32 (H, 288) shows profitability per liter before taxes, and the results were very varied. From those farms that were making losses New Zealand was worse off than Chile, New Zealand farm losses ranged between 3.3% and 6.9%, while Chilean farms were between 1.2% and 1.6%. From the rest of the farms almost all had similar results, between 1.3% and 7.4% in both countries, while farm Ch D had a value out of the range 13.0%. Therefore most farms in Chile as well as in New Zealand had similar percentages of profitability. This profitability was very low in relation to most other activities or businesses.

Table 4 (next page) summarizes all results of this section, by showing in the first column all the elements analyzed, and in the second column the graph number in which the information can be found in the appendixes. Column three and four show the lowest registered values from the farms analyzed, in New Zealand and in Chile respectively. Column five and six show the highest values for both countries. And finally column seven and eight show the averages. All the values per liter shown were calculated with the official exchange rate, the same analysis using the alternative rate was also done and is revealed in a later section.

Table 4: Summary of the results per liter under the official exchange rate

Item	Graph	Lowest Value		Highest Value		Average	
		N.Z.	Chile	N.Z.	Chile	N.Z.	Chile
Liters		529,016	176,030	2,397,135	1,695,947	1,110,524	610,047
Cents / p.l		0.267	0.321	0.406	0.390	0.290	0.349
Capital / p.l		1.07	1.34	3.16	3.87	2.015	2.430
Gross Profit - Int / p.l	4, H	-0.155	-0.048	0.092	0.183	0.038	0.042
Pasture & Suppl / p.l	5, H	0.006	0.031	0.084	0.125	0.042	0.075
Fertilizer / p.l	6, H	0.007	0.016	0.043	0.103	0.024	0.037
Animal Health /p.l	7, H	0.011	0.002	0.032	0.030	0.020	0.014
Wages /p.l	8, H	0.017	0.025	0.074	0.080	0.033	0.044
Shed Expenses /p.l	9, H	0.002	0.001	0.014	0.016	0.005	0.007
Fences / p.l	10, H	0.001	0.000	0.005	0.002	0.003	0.001
Repairs & Mant /p.l	11, H	0.001	0.000	0.018	0.011	0.007	00.5
Ditches /p.l	12, H	0.000	0.000	0.006	0.001	0.003	0.0002
Vehicle Expenses /p.l	13, H	0.003	0.000	0.038	0.009	0.014	0.004
Depreciation /p.l	14, H	0.011	0.014	0.080	0.069	0.028	0.034
Interests /p.l	15, H	0.084	0.113	0.179	0.309	0.161	0.194
Earthq. & Fire I. /p.l	16, H	0.000	0.001	0.010	0.006	0.002	0.002
Administration /p.l	17, H	0.000	0.000	0.040	0.111	0.006	0.041
F. Mnger Wage /p.l	18, H	0.000	0.000	0.057	0.103	0.022	0.031
Accountant /p.l	19, H	0.000	0.000	0.028	0.005	0.005	0.003
Taxes or Rates /p.l	20, H	0.003	0.000	0.019	0.007	0.008	0.003
General Costs / p.l	21, H	0.000	0.001	0.017	0.025	0.005	0.008
Incomes / p.l	22, H	0.286	0.432	0.457	0.583	0.322	0.480
Total Costs / p.l	23, H	0.311	0.433	0.647	0.837	0.445	0.633
Gross Profit /p.l	24, H	- 0.334	- 0.286	- 0.004	+ 0.070	0.123	0.153
GP - Int /p.l	25, H	- 0.155	- 0.048	+ 0.092	+ 0.183	0.038	0.042
T. F. Cash Exp. /p.l	26, H	0.135	0.212	0.258	0.380	0.175	0.300
T. F. Overheads /p.l	27, H	0.007	0.006	0.060	0.029	0.031	0.017
T. Financial Costs /p.l	28, H	0.096	0.127	0.282	0.378	0.189	0.229
T. Business Overhs/p.l	29, H	0.014	0.042	0.123	0.177	0.050	0.089
T. Fixed Costs/p.l	30, H	0.168	0.198	0.441	0.457	0.270	0.334
T. Variable Costs/p.l	31, H	0.135	0.212	0.258	0.380	0.175	0.299
Profitability	32, H	- 6.94%	- 1.63 %	7.44%	12.98%	2.03%	2.83%

Source: Daniela Winkler

4. C. ii.) Per hectare

The analysis of this section is the same as the preceding section, with the only difference being that instead of having values in relation to the total production of milk liters. Here the values are in relation to total number of producing factors, in this case the factor considered is number of hectares.

Milk sales per hectare are shown in graph 33 (H, 289), and the results were that Chilean farmers received less money per hectare than New Zealand farmers, except farmer Ch F. New Zealand values ranged from $1,910 per hectare (p.h.) to $3,597 p.h. with the exception of farmer NZ J who received $4,818 p.h. On the other hand Chilean farmers got a return of $440 p.h to $1,849 p.h., with the exception of farmer Ch F who received $4,134 as return per hectare.

Capital invested was also reviewed per hectare, and the results were inconclusive. New Zealand farms had an investment between $3,671 p.h., and $10,091 p.h. and there were two farms out of this range with values of $12,262 p.h. and $14,917 p.h. Chilean farms were in a range of $4,619 p.h. to $9,577 p.h. and only one farm was out of this range with a of $12,131 p.h. of investment. See graph 34 (H, 289).

Graph 35 (H, 289) shows production of liters per hectare, and the results are clear, in general New Zealand farms had a higher production per hectare than Chilean farms. NZ farms produced between 2,714 and 4,970 liters per hectare, while Chilean farms produced between 1,956 and 3,890 liters p.h. with the only exception of farm Ch F which produced 6,235 liters p.h., which was concordant with the fact that this farm had the highest expense in pasture and supplements per liter 13 c/p.l. See graph 5 (H, 281).

The analysis of cows per hectare was even more conclusive than milk sales p.h., showing that almost all New Zealand farms had a higher amount of cows per hectare. See Graph 36 (H, 289) . New Zealand's ratio of cows per hectare fluctuated between 1.56 to 4, while Chilean ratio fluctuated between 0.62 to 1.7 cows per hectare. This meant that the animal load on the paddocks was higher with New Zealand farms and at the same time production was higher in N.Z., showing a very efficient use of pasture, producing factors / hectares.

The next item is pasture and supplements per hectare, and as shown in graph 37

(H, 290) there was a difference between Chile and New Zealand. Chilean farmers spent between $117/p.h. and $336/p.h., with the exception of farm Ch F mentioned above, using $1,328 /p.h. New Zealand farms spent in a much more fluctuating way, the figures ranged between $41 /p.h. to $1,006 / p.h. The difference between both countries was the big variance of the New Zealand spending if compared to Chilean spending. (Without considering case Ch F). The range in NZ varied 1,820% without considering the highest value of $1,006, while the Chilean range varied 187%.

Graph 38 (H, 290) shows the costs of fertilizer including Nitrogen per hectare. The results were a higher spending in New Zealand farms than in Chilean farms. Most New Zealand farms spent between $120 to $476 dollars per hectare, with the exception of farm NZ H spent only $53 dollars per hectare. On the other hand Chilean farms spend between $45 to $139 dollars per hectare with the exception of Ch F $228 /p.h. This may also explain the fact that NZ produces more liters per hectare than Chile.

The cost of wages/ p.h. is shown in graph 39 (H, 290) and in general Chilean farms spent less in wages than NZ farms. There were only two farms with expenses over $200 /p.h., Farm Ch B $202/p.h. and Ch F $323 /p.h., while NZ had 9 above $200 and 3 under. Chilean range was from $ 61 /p.h. to $323 /p.h., while NZ range was from $150 to $719 p.h.

Fences are an item that was very different between countries, Chile spent less than NZ. Chile spent between $0 and $6.70 / p.h., while NZ spent between $5.80 and $47.6 dollars/ p.h. See graph 40 (H, 290).

Graph 41 (H, 291) shows the expenses on ditches and the difference is tremendous, from the 6 Chilean farms only one included this costs, Ch D $6.8 /p.h., all the others put a $0 value to this item. This could mean one of two things, either the farms have better draining conditions or the cost of ditches is absolutely irrelevant and considered equal to $0. On the other hand NZ spent between $2.6 and $56.2 p.h., and there was also one case NZ D who put a $0 value to the ditches cost.

In the case of vehicle expenses a similar situation occurs. All NZ farms had values between $30 and $194 p.h., with the exception of NZ D with $476 p.h., while Chilean farms had values $0, $17, $45 and $95 p.h. This means that New Zealand had higher vehicle expenses than Chilean, see graph 42 (H, 291).

Total income per hectare shows clear results, New Zealand earned higher

incomes than Chile. The levels were well above Chilean, the incomes fluctuated in a range of $4,051 to $10,037 dollars /p.h., while Chilean incomes fluctuated between $790 and $2,477 with the exception of Ch F $4,578, which had also the highest level of pasture & supplements, fertilizers and production of liters /p.h. Therefore New Zealanders did much better than Chilean in producing incomes from the land. See graph 43 (H, 291).

In counterpoint from the above paragraph, New Zealand's total costs were higher than Chilean, except of farm Ch F. The range of values were, NZ between $2,171 and $8,146, Ch between $1,134 and $2,132, with exception of farmer Ch F = $5.538. In order to draw any conclusion about the general situation of both countries it was necessary to analyze the net returns. See graph 44 (H, 291).

Graphs 45 and 46, (H, 292) present the gross profits and gross profit minus interests. Because this gross profit had almost all values below zero, then a gross profit minus interest was created in order to show the real cash outflow, considering that any return in equity was zero and that there were no loans to pay interests on. This assumption was very strong but is necessary in order to make any conclusions. The item gross profit minus interests per hectare, still had negative values, there were four farms with negative values, two from each country. On the other hand those that had positive values had values that were still low, between $75 and $1,060 per cow, for both countries. This shows that there was no critical difference between countries, but it shows a bad picture in economic terms because of the low profits of the activity of dairy production.

Farm cash expenses per hectare are shown in graph 47 (H, 292). It pictures opposite results than the farm cash expenses per liter (graph 26, H, 286). When the expenses were analyzed in terms of liters Chilean expenses were higher than NZ's, and when analyzed in terms of hectares Chilean expenses were lower than New Zealand's. The reason for this was the ratio of liters per hectare (graph 35, H, 289). New Zealand produces more liters per hectare, therefore when cash costs were divided by liters the NZ values were smaller than Chilean, and vice versa when divided by hectares. This supports the necessity of studying the values in terms of production, as well as in terms of productive factors, in order to avoid biased conclusions. NZ values fluctuate between $999 and $2,906 /p.h. and Chilean values from $515 to $1,044 / p.h, except Ch F =

$3,443 /p.h.

Graph 48 (H, 292) shows the item farm overheads per hectare, but it is different than the evaluation per liter per hectare analyzed, showing a difference between both countries. Chilean farms had lower farm overheads per hectare than New Zealand, with the exception of farm NZ F which was lower than any other New Zealander and Ch F which is higher than any other Chilean values. Chilean farm overheads values fluctuate from $21 /p.h. to $102 /p.h., and Ch F $307 /p.h., and New Zealand values fluctuate from $169/ p.h. to $314 /p.h., and NZ F $64 /p.h. and NZ D $750 /p.h.

Financial costs per hectare have the same pattern as farm overheads analyzed above. Almost all Chilean values were lower than almost all New Zealand values. Chilean values fluctuated between $513 /p.h. and $712 /p.h. with exception of Ch F $1,344 /p.h., and New Zealand values fluctuated between $1,005 /p.h. and $2,396 /p.h. with exceptions NZ D $3,256 /p.h. and NZ I $669 /p.h. See graph 49 (H, 293).

Finally graph 50 (H, 293) shows the business overheads, but here the difference between countries was unclear. Chilean values were from $84 /p.h. to $445 /p.h. and New Zealand values were from $128 /p.h. to $1,549 /p.h. The only conclusion was that the Chilean range was smaller than New Zealand's range of values.

The next two items were covered in the section before (B.1. "Comparison between farms in terms of product, production factor and production strategies", page 62) but because they are so important they are mentioned here again. The graphs 51 and 52 (H, 293), show the value of land per hectare, and the value of variable capital per value of land. Graph 51 shows that the value of land in Chile is lower than in New Zealand, and this does not mean that it has lower nutrient and fertility content or lower general agricultural value. This is very important because it means that Chilean farmers have a comparative advantage in terms of the costs of the productive factors, land and labor. Finally graph 52 (H, 293) shows the ratio between variable capital and the value of land, and here the situation was the opposite, where Chilean had higher values than New Zealanders. Variable capital is formed by the investment in machinery, buildings, cows and shares. This result could be a product of the issue explained before, lower values of land in Chile. The ratio is divided by a smaller value in Chile than in New Zealand. Consequently Chileans have a clear advantage in relation to the money they have tied up in land, in comparison to New Zealand farmers.

The next table shows the summary of the results per hectare calculated with the official exchange rate. And as in the section 'per liter', the first column shows the items, the second the location and number of the graph, column three & four the lowest values for both countries, column five & six the highest values, and seven & eight the averages for both countries.

Table 5 :Summary of results per hectare with Official Exchange Rate

Item	Graph	Lowest Value		Highest Value		Average	
		N.Z.	Chile	N.Z.	Chile	N.Z.	Chile
Hectares		42	55	276	160	117	140
Milk Sales /p.h	33, H	1,910	440	4,818	4,134	2,717	1,607
Capital /p.h	34, H	3,671	4,619	14,917	12,131	18,648	8,002
Liters /p.h	35, H	2,714	1,956	4,970	6,235	9,460	4,236
Cows /p.h	36, H	1.56	0.62	4.00	1.70	2.34	1.05
Pasture & Suppl /p.h	37, H	41	117	1,006	1,328	418	371
Fertilizer /p.h	38, H	53	45	477	228	235	114
Wages /p.h	39, H	150	61	719	323	303	160
Fences / p.h	40, H	5.8	0.0	47.8	6.8	23.3	2.9
Ditches /p.h	41, H	0.0	0.0	56.3	6.8	23.4	1.1
Vehicle Expenses /p.h	42, H	29.8	0.0	476.2	94.8	128.5	26.1
Total Incomes / p.h	43, H	2,141	790	5,219	4,578	3,009	1,947
Total Costs / p.h	44, H	2,171	1,134	8,146	5,538	4,209	2,379
Gross Profit /p.h	45, H	- 4,209	- 960	- 30	+ 345	- 1,200	- 431
GP - Int /p.h	46, H	- 1955	- 112	+ 1,059	+ 899	+ 291	+ 209
T. F. Cash Exp. /p.h	47, H	999	515	2,906	3,442	1,668	1,244
T.F. Overheads /p.h	48, H	64	21	750	307	282	87
T. Financial Costs /p.h	49, H	669	513	3,256	1,344	1,759	746
T.Business Overhs/p.h	50, H	128	84	1549	445	501	301
Value of Land/ p.h	51, H	4,160	2,889	25,000	7,222	10,795	4393
V.Capital/ V. of Land	52, H	0. 14	0.48	0.88	1.38	0.61	0.84

Source : Daniela Winkler

4. C. iii.) Per cow

This section is based on the same ideas than the section 'per hectare', comparing the costs from all the farms in terms of a production factor so that any comparison is possible, and in this case the factor used was number of cows in the herd.

As in the two sections above ('per liter' & 'per hectare') the first comparison is milk sales, which is the value of all the milk sold times the price received by each farmer. Graph 53 (H, 294) shows that between Chile and New Zealand there was basically no difference, except by farmer Ch F. NZ range was from $778 to $1,509 and Chilean range was from $636 to $1,249 per cow (p.c.), while farm Ch F was $2,432 /p.c. There were differences between the analysis in terms of liters, in terms of hectares and in terms of cows. When analyzed per liter Chilean received a much higher return per liter than most of New Zealand farms (graph 1, H, 280) Then when analyzed in terms of hectares the result was opposite, New Zealand received much higher returns than Chilean per hectares (graph 33, H, 289). Finally in terms of cows there were no differences between both countries, with exception of farm Ch F. These three different results were affected by different factors, both economic and productive, all three were affected by the economic factor the exchange rate. They were also affected by the productive strategies such as production of milk per cow and also by production of feed per hectare (pasture, silage, hay, etc) which allows different rates of cows per hectare.

Capital per cow was also studied and the result was that both countries had closely the same values, with exception of three farms NZ F, NZ G, and Ch A. The values were from $3,671 /p.c. to $10,091 /p.c. in NZ, and $4,619 /p.c. to $9,577 /p.c in Chile, while NZ F was $14,917 /p.c., NZ G was $12,262 /p.c. and Ch A was $12,131 /p.c. Graph 54 (H, 294) shows that Chile and NZ have very similar investments per cow, even if the results of the farm business operations were very different.

The following chart shows gross profit minus interests before taxes per cow and the results were the same under every term. There were two farms in each country having losses, and all the other farms were making profits in about the same range from $105 to $271 /p.c. in Ch and from $151 to $362 /p.c. in NZ, with the exception of farm

Ch D, with $599 /p.c. See graph 55 (H, 294).

The next graph shows a production ratio that explains the differences of results in milk sales, graph 56 (H, 294). This chart shows the amount of liters produced per cow. The result was that New Zealand produces in general more milk per cow than Chile. NZ amounts of liter per cow fluctuated between 2,714 liters /per cow, to 4,970 liter /per cow, while Chile produced between 1,956 l /p.c. and 3,890 liters per cow, with the exception of farm Ch F which produced 6,235 liters per cow.

Sales of calves and cows produce incomes for farmers, and graph 57 (H, 295) shows the difference between both countries. New Zealand's result were quite even, between $83 and $177 dollars per cow as income, while Chilean results varied from $261 to $505, dollars per cow as income. This difference was caused by the fact that there is no veal industry in Chile, so all the calves are sold as adults, for the meat industry, and this can affect the result of the dairy farm business if the meat market has a down turn in its prices. Therefore NZ has an advantage with the veal industry. Dairy farmers have always a secure and constant way of eliminating the calves, getting a constant price level over the years, while Chilean farmers have to deal with raising of the calves and the return can be sometimes positive and sometimes negative, much more volatile. It is also important to consider that graph 57 shows the total returns, price times number of heads sold, but it does not show the costs involved in the growth of those animals, so that item is not necessarily profit.

The cost of replacement was very even in most of the New Zealand farms, ranging from $107 to $279 per cow, and there was the exception of farms NZ F with a cost of $765 /p.c. On the other hand Chilean farms replacement cost was from $174 to $734 /p.c. See graph 58 (H, 295).

The item of pasture & supplements per cow was incredible even between Chile and New Zealand, with the exception of farm Ch F almost all farms had very close values. The range of all values fluctuated between $20 /p.c. and $334 dollars/p.c. considering both countries together. The only exception was farm Ch F which spent

$781 /p.c. which was two times higher than the highest level of the range and 40 times higher than the lowest level. This explains the high level of milk production per cow of Ch F, which produces 6,235 liters per cow. See graph 59 (H, 295).

In the case of animal health (graph 60, H, 295) it was possible to see a similar situation than in the paragraph above, were farm Ch F had an extreme high value in relation to all the other farms. The ranges of values were from $35 to $132 /p.c. in New Zealand farms and $9 to $49 in Chilean farms, but Ch F = $136 /p.c. This shows that excepting farm Ch F, Chilean values were lower than New Zealand's values.

Wages were similar in both countries, the figures for both countries fluctuating between $61 /p.c and $240 /p.c. With Chilean farm figures fluctuating in a narrower range than New Zealand figures, from $99 to $190 /p.c. in Chile while from $67 to $240 in NZ. See graph 61 (H, 296)

Shed expenses were also similar between both countries, but Chile was in the lower half of the range in which values fluctuate. The amounts spent per cow were within $4 and $45 dollars per cow, while Ch F was $53 /p.c. (See graph 62, H, 296)

Repairs and maintenance per cow had no pattern at all, New Zealand values varied over $3 and $78 /p.c. while Chilean values were erratic and took values of {$0, $13, $14, $43 and $70} dollars per cow. So no possible conclusion was drawn from this information. See graph 63, (H, 296).

The situation related to vehicle expenses was the same the one described above, NZ values were from $16 to $160 /p.c. while Chilean values were {$0, $15, $30 and $56} So no possible conclusion was drawn from this data. See graph 64 (H, 296).

Graph 65 (H, 297) shows the total income per cow, and the results indicates that some Chileans had very similar incomes per cow than the New Zealanders, and others had highly differing incomes. New Zealand values were in a narrow range, between $883 and $1,604 dollars per cow, while Chilean values were in a very wide range, between $1,140 and $2,693 per cow. As it was possible to see NZ values and Chilean values were very similar with the exception of farm Ch F which had a very high relative production level.

Total costs as well as total income were very stable and similar between both countries, with the usual Chilean exception of farm Ch F. All the values varied from $1,068 to $ 2,800 /p.c. and Ch F was $3,258 per cow. See Graph 66 (H, 297).

As in the cases before ('per liter' & 'per hectare') it was also necessary to evaluate the results in terms of gross profit rather than only in terms incomes and costs separately. As graph 67 (H, 297) shows all farms except for farm Ch D had losses, and were very similar in both countries. This meant that neither New Zealand nor Chilean farmers could buy land, an entire herd, and do the necessary investments for starting a dairy farming business with a bank loan, because the dairy business is not capable of providing the necessary profits to cover the costs of the credit.

In this analysis as well as in the cases before, each costs section was checked in order to find differences and / or similarities. The first item was total farm cash expenses and the results show that both countries had very similar values from $417 /p.c. to $1,217 /p.c., and Ch F equal to $2,025 dollars per cow. So in general there was no difference between Chile and New Zealand. See Graph 68 (H, 297).

Farm overheads are shown in graph 69 (H, 298) and besides farm Ch F the Chilean range of values was lower than New Zealand's, being $19 to $72 /p.c. the former with $34 to $252 /p.c. the latter, and $181 /p.c. the exception.

Graph 70 (H, 298) shows the financial costs per cow with half of the New Zealand farms being in about the same range than the Chilean farms. The other NZ half was well above those levels, and farm Ch A was the exception being above all the other Chilean farms. The Chilean values fluctuate between $416 and $878 /p.c., New Zealand's first half values were between $329 and $686 /p.c., the other half being between $851 and $1,250 /p.c. while farm Ch A was $1,154 dollars per cow.

The final main cost is business overheads and in this case four Chilean farms were in the same range than New Zealand farms, the other two being well above and there were also two exceptions in the New Zealand side. The Chilean four farms had values ranging from $121 to $262 /p.c., the other two farms had values ranging from $464 to $580 /p.c. New Zealand had values between $67 and $258 /p.c. and the two exceptions were NZ D $521 and NZ E $320 dollars per cow. See graph 71 (H, 298).

Finally graph 72 (H, 298) shows variable capital per cow. Because in the item variable capital/value of land (graph 52, H, 293) it was not possible to conclude whether the cost of buildings, machinery cows and shares was higher or lower in either country, it was necessary to analyze it in terms of production factor per cow. Here Chilean farmers have not the same advantage as when analyzed with the value of their land, the

graph indicates that Chilean farms have higher 'investments in machinery, buildings, cows and shares' per cow than New Zealand.

Table 6 presents in a condensed way the results per cow calculated with the official exchange rate. And as in sections before, column one shows the items, two the location and number of graph, three & four the lowest values, five & six the highest values, and seven & eight the averages of both countries.

Table 6: Summary of results per cow with Official Exchange Rate

Item	Graph	Lowest Value		Highest Value		Average	
		N.Z.	Chile	N.Z.	Chile	N.Z.	Chile
Cows		125	55	505	272	258	148
Milk Sales /p.c	53, H	778	636	1,506	2,432	930	1,015
Capital /p.c	54, H	3,671	4,619	14,917	12,131	8,306	8,144
Gross Profit - Int /p.c	55, H	- 657	-156	366	599	153	131
Liters /p.c	56, H	2,714	1,956	4,970	6,235	4,104	3,680
S. Calves + Cows /p.c	57, H	83	261	177	505	126	406
Replacement /p.c	58, H	107	174	765	734	237	483
Pasture & Suppl /p.c	59, H	20	106	334	781	164	295
Animal Health /p.c	60, H	35	8	132	186	82	57
Wages /p.c	61, H	67	99	242	190	131	146
Shed Expenses /p.c	62, H	8	4	45	53	21	24
Repairs & Mant /p.c	63, H	3	0	78	70	27	23
Vehicle Expenses /p.c	64, H	16	0	160	56	56	17
Total Incomes / p.c	65, H	883	1,140	1,604	2,693	1,309	1,713
Total Costs / p.c	66, H	1,068	1,421	2,737	3,258	1,819	2,234
Gross Profit /p.c	67, H	- 1,414	- 1,111	- 15	+ 230	- 511	- 520
T. F. Cash Exp. /p.c	68, H	417	696	1,217	2,025	717	1,093
T. F. Overheads /p.c	69, H	34	19	252	181	125	67
T. Financial Costs /p.c	70, H	329	416	1,250	1,154	777	763
T.Business Overhs/p.c	71, H	67	121	521	580	200	311
V. Capital /p.c	72, H	1,553	2,212	4,608	5,547	2,819	3,559

Source : Daniela Winkler

4. D.) Quantitative comparison between countries with alternative Exchange Rate

This section concerns the Chilean farmer's expression of their worries about the politically controlled exchange rate in Chile. In this section the same items from the preceding section are going to be analyzed. To convert the Chilean values to New Zealand dollars the alternative exchange rate will be used.[21] In this way all the New Zealand values remain the same and only Chilean values are affected by their transformation to NZ dollars. As in the official exchange rate analysis the comparison between both countries is separated in three sections, per liter, per hectare and per cow.

4.D. i.) Per liter

The first graph in this section graph 1 (I, 300) shows big differences from the official exchange rate analysis, in this case Chilean farmers received a lower price per liter than New Zealand farmers. Graph 1 shows New Zealand farmers get prices that were {27,28,29,32, and 41 cents p.l.), Chilean farmers {24,25,26,28 and 29 cents} and in terms of the official exchange rate Chileans receive {32, 33, 35, 38, and 39 cents}. Therefore the clear conclusion here is that the official exchange rate distorts the values (reality), when the official rate was used Chileans got higher prices, and whit the unofficial rate Chileans got lower prices than New Zealanders. This is crucial in measuring or evaluating the competitiveness of Chilean farmers. This section brings a different insight, in order to find out whether the results of the previous sections were merely nominal or real results.

In the case of capital per liter results were very similar with both rates, Chilean and New Zealand farmers use capital in the same range of values. The only change is that with the official rate Chilean farms were in the top half of the New Zealand range of values and with the alternative rate Chilean farms were in the lower half of New Zealand's range of values. See graph 2 (I, 300) .

Graph 3 (I, 300) does not show much difference from its similar in section {C, I.)}.The conclusion of the lack of relationship between investment and income is still the same, using either exchange rate.

[21] See Methodology for details

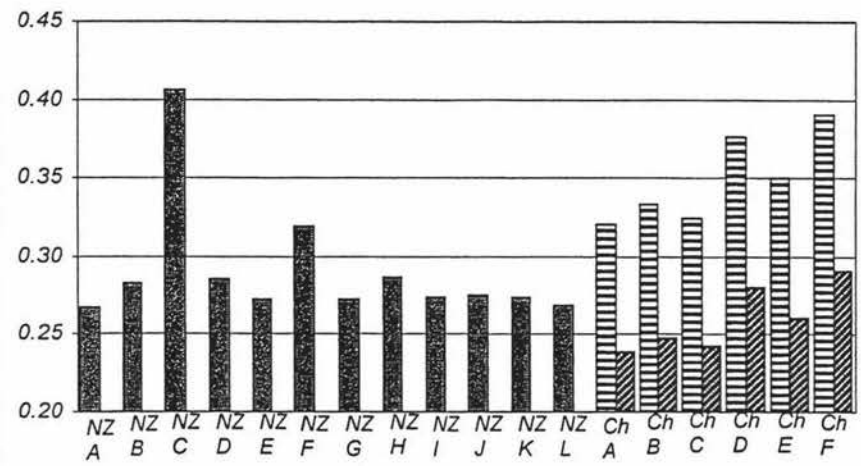
The item 'gross profits minus interests before taxes', in graph 4 (I, 302), shows the same results than graph 4 (H, 281). There was not much difference between New Zealand and Chilean farms, with the exception of farm Ch D. All the other farms that had positive values were in the range of $0.01 to $0.09 dollars per liter, being the same for both countries.

The graphs from 5 to 14 (I, 281 - 283) and 16 to 21 (I, 304, 305), show the same problem than when the analysis was in terms of the official rate, the values vary between $0.00 and $0.05 dollars, which makes any conclusion very inaccurate.

Graph 15 (I, 303) shows the costs of interest (or capital cost) per liter, and the results were that Chilean farms had exactly the same costs than New Zealand farms, between $0.08 and $0.23 dollars per liter.

Incomes being the next item analyzed (graph 22, I, 305) and there were clear differences depending on what exchange rate was used. With the official rate almost all Chilean farms received a higher income per liter than New Zealand farms. But with the alternative rate the results were very different, because half of the Chilean farms received the same income than NZ farms. NZ ranges from $29 to $34 cents/p.l., with the exception of NZ C $46 cents per liter, Chilean official rate ranges were from $43 to $ 58 cents, and with the alternative rate ranged from $32 to $43 cents per liter. These findings support the issue expressed in the introductory paragraph of this chapter, that there may be nominal difficulties with the official exchange rate, if not both results should have been the same. The reason for the drop in income was a drop in the price paid per liter, with the official exchange rate the average price paid was $0.349 /p.l. in Chile, and New Zealand's average price was $0.290 /p.l., while with the estimated exchange rate the average price paid in Chile was $0.260 /p.l. This created a considerable difference in the total return, price of milk times liters supplied, which affects the total income per liter.

Figure 3: Prices paid to farmers, cents per liter with both exchange rates



Source: Daniela Winkler

Figure 3 shows the prices paid per liter in both countries and the difference between both exchange rates. The Chileans get paid more than New Zealanders under the official exchange rate, get less than New Zealand farmers with the estimated exchange rate.

Total costs results have the same situation as the prices paid p.l. depended on what E.R. was used, as to the result obtained. In this case the difference between Chile and New Zealand is greatly reduced once the alternative exchange rate is utilized. See Graph 23 (I, 305).

Gross profit still had the same problem of being mostly negative, all farms except one had negative results, and this is a major issue, which downplays the exchange rate issue into an issue of secondary importance (masking its existence). See graph 24 (I, 306).

Because of problem the item of gross profit minus interests before taxes this created, and is shown with the estimated rate in graph 25 (I, 306). In the graph it is possible to see that Chilean results were lower than New Zealand's. From the 6 farms researched only one had a higher value than NZ's and there was also another that had an equal value than NZ's, all the rest having a lower value.

Total farm cash expenses per liter were higher in Chilean farms than New Zealand farms, with both rates. See Graph 26 (I, 306) this graph indicates that most of the NZ farm values fluctuate between 13 cents and 17 cents, other NZ farms had values between 21 and 26 cents per liter. On the other hand Chilean farms had values between 20 and 28 cents per liter, with the exception of farm Ch D (16), which was also the only one (from the 18 farms) that had a positive total profits (including interests).

Concerning total farm overheads it would be possible to draw some conclusions but again the variations were to small, and the difference between one farm and the next was only one cent or even less. See Graph 27 (I, 306).

Total financial costs were in exactly the same range in both countries, between 9 and 28 cents per liter. This result was again different from that obtained with the official rate. With Chile having higher values than NZ with the official rate, and with the A.E.R., alternative rate, this difference no longer existed. See Graph 28 (I, 307).

Graph 29 (I, 307) shows the total business overheads per liter, and in this case Chilean values were in the same range but a little higher overall. Chilean values fluctuate between 3 cents and 13 cent p.l. while NZ values fluctuate from 1 to 12 cents.

Graph 30 (I, 307) presents the value of the total fixed costs per liter, and the results are clear, all farmers had about the same range of values, in both countries. The values ranged between 15 cents per liter and 44 cents per liter. In the elements composed of the total costs of farm overheads, financial costs, and business overheads Chile's results were similar to New Zealand's.

Finally variable capital per liter is shown in graph 31(I, 307) and the results show that both countries invest about the same amount per liter, with the exception of farm Ch E which had a value a bit higher than all the other farms. The values ranged between 40 cents per liter and approximately one dollar.

The last Graph 32, (I, 308) of this section is the profitability, where results show that both countries had about the same values, being very low in comparison to other industries. The use of the alternative exchange rate reduced the results and values of the Chilean farmers, which shows that the actual economic policies are affecting their returns and terms of trade. This is very discouraging if trying to convert this industry into an exporting one.

The following table shows the results per liter in the same way as tables before, but in this case the calculations were made with the alternative exchange rate. And as in the previous sections, column one shows the items, two the location and number of graph, three & four the lowest values, five & six the highest values, and seven & eight the averages of both countries. But in this table a extra column was added, which shows the Chilean averages calculated with the official exchange rate.

Table 7: Summary of results per liter with Estimated Exchange Rate

Item	Graph	Lowest Value		Highest Value		Average		
		N.Z.	Chile	N.Z.	Chile	N.Z.	Chile	*Chile*[22]
Cents/p.l	1, I	0.267	0.406	0.239	0.291	0.290	0.260	0.349
Capital /p.l	2, I	1.07	1.00	3.16	2.88	2.015	1.811	2.430
Gross Profit - Int /p.l	4, I	- 0.16	- 0.04	+ 0.09	+ 0.14	+0.038	+0.031	+0.042
Pasture & Suppl /p.l	5, I	0.006	0.023	0.084	0.093	0.042	0.056	0.075
Fertilizer /p.l	6, I	0.026	0.012	0.043	0.076	0.024	0.027	0.037
Animal Health /p.l	7, I	0.011	0.002	0.032	0.022	0.020	0.010	0.014
Wages /p.l	8, I	0.017	0.019	0.074	0.060	0.033	0.033	0.044
Shed Expenses /p.l	9, I	0.002	0.001	0.014	0.012	0.005	0.005	0.007
Fences / p.l	10, I	0.001	0.000	0.005	0.001	0.003	0.001	0.001
Repairs & Mant /p.l	11, I	0.001	0.000	0.018	0.008	0.007	0.004	0.005
Ditches /p.l	12, I	0.000	0.000	0.006	0.001	0.0027	0.0002	0.0002
Vehicle Expenses /p.l	13, I	0.003	0.000	0.038	0.007	0.014	0.003	0.004
Depreciation /p.l	14, I	0.011	0.011	0.080	0.052	0.028	0.026	0.034
Interests /p.l	15, I	0.084	0.080	0.253	0.231	0.161	0.145	0.194
Earthq. & Fire I. /p.l	16, I	0.000	0.001	0.010	0.005	0.002	0.002	0.002
Administration /p.l	17, I	0.000	0.000	0.040	0.083	0.006	0.031	0.041
F. Mnger Wage /p.l	18, I	0.000	0.000	0.057	0.077	0.022	0.023	0.031
Accountant /p.l	19, I	0.000	0.000	0.028	0.004	0.005	0.002	0.003
Taxes or Rates /p.l	20, I	0.003	0.000	0.019	0.005	0.008	0.002	0.003
General Costs / p.l	21, I	0.000	0.001	0.017	0.018	0.005	0.006	0.008
Incomes / p.l	22, I	0.286	0.322	0.457	0.435	0.322	0.358	0.480
Total Costs / p.l	23, I	0.311	0.323	0.647	0.624	0.445	0.471	0.633
Gross Profit /p.l	24, I	- 0.334	- 0.213	- 0.004	+0.052	- 0.123	- 0.114	- 0.153
GP - Int /p.l	25, I	- 0.155	-0.036	+0.092	+0.136	+ 0.038	+0.310	+0.042
T. F. Cash Exp. /p.l	26, I	0.135	0.158	0.258	0.284	0.175	0.223	0.299
T. F. Overheads /p.l	27, I	0.007	0.004	0.060	0.022	0.031	0.013	0.017
T. Financial Costs /p.l	28, I	0.096	0.094	0.282	0.282	0.189	0.170	0.229
T.Business Overhs/p.l	29, I	0.014	0.031	0.123	0.132	0.050	0.066	0.089
T. Fixed Costs/ p.l	30, I	0.17	0.15	0.44	0.34	0.27	0.25	0.34
Variable Capital/ p.l	31, I	0.40	0.49	1.05	1.26	0.70	0.78	1.05
Profitability /p.l	32, I	- 6.9 %	- 1.2 %	7.4 %	9.7%	2.3%	2.1%	2,8%

Source : Daniela Winkler

[22] Official Exchange Rate Average

4. D. ii.) per hectare

The first graph 33 (I, 309) shows a dramatic difference between Chile and New Zealand, the former had much lower values than the latter. Chilean values of milk sales per hectare were between $328 /p.h. and $1,378 /p.h. with the exception of farm Ch F, which equates to $3,080 /p.h., whilst New Zealand farms had values fluctuating from $1,910 to $4,818 /p.h. The alternative rate made the difference between both countries even greater. See graph 33 (I, 309). The reason behind this greater difference was due to production variables and was highlighted by economic variables, principally the exchange rate. The production systems show that New Zealand had more cows per hectare and also that milk production per cow was higher, consequently the ratio of liters per hectare was much higher than in Chile. With the official exchange rate Chileans were paid much higher prices than New Zealanders, but Chile's low production ratio of liters per hectare compensated the higher price and New Zealand had higher milk sales per hectare than Chile. When the alternative exchange rate was used, then both variables, price and production ratio, were lower in Chile than in New Zealand, therefore the milk sales were even lower for Chile than in the case with the O.E.R.

Capital per hectare was very similar among all the farms of the research, some fluctuated between $3,671 and $10,091 and others fluctuated between $12,131 and $14,917 dollars per hectare. See Graph 34 (I, 309).

Graphs 35 and 36 (I, 309), are in real terms and because of this, they were not affected by changes in nominal variables. The alternative rate did not make any difference and the values and analysis done was exactly the same than in chapter C-section ii.

Pasture & supplements differ from one country to the other, but still generalized conclusions were difficult because there was no clear pattern in either. Most Chilean values (5 out of 6) fluctuated in a very narrow range between $87 and $251 /p.h., but on the other hand farm Ch F had a value of $989 /p.h. Hence if all the Chilean farms were considered than the range would be very wide. Something similar happened with New Zealand's farms, they fluctuate in a wide range, between $41 and $787 /p.h., and if the extreme was also included $1,006, then New Zealand and Chile have a range with the same width. It was not possible to draw a clear conclusion whether one was higher than

the other, or if they were both the same. See Graph 37 (I, 310).

Graph 38 (I, 310) exhibits the costs in fertilizers per hectare, including Nitrogen. The results show that Chile had a lower overall cost than New Zealand, but with the official exchange rate both countries had the same costs. The range in which New Zealand values fluctuated was from $120 to $476 /p.h., with the exception of farm NZ H $53 /p.h., while Chilean values fluctuated from $33 to $103 and farm Ch F was $170 /p.h. This was a result of two reasons, either these farmers had a competitive advantage in their soils and needed less fertilizer or because of other problems farmers had, they were forced to delay their spending on fertilizers to future years, although this reduces their value of land or capital.

The situation of the wages was similar to that of fertilizers, with the estimated exchange rate Chilean farmers had lower costs than New Zealand farmers. This was caused by the fact that as Chile is a developing country and New Zealand being a developed country, which under economic terms means higher capital costs and lower labor costs in the former and opposite in the latter. This is explained by the amount of capital and labor available in each country, and its productivity. The higher the amount of production factor the lower the productivity, lower price and/ or cost. To define a country as developed or developing relates to the amount of each factor these countries have, high capital - low labor are "developed", low capital - high labor are "developing" or "undeveloped" depending on the amounts of each factor. Even if the number of people employed on a Chilean dairy farm was much higher than in NZ, the cost involved was still lower. The graphs 34 (I, 309) and graph 39 (I, 310) are consistent with the economic background about the definitions of both countries involved.

With graph 40 (I, 310), fences expenditure per hectare, the only possible conclusion was that for Chilean farmers fences were not a considered item in their analysis of costs or in their running of the dairy farming business. This is clear in the graph, because all NZ farms had a value for this item, ($6 - $48 /p.h.), while two Chilean had $0 value and the other had values between $2 and $5 /p.h. The reason for this is related to wages, and labor resources. In Chile fencing is done with posts made by someone from the farm or the village close by with wood from the farm (usually) in a very cheap way. On Chilean farms fencing is undertaken by someone whose salary is not comparable to any wage of a New Zealand farm worker or fencing contractor,

(much lower). Therefore the cost of fences is very low, because it is a time and labor consuming activity and wages per hour in Chile are very cheap in relation to any other developed country.

In Chile ditches/drains are a cost that is given even lower consideration than fences, only one Chilean farm assigned a value to this item while on the other hand only one New Zealand farm did not. The reasons behind this are the same as for fences, someone using a spade does ditches, therefore the only cost involved is salary and these are cheaper in Chile than in New Zealand. See Graph 41 (I, 311).

Vehicle expenses are another item that presents much lower costs in Chile than in New Zealand. The reason behind this is the Chilean agricultural structure, where farmers have to diversify between at least three different products in order to reduce income risks due to price fluctuations. These products can be meat, sugarbeet, wheat, potatoes, maize, and barley among others; therefore vehicle costs were spread through all the different production activities of the farm. Because New Zealand agricultural structure allows a situation where farmers can specialize in only one product, then costs like vehicle costs are all charged to only that activity, makes this item higher if compared to Chile. See graph 42 (I, 311).

Graph 43 (I, 311) shows total income per hectare and almost all Chilean farms had lower incomes than New Zealand farms, with the exception of farm Ch F, which also had an extraordinary milk production. The values fluctuated between $588 and $1,846 /p.h. in Chile, with Ch F equal to $3,411, while New Zealand values fluctuated between $2,141 and $3,936 with the exception of NZ J equal to $5,219 per hectare. This result did not change by the use of the alternative exchange rate, on the contrary this result was made even clearer between both countries.

In the case of total costs results were the same than with the total income per hectare, all Chilean farms except farm Ch F had lower values than New Zealand farms. Graph 44 (I, 311) shows values between $845 and $1,589 for Chilean with Ch F equal to $4,127 per hectare, while most New Zealand farms were between $2,171 and $6,114 with exception of NZ D which had a much higher value, $8,146. Conclusions are the same with both rates, but with the alternative are strengthened.

Graph 45 (I, 312) shows that almost all farms of the research did not have positive values for their gross profit per hectare, except Ch D which had a value of $257

/p.h. Even with all farms having the same results (all negative) there were still differences between both countries. Chilean farms had smaller losses than New Zealand farms. Most of New Zealand farms had values between ($206) and ($1,906), with exceptions of NZ D ($4,209) and NZ I ($30). On the other hand Chilean farms were making losses between ($210) and ($716). This result remains the same with both rates, being enhanced with the alternative rate.

Farm cash expenses were lower in Chile, but with the usual exception of farm Ch F, which had a value in New Zealand's upper limit of the range. Chilean farms had values between $384 and $778 dollars per hectare, while New Zealand farms had values between $999 and $2,906, and Ch F $2,565. As graph 46 (I, 312) shows, Chile had lower farm cash expenses than New Zealand.

Graph 47 (I, 312) exhibits an even more dramatic difference between both countries, most Chilean farms had values in the range of $16 to $76 dollars per hectare, while most New Zealand farms had values in the range of $176 to $314 dollars per hectare. Exceptions were NZ D $750 /p.h., NZ F $64 /p.h. and Ch F $229 /p.h.

Graph 48 (I, 312) presents financial costs per hectare and the results were like in the two items analyzed before, Chilean farms had lower costs than New Zealand farms. This item also shows that Chilean farms had a very narrow range of values, (with exception of farm Ch F), just between $382 and $531 /p.h., while NZ's range fluctuated between $669 and $2,369 /p.h. And exceptions had values equal to $3,256 (NZ D) and $1,002 (Ch F).

Business overheads were different than all items discussed above, in this case both countries had the same values. Chilean values were in the lower limit of the range, between $63 and $331, and New Zealand values between $128 and $753, with the exception of NZ D equal to $1,549. See graph 49 (I, 313).

Graph 50 (I, 313) shows the value of land per hectare and the difference between Chile and New Zealand was absolute. Chile had values fluctuating between $2,153 and $5,381 per hectare, while New Zealand had values ranging between $4,160 and $25,000 per hectare. This clearly means that Chilean farmers have a clear advantage in relation to the capital they need to invest in land in relation to New Zealand farmers.

Graph 51 (I, 313) shows variable capital in relation to value of land. As a result of the values shown in graph 50 this measure was higher in Chile than in New Zealand,

therefore it was necessary to compare this value in other terms, for example per hectare.

Graph 53 presents variable capital per hectare, and the results show that Chile had lower investments per cow than New Zealand. The Chilean values fluctuated between $1,813 and $2,962 per hectare with the exception of farm Ch F $5,235, while New Zealand values fluctuated between $3,157 and $13,175 per hectare. Therefore Chilean farmers have advantages in the value of land and in the investment needed per hectare. The result of graph 51 is just a product of the division of both values, which turned the results up side down. But in reality Chileans have advantages in both items, value of land and variable capital.

Table 8 presents a summary of all the results of this section, in the same way as it was presented in section 'per liter'. Lowest values, highest values, averages, including the Chilean average calculated with the official exchange rate.

Table 8: Summary of result per hectare with Estimated Exchange Rate

Item	Graph	Lowest Value		Highest Value		Average		
		N.Z.	Chile	N.Z.	Chile	N.Z.	Chile	*Chile*[23]
Milk Sales /p.h	33, I	1,910	328	4,818	3,080	2,138	893	1,199
Capital /p.h	34, I	3,671	4,619	14,917	12,131	18,648	5,963	8,002
Liters /p.h	35, I	2,714	1,956	4,970	6,235	9,460	4,236	4,236
Cows /p.h	36, I	1.56	0.62	4.00	1.70	2.34	1.05	1.05
Pasture & Suppl /p.h	37, I	41	87	1,006	989	418	276	371
Fertilizer /p.h	38, I	53	33	476	170	235	85	114
Wages /p.h	39, I	150	45	719	241	303	119	160
Fences / p.h	40, I	6	0	48	5	23	2	3
Ditches /p.h	41, I	0	0	56	5	23	1	1
Vehicle Expenses /p.h	42, I	30	0	476	71	128	19	26
Total Incomes / p.h	43, I	2,141	558	5,219	3,411	3,009	1,451	1,947
Total Costs / p.h	44, I	2,171	845	8,146	4,127	4,209	1,773	2,379
Gross Profit /p.h	45, I	- 4,209	- 716	-30	+ 257	- 1,200	- 321	- 431
T. F. Cash Exp. /p.h	46, I	999	384	2,906	2,565	1,668	927	1,244
T.F. Overheads /p.h	47, I	64	16	750	229	282	65	87
T. Financial Costs /p.h	48, I	669	382	3,256	1,002	1,759	557	747
T.Business Overhs/p.h	49, I	128	63	1,549	331	501	225	301
V. of Land / p.h	50, I	4,160	2,153	25,000	5,381	12,045	3,274	4,393
V. Capital / V. of Land	51, I	0.144	0.481	0.878	1.376	0.608	0.839	0.839
Variable Capital/ p.h	52, I	3,157	1,481	13,175	5,235	6,591	2,689	3,609

Source : Daniela Winkler

[23] Official Exchange Rate Average

4. D. iii.) per cow

This section analyses the costs in terms of number of cows in the herd of each farm, as relating to the A.E.R. The first item is milk sales and the results are surprising. With the official rate Chilean farmers had the same and/or a bit higher milk incomes per cow than New Zealand farmers. But with this alternative rate, results show that Chilean farmers received less milk income per cow than NZ farmers, with the exception of farm Ch F. Graph 53 (I, 314) exhibits values between $475 and $931 /p.c. for Chilean farmers, between $778 and $1,506 for New Zealand farmers and $1,812 for Ch F.

Graph 54 (I, 314) presents values of capital per cow, and here it was not possible to see any difference between countries. New Zealand values varied from $3,671 to $14,917 /p.c. and Chilean values varied from $4,619 to $12,131 /p.c. Therefore the only possible conclusion was, the Chilean results were within a narrower range within New Zealand's range of results.

With the gross profits minus interests before, taxes it was difficult to determine a conclusion, because there were several different situations. There were four farms that made losses, of which New Zealanders had bigger values than Chilean, from ($657) to ($237) of NZ's, and from ($105) to ($116) in Chile. The other farmers having positive values, where New Zealand had values from $151 to $366, and Chile from $80 to $202, with case Ch D $447. Consequently conclusions were that from those farms making loses Chilean were doing less losses than New Zealanders, and from those farms that were making "profits" Chilean had lower values than New Zealanders, except farm Ch D. See graph 55 (I, 314).

Graph 56 (I, 314) presents liters per cow in each farm, and because this value was a real value and not nominal, it is not affected by the estimated exchange rate, conclusions are the same as with the O.E.R.

The incomes from sources other than milk production were sales of calves and cull cows, and they are presented in graph 57 (I, 315). The conclusion with both exchange rates was that Chilean received a much higher retribution for these items than New Zealanders. Values fluctuated from $195 to $376 /p.c. in Chile and from $83 to $177 /p.c. in New Zealand.

Graph 58 (I, 315) displays costs of replacement and as in the case of the official exchange rate the values of Chilean farmers were higher than the values of New Zealand farmers. Chilean values fluctuated from $130 to $547 /p.c. while New Zealand values fluctuated from $107 to $279 /p.c. with the exception of farm NZ F which had a value of $765 per cow.

Pasture & supplements were very similar in both countries, but farm Ch F had a very high value. The New Zealand results varied from $20 to $334 /p.c and Chilean results varied from $79 to $189 with the exception, Ch F $582 /p.c. Consequently Chilean values were in a narrower range within the New Zealand range of values. See graph 59 (I, 315)

Animal health per cow is shown in graph 60 (I, 315), and Chilean farms had lower values than New Zealand farms, without considering farm Ch F which had higher values than all the other Chilean farms. Chilean values fluctuated between $6 and $37 per cow, while New Zealand values fluctuated between $35 and $132 dollars per cow, and farm Ch F is $138 /p.c.

Graph 61 (I, 316) shows costs of wages and Chilean results were the same as New Zealand's results. Chilean values were from $73 to $141 /p.c. and New Zealand values were from $67 to $242 /p.c. The reason for this was explained before (page 90) and it relates to the developing and developed condition of each country.

Shed expenses per cow were also the same between both countries, fluctuating from $3 to $45 dollars per cow. See Graph 62 (I, 316).

Repairs and maintenance per cow were presented in Graph 63 (I, 316), and they had no particular pattern which could led to any conclusion. It seems that it depended on each particular case as to the value. These values fluctuated between $0 and $78 dollar per cow.

Vehicle expenses per cow had the same pattern per hectare, the reason for the differences between both countries was explained in section before. See Graph 64 (I, 316).

Total incomes per cow are shown in Graph 65 (I, 317) and the conclusion was that Chilean farmers had the same incomes than New Zealand farmers, but were in the lower half of the range of values, yet were in the upper half with the official exchange

rate. The values fluctuated from $850 to $1,604 per cow, with farm Ch F being $2,007/p.c.

Graph 66 (I, 317) presents the total costs per cow, and it also shows there was no difference between each country in their values. The values ranged between $1,059 and $2,737 dollars per cow.

Gross profit is shown in Graph 67 (I, 317) and the results it presents were the same as with the official exchange rate, both countries had similar values and almost all with exception of one there were negative. The results being, Chilean farmers ($191) and ($828)[24], and New Zealand farmers ($15) and ($1,414), Chilean values were in a narrower range than New Zealand values.

Farm cash expenses were the same in both countries, with the exception of farm Ch F which was only a little higher than the rest. Values for New Zealand were from $417 to $1,217 and for Chile were from $519 to $827, and Ch F was $1,509. So as graph 68 (I, 317) shows there was no difference between the countries.

Farm overheads were different between Chilean farms and New Zealand farms, the former being lower than the latter. Graph 69 (I, 318) shows that Chilean values fluctuated between $14 and $54 /p.c., while New Zealand values fluctuated between $34 and $192 /p.c., with extremes being NZ D $252 /p.c. and Ch F $135 /p.c.

Chilean financial costs were in the lower half of the range of New Zealand values. The results were from $310 to $860 /p.c. for Chile, and from $329 to $1,250 /p.c. for New Zealand. See graph 70 (I, 318) .

Business overheads were same for both countries, and both showed a high variability among different farms. Graph 71 (I, 318) presents the values and they ranged from $67 to $521 /p.c. for both countries.

Finally table 9 shows in a condensed format all the results per cow calculated with the estimated exchange rate, in the same way it was presented in section 'per hectare'. Lowest values, highest values, averages and including also the Chilean average calculated with the official exchange rate.

[24] Numbers in brackets mean in accounting negative values.

Table 9: Summary of results per cow with Estimated Exchange Rate

Item	Graph	Lowest Value		Highest Value		Average		
		N.Z.	Chile	N.Z.	Chile	N.Z.	Chile	*Chile*
Milk Sales /p.c	53, I	778	474	1,506	1,812	930	756	1,015
Capital /p.c	54, I	3,671	4,619	14,917	12,131	8,306	6,068	8,144
Gross Profit - Int /p.c	55, I	- 657	- 116	366	447	153	98	131
Liters /p.c	56, I	2,714	1,956	4,970	6,235	4,104	3,680	3,680
S. Calves + Cows/p.c	57, I	83	195	177	376	126	303	406
Replacement	58, I	107	130	765	547	237	360	483
Pasture & Suppl /p.c	59, I	20	79	334	582	164	220	295
Animal Health /p.c	60, I	35	6	132	139	82	42	57
Wages /p.c	61, I	67	74	242	142	131	109	146
Shed Expenses /p.c	62, I	8	3	46	40	21	18	24
Repairs & Mant /p.c	63, I	3	0	78	52	27	17	23
Vehicle Expenses /p.c	64, I	16	0	160	42	56	13	17
Total Incomes / p.c	65, I	883	850	1,604	2,007	1,309	1,277	1,713
Total Costs / p.c	66, I	1,068	1,059	2,737	2,428	1,819	1,664	2,234
Gross Profit /p.c	67, I	-1,414	- 828	- 15	+ 171	- 511	- 388	- 520
T.F. Cash Exp. /p.c	68, I	417	519	1,217	1,509	718	814	1,093
T.F. Overheads /p.c	69, I	34	14	252	135	125	50	67
T. Financial Costs /p.c	70, I	329	310	1,250	860	777	569	763
T.Business Overhs/p.c	71, I	67	90	521	432	200	231	311

Source : Daniela Winkler

Chapter 5 Conclusion

There are several conclusions and findings in this research, but in the main is the answer to the hypothesis :

Chilean Dairy farmers are as efficient and competitive as New Zealand Dairy farmers, in year round milk production. Where the efficiency, is measured as the minimal cost and as the maximum production.

And the answer is **yes**, Chilean year round dairy farmers are as efficient and competitive as New Zealand year round dairy farmers. The measurement was through the costs of production, and not total production, because total milk produced in Chile is less due to market characteristics, like lack of veal market and lower cost of land. The first element affects the breed used in Chile, German Red, which is not as dairy specialized as Friesian or Jersey, but is better in beef production. And the second element, the value of land, allows the farmers to use the land in a more extensive rather than intensive way. Consequently the amount of liters per cow is lower because of the breed, and the amount of liters per hectare, because of a low rate of cows per hectare. This shows production is lower in Chile than in New Zealand, but this does not indicate lower efficiency or competitiveness because the costs show quite the opposite.

In the analysis of Chilean costs and the reasons supporting those results, several competitive advantages were found. These were: lower labor cost and lower land value.

- The cost of labor is much lower in Chile than in New Zealand because Chile as a developing country has a bigger labor endowment than New Zealand, a developed country. For example in Chile dairy farms use four or more people while New Zealand uses only two, but Chile has still lower costs in wages than New Zealand. Chile has a clear advantage in labor intensive activities, rather than capital intensive activities.
- The other competitive advantage from Chile is the cost of land, which is lower than in New Zealand. Chilean farms do not need to have so much capital tied up in land as New Zealand, because the value of land is lower. The reason for this is the

developing condition, lower cost of labour and land, high cost of technology and capital. So Chilean farmers have the choice of using land in an extensive way rather than intensive, but New Zealand farmers do not have that choice.

In the analysis New Zealand competitive advantages were also found, and all of these are related to market conditions and industrial organization.

- The existence of the veal market solves the problem of the by-product, calves, and facilitates the specialization of the dairy farms, as dairy only.
- The Industrial Organization provides a tacit protection from international fluctuations and occasional imports, which would impose on the local market and affect the farmer's stability.
- The same industrial organization provides the necessary stability that permits the farmer to be dairy specialized which allows them to increase efficiency and competitiveness.
- Finally NZ's Industrial Organization (I.O.) (farmers, companies and NZDB, completely vertically integrated) eliminates the additional cost of having predominantly evened year round milk production and having a lower reception & elaboration capacity. This element is denoted as "α^{25}" in the equation system and it shows an increase in efficiency in New Zealand in relation to any other country.
- The tacit protection granted to New Zealand farmers by the NZ I.O., explains the higher price paid to New Zealand winter milk farmers than Chilean farmers. Even if New Zealand saves "α" and Chilean farms expense α because the industry forces them to produce as even as possible, during winter as well as in summer.

[25] "α" is defined as the costs difference between having a seasonal production systems (seasonal farm production, large plants reception & elaboration capacity {winter excess capacity}) and the year round production system (even farm milk production {high winter feeding cost}, smaller plant reception & elaboration capacity {no excess during winter})

This research also shows Chilean disadvantages, which are the political economic policy and the industrial organization.

- The political economic policy is to leave the nominal exchange rate $US/$ pesos floating within a boundary that is fixed by the monetary authority. The problem related with this strategy is that this boundary has been inflexible in allowing the real exchange rate to maintain its value. As the boundary has been kept in the same place, the nominal exchange rate can only fluctuate within that range, at the same time the inflation kept rising reducing the real value of the exchange rate. Inflation has rise a 148.5%, UF has rise a 156.7% while TCN has rise only an 47.7% which means that the real exchange rate has dropped 40.6%, from 1990 to 1997. This reduces the terms of trade for Chilean farmers and reduces the exporting potential of Chilean dairy farmers.
- The Industrial Organization is the biggest disadvantage because :

  * The companies push farmers to produce more during winter to avoid to investing in the bigger reception and elaboration capacity ("β") necessary for receiving greater milk quantities during the season. Consequently companies pay a value above the base price to the farmers if they produce with a ratio close to 1:1 in winter and summer. Therefore o farmers expend a certain amount of money in order to achieve this goal. With the whole industry losing by not producing principally during the season. And the farmers lose the most because not only they not win out of the benefit of producing in a seasonal system, but also expend the costs they had to produce maximum milk during winter.

  * Companies pay lower prices to Chilean farmers, but as these manage the International Market "door" by managing the imports, there is no possibility that this price policy will change through international competence. In relation to the National Market there are strong suggestions of coalition between the companies, and consequently this is not likely to change internally either.

  * Companies also maintain the farmer's belief that they are not competitive, by comparing them with seasonal farmers in New Zealand, who receive the benefit of not needing to invest in bigger infrastructure. And as shown in this research when compared to their equivalent winter dairy producers, then it is possible to see that

Chileans as competitive as New Zealanders. But companies strongly benefit out of maintaining this system as it is at the present.

Finally there is a clear conclusion affecting both countries, none of them produce enough profit to cover the cost of capital. None of the farms involved would have been able to repay the loan and interests, if the farm was bought with a bank credit. These farmers are only making profit out of the business activity, but not as rent from the invested capital. This issue applies to both countries.

This research also highlighted New Zealand's disadvantages:

- New Zealand's value of land is very high if compared to Chile. This forces farmers to have higher amounts of capital invested in land, which has high costs, namely capital cost. The comparison in prices does not mean that the quality of the land is different. The land price difference is raised by the fact that New Zealand is a developed country and Chile is developing, and as definitions within chapter 4 explain, usually developed countries have higher prices in land than developing or undeveloped.
- Another New Zealand disadvantage is the higher amount of Variable Capital in shares, which also has (like the capital invested in land), a high cost. But in this case the cost of variable capital invested in shares is highly compensated for by the advantages provided by the industrial organization.

All results above were in relation to the whole industry, but if particular conclusion are needed they are available in the next table. Table 10 presents a summary of all results of the cost analysis of this research. It illustrates the final conclusions about each item analyzed, and it can be clearly seen that some items are higher in Chile, than in New Zealand, some are lower, some are equal and finally there are some that were not conclusive. This table shows the results per liter, per hectare and per cow with both exchange rates. Then in each column that particular conclusion was written, and then the most common result of each file was the one decisive for the final conclusion. That is why there were certain elements that have no clear conclusion or are contradictory, because the results in each column are opposite, there was no clear tendency.

Table 10: Summary of all results

Item	Concl.	Per Liter		Per Hectare		Per Cow	
		O. E. R	A. E. R	O. E. R	A. E. R	O. E. R	A. E. R
Liters	Ch < NZ	—	—	Ch < NZ	—	Ch < NZ	—
Cows	Ch < NZ	—	—	Ch < NZ	—	—	—
Cents / Milk Sales	Ch ≤ NZ	Ch > NZ	Ch < NZ	Ch < NZ	Ch < NZ	Ch ≈ NZ	Ch < NZ
Capital	Ch ≈ NZ	Ch ≥ NZ	Ch ≈ NZ	not clear	Ch ≈ NZ	Ch ≈ NZ	Ch ≈ NZ
Sales of Calves + Cows	Ch > NZ	—	—	—	—	Ch > NZ	Ch > NZ
Replacement	Ch > NZ	—	—	—	—	Ch ≥ NZ	Ch ≥ NZ
Pasture & Suppl	Ch ≥ NZ	Ch > NZ	...	not clear	not clear	Ch = NZ	Ch ≈ NZ
Fertiliser	Ch < NZ	Ch ≈ NZ	...	Ch < NZ	Ch < NZ	—	—
Animal Health	Ch ≈ NZ	Ch = NZ	...	—	—	Ch ≈ NZ	Ch ≤ NZ
Wages	Ch ≤ NZ	...	...	Ch < NZ	Ch < NZ	Ch = NZ	Ch ≈ NZ
Shed Expenses	Ch ≤ NZ	...	...	—	Ch < NZ	Ch = NZ	Ch = NZ
Fences	Ch < NZ	...	...	Ch < NZ	Ch < NZ	—	—
Repairs & Mant.	not clear	...	...	—	—	not clear	not clear
Ditches	Ch < NZ	...	...	Ch < NZ	Ch < NZ	—	—
Vehicle Expenses	Ch < NZ	...	...	Ch < NZ	Ch < NZ	not clear	Ch < NZ
Depreciation	—	...	...	—	—	—	—
Interests	Ch ≥ NZ	Ch ≥ NZ	Ch = NZ	—	—	—	—
Earthq. & Fire I.	—	...	...	—	—	—	—
Administration	—	...	...	—	—	—	—
F. Mnger-Wage	—	...	...	—	—	—	—
Accountant	—	...	...	—	—	—	—
Taxes or Rates	—	...	...	—	—	—	—
General Costs	—	...	...	—	—	—	—
Incomes	Ch ≥ NZ	Ch > NZ	Ch ≥ NZ	Ch < NZ	Ch < NZ	Ch ≥ NZ	Ch ≤ NZ
Total Costs	Ch ≤ NZ	Ch ≥ NZ	Ch = NZ	Ch < NZ	Ch < NZ	Ch ≈ NZ	Ch ≈ NZ
Gross Profit	< 0	Ch=NZ<0	< 0	—	< 0	< 0	Ch ≈ NZ
Gross Profit - Int	Ch ≈ NZ	Ch = NZ	Ch = NZ	—		Ch ≈ NZ	Ch ≤ NZ
T. F. Cash Exp.	↔	Ch > NZ	Ch > NZ	Ch < NZ	Ch < NZ	Ch ≈ NZ	Ch = NZ
T. F. Overheads	Ch < NZ	Ch < NZ	...	Ch < NZ	Ch < NZ	Ch < NZ	Ch < NZ
T. Financial Costs	Ch ≤ NZ	Ch ≥ NZ	Ch = NZ	Ch < NZ	Ch < NZ	not clear	Ch ≤ NZ
T.Business Overhs	↔	Ch > NZ	Ch ≥ NZ	Ch ≤ NZ	Ch ≈ NZ	Ch ≈ NZ	Ch ≈ NZ
T. Fixed Costs		not clear					
T. Variable Costs		Ch > NZ					
Profitability		not clear					

Table 11: List of Symbol Meanings

Symbol	Meaning
Ch	Chile, all farmers
NZ	New Zealand, all farmers
O.E.R	Official Exchange Rate
A.E.R	Alternative Exchange Rate
<	smaller than
≤	smaller than or equal to
>	bigger than
≥	bigger than or equal to
=	equal to
≈	almost equal to
not clear	not conclusive
↔	opposite individual conclusions
...	to small figures to conclude
—	not analysed

Source: Daniela Winkler

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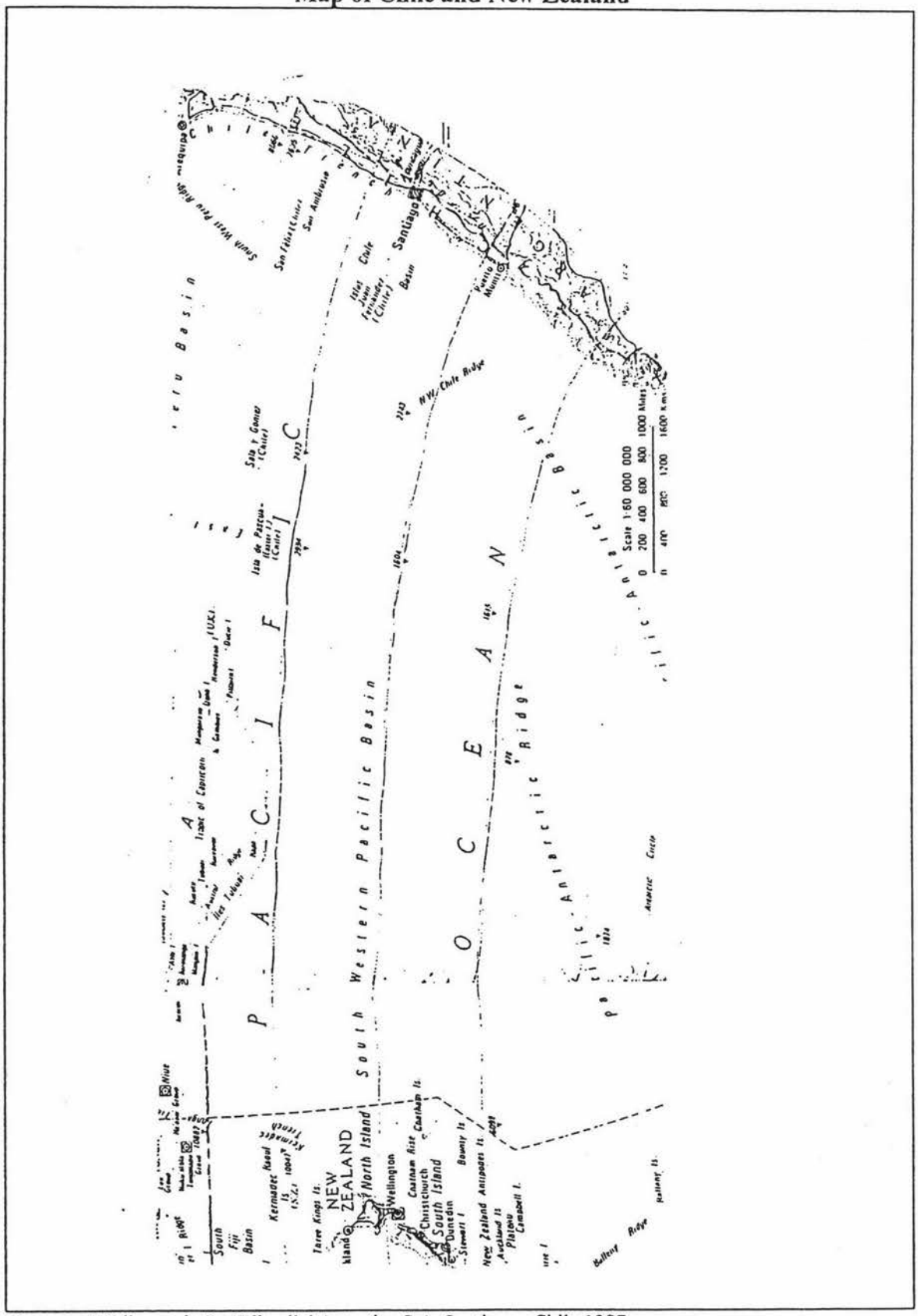
Appendix A

People Contacted and Maps

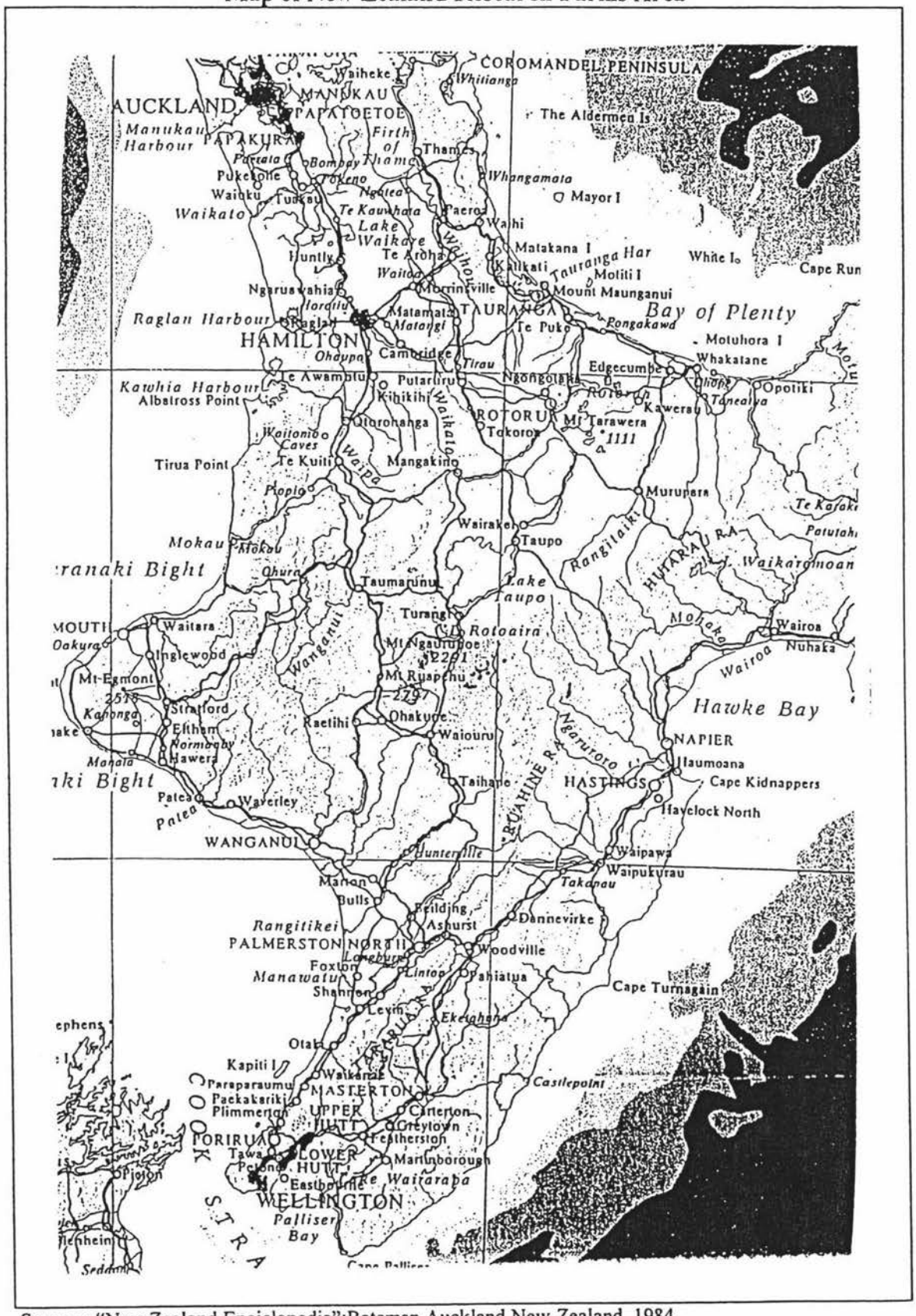
Farmers			Consultants	Personal	Other	Researchers
New Zealand	Chile	Chile	New Zealand	New Zealand	New Zealand	Chile
Ashley	Alamos	Mohr	Clarke	Bailey	Aitchinson	Balocchi
Bailey	Alamos	Mohr M.	Dabb	Bell	Backer	Demanet
Baxter	Alberti	Molina	Dawson	Brookes	Bryant	Dumont
Bell	Allende	Momberg	Gaul	Carnabi	Callow	Esnaola
Bos	Barros	Morstadt	Giles	Ellis	Jones	Gana
Carlie	Becker	Muñoz	Howse	Goss	Mayer	Jahn
Cato	Behrend	Münzenmaye	Mills	Holland	Reagan	Klein
Cowen	Beltrán	Nannig	O'Reilly	Holmes	Robb	Lanuza
Dickson	Bertin	Neumann	Old	Mackenzie		Latrille
Dorn	Boetch	Nicklitscheck	Risdale	Meads		Ledron
Easton	Bollinger	Osorio	Simmonds	Meister		Moreira
Findlay	Bollinger Sch.	Paschke		Parker		Roth
Gallagher	Bondarenko	Provost		Smillie		Ruz
Georgenson	Chubretovic A.	Püschel		White		Vera
Gillespie	de La Puente	Püschel D.	11	14	8	14
Gordon	Ebbinghaus	redlich				
Grant	Fehlandt	Reichert				
Guy	Ferrer	Reinikeh				
Harpter	Galvez	Riadi				
Hercoe	Gebauer	Richards				
Hutton	Glimmann	Riesco		Total Farmers Contacted		144
James	González P.	Riesco G.		Total People Approached		190
Jones	González T.	Rosso				
Keeling	Granzotto	Ruhe				
Laing	Grob	Sabugo				
Logan	Gutierrez	Sabugo T.				
Lutz	Hausdorf	Schalchli				
Mansell	Heijboer	Scheuch				
McVittey	Held K.	Schmidt				
Medlicott	Held W	Schwabe				
Montgomerie	Helmrich	Schwerter				
Montgomerie	Hoffamnn	Stange				
Montgomerie	Hott	Tello				
Mudford	Hott S.	Teuber				
Petersen	Hott V.	Tippmann				
Rohrlach	Hott W.	Varas				
Shailer	Kaschel	Vesperinas				
Sharplin	Keim	Villegas				
Simcox	Klocker	Volomey				
Tanja	Knopel	Von Dessauer				
Tremewan	Koenekamp	Werner				
Turner	Krahmer	Westermeyer				
Verbeek	Krumbach	Wetzel				
Walker	Kullmer	Willer				
Walker	Kuschel	Winkler				
William	Lagos	Wolf				
Wilson	Lalanne	Zúñiga				
47	Lindemann					
	Loebel	97				
	Lovengreen					
	Marin					
	Massmann					

Map of Chile and New Zealand



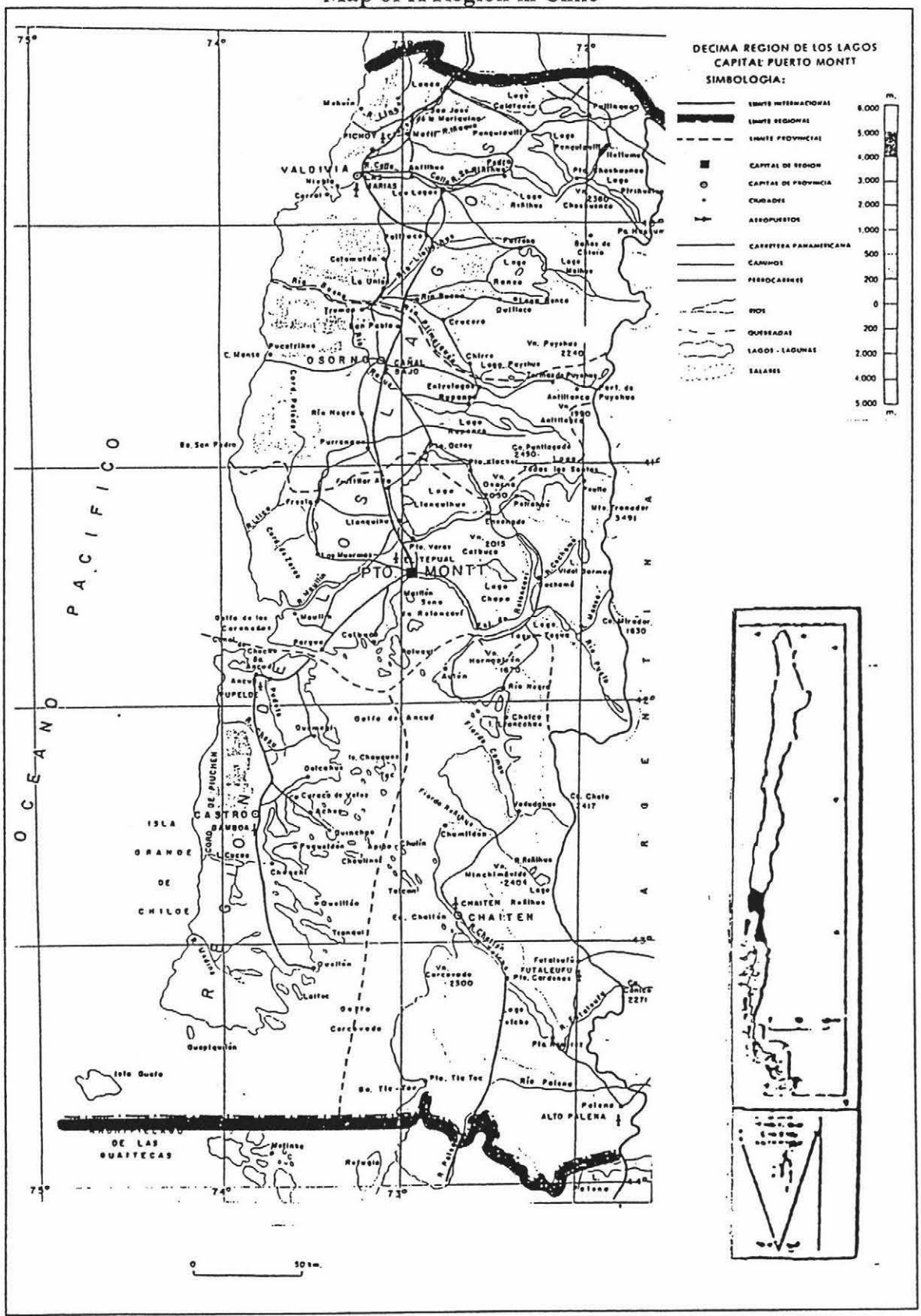
Source : "Chile a color" ; Editorilal Antartica S.A, Santiago , Chile 1987.

Map of New Zealand Research Farms Area



Source : "New Zealand Enciclopedia";Bateman Auckland New Zealand 1984.

Map of X Region in Chile



Source : "Chile a color; Editorilal Antartica S.A.1987

Appendix B

Questionnaires Utilized in the Research

Appendix B

General Information

Private Information

Farmers Name:	:
Farm's Name / Number	:
Address	:
City	
Phone	:
Fax	:
Email	:

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

Comments are very welcome

General Information about the farm

Climate	hot, temperate cold)
Rainfall	(sufficient /insufficient summer rainfall, excessive/enough winter rainfall; even)
Drainage and flooding conditions,	(good,moderate,bad)
Soil	(Loam , sandy loam, clay loam, silt loam)

Land

Hectares	No of ha
Value equivalent of renting it,	($/ha or $/acre)
Number of shares	(kilos milk solids)
Price of shares	$/unit
Which company	

Animals

Breed	
Bovine Tuberculosis clear	yes/no
Bovine Brucellosis clear	yes/no
Does the herd have Pedigree	yes/no
Herd size	(number of cows)
Replacement rate	%
Origin of replacement,	own farm/ bought

Appendix B

Market value of cows you buy	$/unit
Market value of cows you sell	$/unit
Number of calves sold	No.
Number of calves grown	No.
Price of calves to sell	$/ unit
Calving period	Months

Technology

Type of milk shed	(herring bone/ rotating/other)
Elimination Effluent	(ditch /irrigation system /other)
Automatic Cup Removers	(yes/no)

Capital, Infrastructure and Depreciation

Cow Shed	value ($)	How many years is it going to last ?
Implement Shed	value ($)	How many years is it going to last ?
Hay Shed	value ($)	How many years is it going to last ?
Feeding Yard	value ($)	How many years is it going to last ?
Milker Houses	value ($)	How many years is it going to last ?
Cattle Crush	value ($)	How many years is it going to last ?
Fire, Earthquake Insurance	value ($)	
Tractors	value ($)	How many years is it going to last ?
Fumigator	value ($)	How many years is it going to last ?
Chopper	value ($)	How many years is it going to last ?
Vehicles	value ($)	How many years is it going to last ?
Other machinery : specify what		
	value ($)	How many years is it going to last ?
	value ($)	How many years is it going to last ?
	value ($)	How many years is it going to last ?
	value ($)	How many years is it going to last ?

Feeding

Silage	cost per year $
Alfalfa	cost per year $
Paddock Regreasing	cost per year $
Alfalfa Hay	cost per year $
Concentrate	cost per year $
Mineral Salts	cost per year $

Appendix B

Hay	cost per year $
Meal	cost per year $
Cropping	cost per year $
Pasture renovation	cost per year $
Grazing	cost per year $
Contractor costs.	cost per year $
Agronomist	cost per year $
Weed and Pest Control	cost per year $
Fertilisers what:	cost per year $
	cost per year $
	cost per year $
	cost per year $
	cost per year $

Animal Health

Veterinary Products	cost per year $
Herd Testing	cost per year $
Semen	cost per year $
Insemination	cost per year $
Veterinarian	cost per year $

Labor

Milkers	cost per year $
Inseminator	cost per year $
Tractor driver	cost per year $
Feeders	cost per year $
Courses or/and Instructions	cost per year $

Others

Shed expenses	cost per year $
Fences	cost per year $
Maintenance Milking Equipment	cost per year $
Maintenance Installations	cost per year $
Irrigation System, Ditches, Drainage	cost per year $
Freight	cost per year $
Vehicle Expenses	cost per year $

Appendix B

Administration

Administration Costs	cost per year $
Farm Manager Wage	cost per year $
Accountant	cost per year $
Taxes Rates	cost per year $
General Costs (incl. phone, fax, PC etc	cost per year $
ACC	cost per year $

Production

	January	February	March	April
Kg Milk Solids				
Litres				

	May	June	July	August
Kg Milk Solids				
Litres				

	September	October	November	December
Kg Milk Solids				
Litres				

Winter Milk Contract

Quota
Months
$/litre

Thank You Very Much

Daniela Winkler

Appendix B

Información General

Información Privada

Nombre del Agricultor :
Nombre /Número del Campo :
Dirección :
Ciudad :
Teléfono :
Fax :
E-mail :

NOTA : Por favor llenar el formulario SIN IVA , para poder comparar los datos con Nueva Zelandia.

Información General del Campo

Comentarios son Bienvenidos

Clima luroso, templado ,frío)
Precipitaciones (suficientes /insuficientes durante el verano, excesivas/suficientes durante el invierno, parejo)
Condiciones de drenaje uena,moderada,mala)
Suelo (marga , marga arenosa, marga arcillosa , marga sedimentosa,otro)

Terreno

Hectáreas No de ha
Valor equivalente a arriendo, ($/ha o $/acre)
Número de acciones en la compañía o es válido para Chile)
Precio de las acciones o es válido para Chile)
Compañía receptora

Animales

Raza
Libre de Tuberculosis Bovina sí/no
Libre de Brucellosis Bovina sí/no
Tiene el plantel pedigree sí/no
Tamaño del rebaño (número de vacas)
Taza de Reposición %

Appendix B

Origen de la reposición	campo/ compra
Valor del mercado vacas compradas	$/unidad
Valor del mercado vacas vendidas	$/unidad
Número de terneros vendidos	No.
Número de terneros criados	No.
Precio de terneros vendidos	$/ unidad
Periodo de pariciones	meses, fechas

Tecnología

Tipo de sala de ordeña	(espina de pescado/ rotatoria/ otra)
Eliminación de Efluentes	(canal / sistema de riego /otro)
Retiradores Automáticos	(si/no)

Capital, Infraestructura y Depreciación *Sólo lo que corresponde a Producción Lechera*

Sala de Ordeña	valor ($)	¿Cuántos años más va a durar?
Bodega para Implementos	valor ($)	¿Cuántos años más va a durar?
Bodega	valor ($)	¿Cuántos años más va a durar?
Patio de Alimentación	valor ($)	¿Cuántos años más va a durar?
Casa de los Ordeñadores	valor ($)	¿Cuántos años más va a durar?
Manga	valor ($)	¿Cuántos años más va a durar?
Seguro contra Incendio/Terremoto	valor ($)	
Tractores	valor ($)	¿Cuántos años más va a durar?
Fumigador	valor ($)	¿Cuántos años más va a durar?
Chopper	valor ($)	¿Cuántos años más va a durar?
Vehiculos	valor ($)	¿Cuántos años más va a durar?
Otra maquinaria : especificar que:		
	valor ($)	¿Cuántos años más va a durar?
	valor ($)	¿Cuántos años más va a durar?
	valor ($)	¿Cuántos años más va a durar?
	valor ($)	¿Cuántos años más va a durar?

Por favor chequear que los valores dados correspondan sólo a la producción lechera y no involucran otras actividades

Alimentación

Silo	costo por año $
Alfalfa	costo por año $
Pampas	costo por año $

Appendix B

Heno de Alfalfa	costo por año $
Concentrado	costo por año $
Sales Minerales	costo por año $
Heno	costo por año $
Harina de pescado o hueso	costo por año $
Granos	costo por año $
Renovación de Pasturas	costo por año $
Grazing	costo por año $
Costos de Contratación (servicios)	costo por año $
Agrónomo	costo por año $
Control de Pestes y Malezas	costo por año $
Fertilizantes cuales:	costo por año $
	costo por año $
	costo por año $
	costo por año $
	costo por año $

Salud Animal

Productos Veterinarios	costo por año $
Control Lechero	costo por año $
Sémen	costo por año $
Inseminación	costo por año $
Veterinario	costo por año $

Mano de Obra

Ordeñadores	costo por año $
Inseminador	costo por año $
Tractoristas	costo por año $
Forrajeros	costo por año $
Cursos o/y Instrucción	costo por año $

Otros

Gastos de Sala de Ordeña	costo por año $
Cercos	costo por año $
Mantención Equipo de Ordeña	costo por año $
Mantención Instalaciones	costo por año $
Equipo de Riego, Drenaje, Fozos	costo por año $

Appendix B

Fletes costo por año $
Gastos en Vehículos costo por año $

Administración

Costos de Administración costo por año $
Sueldo Administrador costo por año $
Contador costo por año $
Impuestos / contribuciones costo por año $
Costos Generales (fax, computador, e incl. agua, electricidad,teléfono,correo,etc costo por año $
Mutual de seguridad costo por año $

Producción

	Enero	Febrero	Marzo	Abril
Kg Materia Sólida				
Litros				

	Mayo	Junio	Julio	Agosto
Kg Materia Sólida				
Litros				

	Septiembre	Octubre	Noviembre	Diciembre
Kg Materia Sólida				
Litros				

Precio leche
Beneficio relación Invierno/Verano
Otros beneficios

Contrato leche Inviero (sólo NZ) Cuota
Meses
$/litro

Daniela Winkler

Appendix C

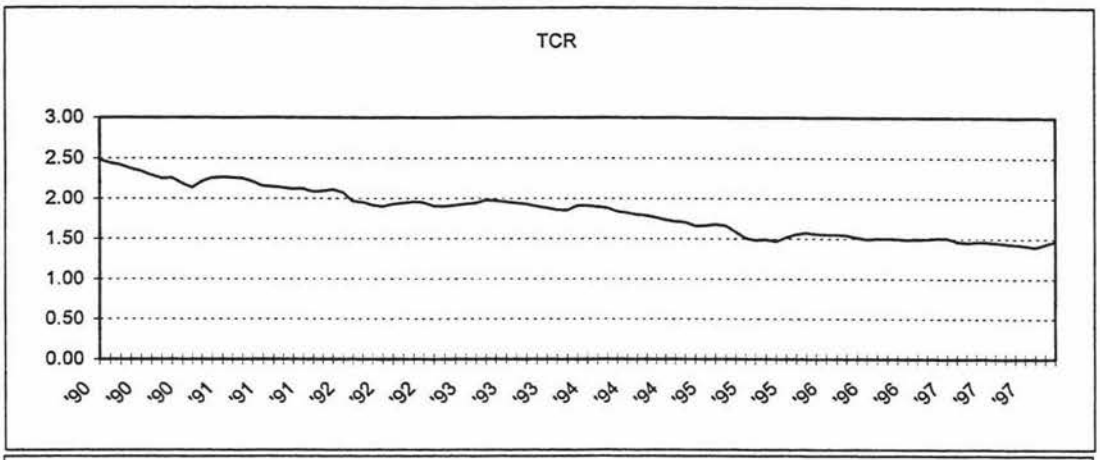
Exchange Rates

Exchange Rates 1997

	U$ per $1 NZ	NZ per $1 U$	Chilean per $1 U$		Chilean per $1 NZ	Us Dollars per one NZ dollar
Jan	0.7019	1.4247	423.79		297.46	
Feb	0.6912	1.4468	416.19		287.67	Nz Dollars
Mar	0.6982	1.4323	414.05		289.09	per one US dollar
Apr	0.6919	1.4453	417.58		288.92	
May	0.6920	1.4451	418.61		289.68	Chilean pesos
Jun	0.6876	1.4543	417.42		287.02	per one US dollar
Jul	0.6623	1.5099	416.61		275.92	
Aug	0.6426	1.5562	414.85		266.58	Chilean pesos
Sep	0.6358	1.5728	414.90		263.79	per one NZ dollar
Oct	0.6369	1.5701	414.41		263.94	
Nov	0.6235	1.6038	424.96		264.96	
Dec	0.5925	1.6878	438.29		259.69	
	0.663033			**Average**	**277.8935**	

	UK per $1 NZ	NZ per $1 UK	UK per $1 US	Chilean per $1 UK	Chilean per $1 NZ	Uk pounds per one NZ dollar
Jan	0.4223	2.36798	0.601395	704.68	297.59	
Feb	0.4255	2.35018	0.615850	675.80	287.55	NZ dollars
Mar	0.4344	2.30203	0.621820	665.87	289.25	per one UK pound
Apr	0.4243	2.35682	0.613164	681.02	288.96	
May	0.4181	2.39177	0.612774	683.14	285.62	UK dollars
Jun	0.3959	2.52589	0.608267	686.24	271.68	per one US dollar
Jul	0.4004	2.49750	0.598070	696.59	278.91	
Aug	0.3970	2.51889	0.623300	665.57	264.23	Chilean pesos
Sep	0.3905	2.56082	0.624147	664.75	259.58	per one UK pound
Oct	0.3694	2.70709	0.614026	674.91	249.31	trough the US dollar
Nov	0.3694	2.70709	0.592155	717.65	265.10	
Dec	0.3567	2.80348	0.601615	728.52	259.86	Chilean pesos
				Average	**274.8049**	Per one NZ dollar

	DM per $1 NZ	NZ per $1 DM	DM per $1 US	Chilean per $1 DM	Chilean per $1 NZ	German Mark per one NZ dollar
Jan	1.1259	0.88818	1.601136	264.68	298.00	
Feb	1.1568	0.86445	1.671960	248.92	287.95	NZ dollars
Mar	1.1851	0.84381	1.695315	244.23	289.44	per one German Mark
Apr	1.1831	0.84524	1.706418	244.71	289.52	
May	1.1787	0.84839	1.703674	245.71	289.62	German Mark
Jun	1.1871	0.84239	1.724600	242.04	287.32	per one US dollar
Jul	1.1843	0.84438	1.786757	233.17	276.14	
Aug	1.1837	0.84481	1.841635	225.26	266.64	Chilean pesos
Sep	1.1381	0.87866	1.790026	231.78	263.79	per one German Mark
Oct	1.1189	0.89373	1.759561	235.52	263.52	trough the US dollar
Nov	1.0791	0.92670	1.728215	245.90	265.35	
Dec	1.0533	0.94940	1.775970	246.79	259.94	Chilean pesos
				Average	**278.1036**	Per one NZ dollar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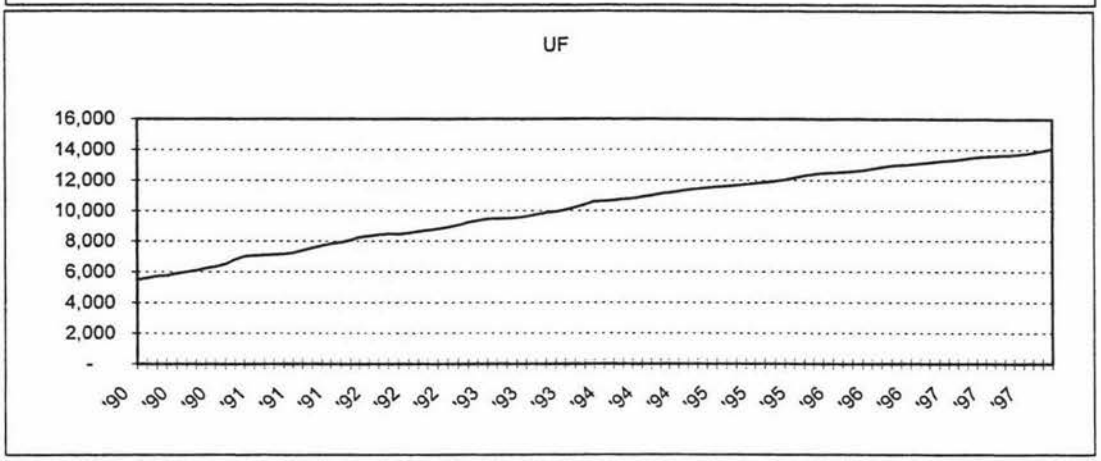
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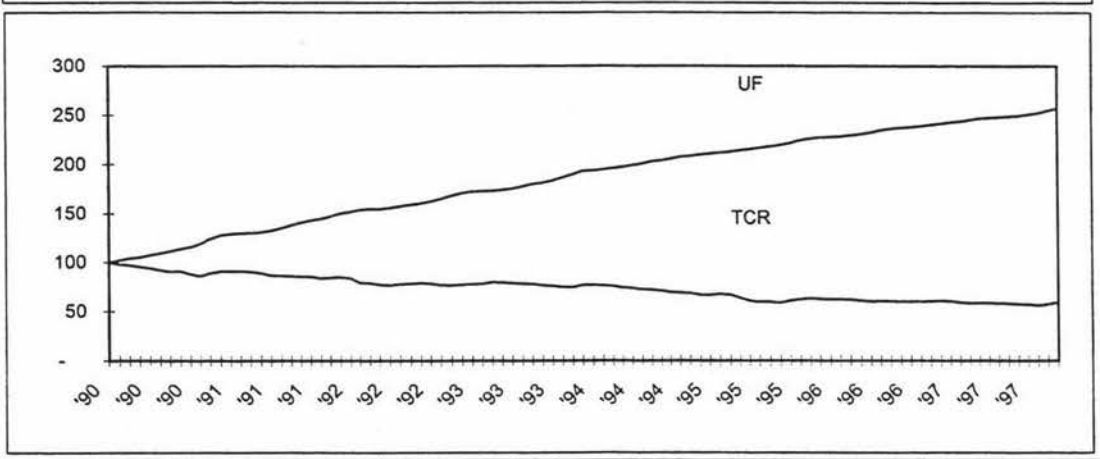
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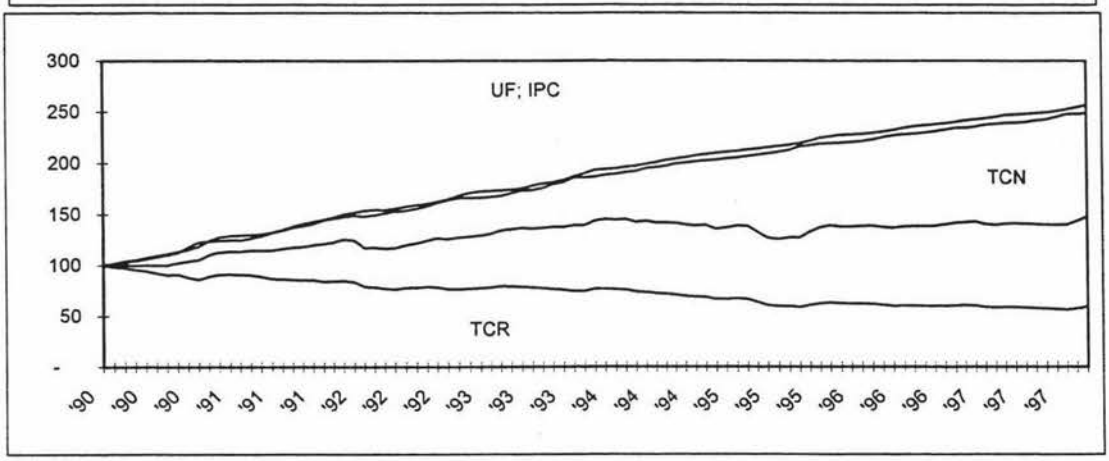
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Date	pesos per 1US				*TCN*	*TCR*	Ratio TCN
	TCN	IPC	TCR	UF	*	*	UF
Jan-90	296.76	119.38	2.49	5,485.55	296.76	2.5	18.5
Feb-90	292.46	119.73	2.44	5,602.36	303.08	2.5	18.5
Mar-90	296.66	122.62	2.42	5,711.62	308.99	2.5	18.5
Apr-90	296.41	124.80	2.38	5,764.50	311.85	2.5	18.5
May-90	296.97	126.70	2.34	5,889.91	318.64	2.5	18.5
Jun-90	296.79	129.48	2.29	5,992.02	324.16	2.5	18.5
Jul-90	296.67	131.64	2.25	6,094.26	329.69	2.5	18.5
Aug-90	303.44	134.29	2.26	6,218.78	336.43	2.5	18.5
Sep-90	308.35	140.86	2.19	6,329.62	342.42	2.4	18.5
Oct-90	312.49	146.24	2.14	6,505.56	351.94	2.4	18.5
Nov-90	326.86	147.53	2.22	6,795.22	367.61	2.5	18.5
Dec-90	334.98	148.30	2.26	7,005.22	378.97	2.6	18.5
Jan-91	337.23	148.93	2.26	7,068.66	382.40	2.6	18.5
Feb-91	337.53	149.12	2.26	7,102.45	384.23	2.6	18.5
Mar-91	340.24	150.85	2.26	7,126.14	385.51	2.6	18.5
Apr-91	340.28	153.63	2.21	7,154.19	387.03	2.5	18.5
May-91	339.95	157.46	2.16	7,248.88	392.15	2.5	18.5
Jun-91	344.89	160.36	2.15	7,389.87	399.78	2.5	18.5
Jul-91	348.72	163.26	2.14	7,560.14	408.99	2.5	18.5
Aug-91	350.89	165.24	2.12	7,698.41	416.47	2.5	18.5
Sep-91	355.61	167.40	2.12	7,823.95	423.26	2.5	18.5
Oct-91	359.06	172.24	2.08	7,922.33	428.59	2.5	18.5
Nov-91	364.26	173.83	2.10	8,056.84	435.86	2.5	18.5
Dec-91	371.93	175.97	2.11	8,244.15	446.00	2.5	18.5
Jan-92	369.75	177.91	2.08	8,331.25	450.71	2.5	18.5
Feb-92	347.86	176.79	1.97	8,426.58	455.87	2.6	18.5
Mar-92	348.34	178.03	1.96	8,482.87	458.91	2.6	18.5
Apr-92	346.30	180.37	1.92	8,466.16	458.01	2.5	18.5
May-92	346.56	182.30	1.90	8,534.91	461.73	2.5	18.5
Jun-92	355.00	183.55	1.93	8,638.75	467.34	2.5	18.5
Jul-92	361.25	185.60	1.95	8,725.94	472.06	2.5	18.5
Aug-92	368.86	188.25	1.96	8,797.65	475.94	2.5	18.5
Sep-92	376.04	192.63	1.95	8,899.13	481.43	2.5	18.5
Oct-92	373.10	195.38	1.91	9,044.63	489.30	2.5	18.5
Nov-92	377.63	198.17	1.91	9,227.07	499.17	2.5	18.5
Dec-92	380.22	198.31	1.92	9,360.29	506.38	2.6	18.5
Jan-93	383.93	198.64	1.93	9,459.29	511.73	2.6	18.5
Feb-93	387.91	199.44	1.94	9,475.33	512.60	2.6	18.5
Mar-93	397.22	200.57	1.98	9,499.23	513.89	2.6	18.5
Apr-93	401.19	203.38	1.97	9,541.21	516.17	2.5	18.5
May-93	404.98	206.35	1.96	9,618.18	520.33	2.5	18.5
Jun-93	403.30	207.37	1.94	9,751.44	527.54	2.5	18.5
Jul-93	404.79	209.41	1.93	9,872.47	534.09	2.6	18.5
Aug-93	407.66	213.88	1.91	9,938.69	537.67	2.5	18.5
Sep-93	408.19	216.37	1.89	10,063.49	544.42	2.5	18.5
Oct-93	412.59	221.94	1.86	10,247.94	554.40	2.5	18.5
Nov-93	412.50	222.13	1.86	10,410.45	563.19	2.5	18.5
Dec-93	425.73	222.57	1.91	10,607.92	573.87	2.6	18.5

Date	pesos per 1US				*TCN* *	*TCR* *	Ratio TCN UF
	TCN	IPC	TCR	UF			
Jan-94	430.45	224.89	1.91	10,631.46	575.15	2.6	18.5
Feb-94	428.69	225.59	1.90	10,672.37	577.36	2.6	18.5
Mar-94	430.45	228.13	1.89	10,758.05	581.99	2.6	18.5
Apr-94	422.47	229.25	1.84	10,815.38	585.10	2.6	18.5
May-94	424.70	232.52	1.83	10,914.63	590.47	2.5	18.5
Jun-94	420.68	233.76	1.80	10,996.55	594.90	2.5	18.5
Jul-94	420.49	235.16	1.79	11,121.50	601.66	2.6	18.5
Aug-94	419.43	237.77	1.76	11,183.95	605.03	2.5	18.5
Sep-94	414.87	238.94	1.74	11,264.46	609.39	2.6	18.5
Oct-94	412.21	240.35	1.72	11,369.15	615.05	2.6	18.5
Nov-94	413.45	241.80	1.71	11,431.17	618.41	2.6	18.5
Dec-94	402.23	242.48	1.66	11,499.77	622.12	2.6	18.5
Jan-95	405.78	244.02	1.66	11,559.75	625.37	2.6	18.5
Feb-95	412.14	245.25	1.68	11,603.26	627.72	2.6	18.5
Mar-95	410.46	246.75	1.66	11,669.84	631.32	2.6	18.5
Apr-95	394.33	248.25	1.59	11,731.45	634.65	2.6	18.5
May-95	377.17	249.77	1.51	11,801.85	638.46	2.6	18.5
Jun-95	373.59	251.61	1.48	11,872.20	642.27	2.6	18.5
Jul-95	378.07	253.71	1.49	11,947.03	646.32	2.5	18.5
Aug-95	378.27	257.88	1.47	12,033.45	650.99	2.5	18.5
Sep-95	394.56	259.41	1.52	12,153.21	657.47	2.5	18.5
Oct-95	406.62	261.42	1.56	12,313.00	666.11	2.5	18.5
Nov-95	412.31	261.61	1.58	12,397.45	670.68	2.6	18.5
Dec-95	408.98	262.36	1.56	12,473.40	674.79	2.6	18.5
Jan-96	408.53	263.08	1.55	12,495.82	676.01	2.6	18.5
Feb-96	410.97	264.44	1.55	12,531.76	677.95	2.6	18.5
Mar-96	411.55	266.36	1.55	12,576.47	680.37	2.6	18.5
Apr-96	408.42	269.06	1.52	12,644.47	684.05	2.5	18.5
May-96	406.23	271.24	1.50	12,742.59	689.35	2.5	18.5
Jun-96	409.85	272.38	1.50	12,861.14	695.77	2.6	18.5
Jul-96	410.72	273.17	1.50	12,952.12	700.69	2.6	18.5
Aug-96	411.10	274.34	1.50	13,002.47	703.41	2.6	18.5
Sep-96	411.84	275.68	1.49	13,045.10	705.72	2.6	18.5
Oct-96	415.55	277.75	1.50	13,100.55	708.72	2.6	18.5
Nov-96	420.03	279.75	1.50	13,171.85	712.58	2.5	18.5
Dec-96	422.41	279.76	1.51	13,253.22	716.98	2.6	18.5
Jan-97	423.79	281.17	1.51	13,307.83	719.93	2.6	18.5
Feb-97	416.19	283.52	1.47	13,362.96	722.92	2.5	18.5
Mar-97	414.05	284.41	1.46	13,441.18	727.15	2.6	18.5
Apr-97	417.58	285.35	1.46	13,529.33	731.92	2.6	18.5
May-97	418.61	286.01	1.46	13,572.79	734.27	2.6	18.5
Jun-97	417.42	286.69	1.46	13,609.75	736.27	2.6	18.5
Jul-97	416.61	288.42	1.44	13,637.68	737.78	2.6	18.5
Aug-97	414.85	289.59	1.43	13,679.34	740.03	2.6	18.5
Sep-97	414.90	292.28	1.42	13,751.68	743.95	2.5	18.5
Oct-97	414.41	295.86	1.40	13,826.21	747.98	2.5	18.5
Nov-97	424.96	296.26	1.43	13,957.81	755.10	2.5	18.5
Dec-97	438.29	296.67	1.48	14,084.14	761.93	2.6	18.5

Date	Indice TCN TCN	Indice de IPC IPC	Indice TCR TCR	Indice UF UF	Indice TCR *	Indice TCN *
Jan-90	100.00	100.00	100.00	100.00	100.00	100.00
Feb-90	98.55	100.29	98.26	102.13	102.13	101.83
Mar-90	99.97	102.71	97.32	104.12	104.12	101.37
Apr-90	99.88	104.54	95.54	105.09	105.09	100.52
May-90	100.07	106.13	94.29	107.37	107.37	101.17
Jun-90	100.01	108.46	92.21	109.23	109.23	100.71
Jul-90	99.97	110.27	90.66	111.10	111.10	100.75
Aug-90	102.25	112.49	90.90	113.37	113.37	100.78
Sep-90	103.91	117.99	88.06	115.39	115.39	97.79
Oct-90	105.30	122.50	85.96	118.59	118.59	96.81
Nov-90	110.14	123.58	89.13	123.87	123.87	100.24
Dec-90	112.88	124.23	90.87	127.70	127.70	102.80
Jan-91	113.64	124.75	91.09	128.86	128.86	103.29
Feb-91	113.74	124.91	91.05	129.48	129.48	103.65
Mar-91	114.65	126.36	90.73	129.91	129.91	102.81
Apr-91	114.67	128.69	89.10	130.42	130.42	101.34
May-91	114.55	131.90	86.85	132.14	132.14	100.19
Jun-91	116.22	134.33	86.52	134.72	134.72	100.29
Jul-91	117.51	136.76	85.93	137.82	137.82	100.78
Aug-91	118.24	138.42	85.42	140.34	140.34	101.39
Sep-91	119.83	140.22	85.46	142.63	142.63	101.71
Oct-91	120.99	144.28	83.86	144.42	144.42	100.10
Nov-91	122.75	145.61	84.30	146.87	146.87	100.87
Dec-91	125.33	147.40	85.03	150.29	150.29	101.96
Jan-92	124.60	149.03	83.61	151.88	151.88	101.91
Feb-92	117.22	148.09	79.15	153.61	153.61	103.73
Mar-92	117.38	149.13	78.71	154.64	154.64	103.70
Apr-92	116.69	151.09	77.24	154.34	154.34	102.15
May-92	116.78	152.71	76.47	155.59	155.59	101.89
Jun-92	119.63	153.75	77.80	157.48	157.48	102.43
Jul-92	121.73	155.47	78.30	159.07	159.07	102.32
Aug-92	124.30	157.69	78.82	160.38	160.38	101.71
Sep-92	126.72	161.36	78.53	162.23	162.23	100.54
Oct-92	125.72	163.66	76.82	164.88	164.88	100.74
Nov-92	127.25	166.00	76.66	168.21	168.21	101.33
Dec-92	128.12	166.12	77.13	170.64	170.64	102.72
Jan-93	129.37	166.39	77.75	172.44	172.44	103.63
Feb-93	130.72	167.06	78.24	172.73	172.73	103.39
Mar-93	133.85	168.01	79.67	173.17	173.17	103.07
Apr-93	135.19	170.36	79.35	173.93	173.93	102.10
May-93	136.47	172.85	78.95	175.34	175.34	101.44
Jun-93	135.90	173.71	78.24	177.77	177.77	102.34
Jul-93	136.40	175.41	77.76	179.97	179.97	102.60
Aug-93	137.37	179.16	76.68	181.18	181.18	101.13
Sep-93	137.55	181.24	75.89	183.45	183.45	101.22
Oct-93	139.03	185.91	74.78	186.82	186.82	100.49
Nov-93	139.00	186.07	74.70	189.78	189.78	101.99
Dec-93	143.46	186.44	76.95	193.38	193.38	103.72

Date	Indice TCN TCN	Indice de IPC IPC	Indice TCR TCR	Indice UF UF	Indice TCR *	Indice TCN *
Jan-94	145.05	188.38	77.00	193.81	193.81	102.88
Feb-94	144.46	188.97	76.45	194.55	194.55	102.96
Mar-94	145.05	191.10	75.90	196.12	196.12	102.63
Apr-94	142.36	192.03	74.13	197.16	197.16	102.67
May-94	143.11	194.77	73.48	198.97	198.97	102.16
Jun-94	141.76	195.81	72.39	200.46	200.46	102.38
Jul-94	141.69	196.98	71.93	202.74	202.74	102.92
Aug-94	141.34	199.17	70.96	203.88	203.88	102.36
Sep-94	139.80	200.15	69.85	205.35	205.35	102.60
Oct-94	138.90	201.33	68.99	207.26	207.26	102.94
Nov-94	139.32	202.55	68.78	208.39	208.39	102.88
Dec-94	135.54	203.12	66.73	209.64	209.64	103.21
Jan-95	136.74	204.41	66.89	210.73	210.73	103.09
Feb-95	138.88	205.44	67.60	211.52	211.52	102.96
Mar-95	138.31	206.69	66.92	212.74	212.74	102.92
Apr-95	132.88	207.95	63.90	213.86	213.86	102.84
May-95	127.10	209.22	60.75	215.14	215.14	102.83
Jun-95	125.89	210.76	59.73	216.43	216.43	102.69
Jul-95	127.40	212.52	59.95	217.79	217.79	102.48
Aug-95	127.47	216.02	59.01	219.37	219.37	101.55
Sep-95	132.96	217.30	61.19	221.55	221.55	101.96
Oct-95	137.02	218.98	62.57	224.46	224.46	102.50
Nov-95	138.94	219.14	63.40	226.00	226.00	103.13
Dec-95	137.82	219.77	62.71	227.39	227.39	103.47
Jan-96	137.66	220.37	62.47	227.80	227.80	103.37
Feb-96	138.49	221.51	62.52	228.45	228.45	103.13
Mar-96	138.68	223.12	62.16	229.27	229.27	102.75
Apr-96	137.63	225.38	61.06	230.51	230.51	102.27
May-96	136.89	227.21	60.25	232.29	232.29	102.24
Jun-96	138.11	228.16	60.53	234.45	234.45	102.76
Jul-96	138.40	228.82	60.48	236.11	236.11	103.19
Aug-96	138.53	229.80	60.28	237.03	237.03	103.14
Sep-96	138.78	230.93	60.10	237.81	237.81	102.98
Oct-96	140.03	232.66	60.19	238.82	238.82	102.65
Nov-96	141.54	234.34	60.40	240.12	240.12	102.47
Dec-96	142.34	234.34	60.74	241.60	241.60	103.10
Jan-97	142.81	235.53	60.63	242.60	242.60	103.00
Feb-97	140.24	237.49	59.05	243.60	243.60	102.57
Mar-97	139.52	238.24	58.56	245.03	245.03	102.85
Apr-97	140.71	239.03	58.87	246.64	246.64	103.18
May-97	141.06	239.58	58.88	247.43	247.43	103.28
Jun-97	140.66	240.15	58.57	248.10	248.10	103.31
Jul-97	140.39	241.60	58.11	248.61	248.61	102.90
Aug-97	139.79	242.58	57.63	249.37	249.37	102.80
Sep-97	139.81	244.83	57.10	250.69	250.69	102.39
Oct-97	139.64	247.83	56.35	252.05	252.05	101.70
Nov-97	143.20	248.17	57.70	254.45	254.45	102.53
Dec-97	147.69	248.51	59.43	256.75	256.75	103.32

Date		Growth Rate IPC	Growth Rate TCR	Growth Rate UF	Growth Rate TCN	Growth Rate TCR
Jan-90				*	*	
Feb-90	-1.4%	0.3%	-1.7%	2.1%	2.1%	1.8%
Mar-90	0.0%	2.7%	-2.7%	4.1%	4.1%	1.4%
Apr-90	-0.1%	4.5%	-4.5%	5.1%	5.1%	0.5%
May-90	0.1%	6.1%	-5.7%	7.4%	7.4%	1.2%
Jun-90	0.0%	8.5%	-7.8%	9.2%	9.2%	0.7%
Jul-90	0.0%	10.3%	-9.3%	11.1%	11.1%	0.7%
Aug-90	2.3%	12.5%	-9.1%	13.4%	13.4%	0.8%
Sep-90	3.9%	18.0%	-11.9%	15.4%	15.4%	-2.2%
Oct-90	5.3%	22.5%	-14.0%	18.6%	18.6%	-3.2%
Nov-90	10.1%	23.6%	-10.9%	23.9%	23.9%	0.2%
Dec-90	12.9%	24.2%	-9.1%	27.7%	27.7%	2.8%
Jan-91	13.6%	24.8%	-8.9%	28.9%	28.9%	3.3%
Feb-91	13.7%	24.9%	-8.9%	29.5%	29.5%	3.7%
Mar-91	14.7%	26.4%	-9.3%	29.9%	29.9%	2.8%
Apr-91	14.7%	28.7%	-10.9%	30.4%	30.4%	1.3%
May-91	14.6%	31.9%	-13.1%	32.1%	32.1%	0.2%
Jun-91	16.2%	34.3%	-13.5%	34.7%	34.7%	0.3%
Jul-91	17.5%	36.8%	-14.1%	37.8%	37.8%	0.8%
Aug-91	18.2%	38.4%	-14.6%	40.3%	40.3%	1.4%
Sep-91	19.8%	40.2%	-14.5%	42.6%	42.6%	1.7%
Oct-91	21.0%	44.3%	-16.1%	44.4%	44.4%	0.1%
Nov-91	22.7%	45.6%	-15.7%	46.9%	46.9%	0.9%
Dec-91	25.3%	47.4%	-15.0%	50.3%	50.3%	2.0%
Jan-92	24.6%	49.0%	-16.4%	51.9%	51.9%	1.9%
Feb-92	17.2%	48.1%	-20.8%	53.6%	53.6%	3.7%
Mar-92	17.4%	49.1%	-21.3%	54.6%	54.6%	3.7%
Apr-92	16.7%	51.1%	-22.8%	54.3%	54.3%	2.1%
May-92	16.8%	52.7%	-23.5%	55.6%	55.6%	1.9%
Jun-92	19.6%	53.8%	-22.2%	57.5%	57.5%	2.4%
Jul-92	21.7%	55.5%	-21.7%	59.1%	59.1%	2.3%
Aug-92	24.3%	57.7%	-21.2%	60.4%	60.4%	1.7%
Sep-92	26.7%	61.4%	-21.5%	62.2%	62.2%	0.5%
Oct-92	25.7%	63.7%	-23.2%	64.9%	64.9%	0.7%
Nov-92	27.3%	66.0%	-23.3%	68.2%	68.2%	1.3%
Dec-92	28.1%	66.1%	-22.9%	70.6%	70.6%	2.7%
Jan-93	29.4%	66.4%	-22.2%	72.4%	72.4%	3.6%
Feb-93	30.7%	67.1%	-21.8%	72.7%	72.7%	3.4%
Mar-93	33.9%	68.0%	-20.3%	73.2%	73.2%	3.1%
Apr-93	35.2%	70.4%	-20.6%	73.9%	73.9%	2.1%
May-93	36.5%	72.9%	-21.0%	75.3%	75.3%	1.4%
Jun-93	35.9%	73.7%	-21.8%	77.8%	77.8%	2.3%
Jul-93	36.4%	75.4%	-22.2%	80.0%	80.0%	2.6%
Aug-93	37.4%	79.2%	-23.3%	81.2%	81.2%	1.1%
Sep-93	37.5%	81.2%	-24.1%	83.5%	83.5%	1.2%
Oct-93	39.0%	85.9%	-25.2%	86.8%	86.8%	0.5%
Nov-93	39.0%	86.1%	-25.3%	89.8%	89.8%	2.0%
Dec-93	43.5%	86.4%	-23.1%	93.4%	93.4%	3.7%

Date		Growth Rate IPC	Growth Rate TCR	Growth Rate UF	Growth Rate TCN	Growth Rate TCR
Jan-94	45.0%	88.4%	-23.0%	93.8%	93.8%	2.9%
Feb-94	44.5%	89.0%	-23.6%	94.6%	94.6%	3.0%
Mar-94	45.0%	91.1%	-24.1%	96.1%	96.1%	2.6%
Apr-94	42.4%	92.0%	-25.9%	97.2%	97.2%	2.7%
May-94	43.1%	94.8%	-26.5%	99.0%	99.0%	2.2%
Jun-94	41.8%	95.8%	-27.6%	100.5%	100.5%	2.4%
Jul-94	41.7%	97.0%	-28.1%	102.7%	102.7%	2.9%
Aug-94	41.3%	99.2%	-29.0%	103.9%	103.9%	2.4%
Sep-94	39.8%	100.2%	-30.2%	105.3%	105.3%	2.6%
Oct-94	38.9%	101.3%	-31.0%	107.3%	107.3%	2.9%
Nov-94	39.3%	102.5%	-31.2%	108.4%	108.4%	2.9%
Dec-94	35.5%	103.1%	-33.3%	109.6%	109.6%	3.2%
Jan-95	36.7%	104.4%	-33.1%	110.7%	110.7%	3.1%
Feb-95	38.9%	105.4%	-32.4%	111.5%	111.5%	3.0%
Mar-95	38.3%	106.7%	-33.1%	112.7%	112.7%	2.9%
Apr-95	32.9%	107.9%	-36.1%	113.9%	113.9%	2.8%
May-95	27.1%	109.2%	-39.3%	115.1%	115.1%	2.8%
Jun-95	25.9%	110.8%	-40.3%	116.4%	116.4%	2.7%
Jul-95	27.4%	112.5%	-40.1%	117.8%	117.8%	2.5%
Aug-95	27.5%	116.0%	-41.0%	119.4%	119.4%	1.6%
Sep-95	33.0%	117.3%	-38.8%	121.5%	121.5%	2.0%
Oct-95	37.0%	119.0%	-37.4%	124.5%	124.5%	2.5%
Nov-95	38.9%	119.1%	-36.6%	126.0%	126.0%	3.1%
Dec-95	37.8%	119.8%	-37.3%	127.4%	127.4%	3.5%
Jan-96	37.7%	120.4%	-37.5%	127.8%	127.8%	3.4%
Feb-96	38.5%	121.5%	-37.5%	128.5%	128.5%	3.1%
Mar-96	38.7%	123.1%	-37.8%	129.3%	129.3%	2.8%
Apr-96	37.6%	125.4%	-38.9%	130.5%	130.5%	2.3%
May-96	36.9%	127.2%	-39.8%	132.3%	132.3%	2.2%
Jun-96	38.1%	128.2%	-39.5%	134.5%	134.5%	2.8%
Jul-96	38.4%	128.8%	-39.5%	136.1%	136.1%	3.2%
Aug-96	38.5%	129.8%	-39.7%	137.0%	137.0%	3.1%
Sep-96	38.8%	130.9%	-39.9%	137.8%	137.8%	3.0%
Oct-96	40.0%	132.7%	-39.8%	138.8%	138.8%	2.6%
Nov-96	41.5%	134.3%	-39.6%	140.1%	140.1%	2.5%
Dec-96	42.3%	134.3%	-39.3%	141.6%	141.6%	3.1%
Jan-97	42.8%	135.5%	-39.4%	142.6%	142.6%	3.0%
Feb-97	40.2%	137.5%	-40.9%	143.6%	143.6%	2.6%
Mar-97	39.5%	138.2%	-41.4%	145.0%	145.0%	2.8%
Apr-97	40.7%	139.0%	-41.1%	146.6%	146.6%	3.2%
May-97	41.1%	139.6%	-41.1%	147.4%	147.4%	3.3%
Jun-97	40.7%	140.1%	-41.4%	148.1%	148.1%	3.3%
Jul-97	40.4%	141.6%	-41.9%	148.6%	148.6%	2.9%
Aug-97	39.8%	142.6%	-42.4%	149.4%	149.4%	2.8%
Sep-97	39.8%	144.8%	-42.9%	150.7%	150.7%	2.4%
Oct-97	39.6%	147.8%	-43.7%	152.0%	152.0%	1.7%
Nov-97	43.2%	148.2%	-42.3%	154.4%	154.4%	2.5%
Dec-97	47.7%	148.5%	-40.6%	156.7%	156.7%	3.3%
		-100.0%	-100.0%	-100.0%		

Date	New Zealand Nominal Exchange RUS Dollars per $1 New Zealand dollar						
Jan-90	0.5957	Jan-91	0.5997	Jan-92	0.5405	Jan-93	0.5188
Feb-90	0.5888	Feb-91	0.6000	Feb-92	0.5484	Feb-93	0.5231
Mar-90	0.5798	Mar-91	0.5872	Mar-92	0.5483	Mar-93	0.5340
Apr-90	0.5750	Apr-91	0.5870	Apr-92	0.5396	Apr-93	0.5429
May-90	0.5765	May-91	0.5815	May-92	0.5355	May-93	0.5426
Jun-90	0.5865	Jun-91	0.5900	Jun-92	0.5458	Jun-93	0.5382
Jul-90	0.5913	Jul-91	0.5717	Jul-92	0.5455	Jul-93	0.5522
Aug-90	0.6190	Aug-91	0.5744	Aug-92	0.5403	Aug-93	0.5516
Sep-90	0.6149	Sep-91	0.5709	Sep-92	0.5381	Sep-93	0.5509
Oct-90	0.6155	Oct-91	0.5588	Oct-92	0.5285	Oct-93	0.5546
Nov-90	0.6081	Nov-91	0.5627	Nov-92	0.5166	Nov-93	0.5449
Dec-90	0.5903	Dec-91	0.5409	Dec-92	0.5136	Dec-93	0.5588
Jan-94	0.5674	Jan-95	0.6401	Jan-96	0.6683	Jan-97	0.7019
Feb-94	0.5774	Feb-95	0.6359	Feb-96	0.6708	Feb-97	0.6912
Mar-94	0.5625	Mar-95	0.6500	Mar-96	0.6783	Mar-97	0.6982
Apr-94	0.5762	Apr-95	0.6738	Apr-96	0.6872	Apr-97	0.6919
May-94	0.5900	May-95	0.6674	May-96	0.6825	May-97	0.6920
Jun-94	0.5947	Jun-95	0.6695	Jun-96	0.6846	Jun-97	0.6876
Jul-94	0.6014	Jul-95	0.6750	Jul-96	0.6931	Jul-97	0.6623
Aug-94	0.6023	Aug-95	0.6505	Aug-96	0.6924	Aug-97	0.6426
Sep-94	0.6030	Sep-95	0.6555	Sep-96	0.6999	Sep-97	0.6358
Oct-94	0.6153	Oct-95	0.6607	Oct-96	0.7046	Oct-97	0.6369
Nov-94	0.6244	Nov-95	0.6550	Nov-96	0.7088	Nov-97	0.6235
Dec-94	0.6426	Dec-95	0.6533	Dec-96	0.7060	Dec-97	0.5925

	TCN US/$1 NZ Quarterly	TCN NZ/$1 US Quarterly	IPC based 1,980	Growth Rate	IPC based 1,993	Growth Rate	TCN *	TCR Quarterly	Index Based Jun '90
Mar-90	0.5881	1.7004							
Jun-90	0.5793	1.7261	2,747		944		1.7261	0.00183	100
Sep-90	0.6084	1.6437	2,774	0.98%	954	0.98%	1.7431	0.00172	94
Dec-90	0.6046	1.6539	2,804	1.08%	964	1.08%	1.7619	0.00172	94
Mar-91	0.5956	1.6789	2,822	0.64%	970	0.64%	1.7732	0.00173	95
Jun-91	0.5862	1.7060	2,824	0.07%	971	0.07%	1.7745	0.00176	96
Sep-91	0.5723	1.7472	2,834	0.35%	974	0.35%	1.7808	0.00179	98
Dec-91	0.5541	1.8046	2,832	-0.07%	974	-0.07%	1.7795	0.00185	101
Mar-92	0.5457	1.8324	2,844	0.42%	978	0.42%	1.7871	0.00187	103
Jun-92	0.5403	1.8508	2,852	0.28%	980	0.28%	1.7921	0.00189	103
Sep-92	0.5413	1.8474	2,862	0.35%	984	0.35%	1.7984	0.00188	103
Dec-92	0.5196	1.9247	2,869	0.24%	986	0.24%	1.8028	0.00195	107
Mar-93	0.5253	1.9037	2,871	0.07%	987	0.07%	1.8040	0.00193	106
Jun-93	0.5412	1.8476	2,889	0.63%	993	0.61%	1.8150	0.00186	102
Sep-93	0.5516	1.8130			998	0.50%	1.8241	0.00182	99
Dec-93	0.5528	1.8091			1,000	0.20%	1.8278	0.00181	99
Mar-94	0.5691	1.7572			1,000	0.00%	1.8278	0.00176	96
Jun-94	0.5870	1.7037			1,004	0.40%	1.8351	0.00170	93
Sep-94	0.6022	1.6605			1,016	1.20%	1.8570	0.00163	89
Dec-94	0.6274	1.5938			1,028	1.18%	1.8790	0.00155	85
Mar-95	0.6420	1.5576			1,040	1.17%	1.9009	0.00150	82
Jun-95	0.6702	1.4920			1,050	0.96%	1.9192	0.00142	78
Sep-95	0.6603	1.5144			1,052	0.19%	1.9228	0.00144	79
Dec-95	0.6563	1.5236			1,058	0.57%	1.9338	0.00144	79
Mar-96	0.6725	1.4871			1,063	0.47%	1.9430	0.00140	77
Jun-96	0.6848	1.4604			1,071	0.75%	1.9576	0.00136	75
Sep-96	0.6951	1.4386			1,077	0.56%	1.9685	0.00134	73
Dec-96	0.7065	1.4155			1,085	0.74%	1.9832	0.00130	71
Mar-97	0.6971	1.4345			1,082	-0.28%	1.9777	0.00133	73
Jun-97	0.6905	1.4482			1,083	0.09%	1.9795	0.00134	73
Sep-97	0.6469	1.5458			1,088	0.46%	1.9886	0.00142	78
Dec-97	0.6176	1.6191			1,094	0.55%	1.9996	0.00148	81

	US$ per $1 NZ	NZ per $1 US$	Chilean per $1 US$		Chilean per $1 NZ	Us Dollars per one NZ dollar
Jan			719.93			
Feb			722.92			Nz Dollars
Mar	0.505643	1.9777	727.15	723.33	365.75	per one US dollar
Apr			731.92			
May			734.27			Chilean pesos
Jun	0.505176	1.9795	736.27	734.15	370.88	per one US dollar
Jul			737.78			
Aug			740.03			Chilean pesos
Sep	0.502854	1.9886	743.95	740.58	372.41	per one NZ dollar
Oct			747.98			
Nov			755.10			
Dec	0.500096	1.9996	761.93	755.00	377.57	
	0.503442			Average	371.6507	

Appendix D

Farmers Questionnaire Answers

General Information

Private Information

Farmers Name:	:	NZ A
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm			**Comments are very welcome**
Climate	hot, temperate cold)	temperate	
Rainfall	(sufficient /insufficient summer rainfall,		
	excessive/enough winter rainfall; even)		
Drainage and flooding conditions,	(good,moderate,bad)	moderate	
Soil	(Loam , sandy loam, clay loam, silt loam)	sandy loam	
Land			
Hectares	No of ha	161 ha	
Value equivalent of renting it,	($/ha or $/acre)	617	
Number of shares	(kilos milk solids)	157,500	
Price of shares	$/unit	2	
Which company		Kiwi	
Animals			
Breed		Fresian	
Bovine Tuberculosis clear	yes/no	yes 2 years	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	no	
Herd size	(number of cows)	308	

Appendix D

Farmer NZ A

Replacement rate	%	25%		
Origin of replacement,	own farm/ bought	own		
Market value of cows you buy	$/unit	850		
Market value of cows you sell	$/unit	270		
Number of calves sold	No.			
Number of calves grown	No.	33%		
Price of calves to sell	$/ unit	31.57		
Calving period	Months	25/07 - 09// 20/04 --05		

Technology

Type of milk shed	(herring bone/ rotating/other)	herring bone		
Elimination Effluent	(ditch /irrigation system /other)	irrigation system (Tegel)		
Automatic Cup Removers	(yes/no)	no		

Capital, Infrastructure and Depreciation

Cow Shed	value ($)	150,000	How many years is it going to last ?	15
Implement Shed	value ($)	20,000	How many years is it going to last ?	8
Hay Shed	value ($)		How many years is it going to last ?	
Feeding Yard	value ($)		How many years is it going to last ?	
Milker Houses	value ($)	220,000	How many years is it going to last ?	20
Cattle Crush	value ($)		How many years is it going to last ?	
Fire, Earthquake Insurance	value ($)	1,900		
Tractors	value ($)	40,000	How many years is it going to last ?	13
Fumigator	value ($)		How many years is it going to last ?	
Chopper	value ($)		How many years is it going to last ?	
Vehicles	value ($)	3,000	How many years is it going to last ?	2
Other machinery : specify what				
Feed Wagon	value ($)	4,000	How many years is it going to last ?	5
Hay mower	value ($)	8,350	How many years is it going to last ?	10
Motobyke	value ($)	10,666	How many years is it going to last ?	5
computer	value ($)	2,288	How many years is it going to last ?	2

Feeding

Silage	cost per year $	4,602	
Alfalfa	cost per year $		

Farmer NZ A

Paddock Regreasing	cost per year $		
Alfalfa Hay	cost per year $		
Concentrate	cost per year $		
Mineral Salts	cost per year $	1,080	
Hay	cost per year $		
Meal	cost per year $		
Cropping	cost per year $		
Pasture renovation	cost per year $	3,306	
Grazing	cost per year $	655	
Contractor costs.	cost per year $	3,000	
Agronomist	cost per year $		
Weed and Pest Control	cost per year $	96	
Fertilisers what:	cost per year $	16,178	
Urea	cost per year $	9,041	
	cost per year $		
	cost per year $		
	cost per year $		
Animal Health			
Veterinary Products	cost per year $	1,461	
Herd Testing	cost per year $	12,099	
Semen	cost per year $		
Insemination	cost per year $		
Veterinarian	cost per year $	11,725	Animal health, Vet fees
Labor			
Milkers	cost per year $	31,393	
Inseminator	cost per year $		
Tractor driver	cost per year $	5,898	
Feeders	cost per year $		
Courses or/and Instructions	cost per year $	100	
Others			
Shed expenses	cost per year $	4,415	includes sundries
Fences	cost per year $	2,163	

Appendix D

Farmer NZ A

Maintenance Milking Equipment	cost per year	$	3,077		
Maintenance Installations	cost per year	$	4,676		
Irrigation System, Ditches, Drainage	cost per year	$	3,270		
Freight	cost per year	$	192		
Vehicle Expenses	cost per year	$	10,547		includes tractor expenses

Administration

Administration Costs	cost per year	$	3,531		General,Consultancy, Runoffs
Farm Manager Wage	cost per year	$	50,000		
Accountant	cost per year	$	3,000		
Taxes Rates	cost per year	$	4,736		
General Costs (incl. phone, fax, PC etc	cost per year	$	9,328	water,power,telephone,mail,computer,legal	
ACC	cost per year	$	3,371		

Production

	January	February	March	April
Kg Milk Solids	10845	8,397	7517	6625
Litres				

	May	June	July	August
Kg Milk Solids	5193	4,079	4352	7581
Litres				

	September	October	November	December
Kg Milk Solids	11195	13,653	13182	12455
Litres				

Winter Milk Contract	Quota	1,520	250	250
	Months	may june july	june	july
	$/litre	0.32	0.32	0.10

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	NZ B
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm			**Comments are very welcome**
Climate	hot, temperate cold)	temperate	
Rainfall	(sufficient /insufficient summer rainfall,	av. 900 mm annually	
	excessive/enough winter rainfall; even)	summer dry / winter wet	
Drainage and flooding conditions,	(good,moderate,bad)	free draining soils, sub soil drainage installed	
Soil	(Loam , sandy loam, clay loam, silt loam)	silt loam	

Land			
Hectares	No of ha	276 ha (104 ha leased)	
Value equivalent of renting it,	($/ha or $/acre)	625 /ha	
Number of shares	(kilos milk solids)	179,305 (1996/97 season)	This season will purchase up to 192,000
Price of shares	$/unit	$1.50	
Which company		Kiwi Dairies	

Animals			
Breed		Fresian	
Bovine Tuberculosis clear	yes/no	yes	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	no	
Herd size	(number of cows)	505	
Replacement rate	%	26%	
Origin of replacement,	own farm/ bought	own	
Market value of cows you buy	$/unit	none purchased	

Appendix D

Farmer NZ B

Market value of cows you sell		$/unit	$355		
Number of calves sold		No.	285		
Number of calves grown		No.	165		
Price of calves to sell		$/ unit	$54.00		
Calving period		Months	April/May - Aug/Oct		
Technology					
Type of milk shed	(herring bone/ rotating/other)		rotary		
Elimination Effluent	(ditch /irrigation system /other)		twin pond - irrigate from second		
Automatic Cup Removers	(yes/no)		no		
Capital, Infrastructure and Depreciation					
Cow Shed	value ($)		100,000	How many years is it going to last ?	20
Implement Shed	value ($)		20,000	How many years is it going to last ?	30
Hay Shed	value ($)		20,000	How many years is it going to last ?	20
Feeding Yard	value ($)		10,000	How many years is it going to last ?	30
Milker Houses	value ($)		60,000	How many years is it going to last ?	30
Cattle Crush	value ($)			How many years is it going to last ?	
Fire, Earthquake Insurance	value ($)		2,387		
Tractors	value ($)		107,000	How many years is it going to last ?	5
Fumigator	value ($)			How many years is it going to last ?	
Chopper	value ($)			How many years is it going to last ?	
Vehicles	value ($)		21,500	How many years is it going to last ?	2
Other machinery : specify what					
haymaking	value ($)		25,000	How many years is it going to last ?	5
cultivation			27,000	How many years is it going to last ?	5
feedout machinery	value ($)		33,000	How many years is it going to last ?	5
irrigation	value ($)		29,000	How many years is it going to last ?	10
Feeding					
Silage		cost per year $	2,880		
Alfalfa		cost per year $	2,708		
Paddock Regreasing		cost per year $			
Alfalfa Hay		cost per year $			
Concentrate		cost per year $			
Mineral Salts		cost per year $			
Hay		cost per year $	1,398		

Appendix D

Farmer NZ B

Meal	cost per year	$	3,585 calf meal
Cropping	cost per year	$	3,412
Pasture renovation	cost per year	$	
Grazing	cost per year	$	
Feed	cost per year	$	
Contractor costs.	cost per year	$	23,001 silage
Agronomist	cost per year	$	
Weed and Pest Control	cost per year	$	1,961
Fertilisers what:	cost per year	$	
DAP 135	cost per year	$	17,938
15/10/10	cost per year	$	777
Superphosphate	cost per year	$	498
Urea	cost per year	$	19,344
Spreading	cost per year	$	5,114

Animal Health

Veterinary Products	cost per year	$	28,827
Herd Testing	cost per year	$	5,335
Semen	cost per year	$	6,017
Insemination	cost per year	$	2,169
Veterinarian	cost per year	$	3,912

Labor

Milkers	cost per year	$	
Inseminator	cost per year	$	70,979
Tractor driver	cost per year	$	
Feeders	cost per year	$	
Courses or/and Instructions	cost per year	$	1,930

Others

Shed expenses	cost per year	$	16,759
Fences	cost per year	$	3,928
Maintenance Milking Equipment	cost per year	$	9,244
Maintenance Installations	cost per year	$	7,086
Irrigation System, Ditches, Drainage	cost per year	$	706
Freight	cost per year	$	316
Vehicle Expenses	cost per year	$	31,359

Appendix D

Farmer NZ B

Administration

Administration Costs	cost per year	$	4,986
Farm Manager Wage	cost per year	$	45,500
Accountant	cost per year	$	4,665
Taxes Rates	cost per year	$	29,424
General Costs (incl. phone, fax, PC etc	cost per year	$	6,122
ACC	cost per year	$	4,721

Production

	January	February	March	April
Kg Milk Solids	17,507	10,926	11,352	14,473
Litres	223,286	139,780	132,193	172,999
	May	**June**	**July**	**August**
Kg Milk Solids	12,000	10,556	10,652	14,748
Litres	160,000	133,437	134,218	171,929
	September	**October**	**November**	**December**
Kg Milk Solids	21,066	26,009	22,992	19,497
Litres	258,783	324,711	292,029	253,770

Winter Milk Contract

Quota	2,960	litres/day
Months	May/Jun/Jul	
$/litre	0.320	cent/litre

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	NZ C
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm			**Comments are very welcome**
Climate	hot, temperate cold)	cool winter /warm summer	
Rainfall	(sufficient /insufficient summer rainfall, excessive/enough winter rainfall; even)	900 mm of rain per year	
Drainage and flooding conditions,	(good,moderate,bad)	moderate	
Soil	(Loam , sandy loam, clay loam, silt loam)	clay loam	
Land			
Hectares	No of ha	100	
Value equivalent of renting it,	($/ha or $/acre)	741	
Number of shares	(kilos milk solids)	86,000	
Price of shares	$/unit	$1.50	
Which company		Kiwi	
Animals			
Breed		Fresian	
Bovine Tuberculosis clear	yes/no	yes	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	no	
Herd size	(number of cows)	220	
Replacement rate	%	18 - 20 %	

Appendix D

Farmer NZ C

Origin of replacement,	own farm/ bought	own farm			
Market value of cows you buy	$/unit	na			
Market value of cows you sell	$/unit	350 - 450 cull cows			
Number of calves sold	No.	156			
Number of calves grown	No.	45			
Price of calves to sell	$/ unit	$100 - $150			
Calving period	Months	April - November			

Technology

Type of milk shed	(herring bone/ rotating/other)	herring bone			
Elimination Effluent	(ditch /irrigation system /other)	ditch			
Automatic Cup Removers	(yes/no)	no			

Capital, Infrastructure and Depreciation

Cow Shed	value ($)	150,000	How many years is it going to last ?	20	
Implement Shed	value ($)	30,000	How many years is it going to last ?	20	
Hay Shed	value ($)	10,000	How many years is it going to last ?	10	
Feeding Yard	value ($)	10,000	How many years is it going to last ?	10	
Milker Houses 2houses	value ($)	170,000	How many years is it going to last ?	50	
Cattle Crush	value ($)	included in cowshed	How many years is it going to last ?		
Fire, Earthquake Insurance	value ($)	3,050			
Tractors	value ($)	20,000	How many years is it going to last ?	10	
Fumigator	value ($)		How many years is it going to last ?		
Chopper	value ($)	1,500	How many years is it going to last ?	5	
Vehicles ute	value ($)	21,000	How many years is it going to last ?	5	
Other machinery : specify what					
Feed Wagon	value ($)	12,000	How many years is it going to last ?	8	
plough		850	How many years is it going to last ?	5	
power Harrow	value ($)	3,000	How many years is it going to last ?	10	
Scaper + Gradel Blade	value ($)	4,000	How many years is it going to last ?	20	

Feeding

Silage	cost per year $	15,000		
Alfalfa	cost per year $			
Paddock Regreasing	cost per year $	3,000		
Alfalfa Hay	cost per year $			
Concentrate	cost per year $			

			Farmer NZ C
Mineral Salts	cost per year	$	120
Hay	cost per year	$	10,000
Meal	cost per year	$	
Cropping	cost per year	$	5,600
Pasture renovation	cost per year	$	1,200
Grazing	cost per year	$	12,000
Feed	cost per year	$	
Contractor costs.	cost per year	$	950
Agronomist	cost per year	$	
Weed and Pest Control	cost per year	$	500
Fertilisers what:	cost per year	$	
Urea	cost per year	$	3,600
DAP	cost per year	$	5,000
Lime	cost per year	$	3,400
	cost per year	$	
Animal Health			
Veterinary Products	cost per year	$	1,500
Herd Testing	cost per year	$	1,600
Semen	cost per year	$	3,800
Insemination	cost per year	$	self
Veterinarian	cost per year	$	800
Labor			
Milkers	cost per year	$	52,000 free house
Inseminator	cost per year	$	
Tractor driver	cost per year	$	
Feeders	cost per year	$	
Courses or/and Instructions	cost per year	$	700
Others			
Shed expenses	cost per year	$	10,000
Fences	cost per year	$	3,500
Maintenance Milking Equipment	cost per year	$	1,200
Maintenance Installations	cost per year	$	
Irrigation System, Ditches, Drainage	cost per year	$	2,500
Freight	cost per year	$	2,000

Appendix D

Farmer NZ C

Vehicle Expenses	cost per year $	4,300	

Administration

Administration Costs	cost per year $		
Farm Manager Wage	cost per year $	40,000	
Accountant	cost per year $	2,500	
Taxes Rates	cost per year $	6,500	
General Costs (incl. phone, fax, PC etc	cost per year $	3,000	
ACC	cost per year $	1,800	

Production

	January	February	March	April
Kg Milk Solids	9,966	7,850	7,501	6,199
Litres	79,796	63,500	61,400	50,072

	May	June	July	August
Kg Milk Solids	6,766	4,978	4,500	4,621
Litres	59,004	44,802	40,215	41,006

	September	October	November	December
Kg Milk Solids	5,538	7,834	10,322	10,356
Litres	44,304	62,087	82,576	82,899

Winter Milk Contract	Quota	1,200
	Months	May/Jun/Jul
	$/litre	0.320

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	NZ D
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm			**Comments are very welcome**
Climate	hot, temperate cold)	temperate	
Rainfall	(sufficient /insufficient summer rainfall,	insufficient	
	excessive/enough winter rainfall; even)	excessive	This winter is dry which is unsual
Drainage and flooding conditions,	(good,moderate,bad)	moderate	
Soil	(Loam , sandy loam, clay loam, silt loam)	sandy loam	

Land			
Hectares	No of ha	42 ha	
Value equivalent of renting it,	($/ha or $/acre)	750 $/ha	
Number of shares	(kilos milk solids)	39,000	
Price of shares	$/unit	$1.00	
Which company		New Zealand Dairy Group	

Animals			
Breed		Fresian	
Bovine Tuberculosis clear	yes/no	yes	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	unregistered pedigree	
Herd size	(number of cows)	125	
Replacement rate	%	20%	
Origin of replacement,	own farm/ bought	own farm	
Market value of cows you buy	$/unit	do not buy any	
Market value of cows you sell	$/unit	$300 cuul cows on average	
Number of calves sold	No.	90 approx	

Appendix D

Farmer NZ D

Number of calves grown	No.	22		
Price of calves to sell	$/ unit	$75.00	average	
Calving period	Months	15/Aug-15/Oct	40%	
		20/March - 1st/Jun	60%	

Technology

Type of milk shed	(herring bone/ rotating/other)	herring bone	
Elimination Effluent	(ditch /irrigation system /other)	irrigation	
Automatic Cup Removers	(yes/no)	no	

Capital, Infrastructure and Depreciation

					I hope it will last another
Cow Shed		value ($) book	11,574	How many years is it going to last ?	6 (29 yrs old)
Implement Shed		value ($) book	13,771	How many years is it going to last ?	10 (60 yrs old)
Hay Shed	2	value ($) book	19,250	How many years is it going to last ?	10 (25 yrs old)
Feeding Yard		value ($) book		How many years is it going to last ?	
Milker Houses		value ($) book	47,323	How many years is it going to last ?	20
Cattle Crush		value ($) book	1,000	How many years is it going to last ?	20
Fire, Earthquake Insurance			5,406		
Tractors	4	value ($) book	38,000	How many years is it going to last ?	5
Fumigator		value ($) book		How many years is it going to last ?	
Chopper		value ($) book		How many years is it going to last ?	
Vehicles	3 cars	value ($) book	16,000	How many years is it going to last ?	5
Other machinery : specify what		value ($) book			
Spray Tank Boom Pump		value ($) book	500	How many years is it going to last ?	2
Round bale feeders	2	value ($) book	6,000	How many years is it going to last ?	2
Truck 6 ton		value ($) book	260	How many years is it going to last ?	2
Hay Balers	2	value ($) book	18,000	How many years is it going to last ?	2
4Wheel trailer home made		value ($) book	1,000	How many years is it going to last ?	2
mower		value ($) book	3,000	How many years is it going to last ?	2
Tamco bale wrapper		value ($) book	17,000	How many years is it going to last ?	5
farm bikes	2	value ($) book	10,000	How many years is it going to last ?	3
water pumpse deep well bores	3	value ($) book	25,000	How many years is it going to last ?	10

Feeding

Silage & hay	cost per year $	7,500	
Alfalfa	cost per year $		
Paddock Regreasing	cost per year $		

Appendix D

Farmer NZ D

Alfalfa Hay	cost per year	$		
Concentrate	cost per year	$		
Mineral Salts	cost per year	$	2,500	
Hay	cost per year	$		
Meal	cost per year	$	5,000	
Cropping	cost per year	$		
Pasture renovation	cost per year	$	1,500	
Grazing	cost per year	$	10,000	
Feed	cost per year	$		
Contractor costs.	cost per year	$		
Agronomist	cost per year	$		
Weed and Pest Control	cost per year	$	4,000	
Fertilisers what:	cost per year	$	14,000	
Potash	cost per year	$		with trace elements mixed and put on together
Phosphate nitrogen	cost per year	$		applied spring winter and autumn
fertilization	cost per year	$		
Urine	cost per year	$		
Animal Health				
Veterinary Products	cost per year	$	10,000	
Herd Testing	cost per year	$	2,000	
Semen	cost per year	$	3,000	
Insemination	cost per year	$	500	
Veterinarian	cost per year	$	1,000	
Labor				
Milkers	cost per year	$	on contract 20% of milk cheque no costs.	
Inseminator	cost per year	$		
Tractor driver	cost per year	$		
Feeders	cost per year	$		
Courses or/and Instructions	cost per year	$		
Others				
Shed expenses	cost per year	$	5,000	
Fences	cost per year	$	2,000	
Maintenance Milking Equipment	cost per year	$	2,500	
Maintenance Installations	cost per year	$	2,000	

Appendix D

Farmer NZ D

Irrigation System, Ditches, Drainage	cost per year	$	
Freight	cost per year	$	
Vehicle Expenses	cost per year	$	20,000

Administration

Administration Costs	cost per year	$	3,500
Farm Manager Wage	cost per year	$	30000 - 35000 contract milker
Accountant	cost per year	$	15,000
Taxes Rates	cost per year	$	10,000
General Costs (incl. phone, fax, PC etc	cost per year	$	500
ACC	cost per year	$	450

Production

	January	February	March	April
Kg Milk Solids	3,358	1,850	2,202	3,272
Litres	41,788	22,858	26,333	39,658

	May	June	July	August
Kg Milk Solids	3,586	3,369	3,066	3,015
Litres	45,802	43,627	38,895	37,938

	September	October	November	December
Kg Milk Solids	4,394	5,258	5,078	3,941
Litres	54,135	65,286	63,592	49,104

Winter Milk Contract

Quota	1,000
Months	may/Jun/Jul
$/litre	0.279

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	NZ E
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm

			Comments are very welcome
Climate	hot, temperate cold)	temperate	
Rainfall	(sufficient /insufficient summer rainfall, excessive/enough winter rainfall; even)	even	
Drainage and flooding conditions,	(good,moderate,bad)	moderate	
Soil	(Loam , sandy loam, clay loam, silt loam)	sandy loam	

Land

Hectares	No of ha	85	
Value equivalent of renting it,	($/ha or $/acre)	500	
Number of shares	(kilos milk solids)	60,000	
Price of shares	$/unit	1.5	
Which company		Kiwi	

Animals

Breed		hollstein Fresian	
Bovine Tuberculosis clear	yes/no	yes 5 years	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	20	
Herd size	(number of cows)	200	
Replacement rate	%	20%	
Origin of replacement,	own farm/ bought	own	
Market value of cows you buy	$/unit	800	

Appendix D

			Farmer NZ E		
Market value of cows you sell		$/unit	370		
Number of calves sold		No.			
Number of calves grown		No.	20%		
Price of calves to sell		$/ unit	70.00		
Calving period		Months	25/07 - 09/		
Technology					
Type of milk shed	(herring bone/ rotating/other)		herring bone		
Elimination Effluent	(ditch /irrigation system /other)		1 km ditch (Tegel)		
Automatic Cup Removers		(yes/no)	no		
Capital, Infrastructure and Depreciation					
Cow Shed	value ($)		200,000	How many years is it going to last ?	20
Implement Shed	value ($)		15,000	How many years is it going to last ?	20
Hay Shed	value ($)		12,000	How many years is it going to last ?	20
Feeding Yard	value ($)			How many years is it going to last ?	
Milker Houses	value ($)		75,000	How many years is it going to last ?	20
Cattle Crush	value ($)		2,000	How many years is it going to last ?	8 weight scales
Fire, Earthquake Insurance	value ($)		3,635		
Tractors	value ($)		5,000	How many years is it going to last ?	5
Fumigator	value ($)		500	How many years is it going to last ?	
Chopper	value ($)			How many years is it going to last ?	
Vehicles	value ($)		10,000	How many years is it going to last ?	5
Other machinery : specify what					
Feed Wagon	value ($)		2,000	How many years is it going to last ?	5
Machinery			6,200	How many years is it going to last ?	5
Motobyke	value ($)		2,000	How many years is it going to last ?	2
Computer	value ($)		3,000	How many years is it going to last ?	3
Feeding					
Silage		cost per year $	8,047		
Alfalfa		cost per year $			
Paddock Regreasing		cost per year $	2,000		
Alfalfa Hay		cost per year $	6,062		
Concentrate		cost per year $			
Mineral Salts		cost per year $			
Hay		cost per year $	2,069		
Meal		cost per year $			

Farmer NZ E

Cropping	cost per year $		
Pasture renovation	cost per year $	2,434 seed	
Grazing	cost per year $	32,668	lease land
Feed	cost per year $	3,584	
Contractor costs.	cost per year $		
Agronomist	cost per year $	1,000	
Weed and Pest Control	cost per year $	9,011	
Fertilisers what:	cost per year $	18,490	
	cost per year $		
	cost per year $		
	cost per year $		
	cost per year $		

Animal Health

Veterinary Products	cost per year $		
Herd Testing	cost per year $	6,812	
Semen	cost per year $		
Insemination	cost per year $		
Veterinarian	cost per year $	18,455	Animal health, Vet fees

Labor

Milkers	cost per year $	27,389	
Inseminator	cost per year $		
Tractor driver	cost per year $		
Feeders	cost per year $		
Courses or/and Instructions	cost per year $	300	

Others

Shed expenses	cost per year $	3,292	includes sundries
Fences	cost per year $	2,188	
Maintenance Milking Equipment	cost per year $	6,566	includes shelter
Maintenance Installations	cost per year $	1,575	
Irrigation System, Ditches, Drainage	cost per year $	3,080	
Freight	cost per year $	2,284	
Vehicle Expenses	cost per year $	7,700	includes tractor expenses

Administration

Administration Costs	cost per year $	3,000	General,Consultancy, Runoffs

Appendix D

Farmer NZ E

Farm Manager Wage	cost per year $	35,000	
Accountant	cost per year $	1,974	
Taxes Rates	cost per year $	4,632	
General Costs (incl. phone, fax, PC etc	cost per year $	13,170	water,power,telephone,mail,computer
ACC	cost per year $	2,566	

Production

	January	February	March	April
Kg Milk Solids	5,842	3824	4199	3692
Litres				

	May	June	July	August
Kg Milk Solids	4,422	3786	3763	4195
Litres				

	September	October	November	December
Kg Milk Solids	5503	6,763	7396	6950
Litres				

Winter Milk Contract

Quota	1,457
Months	may june july
$/litre	0.32

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	NZ F
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm

			Comments are very welcome
Climate	hot, temperate cold)	temperate	
Rainfall	(sufficient /insufficient summer rainfall,	insufficient summer	
	excessive/enough winter rainfall; even)	excessive winter	
Drainage and flooding conditions,	(good,moderate,bad)	good	
Soil	(Loam , sandy loam, clay loam, silt loam)		

Land

Hectares	No of ha	120 ha	90 ha milking platform, 30 ha run - off
Value equivalent of renting it,	($/ha or $/acre)	$10000 - $15000 ha	
Number of shares	(kilos milk solids)	80,000 kg/ms	
Price of shares	$/unit		
Which company		Kiwi	

Animals

Breed		Fresian / Hollstein	
Bovine Tuberculosis clear	yes/no	yes	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	no	
Herd size	(number of cows)	230	
Replacement rate	%	20%	
Origin of replacement,	own farm/ bought	own farm	
Market value of cows you buy	$/unit	$800	

Appendix D

Farmer NZ F

Market value of cows you sell	$/unit	$350		to freezing works
Number of calves sold	No.	160		
Number of calves grown	No.	220		
Price of calves to sell	$/ unit	$40.00		
Calving period	Months	1/3 - 1/5 ; 1/8 - 1/10	2 months autumn, 2 months spring	

Technology

Type of milk shed	(herring bone/ rotating/other)	herring bone 14 a side	
Elimination Effluent	(ditch /irrigation system /other)	irrigation system	
Automatic Cup Removers	(yes/no)	no	

Capital, Infrastructure and Depreciation

Cow Shed	value ($)	50,000	How many years is it going to last ?	10
Implement Shed	value ($)	10,000	How many years is it going to last ?	20
Hay Shed	value ($)	10,000	How many years is it going to last ?	20
Feeding Yard	value ($)	15,000	How many years is it going to last ?	30
Milker Houses	value ($)		How many years is it going to last ?	
Cattle Crush	value ($)		How many years is it going to last ?	
Fire, Earthquake Insurance	value ($)			
Tractors	value ($)	30,000	How many years is it going to last ?	10
Fumigator	value ($)		How many years is it going to last ?	
Chopper	value ($)		How many years is it going to last ?	
Vehicles motorbike	value ($)	10,000	How many years is it going to last ?	3
Other machinery : specify what				
mower	value ($)	1,000	How many years is it going to last ?	10
roundbale feeder		1,000	How many years is it going to last ?	10
	value ($)		How many years is it going to last ?	
	value ($)		How many years is it going to last ?	

Feeding

Silage	cost per year $	30,000	most silage bought in at .12/Kg DM	
Alfalfa	cost per year $			
Paddock Regreasing	cost per year $	500		
Alfalfa Hay	cost per year $			
Concentrate	cost per year $			
Mineral Salts	cost per year $			
Hay	cost per year $	4,000	most hay bought in 100 round bales	

			Farmer NZ F	
Meal	cost per year	$	1,000	
Cropping	cost per year	$		
Pasture renovation	cost per year	$		
Grazing	cost per year	$		
Feed	cost per year	$		
Contractor costs.	cost per year	$	inc in silage cost	
Agronomist	cost per year	$		
Weed and Pest Control	cost per year	$	1,000	
Fertilisers what: 1 tonne/ha	cost per year	$		
15 % Potash Super	cost per year	$	30,000	
10 Ton Urea	cost per year	$	5,000	
	cost per year	$		
	cost per year	$		
Animal Health				
Veterinary Products incl vet	cost per year	$	9,000	
Herd Testing	cost per year	$	5,300	
Semen	cost per year	$		
Insemination	cost per year	$		
Veterinarian	cost per year	$		
Labor				
Milkers	cost per year	$	17,000	
Inseminator	cost per year	$		
Tractor driver	cost per year	$		
Feeders	cost per year	$		
Courses or/and Instructions	cost per year	$	1,000	
Others				
Shed expenses	cost per year	$	1,850	
Fences	cost per year	$	700	
Maintenance Milking Equipment	cost per year	$	600	
Maintenance Installations	cost per year	$	500	
Irrigation System, Ditches, Drainage	cost per year	$	500	
Freight	cost per year	$	1,070	
Vehicle Expenses	cost per year	$	2,500	
Electricity	cost per year	$	3,700	

Appendix D

Farmer NZ F

Administration

Administration Costs	cost per year $	600	
Farm Manager Wage	cost per year $		
Accountant	cost per year $	1,100	
Taxes Rates	cost per year $	5,000	
General Costs (incl. phone, fax, PC etc	cost per year $	1,000	
ACC	cost per year $	4,000	

Production

	January	February	March	April
Kg Milk Solids	5,000	4,000	4,200	6,700
Litres				

	May	June	July	August
Kg Milk Solids	6,200	5,200	5,300	6,300
Litres				

	September	October	November	December
Kg Milk Solids	9,300	11,300	10,200	7,700
Litres				

Winter Milk Contract

Quota	2,000 l/day
Months	May/Jun/Jul
$/litre	0.600 c/litrre

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	NZ G
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm

Comments are very welcome

Climate (hot, temperate cold)		temperate
Rainfall (sufficient /insufficient summer rainfall, excessive/enough winter rainfall; even)		summery dry winter wet
Drainage and flooding conditions, (good,moderate,bad)		sub surface drainage tiles/moles
Soil (Loam , sandy loam, clay loam, silt loam)		clay loam

Land

			effective
Hectares	No of ha	87	ha milking area 80 ha runoff
Value equivalent of renting it,	($/ha or $/acre)	500	700/ha
Number of shares	(kilos milk solids)	100,000	
Price of shares	$/unit	$1.80	$2.00 by 2000
Which company		Kiwi	

Animals

Breed		Fresian	
Bovine Tuberculosis clear	yes/no	clear	
Bovine Brucellosis clear	yes/no	clear	
Does the herd have Pedigree	yes/no	no	
Herd size	(number of cows)	260	peak milked
Replacement rate	%	25%	
Origin of replacement,	own farm/ bought	own bred	

Appendix D

Farmer NZ G

Market value of cows you buy	$/unit		
Market value of cows you sell	$/unit	400-450 sell cull	
Number of calves sold	No.	175	
Number of calves grown	No.	75	
Price of calves to sell	$/ unit	$75.00	
Calving period	Months	8 weeks from March 20/8 weeks frm Aug 20	Autumn 40% ; Spring 60%

Technology

Type of milk shed	(herring bone/ rotating/other)	rotary	
Elimination Effluent	(ditch /irrigation system /other)	surface disposal pumped direct to paddocks	
Automatic Cup Removers	(yes/no)	no	

Capital, Infrastructure and Depreciation

Cow Shed	value ($)		How many years is it going to last ?	Value of Land & Building
Implement Shed	value ($)		How many years is it going to last ?	milking area 87ha= 1.7 mill aprox
Hay Shed	value ($)		How many years is it going to last ?	runoff 80 ha = 1.0 mill approx
Feeding Yard	value ($)		How many years is it going to last ?	machinery $100.000.- approx
Milker Houses	value ($)		How many years is it going to last ?	Livestock $230.000.- approx
Cattle Crush	value ($)		How many years is it going to last ?	
Fire, Earthquake Insurance	value ($)	6,000	premium/year	
Tractors	value ($)		How many years is it going to last ?	
Fumigator	value ($)		How many years is it going to last ?	
Chopper	value ($)		How many years is it going to last ?	
Vehicles	value ($)		How many years is it going to last ?	
Other machinery : specify what				
Feed Wagon	value ($)		How many years is it going to last ?	
Machinery			How many years is it going to last ?	
Motobyke	value ($)		How many years is it going to last ?	
Computer	value ($)		How many years is it going to last ?	

Feeding

Silage	cost per year $		
Alfalfa	cost per year $		
Paddock Regreasing	cost per year $	7,500	
Alfalfa Hay	cost per year $		
Concentrate	cost per year $		
Mineral Salts	cost per year $		

Farmer NZ G

Hay	cost per year	$		
Meal	cost per year	$		
Cropping	cost per year	$		
Pasture renovation	cost per year	$		
Grazing	cost per year	$		
Feed	cost per year	$		
Contractor costs.	cost per year	$	15,000 silage (gras & maize)	
Consultant	cost per year	$	1,600	
Weed and Pest Control	cost per year	$	2,000	
Fertilisers what:	cost per year	$	35,600	
spreading	cost per year	$	5,000	Dap 135, 200 kg/ha; plus
electicity	cost per year	$	6,000	capital for regrassing & maroe
freight	cost per year	$	1,000	.+ approx 20 t urea
	cost per year	$		
Animal Health				
Veterinary Products	cost per year	$	18,145	
Herd Testing	cost per year	$	9,381	
Semen	cost per year	$		
Insemination	cost per year	$	DIY	
Veterinarian	cost per year	$		
Labor				
Milkers	cost per year	$	25,000	
Inseminator	cost per year	$		
Tractor driver	cost per year	$		
Feeders	cost per year	$		
Courses or/and Instructions	cost per year	$		
Others				
Shed expenses	cost per year	$	2,500	
Fences	cost per year	$	1,600	
Maintenance Milking Equipment	cost per year	$	15,300 plant&tools+ tracks & racy	
Maintenance Installations	cost per year	$	5,000 building	
Irrigation System, Ditches, Drainage	cost per year	$	4,000 water	
Freight	cost per year	$	1,000	
Vehicle Expenses	cost per year	$	16,000 tractors, cars, truck, etc.	

Farmer NZ G

Administration

Administration Costs	cost per year $		
Farm Manager Wage	cost per year $		
Accountant	cost per year $		
Taxes Rates	cost per year $	6,000 rates	
General Costs (incl. phone, fax, PC etc	cost per year $	8,000 inc adm.	
ACC	cost per year $	3,000	

Production

	January	February	March	April
Kg Milk Solids	9,349	5,884	6,226	5,578
Litres	123,256	78,441	79,773	70,193
	May	**June**	**July**	**August**
Kg Milk Solids	6,161	5,580	5,579	6,926
Litres	76,595	70,577	71,310	86,848
	September	**October**	**November**	**December**
Kg Milk Solids	12,508	12,969	12,315	10,929
Litres	159,763	169,251	160,246	146,027

Winter Milk Contract

Quota	1,500 l/day
Months	May/Jun/Jul
$/litre	0.320 l on top of seasonal price.

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	NZ H
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm

					Comments are very welcome
Climate	hot, temperate cold)	Temperate			
Rainfall	(sufficient /insufficient summer rainfall,	insufficient	summer		based on 1997/98 Season
	excessive/enough winter rainfall; even)	excessive	winter		
Drainage and flooding conditions,	(good,moderate,bad)	moderate drainage			
Soil	(Loam , sandy loam, clay loam, silt loam)	Sandy Loam			

Land

Hectares	No of ha	120		
Value equivalent of renting it,	($/ha or $/acre)	180	per acre per anum	approximately
Number of shares	(kilos milk solids)	115,062		
Price of shares	$/unit	$1.00		
Which company		Kiwi		

Animals

Breed		Fresian	
Bovine Tuberculosis clear	yes/no	yes	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	no	
Herd size	(number of cows)	360	
Replacement rate	%	not known	

Appendix D

Farmer NZ H

Origin of replacement,	own farm/ bought	own farm trust land			
Market value of cows you buy	$/unit	$400			
Market value of cows you sell	$/unit	300 - 400			
Number of calves sold	No.	171			
Number of calves grown	No.	48			
Price of calves to sell	$/ unit	$38.00			
Calving period	Months	Aug/Sept ; April/May			
Technology					
Type of milk shed	(herring bone/ rotating/other)	rotary			
Elimination Effluent	(ditch /irrigation system /other)	long ditch			
Automatic Cup Removers	(yes/no)	yes			
Capital, Infrastructure and Depreciation					
Cow Shed	value ($)	120,000	How many years is it going to last ?	5	yrs
Implement Shed	value ($)	8,000	How many years is it going to last ?	5	yrs
Hay Shed	value ($)	18,000	How many years is it going to last ?	8	yrs
Feeding Yard	value ($)		How many years is it going to last ?		
Milker Houses	value ($)	260,000	How many years is it going to last ?	30	yrs
Cattle Crush	value ($)		How many years is it going to last ?		
Fire, Earthquake Insurance	value ($)				
Tractors	value ($)	10,000	How many years is it going to last ?	4	yrs
Fumigator	value ($)		How many years is it going to last ?		
Chopper	value ($)		How many years is it going to last ?		
Vehicles	value ($)		How many years is it going to last ?		
Other machinery : specify what					
	value ($)		How many years is it going to last ?		
			How many years is it going to last ?		
4 Wheeler motorbike	value ($)	1,000	How many years is it going to last ?	2	yrs
	value ($)		How many years is it going to last ?		
Feeding					
Silage	cost per year $	17,000	all estimates		
Alfalfa	cost per year $				
Paddock Regreasing	cost per year $				
Alfalfa Hay	cost per year $				
Concentrate	cost per year $				

Farmer NZ H

Mineral Salts	cost per year	$	
Hay	cost per year	$	12,000
Meal	cost per year	$	
Cropping	cost per year	$	
Pasture renovation	cost per year	$	5,000
Grazing	cost per year	$	18,000
Feed	cost per year	$	
Contractor costs.	cost per year	$	6,000
Agronomist	cost per year	$	
Weed and Pest Control	cost per year	$	2,000
Fertilisers what:	cost per year	$	
Urea	cost per year	$	2,700
Nitrogen	cost per year	$	2,800
Lime	cost per year	$	900
	cost per year	$	

Animal Health

Veterinary Products	cost per year	$	2,000
Herd Testing	cost per year	$	5,800
Semen	cost per year	$	468
Insemination	cost per year	$	3,300
Veterinarian	cost per year	$	3,840

Labor

Milkers	cost per year	$	19,000
Inseminator	cost per year	$	4,000
Tractor driver	cost per year	$	4,000
Feeders	cost per year	$	3,000
Courses or/and Instructions	cost per year	$	

Others

Shed expenses	cost per year	$	2,800
Fences	cost per year	$	2,500
Maintenance Milking Equipment	cost per year	$	4,000 average
Maintenance Installations	cost per year	$	
Irrigation System, Ditches, Drainage	cost per year	$	3,000
Freight	cost per year	$	4,000

Appendix D

Farmer NZ H

Vehicle Expenses	cost per year	$	4,000

Administration

Administration Costs	cost per year	$	39,000
Farm Manager Wage	cost per year	$	
Accountant	cost per year	$	2,500
Taxes Rates	cost per year	$	10,500
General Costs (incl. phone, fax, PC etc	cost per year	$	750
ACC	cost per year	$	900 p.a.

Production

	January	February	March	April
Kg Milk Solids	6,449	4,243	4,678	5,459
Litres	79,832	52,122	55,490	63,675
	May	**June**	**July**	**August**
Kg Milk Solids	5,800	5,322	5,931	5,981
Litres	71,732	67,700	75,198	75,330
	September	**October**	**November**	**December**
Kg Milk Solids	8,087	9,506	8,851	8,362
Litres	100,325	119,101	111,480	105,120

Winter Milk Contract	Quota	1,880	l/day
	Months	May/Jun/jul	
	$/litre	0.320	cents/lt

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	NZ I
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm			**Comments are very welcome**
Climate	hot, temperate cold)	Temperate	Ideal climmate for low cost grass based darying
Rainfall	(sufficient /insufficient summer rainfall,	sufficient	
	excessive/enough winter rainfall; even)	enough	
Drainage and flooding conditions,	(good,moderate,bad)	moderate	
Soil	(Loam , sandy loam, clay loam, silt loam)	loam,peat, sandy loam	

Land			
Hectares	No of ha	123	
Value equivalent of renting it,	($/ha or $/acre)	208	
Number of shares	(kilos milk solids)	64,000	
Price of shares	$/unit		
Which company		kiwi	

Animals			
Breed		Fresian	
Bovine Tuberculosis clear	yes/no	yes	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	no	
Herd size	(number of cows)	250	
Replacement rate	%	24%	
Origin of replacement,	own farm/ bought	own bred	
Market value of cows you buy	$/unit	na	

Appendix D

Farmer NZ I

Market value of cows you sell		$/unit	250 to 400 culls		
Number of calves sold		No.	114		
Number of calves grown		No.	60		
Price of calves to sell		$/ unit	$78.00 ave some 5 days some weanet (beef cross)		
Calving period		Months	March/April July/Sept		
Technology					
Type of milk shed	(herring bone/ rotating/other)		herring bone		
Elimination Effluent	(ditch /irrigation system /other)		irrigated		
Automatic Cup Removers	(yes/no)		no		
Capital, Infrastructure and Depreciation					
Cow Shed		value ($)	2,950	How many years is it going to last ?	0 new shed under
Implement Shed		value ($)	300	How many years is it going to last ?	20 construction
Hay Shed	3	value ($)	3,712	How many years is it going to last ?	20
Feeding Yard		value ($)		How many years is it going to last ?	
Milker Houses		value ($)		How many years is it going to last ?	
Cattle Crush		value ($)		How many years is it going to last ?	
Fire, Earthquake Insurance		value ($)	1,768		
Tractors	Market $5500	value ($) book	23	How many years is it going to last ?	
Tractors	Market $8000	value ($) book	1,048	How many years is it going to last ?	
Tractors	Market $10000	value ($) book	3,670	How many years is it going to last ?	
Fumigator		value ($)		How many years is it going to last ?	
Chopper		value ($)	1,818	How many years is it going to last ?	10
Vehicles	car,ute,atu,m cycle	value ($)	24,050	How many years is it going to last ?	
Other machinery : specify what					
Feed Wagon		value ($)	5,000	How many years is it going to last ?	10
Hay Baler 2; 500,500		value ($)	7,423	How many years is it going to last ?	
Motobyke		value ($)		How many years is it going to last ?	
Computer		value ($)		How many years is it going to last ?	
Feeding					
Silage		cost per year $	824		
Alfalfa		cost per year $			
Paddock Regreasing		cost per year $	1,000		
Alfalfa Hay		cost per year $			
Concentrate		cost per year $			

Farmer NZ I

Mineral Salts	cost per year	$	
Hay	cost per year	$	1,200
Meal Barley barley	cost per year	$	800
Cropping	cost per year	$	
Pasture renovation	cost per year	$	
Grazing	cost per year	$	
Feed	cost per year	$	
Contractor costs.	cost per year	$	
Agronomist	cost per year	$	
Weed and Pest Control	cost per year	$	1,200
Fertilisers what:	cost per year	$	22,000
Dap	cost per year	$	
crop 20 - 10 - 10	cost per year	$	
15/10/10	cost per year	$	
Animal Health			
Veterinary Products	cost per year	$	
Herd Testing	cost per year	$	
Semen + herd test. + inseminator	cost per year	$	6,810
Insemination	cost per year	$	
Veterinarian + Vet prod.	cost per year	$	13,029
Labor			
Milkers	cost per year	$	27,990
Inseminator	cost per year	$	
Tractor driver	cost per year	$	
Feeders	cost per year	$	
Courses or/and Instructions	cost per year	$	
Others			
Shed expenses	cost per year	$	4,231
Fences	cost per year	$	1,612
Maintenance Milking Equipment	cost per year	$	covered in shed expenses
Maintenance Machinery	cost per year	$	15,632
Irrigation System, Ditches, Drainage	cost per year	$	4,400
Freight	cost per year	$	600
Vehicle Expenses	cost per year	$	15,400

Farmer NZ I

Administration

Administration Costs	cost per year	$	4,300	(gral, exp, legal, loan fees)
Farm Manager Wage	cost per year	$		
Accountant	cost per year	$	1,900	
Taxes Rates	cost per year	$	5,300	rates; 16740 tax
General Costs (incl. phone, fax, PC etc	cost per year	$	3,100	
ACC	cost per year	$	3,700	

Production

	January	February	March	April
Kg Milk Solids	7,156	4,855	4,447	5,392
Litres	92,755	62,695	54,991	65,410
	May	**June**	**July**	**August**
Kg Milk Solids	4,355	3,065	2,811	4,182
Litres	54,657	41,432	35,706	52,947
	September	**October**	**November**	**December**
Kg Milk Solids	6,393	8,145	7,699	7,957
Litres	84,091	107,241	102,568	104,546

Winter Milk Contract	Quota	1,280	
	Months	May/Jun/Jul	
	$/litre	0.320	premium

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	NZ J
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm

				Comments are very welcome
Climate	hot, temperate cold)	temperate		
Rainfall	(sufficient /insufficient summer rainfall,	insufficient	rain every 3rd year	
	excessive/enough winter rainfall; even)	on average		
Drainage and flooding conditions,	(good,moderate,bad)	1/2 good; 1/2 moderate- bad		
Soil	(Loam , sandy loam, clay loam, silt loam)	1/2 sandy loam; 1/2 clay		

Land

Hectares	No of ha	85 ha	
Value equivalent of renting it,	($/ha or $/acre)	700 $/ha	
Number of shares	(kilos milk solids)	115,000 Kg MS	
Price of shares	$/unit	$2.00	
Which company		NZDG	

Animals

Breed		Fresian	Pedegree Holstein
Bovine Tuberculosis clear	yes/no	yes	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	yes	
Herd size	(number of cows)	340	130 Automn calvers, 210 Spring
Replacement rate	%	25%	

Appendix D

Farmer NZ J

Origin of replacement,	own farm/ bought	owner bred		
Market value of cows you buy	$/unit	$ 800		
Market value of cows you sell	$/unit	$ 300	cull cows	
Number of calves sold	No.	$ 150	bulls	
Number of calves grown	No.	85 - 90	per year	
Price of calves to sell	$/ unit	spring 20 - 40/ autumn 80		
Calving period	Months	April+May/Jul,Aug,Sept		

Technology

Type of milk shed	(herring bone/ rotating/other)	36 bail rotary	cow no's have grown from 230 to 340 in 2 yrs
Elimination Effluent	(ditch /irrigation system /other)	irrigation	hence new Cowshed (was a 17 bail rotary)
Automatic Cup Removers	(yes/no)	yes	

Capital, Infrastructure and Depreciation

Cow Shed	value ($)	250,000	How many years is it going to last ?	30
Implement Shed	value ($)	5,000	How many years is it going to last ?	20
Hay Shed	value ($)	4,000	How many years is it going to last ?	20
Feeding Yard	value ($)	25,000	How many years is it going to last ?	20
Milker Houses	value ($)	70,000	How many years is it going to last ?	20
Cattle Crush	value ($)	500	How many years is it going to last ?	20
Fire, Earthquake Insurance	value ($)			
Tractors	value ($)	20,000	How many years is it going to last ?	10
Fumigator	value ($)		How many years is it going to last ?	
Chopper	value ($)		How many years is it going to last ?	
Vehicles	value ($)		How many years is it going to last ?	
Other machinery : specify what				
Feed Wagon	value ($)	10,000	How many years is it going to last ?	10
			How many years is it going to last ?	
	value ($)		How many years is it going to last ?	
	value ($)		How many years is it going to last ?	

Feeding

Silage	cost per year	$ 30,000	maize silage	maize cost 12-17c/kg DM in pit
Brewers Grain	cost per year	$ 15,000		B Grain 20c/kg DM in pit
Kiwifruit	cost per year	$ 2,000		
Alfalfa Hay	cost per year	$		
Concentrate	cost per year	$		

Farmer NZ J

Mineral Salts	cost per year	$	500 salt put into brewers grain when stored	
Hay	cost per year	$	2,000	
Meal	cost per year	$		
Cropping	cost per year	$		
Pasture renovation	cost per year	$		my aim is to source
Grazing	cost per year	$	25,000	quality cheap bi product feeds
Feed	cost per year	$		like brewers grain or kiwifruit,
Contractor costs.	cost per year	$	10,000 inc maize harvesting	rather than rely on meals etc.
Agronomist	cost per year	$		
Weed and Pest Control	cost per year	$	1,000	
Fertilisers what:	cost per year	$		
urea	cost per year	$	13,000	150kg N/ha/yr
50t S Super 30% K, Autumn	cost per year	$	15,000	Feb/Mar
17t Dap 200kg/ha, Spring	cost per year	$	9,000	July/Aug
Lime 100t per year	cost per year	$	3,500	
Animal Health				
Veterinary Products + vet	cost per year	$	14,000	
Herd Testing	cost per year	$	4,000	
Semen+ Insem	cost per year	$	8,000	
Insemination	cost per year	$		
Veterinarian	cost per year	$		
Labor				
Milkers	cost per year	$	70,000	2 labour units do all work this
Inseminator	cost per year	$		includes myself and a 20 yr old
Tractor driver	cost per year	$		female assistant
Feeders	cost per year	$		
Courses or/and Instructions	cost per year	$		
Others				
Shed expenses	cost per year	$	3,000	
Fences	cost per year	$	2,000	
Maintenance Milking Equipment	cost per year	$	1,000	
Maintenance Installations	cost per year	$		
Irrigation System, Ditches, Drainage	cost per year	$	3,000 drainage	
Freight	cost per year	$	1,000	

Appendix D

Farmer NZ J

Vehicle Expenses	cost per year	$	5,000	

Administration

Administration Costs	cost per year	$	5,000	
Farm Manager Wage	cost per year	$	45,000	this 45000 is incl. in the milkers
Accountant	cost per year	$	7,000	salary of 70000
Taxes Rates	cost per year	$	10,000	
General Costs (incl. phone, fax, PC etc	cost per year	$	5,000	
ACC	cost per year	$	3,000	

Production

	January	February	March	April
Kg Milk Solids	9,100	6,000	7,000	9,000
Litres	120,850	79,680	92,960	119,520
	May	**June**	**July**	**August**
Kg Milk Solids	7,600	7,600	7,700	11,000
Litres	100,930	100,930	102,250	
	September	**October**	**November**	**December**
Kg Milk Solids	13,000	14,100	11,800	10,200
Litres	145,630	187,250	157,070	135,458

Winter Milk Contract	Quota	3,122 l/day	
	Months	May/Jun/Jul	
	$/litre	0.280 cents/lt	

Daniela Winkler

General Information

Private Information

Farmers Name:	: NZ K	
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm				**Comments are very welcome**
Climate	hot, temperate cold)	temperate		
Rainfall	(sufficient /insufficient summer rainfall,	insufficient	expect 6-8 week dry spell most years in Jan Feb	
	excessive/enough winter rainfall; even)		can have to much rain late winter 10 ha flood 3	
Drainage and flooding conditions,	(good,moderate,bad)	moderate	times a year, over in a day	
Soil	(Loam , sandy loam, clay loam, silt loam)	clay loam mostly		

Land				
Hectares	No of ha	60	plus 20ha run off 14 k away	
Value equivalent of renting it,	($/ha or $/acre)	$300	$600	
Number of shares	(kilos milk solids)	85,215	1.6 share per kg MS	going to 2 next year
Price of shares	$/unit	$1.00		
Which company		NZDG		

Animals				
Breed				
Bovine Tuberculosis clear	yes/no	yes		
Bovine Brucellosis clear	yes/no	yes		
Does the herd have Pedigree	yes/no	no		
Herd size	(number of cows)	100	Autumn 50 Spring, Total 150	
Replacement rate	%	26%		
Origin of replacement,	own farm/ bought	own	rear	
Market value of cows you buy	$/unit			

Appendix D

Farmer NZ K

Market value of cows you sell	$/unit	$400 - $500		
Number of calves sold	No.	110		
Number of calves grown	No.	25 - 30		
Price of calves to sell	$/ unit	$50 - $100		
Calving period	Months	20th March/Jun 20th Aug/Oct		

Technology

Type of milk shed	(herring bone/ rotating/other)	13 herring bone	
Elimination Effluent	(ditch /irrigation system /other)	oxidation ponds + slummy tank	speard on paddock every 3 months
Automatic Cup Removers	(yes/no)	no	

Capital, Infrastructure and Depreciation

Cow Shed	value ($)	10,000	How many years is it going to last ?	30	replmnt =$300.000
Implement Shed	value ($)	4,000	How many years is it going to last ?	30	
Hay Shed	value ($) two sheds	12,000	How many years is it going to last ?	50	
Feeding Yard	value ($)		How many years is it going to last ?		
Milker Houses	value ($)		How many years is it going to last ?		
Cattle Crush	value ($)	250	How many years is it going to last ?	10	
Fire, Earthquake Insurance	value ($)				
Tractors Fiat 175	value ($)	58,000	How many years is it going to last ?	20	
Tractors DB	value ($)	2,000	How many years is it going to last ?	30	
Fumigator	value ($)		How many years is it going to last ?		
Chopper	value ($)	5,875	How many years is it going to last ?	10	
Vehicles Ute, Car	value ($)	40,000	How many years is it going to last ?	13	
Other machinery : specify what					
slurry	value ($)	11,000	How many years is it going to last ?	15	
rotary hoe		3,070	How many years is it going to last ?	15	
hay mover	value ($)	4,675	How many years is it going to last ?	10	
small hay bater		600	How many years is it going to last ?	10	
sed driller half share	value ($)	4,495	How many years is it going to last ?	20	

Feeding

Silage	cost per year $	1,000	50 acres made each year
Alfalfa	cost per year $		
Paddock Regreasing	cost per year $	638	
Alfalfa Hay	cost per year $		
Concentrate	cost per year $		

			Farmer NZ K	
Mineral Salts	cost per year	$	900	
Hay	cost per year	$	3,750	Hay is made at runoff and sometimes
Meal	cost per year	$	5,888	brought off other small land owners
Cropping	cost per year	$		
Pasture renovation	cost per year	$	100	
Grazing	cost per year	$	5,250	
Feed	cost per year	$		
Contractor costs.	cost per year	$	60	
Agronomist	cost per year	$		
Weed and Pest Control	cost per year	$	1,288	
Fertilisers what:	cost per year	$		
Fowl Manures	cost per year	$	6,000	
Phosphate Potash	cost per year	$	20,667	
Lime	cost per year	$	3,229	
	cost per year	$		
Animal Health				
Veterinary Products	cost per year	$	10,055	
Herd Testing	cost per year	$	3,650	
Semen	cost per year	$	1,500	
Insemination	cost per year	$		
Veterinarian	cost per year	$	10,055	
Labor				
Milkers	cost per year	$	26,000	
Inseminator	cost per year	$	650	$5 per cow
Tractor driver	cost per year	$		
Feeders	cost per year	$		
Courses or/and Instructions	cost per year	$		
Others				
Shed expenses	cost per year	$	2,133	
Fences	cost per year	$	3,534	
Maintenance Milking Equipment	cost per year	$	3,131	
Maintenance Installations	cost per year	$		
Irrigation System, Ditches, Drainage	cost per year	$	4,503	
Freight	cost per year	$	708	

Appendix D

Farmer NZ K

Vehicle Expenses	cost per year $	14,828	

Administration

Administration Costs	cost per year $	2,351	
Farm Manager Wage	cost per year $		
Accountant	cost per year $	4,716	
Taxes Rates	cost per year $	5,035 taxes $12.250	profit $52.310
General Costs (incl. phone, fax, PC etc	cost per year $		
ACC	cost per year $		

Production

	January	February	March	April
Kg Milk Solids	3,924	2,098	3,076	4,237
Litres	53,154	29,668	40,613	54,834
	May	**June**	**July**	**August**
Kg Milk Solids	4,289	4,621	4,079	3,726
Litres	56,732	61,022	54,032	49,847
	September	**October**	**November**	**December**
Kg Milk Solids	5,065	6,183	6,184	5,981
Litres	65,996	76,610	78,329	78,200

Winter Milk Contract	Quota	1,560	Market value of the farm would be
	Months	May/Jun/Jul	$1.6 million dollars
	$/litre	0.270 cents	

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	NZ L
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm			**Comments are very welcome**
Climate	hot, temperate cold)		
Rainfall	(sufficient /insufficient summer rainfall,	insufficient	
	excessive/enough winter rainfall; even)	enough	
Drainage and flooding conditions,	(good,moderate,bad)	good	
Soil	(Loam , sandy loam, clay loam, silt loam)	clay loam	
Land			
Hectares	No of ha	123	
Value equivalent of renting it,	($/ha or $/acre)	200 acre	
Number of shares	(kilos milk solids)	47,000	
Price of shares	$/unit	$2.00	
Which company		NZCDC	
Animals			
Breed		Fresian	
Bovine Tuberculosis clear	yes/no	yes	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	no	
Herd size	(number of cows)	300	
Replacement rate	%	25%	
Origin of replacement,	own farm/ bought	own farm	

Appendix D

			Farmer NZ L		
Market value of cows you buy		$/unit	nil		
Market value of cows you sell		$/unit	$400		
Number of calves sold		No.	230		
Number of calves grown		No.	70		
Price of calves to sell		$/ unit	$100.00 ave		
Calving period		Months	4 2x2		
Technology					
Type of milk shed	(herring bone/ rotating/other)		herring bone		
Elimination Effluent	(ditch /irrigation system /other)		irrigation system		
Automatic Cup Removers		(yes/no)	no		
Capital, Infrastructure and Depreciation					
Cow Shed	value ($)			How many years is it going to last ?	
Implement Shed	value ($)	=	250,000	How many years is it going to last ?	20 plus
Hay Shed	value ($)			How many years is it going to last ?	
Feeding Yard	value ($)		10,000	How many years is it going to last ?	20 plus
Milker Houses	value ($)		70,000	How many years is it going to last ?	20 plus
Cattle Crush	value ($)			How many years is it going to last ?	
Fire, Earthquake Insurance	value ($)		300		
Tractors	value ($)		30,000	How many years is it going to last ?	10 years
Fumigator	value ($)			How many years is it going to last ?	
Chopper	value ($)			How many years is it going to last ?	
Vehicles	value ($)	x2	15,000	How many years is it going to last ?	5 years
Other machinery : specify what					
spreader	value ($)		1,600	How many years is it going to last ?	
sprayer			1,200	How many years is it going to last ?	
Bike x3	value ($)		3,500	How many years is it going to last ?	5 years each
	value ($)			How many years is it going to last ?	
Feeding					
Silage	cost per year $		4,000		
Alfalfa	cost per year $				
Paddock Regreasing	cost per year $				
Alfalfa Hay	cost per year $				
Concentrate	cost per year $				
Mineral Salts	cost per year $				

			Farmer NZ L	
Hay	cost per year	$	800	
Meal	cost per year	$	2,400	
Cropping	cost per year	$		
Pasture renovation	cost per year	$		
Grazing	cost per year	$	50,000	
Feed	cost per year	$		
Contractor costs.	cost per year	$	9,000	
Agronomist	cost per year	$		
Weed and Pest Control	cost per year	$	2,000	
Fertilisers what:	cost per year	$		
20% Pot Super	cost per year	$	17,000	
Nitrogen	cost per year	$	10,000	
	cost per year	$		
	cost per year	$		
Animal Health				
Veterinary Products + vet	cost per year	$	8,500	
Herd Testing	cost per year	$	6,400	
Semen	cost per year	$		
Insemination	cost per year	$		
Veterinarian	cost per year	$		
Labor				
Milkers	cost per year	$	20,000	
Inseminator	cost per year	$		
Tractor driver	cost per year	$		
Feeders	cost per year	$		
Courses or/and Instructions	cost per year	$		
Others				
Shed expenses	cost per year	$	11,800	
Fences	cost per year	$	3,200	
Maintenance Milking Equipment	cost per year	$	inc in shed expenses	
Maintenance Installations	cost per year	$	2,500	
Irrigation System, Ditches, Drainage	cost per year	$	2,000	
Freight	cost per year	$	3,600	
Vehicle Expenses	cost per year	$	10,000	

Farmer NZ L

Administration

Administration Costs	cost per year $		
Farm Manager Wage	cost per year $	25,000	
Accountant	cost per year $	3,300	
Taxes Rates	cost per year $	10,000	
General Costs (incl. phone, fax, PC etc	cost per year $	4,500	
ACC	cost per year $	2,200	

Production

	January	February	March	April
Kg Milk Solids	8,389	2,992	3,502	3,963
Litres				

	May	June	July	August
Kg Milk Solids	4,378	4,335	4,979	8,872
Litres				

	September	October	November	December
Kg Milk Solids	11,203	11,362	10,122	9,195
Litres				

Winter Milk Contract

Quota	1,600 litres/day
Months	May/Jun/Jul
$/litre	0.279 cents

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	Ch A
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm			**Comments are very welcome**
Climate	hot, temperate cold)	Temperate -cold	
Rainfall	(sufficient /insufficient summer rainfall,	enough summer	
	excessive/enough winter rainfall; even)	excessive winter	
Drainage and flooding conditions,	(good,moderate,bad)	moderate	
Soil	(Loam , sandy loam, clay loam, silt loam)	clay loam	
Land			
Hectares	No of ha	162	
Value equivalent of renting it,	($/ha or $/acre)	70,000 ha	
Number of shares	(kilos milk solids)		
Price of shares	$/unit		
Which company			
Animals			
Breed		Red German	
Bovine Tuberculosis clear	yes/no	yes	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	yes	
Herd size	(number of cows)	100	
Replacement rate	%	25%	68 in shed average
Origin of replacement,	own farm/ bought	own	

Appendix D

Farmer Ch A

Market value of cows you buy		$/unit	$420,000		
Market value of cows you sell		$/unit	$228,000		
Number of calves sold		No.	45		
Number of calves grown		No.	44		just born $15.000
Price of calves to sell		$/ unit	$144,000.00	6 months old	prefernce March - Sept.
Calving period		Months	year round		
Technology					
Type of milk shed	(herring bone/ rotating/other)		herring bone		
Elimination Effluent	(ditch /irrigation system /other)		pond		
Automatic Cup Removers	(yes/no)		no		
Capital, Infrastructure and Depreciation					
Cow Shed		value ($)	6,000,000	How many years is it going to last ?	5
Implement Shed		value ($)	30,000,000	How many years is it going to last ?	20
Hay Shed		value ($)		How many years is it going to last ?	
Feeding Yard		value ($)		How many years is it going to last ?	incl. In Shed
Milker Houses	1	value ($)	3,000,000	How many years is it going to last ?	10
Cattle Crush		value ($)	150,000	How many years is it going to last ?	2
Fire, Earthquake Insurance		value ($)	150,000		
Tractors	2	value ($)	11,000,000	How many years is it going to last ?	10
Fumigator		value ($)	1,000,000	How many years is it going to last ?	10
Chopper		value ($)	4,000,000	How many years is it going to last ?	5
Vehicles		value ($)		How many years is it going to last ?	
Other machinery : specify what					
		value ($)		How many years is it going to last ?	
				How many years is it going to last ?	
		value ($)		How many years is it going to last ?	
		value ($)		How many years is it going to last ?	
Feeding					
Silage		cost per year $	1,480,000		
Alfalfa		cost per year $			
Paddock Regreasing		cost per year $			
Alfalfa Hay		cost per year $			
Concentrate		cost per year $	2,400,000		
Mineral Salts		cost per year $	200,000		

Farmer Ch A

Hay	cost per year	$	996,000		
Meal Barley	cost per year	$	825,000		
Cropping	cost per year	$			
Pasture renovation	cost per year	$			
Grazing	cost per year	$			
Feed	cost per year	$			
Contractor costs.	cost per year	$			
Agronomist	cost per year	$	250,000		
Weed and Pest Control	cost per year	$			
Fertilisers what:	cost per year	$	1,996,510		
Natural Phosphate (Bifox)	cost per year	$	972,510		
Triple Super Phosphate	cost per year	$	394,000		
Super Nitrogen	cost per year	$	445,000		
Photasium (Muriato)	cost per year	$	185,000		
Animal Health					
Veterinary Products + vet	cost per year	$	320,000		
Herd Testing	cost per year	$	636,000		
Semen	cost per year	$	208,000		
Insemination	cost per year	$	80,000	40%	60% Bull
Veterinarian	cost per year	$	120,000		
Labor					
Milkers	cost per year	$	1,440,000		
Inseminator	cost per year	$			
Tractor driver	cost per year	$	190,000		
Feeders	cost per year	$	1,100,000		
Courses or/and Instructions	cost per year	$			
Others					
Shed expenses	cost per year	$	600,000		
Fences	cost per year	$	200,000		
Maintenance Milking Equipment	cost per year	$	600,000		
Maintenance Installations	cost per year	$	600,000		
Irrigation System, Ditches, Drainage	cost per year	$			
Freight	cost per year	$			
Vehicle Expenses	cost per year	$			

Administration

Administration Costs	cost per year $	12,000,000
Farm Manager Wage	cost per year $	
Accountant	cost per year $	90,000
Taxes Rates	cost per year $	500,000
General Costs (incl. phone, fax, PC etc	cost per year $	120,000
ACC	cost per year $	

Production

	January	February	March	April
Kg Milk Solids				
Litres	36,853	23,114	20,027	25,661

	May	June	July	August
Kg Milk Solids				
Litres	31,849	26,765	25,906	28,410

	September	October	November	December
Kg Milk Solids				
Litres	33,342	43,897	48,458	44,716

Base	$	72.00	3%< Fat $ 570
Benefit Summer/Winter	$	3.74	3%< Protein $ 600
Other Benfits	$	13.15	
Total	**$**	**88.90**	

July August Protein was not paid in 1997

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	Ch B
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm			**Comments are very welcome**
Climate	hot, temperate cold)	template	
Rainfall	(sufficient /insufficient summer rainfall,	insufficient summer	
	excessive/enough winter rainfall; even)	sufficient winter	
Drainage and flooding conditions,	(good,moderate,bad)	moderate	
Soil	(Loam , sandy loam, clay loam, silt loam)		

Land			
Hectares	No of ha	50	
Value equivalent of renting it,	($/ha or $/acre)	3,000,000 ha	
Number of shares	(kilos milk solids)		
Price of shares	$/unit		
Which company			

Animals			
Breed		mixed red german / black	
Bovine Tuberculosis clear	yes/no	yes	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	no	
Herd size	(number of cows)	55	
Replacement rate	%	25%	
Origin of replacement,	own farm/ bought	own	

Appendix D

Farmer Ch B

Market value of cows you buy	$/unit		
Market value of cows you sell	$/unit	$200,000	
Number of calves sold	No.	20	
Number of calves grown	No.	20	
Price of calves to sell	$/ unit	$120,000	
Calving period	Months	march - september	

Technology

Type of milk shed	(herring bone/ rotating/other)	other	
Elimination Effluent	(ditch /irrigation system /other)	ditch	
Automatic Cup Removers	(yes/no)	no	

Capital, Infrastructure and Depreciation

Cow Shed	value ($)	4,000,000	How many years is it going to last ?	
Implement Shed	value ($)	1,000,000	How many years is it going to last ?	
Hay Shed	value ($)		How many years is it going to last ?	
Feeding Yard	value ($)	5,000,000	How many years is it going to last ?	
Milker Houses	value ($)	5,200,000	How many years is it going to last ?	
Cattle Crush	value ($)	150,000	How many years is it going to last ?	
Fire, Earthquake Insurance	value ($)	127,400		
Tractors	value ($)	3,000,000	How many years is it going to last ?	
Fumigator	value ($)		How many years is it going to last ?	
Chopper	value ($)		How many years is it going to last ?	
Vehicles	value ($)		How many years is it going to last ?	
Other machinery : specify what				
wagon	value ($)	300,000	How many years is it going to last ?	
			How many years is it going to last ?	
	value ($)		How many years is it going to last ?	
	value ($)		How many years is it going to last ?	

Feeding

Silage	cost per year $	700,000	
Alfalfa	cost per year $		
Paddock Regreasing	cost per year $		
Alfalfa Hay	cost per year $		
Concentrate	cost per year $		
Mineral Salts	cost per year $	200,000	

Farmer Ch B

Hay	cost per year	$	
Meal Barley	cost per year	$	
Cropping	cost per year	$	720,000
Pasture renovation	cost per year	$	
Grazing	cost per year	$	
Feed	cost per year	$	
Contractor costs.	cost per year	$	
Agronomist	cost per year	$	
Weed and Pest Control	cost per year	$	
Fertilisers what:	cost per year	$	
	cost per year	$	
Triple Super Phosphate	cost per year	$	1,566,000
Urea	cost per year	$	212,000
	cost per year	$	

Animal Health

Veterinary Products + vet	cost per year	$	120,000
Herd Testing	cost per year	$	
Semen	cost per year	$	
Insemination	cost per year	$	
Veterinarian	cost per year	$	

Labor

Milkers	cost per year	$	2,640,000
Inseminator	cost per year	$	
Tractor driver	cost per year	$	
Feeders	cost per year	$	160,000
Courses or/and Instructions	cost per year	$	

Others

Shed expenses	cost per year	$	60,000
Fences	cost per year	$	
Maintenance Milking Equipment	cost per year	$	
Maintenance Installations	cost per year	$	
Irrigation System, Ditches, Drainage	cost per year	$	
Freight	cost per year	$	80,000
Vehicle Expenses	cost per year	$	150,000

Appendix D

Farmer Ch B

Administration

Administration Costs	cost per year $	1,800,000
Farm Manager Wage	cost per year $	
Accountant	cost per year $	260,000
Taxes Rates	cost per year $	380,000
General Costs (incl. phone, fax, PC etc	cost per year $	300,000
ACC	cost per year $	105,600

Production

	January	February	March	April
Kg Milk Solids				
Litres	14,512	10,300	14,390	14,500
	May	**June**	**July**	**August**
Kg Milk Solids				
Litres	15,700	14,000	13,000	12,500
	September	**October**	**November**	**December**
Kg Milk Solids				
Litres	15,300	25,400	21,500	18,600

Base	$	92.30
Benefit Summer/Winter		
Other Benfits		
Total		

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	Ch C
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm			**Comments are very welcome**
Climate	hot, temperate cold)	hot dry summer/cold wet winter	
Rainfall	(sufficient /insufficient summer rainfall,	insufficient	
	excessive/enough winter rainfall; even)	sometimes excessive	
Drainage and flooding conditions,	(good,moderate,bad)	moderate	
Soil	(Loam , sandy loam, clay loam, silt loam)	clay loam	Pre Coastal Mountain

Land			
Hectares	No of ha	130	farm very degraded by
Value equivalent of renting it,	($/ha or $/acre)	ha	previous owners
Number of shares	(kilos milk solids)		
Price of shares	$/unit		
Which company		Soalva Pto Varas	

Animals			
Breed		German Red Hybrid with Hereford and Angus	The hibrydation started when
Bovine Tuberculosis clear	yes/no	yes	meat was THE THING and reco
Bovine Brucellosis clear	yes/no	yes	mended by the Farm Magazine
Does the herd have Pedigree	yes/no	no	of The El Mercurio failed:
Herd size	(number of cows)	90 goal 120	The growers want pure red ger
Replacement rate	%	10-15%	man or pure meat variety
Origin of replacement,	own farm/ bought	own	

Appendix D

Farmer Ch C

Market value of cows you buy		$/unit		
Market value of cows you sell		$/unit	150000-200000 cull	
Number of calves sold		No.		
Number of calves grown		No.	85	
Price of calves to sell		$/ unit	120.000-150.000	
Calving period		Months	b/March - Aug/Sept.	
Technology				
Type of milk shed	(herring bone/ rotating/other)		other trampas	
Elimination Effluent	(ditch /irrigation system /other)		ditch	
Automatic Cup Removers	(yes/no)		no	
Capital, Infrastructure and Depreciation				
Cow Shed	value ($)	5,000,000	How many years is it going to last ?	5
Implement Shed	value ($)	3,000,000	How many years is it going to last ?	10
Hay Shed	value ($)		How many years is it going to last ?	
Feeding Yard	value ($)	2,500,000	How many years is it going to last ?	10
Milker Houses	value ($)	4,000,000	How many years is it going to last ?	
Cattle Crush	value ($)	500,000	How many years is it going to last ?	
Fire, Earthquake Insurance	value ($)	300,000		
Tractors	value ($)	4,000,000	How many years is it going to last ?	5
Fumigator	value ($)	1,000,000	How many years is it going to last ?	5
Chopper	value ($)		How many years is it going to last ?	
Vehicles	value ($)	5,000,000	How many years is it going to last ?	
Other machinery : specify what				
Feeding wagon	value ($)	1,000,000	How many years is it going to last ?	
			How many years is it going to last ?	
	value ($)		How many years is it going to last ?	
	value ($)		How many years is it going to last ?	
Feeding				
Silage	cost per year $	1,200,000		
Alfalfa	cost per year $			
Paddock Regreasing	cost per year $			
Alfalfa Hay	cost per year $			
Concentrate	cost per year $	500,000		
Mineral Salts	cost per year $	300,000		

Appendix D

Farmer Ch C

Hay	cost per year	$	1,000,000
Meal Barley	cost per year	$	
Cropping	cost per year	$	
Pasture renovation	cost per year	$	
Grazing	cost per year	$	
Feed	cost per year	$	
Contractor costs.	cost per year	$	1,000,000
Agronomist	cost per year	$	
Weed and Pest Control	cost per year	$	500,000
Fertilisers what:	cost per year	$	5,000,000
P	cost per year	$	
N	cost per year	$	
K	cost per year	$	
Lime	cost per year	$	

Animal Health

Veterinary Products + vet	cost per year	$	300,000
Herd Testing	cost per year	$	200,000
Semen	cost per year	$	
Insemination	cost per year	$	Bulls
Veterinarian	cost per year	$	300,000

Labor

Milkers	cost per year	$	2,600,000
Inseminator	cost per year	$	
Tractor driver	cost per year	$	
Feeders	cost per year	$	1,200,000
Courses or/and Instructions	cost per year	$	100,000

Others

Shed expenses	cost per year	$	800,000
Fences	cost per year	$	
Maintenance Milking Equipment	cost per year	$	
Maintenance Installations	cost per year	$	
Irrigation System, Ditches, Drainage	cost per year	$	
Freight	cost per year	$	
Vehicle Expenses	cost per year	$	

Appendix D

Farmer Ch C

Administration

Administration Costs	cost per year $	1,200,000	
Farm Manager Wage	cost per year $	I make it for free !	
Accountant	cost per year $	240,000	
Taxes Rates	cost per year $		Attached milk receipt 6/98
General Costs (incl. phone, fax, PC etc	cost per year $	1,200,000	
ACC	cost per year $	80,000	

Production

	January	February	March	April
Kg Milk Solids				
Litres	18,000	15	15	18,000
	May	**June**	**July**	**August**
Kg Milk Solids				
Litres	15,000	10,000	10,000	15,000
	September	**October**	**November**	**December**
Kg Milk Solids				
Litres	20,000	25,000	25,000	20,000

Base	$	90.00
Benefit Summer/Winter		10%
Other Benefits		
Total		

General result +/- 0
is my retirement entertainment

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	Ch D
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm

			Comments are very welcome
Climate	hot, temperate cold)	template	
Rainfall	(sufficient /insufficient summer rainfall,	insufficient in summer	
	excessive/enough winter rainfall; even)		
Drainage and flooding conditions,	(good,moderate,bad)	good	
Soil	(Loam , sandy loam, clay loam, silt loam)		

Land

Hectares	No of ha	160	
Value equivalent of renting it,	($/ha or $/acre)	50,000 ha	
Number of shares	(kilos milk solids)		
Price of shares	$/unit		
Which company		Quesos Dollinco	

Animals

Breed		German Red	
Bovine Tuberculosis clear	yes/no	almost	
Bovine Brucellosis clear	yes/no	almost	
Does the herd have Pedigree	yes/no	no	
Herd size	(number of cows)	240	
Replacement rate	%	20%	
Origin of replacement,	own farm/ bought	own	

Appendix D

Farmer Ch D

Market value of cows you buy	$/unit			
Market value of cows you sell	$/unit	$180,000		
Number of calves sold	No.			
Number of calves grown	No.	205		
Price of calves to sell	$/ unit		don´t sell calves only steers	
Calving period	Months	March to September		

Technology

Type of milk shed	(herring bone/ rotating/other)	herring bone	
Elimination Effluent	(ditch /irrigation system /other)	irrigation by aspertion	
Automatic Cup Removers	(yes/no)	no	

Capital, Infrastructure and Depreciation

Cow Shed	value ($)	8,000,000	How many years is it going to last ?	
Implement Shed	value ($)		How many years is it going to last ?	
Hay Shed	value ($)	10,000,000	How many years is it going to last ?	
Feeding Yard	value ($)	20,000,000	How many years is it going to last ?	
Milker Houses	value ($)	6,000,000	How many years is it going to last ?	
Cattle Crush	value ($)	500,000	How many years is it going to last ?	
Fire, Earthquake Insurance	value ($)	200,000		
Tractors	value ($)	2,200,000	How many years is it going to last ?	
Fumigator	value ($)	500,000	How many years is it going to last ?	
Chopper	value ($)	4,000,000	How many years is it going to last ?	
Vehicles	value ($)	1,000,000	How many years is it going to last ?	
Other machinery : specify what				
	value ($)		How many years is it going to last ?	
			How many years is it going to last ?	
	value ($)		How many years is it going to last ?	
	value ($)		How many years is it going to last ?	

Feeding

Silage	cost per year	$ 2,000,000		
Alfalfa	cost per year	$ 2,500,000		soiling
Paddock Regreasing	cost per year	$ 4,000,000		
Alfalfa Hay	cost per year	$		
Concentrate	cost per year	$ 6,000,000		
Mineral Salts	cost per year	$ 200,000		

Farmer Ch D

Hay	cost per year $		
Meal Barley	cost per year $		
Cropping	cost per year $		
Pasture renovation	cost per year $		
Grazing	cost per year $		
Feed	cost per year $		
Contractor costs.	cost per year $		
Agronomist	cost per year $		
Weed and Pest Control	cost per year $	200,000	
Fertilisers what:	cost per year $		
	cost per year $	3,440,000	I put it in
Diamonic Phosphate	cost per year $		Paddocks
Salpomag	cost per year $		
Photasium (Muriato)	cost per year $		
Animal Health			
Veterinary Products + vet	cost per year $	250,000	
Herd Testing	cost per year $		
Semen	cost per year $		heifers with bull and cows too
Insemination	cost per year $	1,000,000	since November
Veterinarian	cost per year $	500,000	
Labor			
Milkers	cost per year $	4,000,000	
Inseminator	cost per year $		
Tractor driver	cost per year $	1,200,000	
Feeders	cost per year $	2,000,000	
Courses or/and Instructions	cost per year $		
Others			
Shed expenses	cost per year $	1,000,000	
Fences	cost per year $	300,000	
Maintenance Milking Equipment	cost per year $	700,000	
Maintenance Installations	cost per year $	200,000	
Irrigation System, Ditches, Drainage	cost per year $	300,000	
Freight	cost per year $		
Vehicle Expenses	cost per year $	2,000,000	

Farmer Ch D

Administration

Administration Costs	cost per year	$	2,000,000
Farm Manager Wage	cost per year	$	12,000,000
Accountant	cost per year	$	
Taxes Rates	cost per year	$	1,000,000
General Costs (incl. phone, fax, PC etc	cost per year	$	700,000
ACC	cost per year	$	160,000

Production

	January	February	March	April
Kg Milk Solids				
Litres	80,983	53,525	49,240	48,222
	May	**June**	**July**	**August**
Kg Milk Solids				
Litres	53,190	47,750	49,104	45,928
	September	**October**	**November**	**December**
Kg Milk Solids				
Litres	67,213	82,830	111,536	98,458

Base $ 104.00 $/litre

Benefit Summer/Winter

Other Benfits

Total

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	Ch E
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm

			Comments are very welcome
Climate	hot, temperate cold)	template	
Rainfall	(sufficient /insufficient summer rainfall,	insufficient	
	excessive/enough winter rainfall; even)	excessive	
Drainage and flooding conditions,	(good,moderate,bad)	moderate	
Soil	(Loam , sandy loam, clay loam, silt loam)		

Land

Hectares	No of ha	180	ha aprox animals	278 ha total
Value equivalent of renting it,	($/ha or $/acre)	40,000	ha	
Number of shares	(kilos milk solids)			
Price of shares	$/unit			
Which company		Nestle		

Animals

Breed		Red German		
Bovine Tuberculosis clear	yes/no	yes		
Bovine Brucellosis clear	yes/no	yes		
Does the herd have Pedigree	yes/no	no		
Herd size	(number of cows)	*129*	160	*Italics are of extra information*
Replacement rate	%	*41%*	45%	*provided*
Origin of replacement,	own farm/ bought	own		

Appendix D

Farmer Ch E

Market value of cows you buy	$/unit	$350,000		
Market value of cows you sell	$/unit	$160,000		
Number of calves sold	No.	70	all the males grown	
Number of calves grown	No.	140	male and female	
Price of calves to sell	$/ unit	$120,000		
Calving period	Months	march / october		60% autumn

Technology

Type of milk shed	(herring bone/ rotating/other)	herring bone		
Elimination Effluent	(ditch /irrigation system /other)	ditch		
Automatic Cup Removers	(yes/no)	no		

Capital, Infrastructure and Depreciation

Cow Shed	value ($)	10,000,000	How many years is it going to last ?	20	
Implement Shed	value ($)	60,000,000	How many years is it going to last ?	50	with fixings
Hay Shed	value ($)	60,000,000	How many years is it going to last ?	100	"
Feeding Yard	value ($)		How many years is it going to last ?		"
Milker Houses	value ($) 3 houses	10,000,000	How many years is it going to last ?	50	"
Cattle Crush	value ($)	500,000	How many years is it going to last ?	5	
Fire, Earthquake Insurance	value ($)	*87,000*	al 2 por 1000		
Tractors	value ($) 2	4,500,000	How many years is it going to last ?	10	ford + fordson
Fumigator	value ($)	1,000,000	How many years is it going to last ?	10	
Chopper	value ($)		How many years is it going to last ?		
Vehicles	value ($)	*2,500,000*	How many years is it going to last ?	10	F- 150 todo el campo
Other machinery : specify what					
Hay baler	value ($)	3,000,000	How many years is it going to last ?	10	
cutter		1,000,000	How many years is it going to last ?	5	
Rastrillo	value ($)	500,000	How many years is it going to last ?	5	
	value ($)		How many years is it going to last ?		

Feeding

Silage	cost per year $			
Alfalfa	cost per year $			
Paddock Regreasing	cost per year $			
Alfalfa Hay	cost per year $			
Concentrate	cost per year $	*3,545,000*	5,000,000	
Mineral Salts	cost per year $	*191,000*	200,000	

Farmer Ch E

Hay	cost per year	$	4,000,000		
Meal Barley	cost per year	$			
Cropping	cost per year	$			
Pasture renovation	cost per year	$			
Grazing	cost per year	$			
Feed	cost per year	$	*1,342,000*	1,000,000	subproduct of sugarbeet
Contractor costs.	cost per year	$			coseta humeda
Agronomist	cost per year	$			
Weed and Pest Control	cost per year	$			
Fertilisers what:	cost per year	$	*1,071,000*		
	cost per year	$			
Triple Super Phosphate	cost per year	$	*778,000*		
Fango de Cal	cost per year	$	*1,500,000*		
Photasium (Muriato)	cost per year	$			
Animal Health					
Veterinary Products + vet	cost per year	$	*596,000*	570,000	
Herd Testing	cost per year	$	35,000 interno		
Semen	cost per year	$	400,000 1 bull per year		
Insemination	cost per year	$			
Veterinarian	cost per year	$	*391,000*	400,000	
Labor					
Milkers	cost per year	$	*5,016,000*	5,000,000	
Inseminator	cost per year	$			
Tractor driver	cost per year	$			
Feeders	cost per year	$			
Courses or/and Instructions	cost per year	$			
Others					
Shed expenses	cost per year	$	*543,000*	550,000	
Fences	cost per year	$	200,000		
Maintenance Milking Equipment	cost per year	$			
Maintenance Installations	cost per year	$	*447,000*	400,000	
Irrigation System, Ditches, Drainage	cost per year	$			
Freight	cost per year	$			
Vehicle Expenses	cost per year	$			

Appendix D

Farmer Ch E

Administration

Administration Costs	cost per year $	*20,000,000*	
Farm Manager Wage	cost per year $	incl in Administraotion Costs	
Accountant	cost per year $	*187,000*	
Taxes Rates	cost per year $		
General Costs (incl. phone, fax, PC etc	cost per year $	*441,000*	
ACC	cost per year $		

Production

	January	February	March	April
Kg Milk Solids				
Litres	*33,982*	*21,736*	*21,145*	*28,477*
	May	**June**	**July**	**August**
Kg Milk Solids				
Litres	*36,582*	*32,929*	*33,307*	*39,270*
	September	**October**	**November**	**December**
Kg Milk Solids				
Litres	*38,298*	*47,970*	*47,449*	*40,483*

Base	$	*96.90*
Benefit Summer/Winter		
Other Benfits		
Total		

Thank You Very Much

Daniela Winkler

General Information

Private Information

Farmers Name:	:	Ch F
Farm's Name / Number	:	
Address	:	
City		
Phone	:	
Fax	:	
Email	:	

NOTE : Please fill in the Form with GST EXCLUSIVE, so it is comparable to the Chilean data

General Information about the farm

			Comments are very welcome
Climate	hot, temperate cold)	template	
Rainfall	(sufficient /insufficient summer rainfall,	insufficient in summer	X year : 1500 mm except 1998
	excessive/enough winter rainfall; even)	excessive in winter	
Drainage and flooding conditions,	(good,moderate,bad)	good	Natural because tilt (hills)
Soil	(Loam , sandy loam, clay loam, silt loam)	loam	Type Corte Alto

Land

Hectares	No of ha	160 100ha gras, 20ha maiz, 40ha silage	
Value equivalent of renting it,	($/ha or $/acre)	100,000 ha	
Number of shares	(kilos milk solids)	159,468 shares Colun	1 share equals 12 Kg of milk, to
Price of shares	$/unit	510 /share	obtain a 5% bonification in the final
Which company		Colun Ltd.	price and security in reception

Animals

Breed		Black Frison	50% Holstein 50% Eurpoean Frison
Bovine Tuberculosis clear	yes/no	yes	
Bovine Brucellosis clear	yes/no	yes	
Does the herd have Pedigree	yes/no	yes	
Herd size	(number of cows)	272	growing
Replacement rate	%	18%	
Origin of replacement,	own farm/ bought	own	

Appendix D

Farmer Ch F

Market value of cows you buy	$/unit		reference $1000 Us / pregnenat joung cow	
Market value of cows you sell	$/unit	$150,000	Considering that some die and other are sold as waste.	
Number of calves sold	No.	137		
Number of calves grown	No.	140		
Price of calves to sell	$/ unit	$90,000		
Calving period	Months	February - 18 Septemincluded		

Technology

Type of milk shed	(herring bone/ rotating/other)	individual cage	
Elimination Effluent	(ditch /irrigation system /other)	irrigation from dacanting pond	
Automatic Cup Removers	(yes/no)	yes	

Capital, Infrastructure and Depreciation

Cow Shed	value ($)	15,000,000	How many years is it going to last ?	30
Implement Shed	value ($)	26,000,000	How many years is it going to last ?	50
Hay Shed	value ($)		How many years is it going to last ?	
Feeding Yard	value ($)	20,000,000	How many years is it going to last ?	50
Milker Houses	value ($)	12,000,000	How many years is it going to last ?	50
Cattle Crush	value ($)		How many years is it going to last ?	
Fire, Earthquake Insurance	value ($)	400,000		
Tractors	value ($)	20,000,000	How many years is it going to last ?	7
Fumigator	value ($)	500,000	How many years is it going to last ?	10
Chopper	value ($)	5,000,000	How many years is it going to last ?	5
Vehicles	value ($)	12,000,000	How many years is it going to last ?	10
Other machinery : specify what				
mixing wagon	value ($)	4,000,000	How many years is it going to last ?	5
cutting		3,000,000	How many years is it going to last ?	3
wagonss	value ($)	2,000,000	How many years is it going to last ?	10
manure	value ($)	3,000,000	How many years is it going to last ?	10

Feeding

Silage premarchito	cost per year $	10,000,000	20- 25 % Dry Matter
Alfalfa	cost per year $		
Paddock Regreasing	cost per year $		
Alfalfa Hay	cost per year $		
Concentrate	cost per year $	32,500,000	
Mineral Salts	cost per year $	3,000,000	

Appendix D

Farmer Ch F

Hay	cost per year	$	3,300,000	
Maize Silage	cost per year	$	9,000,000	
Cropping	cost per year	$		
Vitamins , ADE + Se	cost per year	$	630,000	
Grazing	cost per year	$		
Feed	cost per year	$		
Contractor costs.	cost per year	$		
Agronomist	cost per year	$		
Weed and Pest Control	cost per year	$	400,000	There are no weeds
Fertilisers what:	cost per year	$		
Urea	cost per year	$	2,200,000	
Triple Super Phosphate	cost per year	$	3,800,000	
Nitrato de Amonio Neutralizado	cost per year	$	2,500,000	
Photasium (Muriato)	cost per year	$	1,600,000	
Animal Health				
Veterinary Products + vet	cost per year	$	6,000,000	
Herd Testing	cost per year	$	1,800,000	
Semen	cost per year	$	3,500,000	
Insemination	cost per year	$	1,600,000	
Veterinarian	cost per year	$	1,100,000	
Labor				
Milkers	cost per year	$	12,000,000	
Inseminator	cost per year	$		
Tractor driver	cost per year	$	900,000	
Feeders	cost per year	$	900,000	
Courses or/and Instructions	cost per year	$	500,000	
Others				
Shed expenses	cost per year	$	4,000,000	Detergents,Desinfectant,Dripping,etc
Fences	cost per year	$	100,000	
Maintenance Milking Equipment	cost per year	$	300,000	mechanic mantainance
Maintenance Installations	cost per year	$	5,000,000	
Irrigation System, Ditches, Drainage	cost per year	$		
Freight	cost per year	$		
Vehicle Expenses	cost per year	$	4,200,000	

Appendix D

Farmer Ch F

Administration

Administration Costs	cost per year $		
Farm Manager Wage	cost per year $	12,000,000	
Accountant	cost per year $	1,800,000	
Taxes Rates	cost per year $	1,000,000	
General Costs (incl. phone, fax, PC etc	cost per year $	4,500,000	
ACC	cost per year $	in the wages cost	

Production

	January	February	March	April
Kg Milk Solids				
Litres	128,730	94,395	106,200	117,055

	May	June	July	August
Kg Milk Solids				
Litres	132,444	133,070	142,014	168,253

	September	October	November	December
Kg Milk Solids				
Litres	163,027	184,361	170,640	155,758

.-included in milk PRICE

.-somatic cells < 3000.000 cells/ml

Colony Forming Units< 90.000 col/ml

.-Supplied Volume

.-Invernan Bonus

.-Reliquidation ($15/ lt given in a year

In one payment

.- Protein > 3,2%

.- Fat > 3%

.- Total Shares

Base $ 108.00 includes all the benefits - annual average

Benefit Summer/Winter $12.6/lt .+ $8.2 /lt Volume supplied in Winter

Consider Winter = May, June,July,Augst

Summer = Total supplied in October,Nov. Dec.January

Thank You Very Much

Daniela Winkler

Appendix E

Farmers data in terms of production and production factors, in each of the three currencies.

Table Revenue and Expenditure													
	NZ A	NZ A	NZ A	NZ A	NZ A	NZ A	NZ A	NZ A	NZ A	NZ A	NZ A	NZ A	NZ A
Incomes	Totals	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	C$ 276.9341	$/litre	Ch $/ha	Ch $/cow
Milk Sales	315,721	79.8%	0.23	1,961.0	1,025.1	209,333	0.151	1,300	679.7	87,433,867	63.2	543,067	283,876
Winter Milk	54,030	13.7%	0.04	335.6	175.4	35,824	0.026	223	116.3	14,962,771	10.8	92,936	48,580
Stock Sales cows	20,790	5.3%	0.02	129.1	67.5	13,784	0.010	86	44.8	5,757,460	4.2	35,761	18,693
Calves sold	4,853	1.2%	0.00	30.1	15.8	3,217	0.002	20	10.4	1,343,834	1.0	8,347	4,363
Total	**395,393**	**100.0%**	**0.29**	**2,455.9**	**1,283.7**	**262,159**	**0.190**	**1,628**	**851.2**	**109,497,932**	**79.2**	**680,111**	**355,513**
Farm Cash Expenses													
Replacement	85,850	-15.5%	0.06	533.2	278.7	56,921	0.041	354	184.8	23,774,792	17.2	147,670	77,191
Pasture and Supplements	12,739	-2.3%	0.01	79.1	41.4	8,447	0.006	52	27.4	3,527,986	2.6	21,913	11,455
Fertiliser (incl nitrogen)	25,219	-4.6%	0.02	156.6	81.9	16,721	0.012	104	54.3	6,984,001	5.1	43,379	22,675
Animal Health	25,285	-4.6%	0.02	157.0	82.1	16,765	0.012	104	54.4	7,002,279	5.1	43,492	22,735
Wages	37,391	-6.8%	0.03	232.2	121.4	24,791	0.018	154	80.5	10,354,843	7.5	64,316	33,620
Total	**186,484**	**-33.7%**	**0.13**	**1,158.3**	**605.5**	**123,645**	**0.089**	**768**	**401.4**	**51,643,901**	**37.4**	**320,770**	**167,675**
Overheads													
Shed Expenses	4,415	-0.8%	0.00	27.4	14.3	2,927	0.002	18	9.5	1,222,664	0.9	7,594	3,970
Fences	2,163	-0.4%	0.00	13.4	7.0	1,434	0.001	9	4.7	599,008	0.4	3,721	1,945
Repairs and Maintenance	7,753	-1.4%	0.01	48.2	25.2	5,140	0.004	32	16.7	2,147,070	1.6	13,336	6,971
Ditches	3,270	-0.6%	0.00	20.3	10.6	2,168	0.002	13	7.0	905,575	0.7	5,625	2,940
Vehicle Expenses	10,739	-1.9%	0.01	66.7	34.9	7,120	0.005	44	23.1	2,973,995	2.2	18,472	9,656
Total	**28,340**	**-5.1%**	**0.02**	**176.0**	**92.0**	**18,790**	**0.014**	**117**	**61.0**	**7,848,312**	**5.7**	**48,747**	**25,482**
Depreciation	32,989	-6.0%	0.02	204.9	107.1	21,873	0.016	136	71.0	9,135,813	6.6	56,744	29,662
Interests	229,148	-41.5%	0.17	1,423.3	744.0	151,932	0.110	944	493.3	63,458,762	45.9	394,154	206,035
Total	**262,137**	**-47.4%**	**0.19**	**1,628.2**	**851.1**	**173,805**	**0.126**	**1,080**	**564.3**	**72,594,575**	**52.5**	**450,898**	**235,697**
Fire & Earthq. Insurance	1,900	-0.3%	0.00	11.8	6.2	1,260	0.001	8	4.1	526,175	0.4	3,268	1,708
Administration	3,531	-0.6%	0.00	21.9	11.5	2,341	0.002	15	7.6	977,854	0.7	6,074	3,175
Farm Manager Wage	50,000	-9.0%	0.04	310.6	162.3	33,152	0.024	206	107.6	13,846,705	10.0	86,004	44,957
Accountant	3,000	-0.5%	0.00	18.6	9.7	1,989	0.001	12	6.5	830,802	0.6	5,160	2,697
Taxes/ Rates	4,736	-0.9%	0.00	29.4	15.4	3,140	0.002	20	10.2	1,311,560	0.9	8,146	4,258
General Costs	9,328	-1.7%	0.01	57.9	30.3	6,185	0.004	38	20.1	2,583,241	1.9	16,045	8,387
ACC	3,371	-0.6%	0.00	20.9	10.9	2,235	0.002	14	7.3	933,545	0.7	5,798	3,031
Total	**75,866**	**-13.7%**	**0.05**	**471.2**	**246.3**	**50,302**	**0.036**	**312**	**163.3**	**21,009,882**	**15.2**	**130,496**	**68,214**
Total Costs	**(552,827)**	**100.0%**	**(0.40)**	**(3,433.7)**	**(1,794.9)**	**(366,543)**	**(0.265)**	**(2,277)**	**(1,190.1)**	**(153,096,672)**	**(110.7)**	**(950,911)**	**(497,067)**
Total Income	**395,393**		**0.29**	**2,455.9**	**1,283.7**	**262,159**	**0.190**	**1,628**	**851.2**	**109,497,932**	**79.2**	**680,111**	**355,513**
Gross Profit	**(157,434)**		**(0.11)**	**(977.8)**	**(511.1)**	**(104,384)**	**(0.076)**	**(648)**	**(338.9)**	**(43,598,740)**	**(31.5)**	**(270,800)**	**(141,554)**
GP - Interests	**71,714**		**0.05**	**445.4**	**232.8**	**47,549**	**0.034**	**295**	**154.4**	**19,860,022**	**14.4**	**123,354**	**64,481**
Taxes													
Profits													
Profitability	**2.50%**												

Table Revenue and Expenditure													
	NZ B	NZ B	NZ B	NZ B	NZ B	NZ B	NZ B	NZ B	NZ B	NZ B	NZ B	NZ B	NZ B
Incomes	Totals	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	C$ 276.9341	$/litre	Ch $/ha	Ch $/cow
Milk Sales	548,316	74.2%	0.23	1,986.7	1,085.8	363,552	0.152	1,317	719.9	151,847,398	63.3	550,172	300,688
Winter Milk	128,461	17.4%	0.05	465.4	254.4	85,174	0.036	309	168.7	35,575,231	14.8	128,896	70,446
Stock Sales cows	46,612	6.3%	0.02	168.9	92.3	30,905	0.013	112	61.2	12,908,452	5.4	46,770	25,561
Calves sold	15,390	2.1%	0.01	55.8	30.5	10,204	0.004	37	20.2	4,262,016	1.8	15,442	8,440
Total	*738,779*	100.0%	*0.31*	*2,676.7*	*1,462.9*	489,835	0.204	1,775	970.0	204,593,097	85.3	741,279	405,135
Farm Cash Expenses													
Replacement	132,000	-14.2%	0.06	478.3	261.4	87,520	0.037	317	173.3	36,555,301	15.2	132,447	72,387
Pasture and Supplements	38,945	-4.2%	0.02	141.1	77.1	25,822	0.011	94	51.1	10,785,199	4.5	39,077	21,357
Fertiliser (incl nitrogen)	43,671	-4.7%	0.02	158.2	86.5	28,955	0.012	105	57.3	12,093,989	5.0	43,819	23,948
Animal Health	46,260	-5.0%	0.02	167.6	91.6	30,672	0.013	111	60.7	12,810,971	5.3	46,417	25,368
Wages	72,909	-7.9%	0.03	264.2	144.4	48,341	0.020	175	95.7	20,190,988	8.4	73,156	39,982
Total	*333,785*	-36.0%	*0.14*	*1,209.4*	*661.0*	221,310	0.092	802	438.2	92,436,449	38.6	334,915	183,042
Overheads													
Shed Expenses	16,759	-1.8%	0.01	60.7	33.2	11,112	0.005	40	22.0	4,641,139	1.9	16,816	9,190
Fences	3,928	-0.4%	0.00	14.2	7.8	2,604	0.001	9	5.2	1,087,797	0.5	3,941	2,154
Repairs and Maintenance	16,330	-1.8%	0.01	59.2	32.3	10,827	0.005	39	21.4	4,522,334	1.9	16,385	8,955
Ditches	706	-0.1%	0.00	2.6	1.4	468	0.000	2	0.9	195,515	0.1	708	387
Vehicle Expenses	31,675	-3.4%	0.01	114.8	62.7	21,002	0.009	76	41.6	8,771,888	3.7	31,782	17,370
Total	*69,398*	-7.5%	*0.03*	*251.4*	*137.4*	46,013	0.019	167	91.1	19,218,673	8.0	69,633	38,057
Depreciation	61,050	-6.6%	0.03	221.2	120.9	40,478	0.017	147	80.2	16,906,827	7.1	61,257	33,479
Interests	366,037	-39.4%	0.15	1,326.2	724.8	242,695	0.101	879	480.6	101,368,127	42.3	367,276	200,729
Total	*427,087*	-46.0%	*0.18*	*1,547.4*	*845.7*	283,173	0.118	1,026	560.7	118,274,954	49.3	428,532	234,208
Fire & Earthq. Insurance	2,387	-0.3%	0.00	8.6	4.7	1,583	0.001	6	3.1	661,042	0.3	2,395	1,309
Administration	4,986	-0.5%	0.00	18.1	9.9	3,306	0.001	12	6.5	1,380,793	0.6	5,003	2,734
Farm Manager Wage	45,500	-4.9%	0.02	164.9	90.1	30,168	0.013	109	59.7	12,600,502	5.3	45,654	24,951
Accountant	4,665	-0.5%	0.00	16.9	9.2	3,093	0.001	11	6.1	1,291,898	0.5	4,681	2,558
Taxes/ Rates	29,424	-3.2%	0.01	106.6	58.3	19,509	0.008	71	38.6	8,148,509	3.4	29,524	16,136
General Costs	6,122	-0.7%	0.00	22.2	12.1	4,059	0.002	15	8.0	1,695,391	0.7	6,143	3,357
ACC	4,721	-0.5%	0.00	17.1	9.3	3,130	0.001	11	6.2	1,307,406	0.5	4,737	2,589
Total	*97,805*	-10.5%	*0.04*	*354.4*	*193.7*	64,848	0.027	235	128.4	27,085,540	11.3	98,136	53,635
Total Costs	(928,075)	100.0%	(0.39)	(3,362.6)	(1,837.8)	(615,344)	(0.257)	(2,230)	(1,218.5)	(257,015,615)	(107.2)	(931,216)	(508,942)
Total Income	738,779		0.31	2,676.7	1,462.9	489,835	0.204	1,775	970.0	204,593,097	85.3	741,279	405,135
Gross Profit	(189,296)		(0.08)	(685.9)	(374.8)	(125,509)	(0.052)	(455)	(248.5)	(52,422,517)	(21.9)	(189,937)	(103,807)
GP - Interest	176,741		0.07	640.4	350.0	117,185	0.049	425	232.0	48,945,610	20.4	177,339	96,922
Taxes 33%													
Profits													
Profitability	3.86%												

Table Revenue and Expenditure													
	NZ C	NZ C	NZ C	NZ C	NZ C	NZ C	NZ C	NZ C	NZ C	NZ C	NZ C	NZ C	NZ C
Incomes	Totals	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	C$ 276.9341	$/litre	Ch $/ha	Ch $/cow
Milk Sales	240,898	74.0%	0.34	2,409.0	1,095.0	159,723	0.224	1,597	726.0	66,712,871	93.7	667,129	303,240
Winter Milk	48,254	14.8%	0.07	482.5	219.3	31,994	0.045	320	145.4	13,363,178	18.8	133,632	60,742
Stock Sales cows	16,720	5.1%	0.02	167.2	76.0	11,086	0.016	111	50.4	4,630,338	6.5	46,303	21,047
Calves sold	19,500	6.0%	0.03	195.0	88.6	12,929	0.018	129	58.8	5,400,215	7.6	54,002	24,546
Total	**325,372**	**100.0%**	**0.46**	**3,253.7**	**1,479.0**	**215,732**	**0.303**	**2,157**	**980.6**	**90,106,602**	**126.6**	**901,066**	**409,575**
Farm Cash Expenses													
Replacement	36,000	-8.2%	0.05	360.0	163.6	23,869	0.034	239	108.5	9,969,628	14.0	99,696	45,316
Pasture and Supplements	48,370	-11.0%	0.07	483.7	219.9	32,071	0.045	321	145.8	13,395,302	18.8	133,953	60,888
Fertiliser (incl nitrogen)	12,000	-2.7%	0.02	120.0	54.5	7,956	0.011	80	36.2	3,323,209	4.7	33,232	15,105
Animal Health	7,700	-1.8%	0.01	77.0	35.0	5,105	0.007	51	23.2	2,132,393	3.0	21,324	9,693
Wages	52,700	-12.0%	0.07	527.0	239.5	34,942	0.049	349	158.8	14,594,427	20.5	145,944	66,338
Total	**156,770**	**-35.8%**	**0.22**	**1,567.7**	**712.6**	**103,944**	**0.146**	**1,039**	**472.5**	**43,414,959**	**61.0**	**434,150**	**197,341**
Overheads													
Shed Expenses	10,000	-2.3%	0.01	100.0	45.5	6,630	0.009	66	30.1	2,769,341	3.9	27,693	12,588
Fences	3,500	-0.8%	0.00	35.0	15.9	2,321	0.003	23	10.5	969,269	1.4	9,693	4,406
Repairs and Maintenance	1,200	-0.3%	0.00	12.0	5.5	796	0.001	8	3.6	332,321	0.5	3,323	1,511
Ditches	2,500	-0.6%	0.00	25.0	11.4	1,658	0.002	17	7.5	692,335	1.0	6,923	3,147
Vehicle Expenses	6,300	-1.4%	0.01	63.0	28.6	4,177	0.006	42	19.0	1,744,685	2.5	17,447	7,930
Total	**23,500**	**-5.4%**	**0.03**	**235.0**	**106.8**	**15,581**	**0.022**	**156**	**70.8**	**6,507,951**	**9.1**	**65,080**	**29,582**
Depreciation	23,070	-5.3%	0.03	230.7	104.9	15,296	0.021	153	69.5	6,388,870	9.0	63,889	29,040
Interests	177,594	-40.6%	0.25	1,775.9	807.2	117,751	0.165	1,178	535.2	49,181,835	69.1	491,818	223,554
Total	**200,664**	**-45.8%**	**0.28**	**2,006.6**	**912.1**	**133,047**	**0.187**	**1,330**	**604.8**	**55,570,704**	**78.1**	**555,707**	**252,594**
Fire & Earthq. Insurance	3,050	-0.7%	0.00	30.5	13.9	2,022	0.003	20	9.2	844,649	1.2	8,446	3,839
Administration	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Farm Manager Wage	40,000	-9.1%	0.06	400.0	181.8	26,521	0.037	265	120.6	11,077,364	15.6	110,774	50,352
Accountant	2,500	-0.6%	0.00	25.0	11.4	1,658	0.002	17	7.5	692,335	1.0	6,923	3,147
Taxes/ Rates	6,500	-1.5%	0.01	65.0	29.5	4,310	0.006	43	19.6	1,800,072	2.5	18,001	8,182
General Costs	3,000	-0.7%	0.00	30.0	13.6	1,989	0.003	20	9.0	830,802	1.2	8,308	3,776
ACC	1,800	-0.4%	0.00	18.0	8.2	1,193	0.002	12	5.4	498,481	0.7	4,985	2,266
Total	**56,850**	**-13.0%**	**0.08**	**568.5**	**258.4**	**37,693**	**0.053**	**377**	**171.3**	**15,743,704**	**22.1**	**157,437**	**71,562**
Total Costs	**(437,784)**	**100.0%**	**(0.62)**	**(4,377.8)**	**(1,989.9)**	**(290,265)**	**(0.408)**	**(2,903)**	**(1,319.4)**	**(121,237,318)**	**(170.3)**	**(1,212,373)**	**(551,079)**
Total Income	**325,372**		**0.46**	**3,253.7**	**1,479.0**	**215,732**	**0.303**	**2,157**	**980.6**	**90,106,602**	**126.6**	**901,066**	**409,575**
Gross Profit	**(112,412)**		**(0.16)**	**(1,124.1)**	**(511.0)**	**(74,533)**	**(0.105)**	**(745)**	**(338.8)**	**(31,130,716)**	**(43.7)**	**(311,307)**	**(141,503)**
GP - Interests	**65,182**		**0.09**	**651.8**	**296.3**	**43,218**	**0.061**	**432**	**196.4**	**18,051,119**	**25.4**	**180,511**	**82,051**
Taxes													
Profits													
Profitability	**2.94%**												

Table Revenue and Expenditure													
	NZ D	NZ D	NZ D	NZ D	NZ D	NZ D	NZ D	NZ D	NZ D	NZ D	NZ D	NZ D	NZ D
Incomes	Totals	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	C$ 276.9341	$/litre	Ch $/ha	Ch $/cow
Milk Sales	115,532	69.9%	0.22	2,750.8	924.3	76,602	0.145	1,824	612.8	31,994,750	60.5	761,780	255,958
Winter Milk	35,547	21.5%	0.07	846.4	284.4	23,569	0.045	561	188.6	9,844,176	18.6	234,385	78,753
Stock Sales cows	7,500	4.5%	0.01	178.6	60.0	4,973	0.009	118	39.8	2,077,006	3.9	49,453	16,616
Calves sold	6,750	4.1%	0.01	160.7	54.0	4,475	0.008	107	35.8	1,869,305	3.5	44,507	14,954
Total	**165,329**	**100.0%**	**0.31**	**3,936.4**	**1,322.6**	**109,619**	**0.207**	**2,610**	**876.9**	**45,785,238**	**86.5**	**1,090,125**	**366,282**
Farm Cash Expenses													
Replacement	17,600	-5.1%	0.03	419.0	140.8	11,669	0.022	278	93.4	4,874,040	9.2	116,049	38,992
Pasture and Supplements	30,500	-8.9%	0.06	726.2	244.0	20,223	0.038	481	161.8	8,446,490	16.0	201,107	67,572
Fertiliser (incl nitrogen)	14,000	-4.1%	0.03	333.3	112.0	9,282	0.018	221	74.3	3,877,077	7.3	92,311	31,017
Animal Health	16,500	-4.8%	0.03	392.9	132.0	10,940	0.021	260	87.5	4,569,413	8.6	108,796	36,555
Wages	30,216	-8.8%	0.06	719.4	241.7	20,034	0.038	477	160.3	8,367,841	15.8	199,234	66,943
Total	**108,816**	**-31.8%**	**0.21**	**2,590.9**	**870.5**	**72,149**	**0.136**	**1,718**	**577.2**	**30,134,861**	**57.0**	**717,497**	**241,079**
Overheads													
Shed Expenses	5,000	-1.5%	0.01	119.0	40.0	3,315	0.006	79	26.5	1,384,671	2.6	32,968	11,077
Fences	2,000	-0.6%	0.00	47.6	16.0	1,326	0.003	32	10.6	553,868	1.0	13,187	4,431
Repairs and Maintenance	4,500	-1.3%	0.01	107.1	36.0	2,984	0.006	71	23.9	1,246,203	2.4	29,672	9,970
Ditches	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Vehicle Expenses	20,000	-5.8%	0.04	476.2	160.0	13,261	0.025	316	106.1	5,538,682	10.5	131,873	44,309
Total	**31,500**	**-9.2%**	**0.06**	**750.0**	**252.0**	**20,886**	**0.039**	**497**	**167.1**	**8,723,424**	**16.5**	**207,701**	**69,787**
Depreciation	42,061	-12.3%	0.08	1,001.5	336.5	27,888	0.053	664	223.1	11,648,125	22.0	277,336	93,185
Interests	94,670	-27.7%	0.18	2,254.0	757.4	62,769	0.119	1,495	502.2	26,217,351	49.6	624,223	209,739
Total	**136,731**	**-40.0%**	**0.26**	**3,255.5**	**1,093.8**	**90,657**	**0.171**	**2,159**	**725.3**	**37,865,476**	**71.6**	**901,559**	**302,924**
Fire & Earthq. Insurance	5,406	-1.6%	0.01	128.7	43.2	3,584	0.007	85	28.7	1,497,106	2.8	35,645	11,977
Administration	3,500	-1.0%	0.01	83.3	28.0	2,321	0.004	55	18.6	969,269	1.8	23,078	7,754
Farm Manager Wage	30,216	-8.8%	0.06	719.4	241.7	20,034	0.038	477	160.3	8,367,841	15.8	199,234	66,943
Accountant	15,000	-4.4%	0.03	357.1	120.0	9,945	0.019	237	79.6	4,154,012	7.9	98,905	33,232
Taxes/ Rates	10,000	-2.9%	0.02	238.1	80.0	6,630	0.013	158	53.0	2,769,341	5.2	65,937	22,155
General Costs	500	-0.1%	0.00	11.9	4.0	332	0.001	8	2.7	138,467	0.3	3,297	1,108
ACC	450	-0.1%	0.00	10.7	3.6	298	0.001	7	2.4	124,620	0.2	2,967	997
Total	**65,072**	**-19.0%**	**0.12**	**1,549.3**	**520.6**	**43,145**	**0.082**	**1,027**	**345.2**	**18,020,656**	**34.1**	**429,063**	**144,165**
Total Costs	**(342,119)**	**100.0%**	**(0.65)**	**(8,145.7)**	**(2,737.0)**	**(226,836)**	**(0.429)**	**(5,401)**	**(1,814.7)**	**(94,744,417)**	**(179.1)**	**(2,255,819)**	**(757,955)**
Total Income	**165,329**		**0.31**	**3,936.4**	**1,322.6**	**109,619**	**0.207**	**2,610**	**876.9**	**45,785,238**	**86.5**	**1,090,125**	**366,282**
Gross profit	**(176,790)**		**(0.33)**	**(4,209.3)**	**(1,414.3)**	**(117,218)**	**(0.222)**	**(2,791)**	**(937.7)**	**(48,959,180)**	**(92.5)**	**(1,165,695)**	**(391,673)**
GP - Interests	**(82,120)**		**(0.16)**	**(1,955.2)**	**(657.0)**	**(54,448)**	**(0.103)**	**(1,296)**	**(435.6)**	**(22,741,828)**	**(43.0)**	**(541,472)**	**(181,935)**
Taxes													
Profits													
Profitability	**-6.94%**												

Table Revenue and Expenditure													
	NZ E	NZ E	NZ E	NZ E	NZ E	NZ E	NZ E	NZ E	NZ E	NZ E	NZ E	NZ E	NZ E
Incomes	Totals	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	C$ 276.9341	$/litre	Ch $/ha	Ch $/cow
Milk Sales	166,995	70.7%	0.21	1,964.6	835.0	110,723	0.139	1,303	553.6	46,246,610	58.3	544,078	231,233
Winter Milk	48,971	20.7%	0.06	576.1	244.9	32,469	0.041	382	162.3	13,561,740	17.1	159,550	67,809
Stock Sales cows	14,800	6.3%	0.02	174.1	74.0	9,813	0.012	115	49.1	4,098,625	5.2	48,219	20,493
Calves sold	5,280	2.2%	0.01	62.1	26.4	3,501	0.004	41	17.5	1,462,212	1.8	17,202	7,311
Total	**236,046**	**100.0%**	**0.30**	**2,777.0**	**1,180.2**	**156,506**	**0.197**	**1,841**	**782.5**	**65,369,187**	**82.3**	**769,049**	**326,846**
Farm Cash Expenses													
Replacement	32,000	-8.0%	0.04	376.5	160.0	21,217	0.027	250	106.1	8,861,891	11.2	104,258	44,309
Pasture and Supplements	66,875	-16.8%	0.08	786.8	334.4	44,340	0.056	522	221.7	18,519,968	23.3	217,882	92,600
Fertiliser (incl nitrogen)	18,490	-4.6%	0.02	217.5	92.5	12,259	0.015	144	61.3	5,120,512	6.4	60,241	25,603
Animal Health	25,267	-6.3%	0.03	297.3	126.3	16,753	0.021	197	83.8	6,997,294	8.8	82,321	34,986
Wages	27,689	-7.0%	0.03	325.8	138.4	18,359	0.023	216	91.8	7,668,028	9.7	90,212	38,340
Total	**170,321**	**-42.8%**	**0.21**	**2,003.8**	**851.6**	**112,928**	**0.142**	**1,329**	**564.6**	**47,167,693**	**59.4**	**554,914**	**235,838**
Overheads													
Shed Expenses	3,292	-0.8%	0.00	38.7	16.5	2,183	0.003	26	10.9	911,667	1.1	10,725	4,558
Fences	2,188	-0.5%	0.00	25.7	10.9	1,451	0.002	17	7.3	605,932	0.8	7,129	3,030
Repairs and Maintenance	8,141	-2.0%	0.01	95.8	40.7	5,398	0.007	64	27.0	2,254,521	2.8	26,524	11,273
Ditches	3,080	-0.8%	0.00	36.2	15.4	2,042	0.003	24	10.2	852,957	1.1	10,035	4,265
Vehicle Expenses	9,984	-2.5%	0.01	117.5	49.9	6,620	0.008	78	33.1	2,764,910	3.5	32,528	13,825
Total	**26,685**	**-6.7%**	**0.03**	**313.9**	**133.4**	**17,693**	**0.022**	**208**	**88.5**	**7,389,986**	**9.3**	**86,941**	**36,950**
Depreciation	22,490	-5.6%	0.03	264.6	112.5	14,912	0.019	175	74.6	6,228,248	7.8	73,274	31,141
Interests	114,616	-28.8%	0.14	1,348.4	573.1	75,994	0.096	894	380.0	31,741,079	40.0	373,424	158,705
Total	**137,106**	**-34.4%**	**0.17**	**1,613.0**	**685.5**	**90,906**	**0.115**	**1,069**	**454.5**	**37,969,327**	**47.8**	**446,698**	**189,847**
Fire & Earthq. Insurance	3,635	-0.9%	0.00	42.8	18.2	2,410	0.003	28	12.1	1,006,655	1.3	11,843	5,033
Administration	3,000	-0.8%	0.00	35.3	15.0	1,989	0.003	23	9.9	830,802	1.0	9,774	4,154
Farm Manager Wage	35,000	-8.8%	0.04	411.8	175.0	23,206	0.029	273	116.0	9,692,694	12.2	114,032	48,463
Accountant	1,974	-0.5%	0.00	23.2	9.9	1,309	0.002	15	6.5	546,668	0.7	6,431	2,733
Taxes/ Rates	4,632	-1.2%	0.01	54.5	23.2	3,071	0.004	36	15.4	1,282,759	1.6	15,091	6,414
General Costs	13,170	-3.3%	0.02	154.9	65.9	8,732	0.011	103	43.7	3,647,222	4.6	42,908	18,236
ACC	2,566	-0.6%	0.00	30.2	12.8	1,701	0.002	20	8.5	710,613	0.9	8,360	3,553
Total	**63,977**	**-16.1%**	**0.08**	**752.7**	**319.9**	**42,419**	**0.053**	**499**	**212.1**	**17,717,413**	**22.3**	**208,440**	**88,587**
Total Costs	**(398,089)**	**100.0%**	**(0.50)**	**(4,683.4)**	**(1,990.4)**	**(263,946)**	**(0.332)**	**(3,105)**	**(1,319.7)**	**(110,244,419)**	**(138.9)**	**(1,296,993)**	**(551,222)**
Total Income	**236,046**		**0.30**	**2,777.0**	**1,180.2**	**156,506**	**0.197**	**1,841**	**782.5**	**65,369,187**	**82.3**	**769,049**	**326,846**
Gross Profit	**(162,043)**		**(0.20)**	**(1,906.4)**	**(810.2)**	**(107,440)**	**(0.135)**	**(1,264)**	**(537.2)**	**(44,875,232)**	**(56.5)**	**(527,944)**	**(224,376)**
GP - Interests	**(47,427)**		**(0.06)**	**(558.0)**	**(237.1)**	**(31,446)**	**(0.040)**	**(370)**	**(157.2)**	**(13,134,154)**	**(16.5)**	**(154,519)**	**(65,671)**
Taxes													
Profits													
Profitability	**-3.31%**												

Appendix E | Farm NZ F | O.E.R.,All Currencies

Table Revenue and Expenditure													
	NZ F	NZ F	NZ F	NZ F	NZ F	NZ F	NZ F	NZ F	NZ F	NZ F	NZ F	NZ F	NZ F
Incomes	Totals	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	C$ 276.9341	$/litre	Ch $/ha	Ch $/cow
Milk Sales	224,262	60.8%	0.21	1,868.9	975.1	148,693	0.137	1,239	646.5	62,105,795	57.2	517,548	270,025
Winter Milk	122,149	33.1%	0.11	1,017.9	531.1	80,989	0.075	675	352.1	33,827,223	31.2	281,894	147,075
Stock Sales cows	16,100	4.4%	0.01	134.2	70.0	10,675	0.010	89	46.4	4,458,639	4.1	37,155	19,385
Calves sold	6,400	1.7%	0.01	53.3	27.8	4,243	0.004	35	18.4	1,772,378	1.6	14,770	7,706
Total	**368,911**	**100.0%**	**0.34**	**3,074.3**	**1,604.0**	**244,600**	**0.225**	**2,038**	**1,063.5**	**102,164,036**	**94.1**	**851,367**	**444,191**
Farm Cash Expenses													
Replacement	176,000	-29.8%	0.16	1,466.7	765.2	116,694	0.108	972	507.4	48,740,402	44.9	406,170	211,915
Pasture and Supplements	36,500	-6.2%	0.03	304.2	158.7	24,201	0.022	202	105.2	10,108,095	9.3	84,234	43,948
Fertiliser (incl nitrogen)	35,000	-5.9%	0.03	291.7	152.2	23,206	0.021	193	100.9	9,692,694	8.9	80,772	42,142
Animal Health	14,300	-2.4%	0.01	119.2	62.2	9,481	0.009	79	41.2	3,960,158	3.6	33,001	17,218
Wages	18,000	-3.0%	0.02	150.0	78.3	11,935	0.011	99	51.9	4,984,814	4.6	41,540	21,673
Total	**279,800**	**-47.4%**	**0.26**	**2,331.7**	**1,216.5**	**185,517**	**0.171**	**1,546**	**806.6**	**77,486,161**	**71.4**	**645,718**	**336,896**
Overheads													
Shed Expenses	1,850	-0.3%	0.00	15.4	8.0	1,227	0.001	10	5.3	512,328	0.5	4,269	2,228
Fences	700	-0.1%	0.00	5.8	3.0	464	0.000	4	2.0	193,854	0.2	1,615	843
Repairs and Maintenance	1,100	-0.2%	0.00	9.2	4.8	729	0.001	6	3.2	304,628	0.3	2,539	1,324
Ditches	500	-0.1%	0.00	4.2	2.2	332	0.000	3	1.4	138,467	0.1	1,154	602
Vehicle Expenses	3,570	-0.6%	0.00	29.8	15.5	2,367	0.002	20	10.3	988,655	0.9	8,239	4,298
Total	**7,720**	**-1.3%**	**0.01**	**64.3**	**33.6**	**5,119**	**0.005**	**43**	**22.3**	**2,137,931**	**2.0**	**17,816**	**9,295**
Depreciation	13,033	-2.2%	0.01	108.6	56.7	8,641	0.008	72	37.6	3,609,282	3.3	30,077	15,693
Interests	274,480	-46.5%	0.25	2,287.3	1,193.4	181,989	0.168	1,517	791.3	76,012,872	70.0	633,441	330,491
Total	**287,513**	**-48.7%**	**0.26**	**2,395.9**	**1,250.1**	**190,631**	**0.176**	**1,589**	**828.8**	**79,622,154**	**73.4**	**663,518**	**346,183**
Fire & Earthq. Insurance	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Administration	600	-0.1%	0.00	5.0	2.6	398	0.000	3	1.7	166,160	0.2	1,385	722
Farm Manager Wage	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Accountant	1,100	-0.2%	0.00	9.2	4.8	729	0.001	6	3.2	304,628	0.3	2,539	1,324
Taxes/ Rates	5,000	-0.8%	0.00	41.7	21.7	3,315	0.003	28	14.4	1,384,671	1.3	11,539	6,020
General Costs	4,700	-0.8%	0.00	39.2	20.4	3,116	0.003	26	13.5	1,301,590	1.2	10,847	5,659
ACC	4,000	-0.7%	0.00	33.3	17.4	2,652	0.002	22	11.5	1,107,736	1.0	9,231	4,816
Total	**15,400**	**-2.6%**	**0.01**	**128.3**	**67.0**	**10,211**	**0.009**	**85**	**44.4**	**4,264,785**	**3.9**	**35,540**	**18,543**
Total Costs	**(590,433)**	**100.0%**	**(0.54)**	**(4,920.3)**	**(2,567.1)**	**(391,477)**	**(0.361)**	**(3,262)**	**(1,702.1)**	**(163,511,031)**	**(150.7)**	**(1,362,592)**	**(710,918)**
Total Income	**368,911**		**0.34**	**3,074.3**	**1,604.0**	**244,600**	**0.225**	**2,038**	**1,063.5**	**102,164,036**	**94.1**	**851,367**	**444,191**
Gross Profit	**(221,522)**		**(0.20)**	**(1,846.0)**	**(963.1)**	**(146,876)**	**(0.135)**	**(1,224)**	**(638.6)**	**(61,346,996)**	**(56.5)**	**(511,225)**	**(266,726)**
GP - Interests	**52,958**		**0.05**	**441.3**	**230.3**	**35,113**	**0.032**	**293**	**152.7**	**14,665,876**	**13.5**	**122,216**	**63,765**
Taxes													
Profits													
Profitability	**1.54%**												

Table Revenue and Expenditure													
	NZ G	NZ G	NZ G	NZ G	NZ G	NZ G	NZ G	NZ G	NZ G	NZ G	NZ G	NZ G	NZ G
Incomes	Totals	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	C$ 276.9341	$/litre	Ch $/ha	Ch $/cow
Milk Sales	286,212	72.8%	0.22	1,713.8	1,100.8	189,768	0.147	1,136	729.9	79,261,863	61.3	474,622	304,853
Winter Milk	66,178	16.8%	0.05	396.3	254.5	43,878	0.034	263	168.8	18,326,945	14.2	109,742	70,488
Stock Sales cows	27,625	7.0%	0.02	165.4	106.3	18,316	0.014	110	70.4	7,650,305	5.9	45,810	29,424
Calves sold	13,125	3.3%	0.01	78.6	50.5	8,702	0.007	52	33.5	3,634,760	2.8	21,765	13,980
Total	**393,140**	**100.0%**	**0.30**	**2,354.1**	**1,512.1**	**260,665**	**0.202**	**1,561**	**1,002.6**	**108,873,872**	**84.2**	**651,939**	**418,746**
Farm Cash Expenses													
Replacement	60,000	-10.8%	0.05	359.3	230.8	39,782	0.031	238	153.0	16,616,046	12.9	99,497	63,908
Pasture and Supplements	26,100	-4.7%	0.02	156.3	100.4	17,305	0.013	104	66.6	7,227,980	5.6	43,281	27,800
Fertiliser (incl nitrogen)	40,600	-7.3%	0.03	243.1	156.2	26,919	0.021	161	103.5	11,243,524	8.7	67,326	43,244
Animal Health	27,526	-5.0%	0.02	164.8	105.9	18,251	0.014	109	70.2	7,622,888	5.9	45,646	29,319
Wages	25,000	-4.5%	0.02	149.7	96.2	16,576	0.013	99	63.8	6,923,353	5.4	41,457	26,628
Total	**179,226**	**-32.3%**	**0.14**	**1,073.2**	**689.3**	**118,833**	**0.092**	**712**	**457.0**	**49,633,791**	**38.4**	**297,208**	**190,899**
Overheads													
Shed Expenses	2,500	-0.5%	0.00	15.0	9.6	1,658	0.001	10	6.4	692,335	0.5	4,146	2,663
Fences	1,600	-0.3%	0.00	9.6	6.2	1,061	0.001	6	4.1	443,095	0.3	2,653	1,704
Repairs and Maintenance	20,300	-3.7%	0.02	121.6	78.1	13,460	0.010	81	51.8	5,621,762	4.4	33,663	21,622
Ditches	4,000	-0.7%	0.00	24.0	15.4	2,652	0.002	16	10.2	1,107,736	0.9	6,633	4,261
Vehicle Expenses	17,000	-3.1%	0.01	101.8	65.4	11,272	0.009	67	43.4	4,707,880	3.6	28,191	18,107
Total	**45,400**	**-8.2%**	**0.04**	**271.9**	**174.6**	**30,102**	**0.023**	**180**	**115.8**	**12,572,808**	**9.7**	**75,286**	**48,357**
Depreciation	45,500	-8.2%	0.04	272.5	175.0	30,168	0.023	181	116.0	12,600,502	9.8	75,452	48,463
Interests	255,040	-46.0%	0.20	1,527.2	980.9	169,100	0.131	1,013	650.4	70,629,273	54.7	422,930	271,651
Total	**300,540**	**-54.2%**	**0.23**	**1,799.6**	**1,155.9**	**199,268**	**0.154**	**1,193**	**766.4**	**83,229,774**	**64.4**	**498,382**	**320,115**
Fire & Earthq. Insurance	6,000	-1.1%	0.00	35.9	23.1	3,978	0.003	24	15.3	1,661,605	1.3	9,950	6,391
Administration	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Farm Manager Wage	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Accountant	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Taxes/ Rates	6,000	-1.1%	0.00	35.9	23.1	3,978	0.003	24	15.3	1,661,605	1.3	9,950	6,391
General Costs	14,000	-2.5%	0.01	83.8	53.8	9,282	0.007	56	35.7	3,877,077	3.0	23,216	14,912
ACC	3,000	-0.5%	0.00	18.0	11.5	1,989	0.002	12	7.7	830,802	0.6	4,975	3,195
Total	**29,000**	**-5.2%**	**0.02**	**173.7**	**111.5**	**19,228**	**0.015**	**115**	**74.0**	**8,031,089**	**6.2**	**48,090**	**30,889**
Total Costs	**(554,166)**	**100.0%**	**(0.43)**	**(3,318.4)**	**(2,131.4)**	**(367,430)**	**(0.284)**	**(2,200)**	**(1,413.2)**	**(153,467,462)**	**(118.8)**	**(918,967)**	**(590,259)**
Total Income	**393,140**		**0.30**	**2,354.1**	**1,512.1**	**260,665**	**0.202**	**1,561**	**1,002.6**	**108,873,872**	**84.2**	**651,939**	**418,746**
Gross Profit	**(161,026)**		**(0.12)**	**(964.2)**	**(619.3)**	**(106,766)**	**(0.083)**	**(639)**	**(410.6)**	**(44,593,590)**	**(34.5)**	**(267,027)**	**(171,514)**
GP - Interests	**94,014**		**0.07**	**563.0**	**361.6**	**62,334**	**0.048**	**373**	**239.7**	**26,035,682**	**20.1**	**155,902**	**100,137**
Taxes													
Profits													
Profitability	**2.95%**												

Table Revenue and Expenditure													
	NZ H	NZ H	NZ H	NZ H	NZ H	NZ H	NZ H	NZ H	NZ H	NZ H	NZ H	NZ H	NZ H
Incomes	Totals	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	C$ 276.9341	$/litre	Ch $/ha	Ch $/cow
Milk Sales	213,122	67.0%	0.22	1,776.0	592.0	141,307	0.145	1,178	392.5	59,020,749	60.4	491,840	163,947
Winter Milk	66,805	21.0%	0.07	556.7	185.6	44,294	0.045	369	123.0	18,500,583	18.9	154,172	51,391
Stock Sales cows	31,500	9.9%	0.03	262.5	87.5	20,886	0.021	174	58.0	8,723,424	8.9	72,695	24,232
Calves sold	6,498	2.0%	0.01	54.2	18.1	4,308	0.004	36	12.0	1,799,518	1.8	14,996	4,999
Total	**317,925**	**100.0%**	**0.33**	**2,649.4**	**883.1**	**210,795**	**0.216**	**1,757**	**585.5**	**88,044,274**	**90.1**	**733,702**	**244,567**
Farm Cash Expenses													
Replacement	38,400	-9.3%	0.04	320.0	106.7	25,460	0.026	212	70.7	10,634,269	10.9	88,619	29,540
Pasture and Supplements	60,000	-14.5%	0.06	500.0	166.7	39,782	0.041	332	110.5	16,616,046	17.0	138,467	46,156
Fertiliser (incl nitrogen)	6,400	-1.5%	0.01	53.3	17.8	4,243	0.004	35	11.8	1,772,378	1.8	14,770	4,923
Animal Health	15,408	-3.7%	0.02	128.4	42.8	10,216	0.010	85	28.4	4,267,001	4.4	35,558	11,853
Wages	30,000	-7.2%	0.03	250.0	83.3	19,891	0.020	166	55.3	8,308,023	8.5	69,234	23,078
Total	**150,208**	**-36.2%**	**0.15**	**1,251.7**	**417.2**	**99,593**	**0.102**	**830**	**276.6**	**41,597,717**	**42.6**	**346,648**	**115,549**
Overheads													
Shed Expenses	2,800	-0.7%	0.00	23.3	7.8	1,856	0.002	15	5.2	775,415	0.8	6,462	2,154
Fences	2,500	-0.6%	0.00	20.8	6.9	1,658	0.002	14	4.6	692,335	0.7	5,769	1,923
Repairs and Maintenance	4,000	-1.0%	0.00	33.3	11.1	2,652	0.003	22	7.4	1,107,736	1.1	9,231	3,077
Ditches	3,000	-0.7%	0.00	25.0	8.3	1,989	0.002	17	5.5	830,802	0.9	6,923	2,308
Vehicle Expenses	8,000	-1.9%	0.01	66.7	22.2	5,304	0.005	44	14.7	2,215,473	2.3	18,462	6,154
Total	**20,300**	**-4.9%**	**0.02**	**169.2**	**56.4**	**13,460**	**0.014**	**112**	**37.4**	**5,621,762**	**5.8**	**46,848**	**15,616**
Depreciation	39,517	-9.5%	0.04	329.3	109.8	26,201	0.027	218	72.8	10,943,605	11.2	91,197	30,399
Interests	151,045	-36.4%	0.15	1,258.7	419.6	100,148	0.102	835	278.2	41,829,500	42.8	348,579	116,193
Total	**190,562**	**-45.9%**	**0.20**	**1,588.0**	**529.3**	**126,349**	**0.129**	**1,053**	**351.0**	**52,773,105**	**54.0**	**439,776**	**146,592**
Fire & Earthq. Insurance	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Administration	39,000	-9.4%	0.04	325.0	108.3	25,858	0.026	215	71.8	10,800,430	11.1	90,004	30,001
Farm Manager Wage	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Accountant	2,500	-0.6%	0.00	20.8	6.9	1,658	0.002	14	4.6	692,335	0.7	5,769	1,923
Taxes/ Rates	10,500	-2.5%	0.01	87.5	29.2	6,962	0.007	58	19.3	2,907,808	3.0	24,232	8,077
General Costs	750	-0.2%	0.00	6.3	2.1	497	0.001	4	1.4	207,701	0.2	1,731	577
ACC	900	-0.2%	0.00	7.5	2.5	597	0.001	5	1.7	249,241	0.3	2,077	692
Total	**53,650**	**-12.9%**	**0.05**	**447.1**	**149.0**	**35,572**	**0.036**	**296**	**98.8**	**14,857,514**	**15.2**	**123,813**	**41,271**
Total Costs	**(414,720)**	**100.0%**	**(0.42)**	**(3,456.0)**	**(1,152.0)**	**(274,973)**	**(0.281)**	**(2,291)**	**(763.8)**	**(114,850,099)**	**(117.5)**	**(957,084)**	**(319,028)**
Total Income	**317,925**		**0.33**	**2,649.4**	**883.1**	**210,795**	**0.216**	**1,757**	**585.5**	**88,044,274**	**90.1**	**733,702**	**244,567**
Gross Profit	**(96,795)**		**(0.10)**	**(806.6)**	**(268.9)**	**(64,178)**	**(0.066)**	**(535)**	**(178.3)**	**(26,805,825)**	**(27.4)**	**(223,382)**	**(74,461)**
GP - Interests	**54,250**		**0.06**	**452.1**	**150.7**	**35,970**	**0.037**	**300**	**99.9**	**15,023,675**	**15.4**	**125,197**	**41,732**
Taxes													
Profits													
Profitability	**2.87%**												

Table Revenue and Expenditure													
	NZ I	NZ I	NZ I	NZ I	NZ I	NZ I	NZ I	NZ I	NZ I	NZ I	NZ I	NZ I	NZ I
Incomes	Totals	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	C$ 276.9341	$/litre	Ch $/ha	Ch $/cow
Milk Sales	193,796	73.6%	0.23	1,575.6	775.2	128,493	0.150	1,045	514.0	53,668,721	62.5	436,331	214,675
Winter Milk	41,144	15.6%	0.05	334.5	164.6	27,280	0.032	222	109.1	11,394,177	13.3	92,636	45,577
Stock Sales cows	19,500	7.4%	0.02	158.5	78.0	12,929	0.015	105	51.7	5,400,215	6.3	43,904	21,601
Calves sold	8,892	3.4%	0.01	72.3	35.6	5,896	0.007	48	23.6	2,462,498	2.9	20,020	9,850
Total	**263,332**	**100.0%**	**0.31**	**2,140.9**	**1,053.3**	**174,598**	**0.203**	**1,419**	**698.4**	**72,925,610**	**84.9**	**592,891**	**291,702**
Farm Cash Expenses													
Replacement	48,000	-18.0%	0.06	390.2	192.0	31,826	0.037	259	127.3	13,292,837	15.5	108,072	53,171
Pasture and Supplements	5,024	-1.9%	0.01	40.8	20.1	3,331	0.004	27	13.3	1,391,317	1.6	11,312	5,565
Fertiliser (incl nitrogen)	22,000	-8.2%	0.03	178.9	88.0	14,587	0.017	119	58.3	6,092,550	7.1	49,533	24,370
Animal Health	19,839	-7.4%	0.02	161.3	79.4	13,154	0.015	107	52.6	5,494,096	6.4	44,667	21,976
Wages	27,990	-10.5%	0.03	227.6	112.0	18,558	0.022	151	74.2	7,751,385	9.0	63,019	31,006
Total	**122,853**	**-46.0%**	**0.14**	**998.8**	**491.4**	**81,456**	**0.095**	**662**	**325.8**	**34,022,185**	**39.6**	**276,603**	**136,089**
Overheads													
Shed Expenses	4,231	-1.6%	0.00	34.4	16.9	2,805	0.003	23	11.2	1,171,708	1.4	9,526	4,687
Fences	1,612	-0.6%	0.00	13.1	6.4	1,069	0.001	9	4.3	446,418	0.5	3,629	1,786
Repairs and Maintenance	15,632	-5.9%	0.02	127.1	62.5	10,365	0.012	84	41.5	4,329,034	5.0	35,195	17,316
Ditches	4,400	-1.6%	0.01	35.8	17.6	2,917	0.003	24	11.7	1,218,510	1.4	9,907	4,874
Vehicle Expenses	16,000	-6.0%	0.02	130.1	64.0	10,609	0.012	86	42.4	4,430,946	5.2	36,024	17,724
Total	**41,875**	**-15.7%**	**0.05**	**340.4**	**167.5**	**27,765**	**0.032**	**226**	**111.1**	**11,596,615**	**13.5**	**94,281**	**46,386**
Depreciation	10,260	-3.8%	0.01	83.4	41.0	6,803	0.008	55	27.2	2,841,344	3.3	23,100	11,365
Interests	72,003	-27.0%	0.08	585.4	288.0	47,740	0.056	388	191.0	19,940,086	23.2	162,115	79,760
Total	**82,263**	**-30.8%**	**0.10**	**668.8**	**329.1**	**54,543**	**0.063**	**443**	**218.2**	**22,781,430**	**26.5**	**185,215**	**91,126**
Fire & Earthq. Insurance	1,768	-0.7%	0.00	14.4	7.1	1,172	0.001	10	4.7	489,619	0.6	3,981	1,958
Administration	4,300	-1.6%	0.01	35.0	17.2	2,851	0.003	23	11.4	1,190,817	1.4	9,681	4,763
Farm Manager Wage	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Accountant	1,900	-0.7%	0.00	15.4	7.6	1,260	0.001	10	5.0	526,175	0.6	4,278	2,105
Taxes/ Rates	5,300	-2.0%	0.01	43.1	21.2	3,514	0.004	29	14.1	1,467,751	1.7	11,933	5,871
General Costs	3,100	-1.2%	0.00	25.2	12.4	2,055	0.002	17	8.2	858,496	1.0	6,980	3,434
ACC	3,700	-1.4%	0.00	30.1	14.8	2,453	0.003	20	9.8	1,024,656	1.2	8,331	4,099
Total	**20,068**	**-7.5%**	**0.02**	**163.2**	**80.3**	**13,306**	**0.015**	**108**	**53.2**	**5,557,514**	**6.5**	**45,183**	**22,230**
Total Costs	**(267,059)**	**100.0%**	**(0.31)**	**(2,171.2)**	**(1,068.2)**	**(177,069)**	**(0.206)**	**(1,440)**	**(708.3)**	**(73,957,744)**	**(86.1)**	**(601,282)**	**(295,831)**
Total Income	**263,332**		**0.31**	**2,140.9**	**1,053.3**	**174,598**	**0.203**	**1,419**	**698.4**	**72,925,610**	**84.9**	**592,891**	**291,702**
Gross Profit	**(3,727)**		**(0.00)**	**(30.3)**	**(14.9)**	**(2,471)**	**(0.003)**	**(20)**	**(9.9)**	**(1,032,133)**	**(1.2)**	**(8,391)**	**(4,129)**
GP - Interests	**68,276**		**0.08**	**555.1**	**273.1**	**45,269**	**0.053**	**368**	**181.1**	**18,907,953**	**22.0**	**153,723**	**75,632**
Taxes													
Profits													
Profitability	**7.59%**												

Table Revenue and Expenditure														
	NZ J	NZ J	NZ J	NZ J	NZ J	NZ J	NZ J	NZ J	NZ J	NZ J	NZ J	NZ J	NZ J	NZ J
Incomes	Totals	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	C$ 276.9341	$/litre	Ch $/ha	Ch $/cow
Milk Sales	325,710	73.4%	0.22	3,831.9	958.0	215,956	0.145	2,541	635.2	90,200,206	60.6	1,061,179	265,295
Winter Milk	83,793	18.9%	0.06	985.8	246.5	55,558	0.037	654	163.4	23,205,139	15.6	273,002	68,250
Stock Sales cows	25,500	5.7%	0.02	300.0	75.0	16,907	0.011	199	49.7	7,061,820	4.7	83,080	20,770
Calves sold	8,625	1.9%	0.01	101.5	25.4	5,719	0.004	67	16.8	2,388,557	1.6	28,101	7,025
Total	**443,628**	**100.0%**	**0.30**	**5,219.2**	**1,304.8**	**294,140**	**0.198**	**3,460**	**865.1**	**122,855,721**	**82.5**	**1,445,361**	**361,340**
Farm Cash Expenses													
Replacement	70,000	-13.5%	0.05	823.5	205.9	46,412	0.031	546	136.5	19,385,387	13.0	228,063	57,016
Pasture and Supplements	85,500	-16.5%	0.06	1,005.9	251.5	56,689	0.038	667	166.7	23,677,866	15.9	278,563	69,641
Fertiliser (incl nitrogen)	40,500	-7.8%	0.03	476.5	119.1	26,853	0.018	316	79.0	11,215,831	7.5	131,951	32,988
Animal Health	26,000	-5.0%	0.02	305.9	76.5	17,239	0.012	203	50.7	7,200,287	4.8	84,709	21,177
Wages	25,000	-4.8%	0.02	294.1	73.5	16,576	0.011	195	48.8	6,923,353	4.7	.81,451	20,363
Total	**247,000**	**-47.5%**	**0.17**	**2,905.9**	**726.5**	**163,769**	**0.110**	**1,927**	**481.7**	**68,402,723**	**46.0**	**804,738**	**201,184**
Overheads													
Shed Expenses	3,000	-0.6%	0.00	35.3	8.8	1,989	0.001	23	5.9	830,802	0.6	9,774	2,444
Fences	2,000	-0.4%	0.00	23.5	5.9	1,326	0.001	16	3.9	553,868	0.4	6,516	1,629
Repairs and Maintenance	1,000	-0.2%	0.00	11.8	2.9	663	0.000	8	2.0	276,934	0.2	3,258	815
Ditches	3,000	-0.6%	0.00	35.3	8.8	1,989	0.001	23	5.9	830,802	0.6	9,774	2,444
Vehicle Expenses	6,000	-1.2%	0.00	70.6	17.6	3,978	0.003	47	11.7	1,661,605	1.1	19,548	4,887
Total	**15,000**	**-2.9%**	**0.01**	**176.5**	**44.1**	**9,945**	**0.007**	**117**	**29.3**	**4,154,012**	**2.8**	**48,871**	**12,218**
Depreciation	16,558	-3.2%	0.01	194.8	48.7	10,979	0.007	129	32.3	4,585,475	3.1	53,947	13,487
Interests	166,120	-32.0%	0.11	1,954.4	488.6	110,143	0.074	1,296	324.0	46,004,293	30.9	541,227	135,307
Total	**182,678**	**-35.2%**	**0.12**	**2,149.2**	**537.3**	**121,122**	**0.081**	**1,425**	**356.2**	**50,589,768**	**34.0**	**595,174**	**148,793**
Fire & Earthq. Insurance	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Administration	5,000	-1.0%	0.00	58.8	14.7	3,315	0.002	39	9.8	1,384,671	0.9	16,290	4,073
Farm Manager Wage	45,000	-8.7%	0.03	529.4	132.4	29,836	0.020	351	87.8	12,462,035	8.4	146,612	36,653
Accountant	7,000	-1.3%	0.00	82.4	20.6	4,641	0.003	55	13.7	1,938,539	1.3	22,806	5,702
Taxes/ Rates	10,000	-1.9%	0.01	117.6	29.4	6,630	0.004	78	19.5	2,769,341	1.9	32,580	8,145
General Costs	5,000	-1.0%	0.00	58.8	14.7	3,315	0.002	39	9.8	1,384,671	0.9	16,290	4,073
ACC	3,000	-0.6%	0.00	35.3	8.8	1,989	0.001	23	5.9	830,802	0.6	9,774	2,444
Total	**75,000**	**-14.4%**	**0.05**	**882.4**	**220.6**	**49,727**	**0.033**	**585**	**146.3**	**20,770,058**	**14.0**	**244,354**	**61,088**
Total Costs	**(519,678)**	**100.0%**	**(0.35)**	**(6,113.9)**	**(1,528.5)**	**(344,564)**	**(0.231)**	**(4,054)**	**(1,013.4)**	**(143,916,559)**	**(96.7)**	**(1,693,136)**	**(423,284)**
Total Income	**443,628**		**0.30**	**5,219.2**	**1,304.8**	**294,140**	**0.198**	**3,460**	**865.1**	**122,855,721**	**82.5**	**1,445,361**	**361,340**
Gross Profit	**(76,050)**		**(0.05)**	**(894.7)**	**(223.7)**	**(50,424)**	**(0.034)**	**(593)**	**(148.3)**	**(21,060,838)**	**(14.1)**	**(247,775)**	**(61,944)**
GP - Interests	**90,070**		**0.06**	**1,059.6**	**264.9**	**59,719**	**0.040**	**703**	**175.6**	**24,943,454**	**16.8**	**293,452**	**73,363**
Taxes													
Profits													
Profitability	**4.34%**												

Table Revenue and Expenditure													
	NZ K	NZ K	NZ K	NZ K	NZ K	NZ K	NZ K	NZ K	NZ K	NZ K	NZ K	NZ K	NZ K
Incomes	Totals	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	C$ 276.9341	$/litre	Ch $/ha	Ch $/cow
Milk Sales	144,464	66.4%	0.21	1,805.8	963.1	95,784	0.137	1,197	638.6	40,007,008	57.2	500,088	266,713
Winter Milk	47,230	21.7%	0.07	590.4	314.9	31,315	0.045	391	208.8	13,079,598	18.7	163,495	87,197
Stock Sales cows	17,550	8.1%	0.03	219.4	117.0	11,636	0.017	145	77.6	4,860,193	7.0	60,752	32,401
Calves sold	8,250	3.8%	0.01	103.1	55.0	5,470	0.008	68	36.5	2,284,706	3.3	28,559	15,231
Total	**217,494**	**100.0%**	**0.31**	**2,718.7**	**1,450.0**	**144,206**	**0.206**	**1,803**	**961.4**	**60,231,505**	**86.2**	**752,894**	**401,543**
Farm Cash Expenses													
Replacement	22,000	-9.4%	0.03	275.0	146.7	14,587	0.021	182	97.2	6,092,550	8.7	76,157	40,617
Pasture and Supplements	18,874	-8.1%	0.03	235.9	125.8	12,514	0.018	156	83.4	5,226,854	7.5	65,336	34,846
Fertiliser (incl nitrogen)	29,896	-12.8%	0.04	373.7	199.3	19,822	0.028	248	132.1	8,279,222	11.8	103,490	55,195
Animal Health	15,205	-6.5%	0.02	190.1	101.4	10,081	0.014	126	67.2	4,210,783	6.0	52,635	28,072
Wages	26,650	-11.4%	0.04	333.1	177.7	17,670	0.025	221	117.8	7,380,294	10.6	92,254	49,202
Total	**112,625**	**-48.1%**	**0.16**	**1,407.8**	**750.8**	**74,674**	**0.107**	**933**	**497.8**	**31,189,703**	**44.6**	**389,871**	**207,931**
Overheads													
Shed Expenses	2,133	-0.9%	0.00	26.7	14.2	1,414	0.002	18	9.4	590,700	0.8	7,384	3,938
Fences	3,534	-1.5%	0.01	44.2	23.6	2,343	0.003	29	15.6	978,685	1.4	12,234	6,525
Repairs and Maintenance	3,131	-1.3%	0.00	39.1	20.9	2,076	0.003	26	13.8	867,081	1.2	10,839	5,781
Ditches	4,503	-1.9%	0.01	56.3	30.0	2,986	0.004	37	19.9	1,247,034	1.8	15,588	8,314
Vehicle Expenses	15,536	-6.6%	0.02	194.2	103.6	10,301	0.015	129	68.7	4,302,448	6.2	53,781	28,683
Total	**28,837**	**-12.3%**	**0.04**	**360.5**	**192.2**	**19,120**	**0.027**	**239**	**127.5**	**7,985,949**	**11.4**	**99,824**	**53,240**
Depreciation	9,053	-3.9%	0.01	113.2	60.4	6,002	0.009	75	40.0	2,507,086	3.6	31,339	16,714
Interests	71,385	-30.5%	0.10	892.3	475.9	47,331	0.068	592	315.5	19,768,941	28.3	247,112	131,793
Total	**80,438**	**-34.4%**	**0.12**	**1,005.5**	**536.3**	**53,333**	**0.076**	**667**	**355.6**	**22,276,027**	**31.9**	**278,450**	**148,507**
Fire & Earthq. Insurance	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Administration	2,351	-1.0%	0.00	29.4	15.7	1,559	0.002	19	10.4	651,072	0.9	8,138	4,340
Farm Manager Wage	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Accountant	4,716	-2.0%	0.01	59.0	31.4	3,127	0.004	39	20.8	1,306,021	1.9	16,325	8,707
Taxes/ Rates	5,035	-2.2%	0.01	62.9	33.6	3,338	0.005	42	22.3	1,394,336	2.0	17,429	9,296
General Costs	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
ACC	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Total	**12,102**	**-5.2%**	**0.02**	**151.3**	**80.7**	**8,024**	**0.011**	**100**	**53.5**	**3,351,429**	**4.8**	**41,893**	**22,343**
Total Costs	**(234,002)**	**100.0%**	**(0.33)**	**(2,925.0)**	**(1,560.0)**	**(155,151)**	**(0.222)**	**(1,939)**	**(1,034.3)**	**(64,803,107)**	**(92.7)**	**(810,039)**	**(432,021)**
Total Income	**217,494**		**0.31**	**2,718.7**	**1,450.0**	**144,206**	**0.206**	**1,803**	**961.4**	**60,231,505**	**86.2**	**752,894**	**401,543**
Gross Profit	**(16,508)**		**(0.02)**	**(206.3)**	**(110.1)**	**(10,945)**	**(0.016)**	**(137)**	**(73.0)**	**(4,571,602)**	**(6.5)**	**(57,145)**	**(30,477)**
GP - Interests	**54,877**		**0.08**	**686.0**	**365.8**	**36,385**	**0.052**	**455**	**242.6**	**15,197,339**	**21.7**	**189,967**	**101,316**
Taxes													
Profits													
Profitability	**6.15%**												

Table Revenue and Expenditure													
	NZ L	NZ L	NZ L	NZ L	NZ L	NZ L	NZ L	NZ L	NZ L	NZ L	NZ L	NZ L	NZ L
Incomes	Totals	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	C$ 276.9341	$/litre	Ch $/ha	Ch $/cow
Milk Sales	247,688	70.6%	0.22	2,013.7	825.6	164,225	0.148	1,335	547.4	68,593,253	61.8	557,669	228,644
Winter Milk	50,314	14.3%	0.05	409.1	167.7	33,360	0.030	271	111.2	13,933,662	12.5	113,282	46,446
Stock Sales cows	30,000	8.5%	0.03	243.9	100.0	19,891	0.018	162	66.3	8,308,023	7.5	67,545	27,693
Calves sold	23,000	6.6%	0.02	187.0	76.7	15,250	0.014	124	50.8	6,369,484	5.7	51,784	21,232
Total	**351,002**	**100.0%**	**0.32**	**2,853.7**	**1,170.0**	**232,726**	**0.210**	**1,892**	**775.8**	**97,204,423**	**87.5**	**790,280**	**324,015**
Farm Cash Expenses													
Replacement	56,000	-12.6%	0.05	455.3	186.7	37,130	0.033	302	123.8	15,508,310	14.0	126,084	51,694
Pasture and Supplements	68,200	-15.4%	0.06	554.5	227.3	45,219	0.041	368	150.7	18,886,906	17.0	153,552	62,956
Fertiliser (incl nitrogen)	27,000	-6.1%	0.02	219.5	90.0	17,902	0.016	146	59.7	7,477,221	6.7	60,790	24,924
Animal Health	14,900	-3.4%	0.01	121.1	49.7	9,879	0.009	80	32.9	4,126,318	3.7	33,547	13,754
Wages	20,000	-4.5%	0.02	162.6	66.7	13,261	0.012	108	44.2	5,538,682	5.0	45,030	18,462
Total	**186,100**	**-42.0%**	**0.17**	**1,513.0**	**620.3**	**123,390**	**0.111**	**1,003**	**411.3**	**51,537,436**	**46.4**	**419,004**	**171,791**
Overheads													
Shed Expenses	11,800	-2.7%	0.01	95.9	39.3	7,824	0.007	64	26.1	3,267,822	2.9	26,568	10,893
Fences	3,200	-0.7%	0.00	26.0	10.7	2,122	0.002	17	7.1	886,189	0.8	7,205	2,954
Repairs and Maintenance	2,500	-0.6%	0.00	20.3	8.3	1,658	0.001	13	5.5	692,335	0.6	5,629	2,308
Ditches	2,000	-0.5%	0.00	16.3	6.7	1,326	0.001	11	4.4	553,868	0.5	4,503	1,846
Vehicle Expenses	13,600	-3.1%	0.01	110.6	45.3	9,017	0.008	73	30.1	3,766,304	3.4	30,620	12,554
Total	**33,100**	**-7.5%**	**0.03**	**269.1**	**110.3**	**21,946**	**0.020**	**178**	**73.2**	**9,166,519**	**8.3**	**74,525**	**30,555**
Depreciation	23,760	-5.4%	0.02	193.2	79.2	15,754	0.014	128	52.5	6,579,954	5.9	53,496	21,933
Interests	154,640	-34.9%	0.14	1,257.2	515.5	102,531	0.092	834	341.8	42,825,089	38.6	348,171	142,750
Total	**178,400**	**-40.3%**	**0.16**	**1,450.4**	**594.7**	**118,285**	**0.107**	**962**	**394.3**	**49,405,043**	**44.5**	**401,667**	**164,683**
Fire & Earthq. Insurance	300	-0.1%	0.00	2.4	1.0	199	0.000	2	0.7	83,080	0.1	675	277
Administration	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Farm Manager Wage	25,000	-5.6%	0.02	203.3	83.3	16,576	0.015	135	55.3	6,923,353	6.2	56,287	23,078
Accountant	3,300	-0.7%	0.00	26.8	11.0	2,188	0.002	18	7.3	913,883	0.8	7,430	3,046
Taxes/ Rates	10,000	-2.3%	0.01	81.3	33.3	6,630	0.006	54	22.1	2,769,341	2.5	22,515	9,231
General Costs	4,500	-1.0%	0.00	36.6	15.0	2,984	0.003	24	9.9	1,246,203	1.1	10,132	4,154
ACC	2,200	-0.5%	0.00	17.9	7.3	1,459	0.001	12	4.9	609,255	0.5	4,953	2,031
Total	**45,300**	**-10.2%**	**0.04**	**368.3**	**151.0**	**30,035**	**0.027**	**244**	**100.1**	**12,545,115**	**11.3**	**101,993**	**41,817**
Total Costs	**(442,900)**	**100.0%**	**(0.40)**	**(3,600.8)**	**(1,476.3)**	**(293,657)**	**(0.264)**	**(2,387)**	**(978.9)**	**(122,654,113)**	**(110.4)**	**(997,188)**	**(408,847)**
Total Income	**351,002**		**0.32**	**2,853.7**	**1,170.0**	**232,726**	**0.210**	**1,892**	**775.8**	**97,204,423**	**87.5**	**790,280**	**324,015**
Gross Profit	**(91,898)**		**(0.08)**	**(747.1)**	**(306.3)**	**(60,931)**	**(0.055)**	**(495)**	**(203.1)**	**(25,449,690)**	**(22.9)**	**(206,908)**	**(84,832)**
GP - Interetst	**62,742**		**0.06**	**510.1**	**209.1**	**41,600**	**0.037**	**338**	**138.7**	**17,375,399**	**15.6**	**141,263**	**57,918**
Taxes													
Profits													
Profitability	**3.25%**												

Table Revenue and Expenditure													
	Ch A	Ch A	Ch A	Ch A	Ch A	Ch A	Ch A	Ch A	Ch A	Ch A	Ch A	Ch A	Ch A
Incomes	276.9341	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	No interest	$/litre	$/ha	$/cow
Milk Sales	97,742.00	57.9%	0.25	603.3	977.4	64,806	0.167	400.0	648.1	27,068,094	69.6	167,087	270,681
Winter Milk	27,132.19	16.1%	0.07	167.5	271.3	17,990	0.046	111.0	179.9	7,513,828	19.3	46,382	75,138
Stock Sales cows	20,582.51	12.2%	0.05	127.1	205.8	13,647	0.035	84.2	136.5	5,700,000	14.7	35,185	57,000
Calves sold	23,399.07	13.9%	0.06	144.4	234.0	15,514	0.040	95.8	155.1	6,480,000	16.7	40,000	64,800
Total	**168,855.77**	**100.0%**	**0.43**	**1,042.3**	**1,688.6**	**111,957**	**0.288**	**691.1**	**1,119.6**	**46,761,922**	**120.2**	**288,654**	**467,619**
Farm Cash Expenses													
Replacement	66,730.68	-23.8%	0.17	411.9	667.3	44,245	0.114	273.1	442.4	18,480,000	47.5	114,074	184,800
Pasture and Supplements	22,211.06	-7.9%	0.06	137.1	222.1	14,727	0.038	90.9	147.3	6,151,000	15.8	37,969	61,510
Fertiliser (incl nitrogen)	7,209.33	-2.6%	0.02	44.5	72.1	4,780	0.012	29.5	47.8	1,996,510	5.1	12,324	19,965
Animal Health	4,925.36	-1.8%	0.01	30.4	49.3	3,266	0.008	20.2	32.7	1,364,000	3.5	8,420	13,640
Wages	9,857.94	-3.5%	0.03	60.9	98.6	6,536	0.017	40.3	65.4	2,730,000	7.0	16,852	27,300
Total	**110,934.37**	**-39.6%**	**0.29**	**684.8**	**1,109.3**	**73,553**	**0.189**	**454.0**	**735.5**	**30,721,510**	**79.0**	**189,639**	**307,215**
Overheads													
Shed Expenses	2,166.58	-0.8%	0.01	13.4	21.7	1,437	0.004	8.9	14.4	600,000	1.5	3,704	6,000
Fences	722.19	-0.3%	0.00	4.5	7.2	479	0.001	3.0	4.8	200,000	0.5	1,235	2,000
Repairs and Maintenance	4,333.16	-1.5%	0.01	26.7	43.3	2,873	0.007	17.7	28.7	1,200,000	3.1	7,407	12,000
Ditches	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Vehicle Expenses	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Total	**7,221.93**	**-2.6%**	**0.02**	**44.6**	**72.2**	**4,788**	**0.012**	**29.6**	**47.9**	**2,000,000**	**5.1**	**12,346**	**20,000**
Depreciation	18,325.66	-6.5%	0.05	113.1	183.3	12,151	0.031	75.0	121.5	5,075,000	13.0	31,327	50,750
Interests	97,048.36	-34.7%	0.25	599.1	970.5	64,346	0.165	397.2	643.5	26,876,000	69.1	165,901	268,760
Total	**115,374.02**	**-41.2%**	**0.30**	**712.2**	**1,153.7**	**76,497**	**0.197**	**472.2**	**765.0**	**31,951,000**	**82.1**	**197,228**	**319,510**
Fire & Earthq. Insurance	541.65	-0.2%	0.00	3.3	5.4	359	0.001	2.2	3.6	150,000	0.4	926	1,500
Administration	43,331.61	-15.5%	0.11	267.5	433.3	28,730	0.074	177.3	287.3	12,000,000	30.8	74,074	120,000
Farm Manager Wage	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Accountant	324.99	-0.1%	0.00	2.0	3.2	215	0.001	1.3	2.2	90,000	0.2	556	900
Taxes/ Rates	1,805.48	-0.6%	0.00	11.1	18.1	1,197	0.003	7.4	12.0	500,000	1.3	3,086	5,000
General Costs	433.32	-0.2%	0.00	2.7	4.3	287	0.001	1.8	2.9	120,000	0.3	741	1,200
ACC	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Total	**46,437.04**	**-16.6%**	**0.12**	**286.6**	**464.4**	**30,789**	**0.079**	**190.1**	**307.9**	**12,860,000**	**33.1**	**79,383**	**128,600**
Total Costs	**(279,967.36)**	**100.0%**	**(0.72)**	**(1,728.2)**	**(2,799.7)**	**(185,628)**	**(0.477)**	**(1,145.8)**	**(1,856.3)**	**(77,532,510)**	**(199.3)**	**(478,596)**	**(775,325)**
Total Income	**168,855.77**		**0.43**	**1,042.3**	**1,688.6**	**111,957**	**0.288**	**691.1**	**1,119.6**	**46,761,922**	**120.2**	**288,654**	**467,619**
Gross Profit	**(111,111.59)**		**(0.29)**	**(685.9)**	**(1,111.1)**	**(73,671)**	**(0.189)**	**(454.8)**	**(736.7)**	**(30,770,588)**	**(79.1)**	**(189,942)**	**(307,706)**
GP - Interetst	**(14,063.23)**		**(0.04)**	**(86.8)**	**(140.6)**	**(9,324)**	**(0.024)**	**(57.6)**	**(93.2)**	**(3,894,588)**	**(10.0)**	**(24,041)**	**(38,946)**
Taxes													
Profits													
Profitability	**-1.16%**												

Table Revenue and Expenditure													
	Ch B	Ch B	Ch B	Ch B	Ch B	Ch B	Ch B	Ch B	Ch B	Ch B	Ch B	Ch B	Ch B
Incomes	276.9341	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	No interest	$/litre	$/ha	$/cow
Milk Sales	48,994.63	59.7%	0.26	979.9	890.8	32,485	0.171	649.7	590.6	13,568,285	71.5	271,366	246,696
Winter Milk	14,231.58	17.4%	0.08	284.6	258.8	9,436	0.050	188.7	171.6	3,941,210	20.8	78,824	71,658
Stock Sales cows	10,110.71	12.3%	0.05	202.2	183.8	6,704	0.035	134.1	121.9	2,800,000	14.8	56,000	50,909
Calves sold	8,666.32	10.6%	0.05	173.3	157.6	5,746	0.030	114.9	104.5	2,400,000	12.7	48,000	43,636
Total	**82,003.25**	**100.0%**	**0.43**	**1,640.1**	**1,491.0**	**54,371**	**0.287**	**1,087.4**	**988.6**	**22,709,495**	**119.7**	**454,190**	**412,900**
Farm Cash Expenses													
Replacement	28,526.64	-29.7%	0.15	570.5	518.7	18,914	0.100	378.3	343.9	7,900,000	41.6	158,000	143,636
Pasture and Supplements	5,849.77	-6.1%	0.03	117.0	106.4	3,879	0.020	77.6	70.5	1,620,000	8.5	32,400	29,455
Fertiliser (incl nitrogen)	6,420.30	-6.7%	0.03	128.4	116.7	4,257	0.022	85.1	77.4	1,778,000	9.4	35,560	32,327
Animal Health	433.32	-0.5%	0.00	8.7	7.9	287	0.002	5.7	5.2	120,000	0.6	2,400	2,182
Wages	10,110.71	-10.5%	0.05	202.2	183.8	6,704	0.035	134.1	121.9	2,800,000	14.8	56,000	50,909
Total	**51,340.73**	**-53.4%**	**0.27**	**1,026.8**	**933.5**	**34,041**	**0.179**	**680.8**	**618.9**	**14,218,000**	**74.9**	**284,360**	**258,509**
Overheads													
Shed Expenses	216.66	-0.2%	0.00	4.3	3.9	144	0.001	2.9	2.6	60,000	0.3	1,200	1,091
Fences	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Repairs and Maintenance	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Ditches	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Vehicle Expenses	830.52	-0.9%	0.00	16.6	15.1	551	0.003	11.0	10.0	230,000	1.2	4,600	4,182
Total	**1,047.18**	**-1.1%**	**0.01**	**20.9**	**19.0**	**694**	**0.004**	**13.9**	**12.6**	**290,000**	**1.5**	**5,800**	**5,273**
Depreciation	3,963.04	-4.1%	0.02	79.3	72.1	2,628	0.014	52.6	47.8	1,097,500	5.8	21,950	19,955
Interests	28,996.07	-30.2%	0.15	579.9	527.2	19,225	0.101	384.5	349.6	8,030,000	42.3	160,600	146,000
Total	**32,959.10**	**-34.3%**	**0.17**	**659.2**	**599.3**	**21,853**	**0.115**	**437.1**	**397.3**	**9,127,500**	**48.1**	**182,550**	**165,955**
Fire & Earthquake Insurance	460.04	-0.5%	0.00	9.2	8.4	305	0.002	6.1	5.5	127,400	0.7	2,548	2,316
Administration	6,499.74	-6.8%	0.03	130.0	118.2	4,310	0.023	86.2	78.4	1,800,000	9.5	36,000	32,727
Farm Manager Wage	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Accountant	938.85	-1.0%	0.00	18.8	17.1	622	0.003	12.4	11.3	260,000	1.4	5,200	4,727
Taxes/ Rates	1,372.17	-1.4%	0.01	27.4	24.9	910	0.005	18.2	16.5	380,000	2.0	7,600	6,909
General Costs	1,083.29	-1.1%	0.01	21.7	19.7	718	0.004	14.4	13.1	300,000	1.6	6,000	5,455
ACC	381.32	-0.4%	0.00	7.6	6.9	253	0.001	5.1	4.6	105,600	0.6	2,112	1,920
Total	**10,735.41**	**-11.2%**	**0.06**	**214.7**	**195.2**	**7,118**	**0.038**	**142.4**	**129.4**	**2,973,000**	**15.7**	**59,460**	**54,055**
Total Costs	**(96,082.43)**	**100.0%**	**(0.51)**	**(1,921.6)**	**(1,747.0)**	**(63,706)**	**(0.336)**	**(1,274.1)**	**(1,158.3)**	**(26,608,500)**	**(140.3)**	**(532,170)**	**(483,791)**
Total Income	**82,003.25**		**0.43**	**1,640.1**	**1,491.0**	**54,371**	**0.287**	**1,087.4**	**988.6**	**22,709,495**	**119.7**	**454,190**	**412,900**
Gross Profit	**(14,079.18)**		**(0.07)**	**(281.6)**	**(256.0)**	**(9,335)**	**(0.049)**	**(186.7)**	**(169.7)**	**(3,899,005)**	**(20.6)**	**(77,980)**	**(70,891)**
GP - Interetst	**14,916.89**		**0.08**	**298.3**	**271.2**	**9,890**	**0.052**	**197.8**	**179.8**	**4,130,995**	**21.8**	**82,620**	**75,109**
Taxes													
Profits													
Profitability	**4.12%**												

Table Revenue and Expenditure													
	Ch C	Ch C	Ch C	Ch C	Ch C	Ch C	Ch C	Ch C	Ch C	Ch C	Ch C	Ch C	Ch C
Incomes	276.9341	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	No interest	$/litre	$/ha	$/cow
Milk Sales	45,832.93	44.7%	0.26	352.6	509.3	30,389	0.173	233.8	337.7	12,692,700	72.1	97,636	141,030
Winter Milk	11,374.55	11.1%	0.06	87.5	126.4	7,542	0.043	58.0	83.8	3,150,000	17.9	24,231	35,000
Stock Sales cows	6,951.11	6.8%	0.04	53.5	77.2	4,609	0.026	35.5	51.2	1,925,000	10.9	14,808	21,389
Calves sold	38,478.47	37.5%	0.22	296.0	427.5	25,512	0.145	196.2	283.5	10,656,000	60.5	81,969	118,400
Total	**102,637.05**	**100.0%**	**0.58**	**789.5**	**1,140.4**	**68,052**	**0.387**	**523.5**	**756.1**	**28,423,700**	**161.5**	**218,644**	**315,819**
Farm Cash Expenses													
Replacement	15,689.65	-10.6%	0.09	120.7	174.3	10,403	0.059	80.0	115.6	4,345,000	24.7	33,423	48,278
Pasture and Supplements	16,249.35	-11.0%	0.09	125.0	180.5	10,774	0.061	82.9	119.7	4,500,000	25.6	34,615	50,000
Fertiliser (incl nitrogen)	18,054.84	-12.2%	0.10	138.9	200.6	11,971	0.068	92.1	133.0	5,000,000	28.4	38,462	55,556
Animal Health	2,888.77	-2.0%	0.02	22.2	32.1	1,915	0.011	14.7	21.3	800,000	4.5	6,154	8,889
Wages	14,082.77	-9.6%	0.08	108.3	156.5	9,337	0.053	71.8	103.7	3,900,000	22.2	30,000	43,333
Total	**66,965.39**	**-45.4%**	**0.38**	**515.1**	**744.1**	**44,400**	**0.252**	**341.5**	**493.3**	**18,545,000**	**105.4**	**142,654**	**206,056**
Overheads													
Shed Expenses	2,888.77	-2.0%	0.02	22.2	32.1	1,915	0.011	14.7	21.3	800,000	4.5	6,154	8,889
Fences	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Repairs and Maintenance	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Ditches	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Vehicle Expenses	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Total	**2,888.77**	**-2.0%**	**0.02**	**22.2**	**32.1**	**1,915**	**0.011**	**14.7**	**21.3**	**800,000**	**4.5**	**6,154**	**8,889**
Depreciation	12,187.01	-8.3%	0.07	93.7	135.4	8,080	0.046	62.2	89.8	3,375,000	19.2	25,962	37,500
Interests	54,467.83	-36.9%	0.31	419.0	605.2	36,114	0.205	277.8	401.3	15,084,000	85.7	116,031	167,600
Total	**66,654.85**	**-45.2%**	**0.38**	**512.7**	**740.6**	**44,194**	**0.251**	**340.0**	**491.0**	**18,459,000**	**104.9**	**141,992**	**205,100**
Fire & Earthq. Insurance	1,083.29	-0.7%	0.01	8.3	12.0	718	0.004	5.5	8.0	300,000	1.7	2,308	3,333
Administration	4,333.16	-2.9%	0.02	33.3	48.1	2,873	0.016	22.1	31.9	1,200,000	6.8	9,231	13,333
Farm Manager Wage	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Accountant	866.63	-0.6%	0.00	6.7	9.6	575	0.003	4.4	6.4	240,000	1.4	1,846	2,667
Taxes/ Rates	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
General Costs	4,333.16	-2.9%	0.02	33.3	48.1	2,873	0.016	22.1	31.9	1,200,000	6.8	9,231	13,333
ACC	288.88	-0.2%	0.00	2.2	3.2	192	0.001	1.5	2.1	80,000	0.5	615	889
Total	**10,905.12**	**-7.4%**	**0.06**	**83.9**	**121.2**	**7,230**	**0.041**	**55.6**	**80.3**	**3,020,000**	**17.2**	**23,231**	**33,556**
Total Costs	**(147,414.13)**	**100.0%**	**(0.84)**	**(1,134.0)**	**(1,637.9)**	**(97,740)**	**(0.555)**	**(751.8)**	**(1,086.0)**	**(40,824,000)**	**(231.9)**	**(314,031)**	**(453,600)**
Total Income	**102,637.05**		**0.58**	**789.5**	**1,140.4**	**68,052**	**0.387**	**523.5**	**756.1**	**28,423,700**	**161.5**	**218,644**	**315,819**
Gross profit	**(44,777.08)**		**(0.25)**	**(344.4)**	**(497.5)**	**(29,689)**	**(0.169)**	**(228.4)**	**(329.9)**	**(12,400,300)**	**(70.4)**	**(95,387)**	**(137,781)**
Gp - Interetst	**9,690.75**		**0.06**	**74.5**	**107.7**	**6,425**	**0.037**	**49.4**	**71.4**	**2,683,700**	**15.2**	**20,644**	**29,819**
Taxes													
Profits													
Profitability	**1.42%**									**0.95%**			

Table Revenue and Expenditure													
	Ch D	Ch D	Ch D	Ch D	Ch D	Ch D	Ch D	Ch D	Ch D	Ch D	Ch D	Ch D	Ch D
Incomes	276.9341	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	No interest	$/litre	$/ha	$/cow
Milk Sales	239,570.50	60.5%	0.30	1,497.3	998.2	158,843	0.202	992.8	661.8	66,345,240	84.2	414,658	276,439
Winter Milk	56,347.61	14.2%	0.07	352.2	234.8	37,360	0.047	233.5	155.7	15,604,576	19.8	97,529	65,019
Stock Sales cows	31,198.76	7.9%	0.04	195.0	130.0	20,686	0.026	129.3	86.2	8,640,000	11.0	54,000	36,000
Calves sold	69,164.47	17.5%	0.09	432.3	288.2	45,858	0.058	286.6	191.1	19,154,000	24.3	119,713	79,808
Total	**396,281.34**	**100.0%**	**0.50**	**2,476.8**	**1,651.2**	**262,748**	**0.333**	**1,642.2**	**1,094.8**	**109,743,816**	**139.3**	**685,899**	**457,266**
Farm Cash Expenses													
Replacement	68,463.94	-20.1%	0.09	427.9	285.3	45,394	0.058	283.7	189.1	18,960,000	24.1	118,500	79,000
Pasture and Supplements	53,803.41	-15.8%	0.07	336.3	224.2	35,673	0.045	223.0	148.6	14,900,000	18.9	93,125	62,083
Fertiliser (incl nitrogen)	12,421.73	-3.6%	0.02	77.6	51.8	8,236	0.010	51.5	34.3	3,440,000	4.4	21,500	14,333
Animal Health	6,319.19	-1.9%	0.01	39.5	26.3	4,190	0.005	26.2	17.5	1,750,000	2.2	10,938	7,292
Wages	25,998.97	-7.6%	0.03	162.5	108.3	17,238	0.022	107.7	71.8	7,200,000	9.1	45,000	30,000
Total	**167,007.24**	**-49.0%**	**0.21**	**1,043.8**	**695.9**	**110,731**	**0.141**	**692.1**	**461.4**	**46,250,000**	**58.7**	**289,063**	**192,708**
Overheads													
Shed Expenses	3,610.97	-1.1%	0.00	22.6	15.0	2,394	0.003	15.0	10.0	1,000,000	1.3	6,250	4,167
Fences	1,083.29	-0.3%	0.00	6.8	4.5	718	0.001	4.5	3.0	300,000	0.4	1,875	1,250
Repairs and Maintenance	3,249.87	-1.0%	0.00	20.3	13.5	2,155	0.003	13.5	9.0	900,000	1.1	5,625	3,750
Ditches	1,083.29	-0.3%	0.00	6.8	4.5	718	0.001	4.5	3.0	300,000	0.4	1,875	1,250
Vehicle Expenses	7,221.93	-2.1%	0.01	45.1	30.1	4,788	0.006	29.9	20.0	2,000,000	2.5	12,500	8,333
Total	**16,249.35**	**-4.8%**	**0.02**	**101.6**	**67.7**	**10,774**	**0.014**	**67.3**	**44.9**	**4,500,000**	**5.7**	**28,125**	**18,750**
Depreciation	11,175.94	-3.3%	0.01	69.8	46.6	7,410	0.009	46.3	30.9	3,095,000	3.9	19,344	12,896
Interests	88,685.36	-26.0%	0.11	554.3	369.5	58,801	0.075	367.5	245.0	24,560,000	31.2	153,500	102,333
Total	**99,861.30**	**-29.3%**	**0.13**	**624.1**	**416.1**	**66,211**	**0.084**	**413.8**	**275.9**	**27,655,000**	**35.1**	**172,844**	**115,229**
Fire & Earthq. Insurance	722.19	-0.2%	0.00	4.5	3.0	479	0.001	3.0	2.0	200,000	0.3	1,250	833
Administration	7,221.93	-2.1%	0.01	45.1	30.1	4,788	0.006	29.9	20.0	2,000,000	2.5	12,500	8,333
Farm Manager Wage	43,331.61	-12.7%	0.05	270.8	180.5	28,730	0.036	179.6	119.7	12,000,000	15.2	75,000	50,000
Accountant	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Taxes/ Rates	3,610.97	-1.1%	0.00	22.6	15.0	2,394	0.003	15.0	10.0	1,000,000	1.3	6,250	4,167
General Costs	2,527.68	-0.7%	0.00	15.8	10.5	1,676	0.002	10.5	7.0	700,000	0.9	4,375	2,917
ACC	577.75	-0.2%	0.00	3.6	2.4	383	0.000	2.4	1.6	160,000	0.2	1,000	667
Total	**57,992.14**	**-17.0%**	**0.07**	**362.5**	**241.6**	**38,451**	**0.049**	**240.3**	**160.2**	**16,060,000**	**20.4**	**100,375**	**66,917**
Total Costs	**(341,110.03)**	**100.0%**	**(0.43)**	**(2,131.9)**	**(1,421.3)**	**(226,167)**	**(0.287)**	**(1,413.5)**	**(942.4)**	**(94,465,000)**	**(119.9)**	**(590,406)**	**(393,604)**
Total Income	**396,281.34**		**0.50**	**2,476.8**	**1,651.2**	**262,748**	**0.333**	**1,642.2**	**1,094.8**	**109,743,816**	**139.3**	**685,899**	**457,266**
Gross Profit	**55,171.31**		**0.07**	**344.8**	**229.9**	**36,580**	**0.046**	**228.6**	**152.4**	**15,278,816**	**19.4**	**95,493**	**63,662**
GP - Interetst	**143,856.66**		**0.18**	**899.1**	**599.4**	**95,382**	**0.121**	**596.1**	**397.4**	**39,838,816**	**50.6**	**248,993**	**165,995**
Taxes													
Profits													
Rentability	**12.98%**									**8.69%**			

Table Revenue and Expenditure													
	Ch E	Ch E	Ch E	Ch E	Ch E	Ch E	Ch E	Ch E	Ch E	Ch E	Ch E	Ch E	Ch E
Incomes	276.9341	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	No interest	$/litre	$/ha	$/cow
Milk Sales	111,552.49	53.5%	0.26	619.7	864.7	73,963	0.175	410.9	573.4	30,892,689	73.3	171,626	239,478
Winter Milk	35,976.30	17.3%	0.09	199.9	278.9	23,853	0.057	132.5	184.9	9,963,064	23.6	55,350	77,233
Stock Sales cows	30,621.00	14.7%	0.07	170.1	237.4	20,303	0.048	112.8	157.4	8,480,000	20.1	47,111	65,736
Calves sold	30,332.13	14.5%	0.07	168.5	235.1	20,111	0.048	111.7	155.9	8,400,000	19.9	46,667	65,116
Total	**208,481.92**	**100.0%**	**0.49**	**1,158.2**	**1,616.1**	**138,230**	**0.328**	**767.9**	**1,071.6**	**57,735,753**	**136.9**	**320,754**	**447,564**
Farm Cash Expenses													
Replacement	66,983.44	-20.5%	0.16	372.1	519.3	44,412	0.105	246.7	344.3	18,550,000	44.0	103,056	143,798
Pasture and Supplements	32,780.36	-10.0%	0.08	182.1	254.1	21,734	0.052	120.7	168.5	9,078,000	21.5	50,433	70,372
Fertiliser (incl nitrogen)	12,093.13	-3.7%	0.03	67.2	93.7	8,018	0.019	44.5	62.2	3,349,000	7.9	18,606	25,961
Animal Health	5,134.80	-1.6%	0.01	28.5	39.8	3,405	0.008	18.9	26.4	1,422,000	3.4	7,900	11,023
Wages	18,112.61	-5.5%	0.04	100.6	140.4	12,009	0.028	66.7	93.1	5,016,000	11.9	27,867	38,884
Total	**135,104.34**	**-41.3%**	**0.32**	**750.6**	**1,047.3**	**89,579**	**0.212**	**497.7**	**694.4**	**37,415,000**	**88.7**	**207,861**	**290,039**
Overheads													
Shed Expenses	1,960.76	-0.6%	0.00	10.9	15.2	1,300	0.003	7.2	10.1	543,000	1.3	3,017	4,209
Fences	722.19	-0.2%	0.00	4.0	5.6	479	0.001	2.7	3.7	200,000	0.5	1,111	1,550
Repairs and Maintenance	1,614.10	-0.5%	0.00	9.0	12.5	1,070	0.003	5.9	8.3	447,000	1.1	2,483	3,465
Ditches	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Vehicle Expenses	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Total	**4,297.05**	**-1.3%**	**0.01**	**23.9**	**33.3**	**2,849**	**0.007**	**15.8**	**22.1**	**1,190,000**	**2.8**	**6,611**	**9,225**
Depreciation	14,443.87	-4.4%	0.03	80.2	112.0	9,577	0.023	53.2	74.2	4,000,000	9.5	22,222	31,008
Interests	98,839.40	-30.2%	0.23	549.1	766.2	65,534	0.155	364.1	508.0	27,372,000	64.9	152,067	212,186
Total	**113,283.27**	**-34.6%**	**0.27**	**629.4**	**878.2**	**75,111**	**0.178**	**417.3**	**582.3**	**31,372,000**	**74.4**	**174,289**	**243,194**
Fire & Earthq. Insurance	314.15	-0.1%	0.00	1.7	2.4	208	0.000	1.2	1.6	87,000	0.2	483	674
Administration	28,887.74	-8.8%	0.07	160.5	223.9	19,154	0.045	106.4	148.5	8,000,000	19.0	44,444	62,016
Farm Manager Wage	43,331.61	-13.2%	0.10	240.7	335.9	28,730	0.068	159.6	222.7	12,000,000	28.5	66,667	93,023
Accountant	675.25	-0.2%	0.00	3.8	5.2	448	0.001	2.5	3.5	187,000	0.4	1,039	1,450
Taxes/ Rates	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
General Costs	1,592.44	-0.5%	0.00	8.8	12.3	1,056	0.003	5.9	8.2	441,000	1.0	2,450	3,419
ACC	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Total	**74,801.19**	**-22.8%**	**0.18**	**415.6**	**579.9**	**49,596**	**0.118**	**275.5**	**384.5**	**20,715,000**	**49.1**	**115,083**	**160,581**
Total Costs	**(327,485.85)**	**100.0%**	**(0.78)**	**(1,819.4)**	**(2,538.7)**	**(217,134)**	**(0.515)**	**(1,206.3)**	**(1,683.2)**	**(90,692,000)**	**(215.1)**	**(503,844)**	**(703,039)**
Total Income	**208,481.92**		**0.49**	**1,158.2**	**1,616.1**	**138,230**	**0.328**	**767.9**	**1,071.6**	**57,735,753**	**136.9**	**320,754**	**447,564**
Gross Profit	**(119,003.93)**		**(0.28)**	**(661.1)**	**(922.5)**	**(78,904)**	**(0.187)**	**(438.4)**	**(611.7)**	**(32,956,247)**	**(78.2)**	**(183,090)**	**(255,475)**
GP - Interetst	**(20,164.53)**		**(0.05)**	**(112.0)**	**(156.3)**	**(13,370)**	**(0.032)**	**(74.3)**	**(103.6)**	**(5,584,247)**	**(13.2)**	**(31,024)**	**(43,289)**
Taxes													
Profits													
Profitability	**-1.63%**									**-1.09%**			

Table Revenue and Expenditure													
	Ch F	Ch F	Ch F	Ch F	Ch F	Ch F	Ch F	Ch F	Ch F	Ch F	Ch F	Ch F	Ch F
Incomes	276.9341	%	$/litre	$/ha	$/cow	U$ 0.663033	US $/litre	US $/ha	US $/cow	Totals	$/litre	$/ha	$/cow
Milk Sales	502,463.41	68.6%	0.30	3,140.4	1,847.3	333,150	0.196	2,082.2	1,224.8	139,149,252	82.0	869,683	511,578
Winter Milk	158,929.59	21.7%	0.09	993.3	584.3	105,376	0.062	658.6	387.4	44,013,024	26.0	275,081	161,813
Stock Sales cows	26,540.61	3.6%	0.02	165.9	97.6	17,597	0.010	110.0	64.7	7,350,000	4.3	45,938	27,022
Calves sold	44,523.23	6.1%	0.03	278.3	163.7	29,520	0.017	184.5	108.5	12,330,000	7.3	77,063	45,331
Total	***732,456.84***	**100.0%**	***0.43***	***4,577.9***	***2,692.9***	**485,643**	**0.286**	**3,035.3**	**1,785.5**	**202,842,276**	**119.6**	**1,267,764**	**745,744**
Farm Cash Expenses													
Replacement	199,686.50	-22.5%	0.12	1,248.0	734.1	132,399	0.078	827.5	486.8	55,300,000	32.6	345,625	203,309
Pasture and Supplements	212,433.21	-24.0%	0.13	1,327.7	781.0	140,850	0.083	880.3	517.8	58,830,000	34.7	367,688	216,287
Fertiliser (incl nitrogen)	36,470.77	-4.1%	0.02	227.9	134.1	24,181	0.014	151.1	88.9	10,100,000	6.0	63,125	37,132
Animal Health	50,553.54	-5.7%	0.03	316.0	185.9	33,519	0.020	209.5	123.2	14,000,000	8.3	87,500	51,471
Wages	51,636.83	-5.8%	0.03	322.7	189.8	34,237	0.020	214.0	125.9	14,300,000	8.4	89,375	52,574
Total	***550,780.85***	**-62.2%**	***0.32***	***3,442.4***	***2,024.9***	**365,186**	**0.215**	**2,282.4**	**1,342.6**	**152,530,000**	**89.9**	**953,313**	**560,772**
Overheads													
Shed Expenses	14,443.87	-1.6%	0.01	90.3	53.1	9,577	0.006	59.9	35.2	4,000,000	2.4	25,000	14,706
Fences	361.10	0.0%	0.00	2.3	1.3	239	0.000	1.5	0.9	100,000	0.1	625	368
Repairs and Maintenance	19,138.13	-2.2%	0.01	119.6	70.4	12,689	0.007	79.3	46.7	5,300,000	3.1	33,125	19,485
Ditches	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Vehicle Expenses	15,166.06	-1.7%	0.01	94.8	55.8	10,056	0.006	62.8	37.0	4,200,000	2.5	26,250	15,441
Total	***49,109.16***	**-5.5%**	***0.03***	***306.9***	***180.5***	**32,561**	**0.019**	**203.5**	**119.7**	**13,600,000**	**8.0**	**85,000**	**50,000**
Depreciation	32,741.16	-3.7%	0.02	204.6	120.4	21,708	0.013	135.7	79.8	9,067,143	5.3	56,670	33,335
Interests	182,359.25	-20.6%	0.11	1,139.7	670.4	120,910	0.071	755.7	444.5	50,501,494	29.8	315,634	185,667
Total	***215,100.40***	**-24.3%**	***0.13***	***1,344.4***	***790.8***	**142,619**	**0.084**	**891.4**	**524.3**	**59,568,637**	**35.1**	**372,304**	**219,002**
Fire & Earthquake Insurance	1,444.39	-0.2%	0.00	9.0	5.3	958	0.001	6.0	3.5	400,000	0.2	2,500	1,471
Administration	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Farm Manager Wage	43,331.61	-4.9%	0.03	270.8	159.3	28,730	0.017	179.6	105.6	12,000,000	7.1	75,000	44,118
Accountant	6,499.74	-0.7%	0.00	40.6	23.9	4,310	0.003	26.9	15.8	1,800,000	1.1	11,250	6,618
Taxes/ Rates	3,610.97	-0.4%	0.00	22.6	13.3	2,394	0.001	15.0	8.8	1,000,000	0.6	6,250	3,676
General Costs	16,249.35	-1.8%	0.01	101.6	59.7	10,774	0.006	67.3	39.6	4,500,000	2.7	28,125	16,544
ACC	-	0.0%	-	-	-	-	-	-	-	-	-	-	-
Total	***71,136.06***	**-8.0%**	***0.04***	***444.6***	***261.5***	**47,166**	**0.028**	**294.8**	**173.4**	**19,700,000**	**11.6**	**123,125**	**72,426**
Total Costs	**(886,126.47)**	**100.0%**	**(0.52)**	**(5,538.3)**	**(3,257.8)**	**(587,531)**	**(0.346)**	**(3,672.1)**	**(2,160.0)**	**(245,398,637)**	**(144.7)**	**(1,533,741)**	**(902,201)**
Total Income	**732,456.84**		**0.43**	**4,577.9**	**2,692.9**	**485,643**	**0.286**	**3,035.3**	**1,785.5**	**202,842,276**	**119.6**	**1,267,764**	**745,744**
Gross Profit	**(153,669.63)**		**(0.09)**	**(960.4)**	**(565.0)**	**(101,888)**	**(0.060)**	**(636.8)**	**(374.6)**	**(42,556,361)**	**(25.1)**	**(265,977)**	**(156,457)**
GP - Interetst	**28,689.62**		**0.02**	**179.3**	**105.5**	**19,022**	**0.011**	**118.9**	**69.9**	**7,945,133**	**4.7**	**49,657**	**29,210**
Taxes													
Profits													
Profitability	**1.26%**									**0.84%**			

Appendix F

Summaries of data of all farmers by production and production factors, in terms of each of the three currencies.

Revenue & Expenditure	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals
Milk Sales	315,720.8	548,316.0	240,898.0	115,532.0	166,995.0	224,262.0	286,212.0	213,122.0	193,796.0	325,710.0	144,464.0	247,688.0
Winter Milk	54,034.9	128,461.0	48,254.0	35,547.0	48,971.0	122,149.0	66,178.0	66,805.0	41,144.0	83,793.0	47,230.0	50,314.0
Stock Sales cows	20,790.0	46,612.0	16,720.0	7,500.0	14,800.0	16,100.0	27,625.0	31,500.0	19,500.0	25,500.0	17,550.0	30,000.0
Calves sold	4,852.5	15,390.0	19,500.0	6,750.0	5,280.0	6,400.0	13,125.0	6,498.0	8,892.0	8,625.0	8,250.0	23,000.0
Total	**395,398.2**	**738,779.0**	**325,372.0**	**165,329.0**	**236,046.0**	**368,911.0**	**393,140.0**	**317,925.0**	**263,332.0**	**443,628.0**	**217,494.0**	**351,002.0**
Farm Cash Expenses												
Replacement	85,850.0	132,000.0	36,000.0	17,600.0	32,000.0	176,000.0	60,000.0	38,400.0	48,000.0	70,000.0	22,000.0	56,000.0
Pasture and Supplements	12,739.4	38,945.0	48,370.0	30,500.0	66,875.0	36,500.0	26,100.0	60,000.0	5,024.0	85,500.0	18,874.0	68,200.0
Fertiliser (incl nitrogen)	25,219.0	43,671.0	12,000.0	14,000.0	18,490.0	35,000.0	40,600.0	6,400.0	22,000.0	40,500.0	29,896.0	27,000.0
Animal Health	25,285.0	46,260.0	7,700.0	16,500.0	25,267.0	14,300.0	27,526.0	15,408.0	19,839.0	26,000.0	15,205.0	14,900.0
Wages	37,391.0	72,909.0	52,700.0	30,216.0	27,689.0	18,000.0	25,000.0	30,000.0	27,990.0	25,000.0	26,650.0	20,000.0
Total	**186,484.4**	**333,785.0**	**156,770.0**	**108,816.0**	**170,321.0**	**279,800.0**	**179,226.0**	**150,208.0**	**122,853.0**	**247,000.0**	**112,625.0**	**186,100.0**
Overheads												
Shed Expenses	4,415.0	16,759.0	10,000.0	5,000.0	3,292.0	1,850.0	2,500.0	2,800.0	4,231.0	3,000.0	2,133.0	11,800.0
Fences	2,163.0	3,928.0	3,500.0	2,000.0	2,188.0	700.0	1,600.0	2,500.0	1,612.0	2,000.0	3,534.0	3,200.0
Repairs and Maintenance	7,753.0	16,330.0	1,200.0	4,500.0	8,141.0	1,100.0	20,300.0	4,000.0	15,632.0	1,000.0	3,131.0	2,500.0
Ditches	3,270.0	706.0	2,500.0	-	3,080.0	500.0	4,000.0	3,000.0	4,400.0	3,000.0	4,503.0	2,000.0
Vehicle Expenses	10,739.0	31,675.0	6,300.0	20,000.0	9,984.0	3,570.0	17,000.0	8,000.0	16,000.0	6,000.0	15,536.0	13,600.0
Total	**28,340.0**	**69,398.0**	**23,500.0**	**31,500.0**	**26,685.0**	**7,720.0**	**45,400.0**	**20,300.0**	**41,875.0**	**15,000.0**	**28,837.0**	**33,100.0**
Depreciation	32,989.1	61,050.0	23,070.0	42,061.0	22,490.0	13,033.0	45,500.0	39,517.0	10,260.0	16,558.0	9,053.0	23,760.0
Interests	229,147.5	366,037.0	177,594.0	94,670.0	114,616.0	274,480.0	255,040.0	151,045.0	72,003.0	166,120.0	71,385.0	154,640.0
Total	**262,136.6**	**427,087.0**	**200,664.0**	**136,731.0**	**137,106.0**	**287,513.0**	**300,540.0**	**190,562.0**	**82,263.0**	**182,678.0**	**80,438.0**	**178,400.0**
Fire & Earthquake Insurance	1,900.0	2,387.0	3,050.0	5,406.0	3,635.0	-	6,000.0	-	1,768.0	-	-	300.0
Administration	3,531.0	4,986.0	-	3,500.0	3,000.0	600.0	-	39,000.0	4,300.0	5,000.0	2,351.0	-
Farm Manager Wage	50,000.0	45,500.0	40,000.0	30,216.0	35,000.0	-	-	-	-	45,000.0	-	25,000.0
Accountant	3,000.0	4,665.0	2,500.0	15,000.0	1,974.0	1,100.0	-	2,500.0	1,900.0	7,000.0	4,716.0	3,300.0
Taxes/ Rates	4,736.0	29,424.0	6,500.0	10,000.0	4,632.0	5,000.0	6,000.0	10,500.0	5,300.0	10,000.0	5,035.0	10,000.0
General Costs	9,328.0	6,122.0	3,000.0	500.0	13,170.0	4,700.0	14,000.0	750.0	3,100.0	5,000.0	-	4,500.0
ACC	3,371.0	4,721.0	1,800.0	450.0	2,566.0	4,000.0	3,000.0	900.0	3,700.0	3,000.0	-	2,200.0
Total	**75,866.0**	**97,805.0**	**56,850.0**	**65,072.0**	**63,977.0**	**15,400.0**	**29,000.0**	**53,650.0**	**20,068.0**	**75,000.0**	**12,102.0**	**45,300.0**
Total Costs	**(552,827.1)**	**(928,075.0)**	**(437,784.0)**	**(342,119.0)**	**(398,089.0)**	**(590,433.0)**	**(554,166.0)**	**(414,720.0)**	**(267,059.0)**	**(519,678.0)**	**(234,002.0)**	**(442,900.0)**
Total Income	**395,398.2**	**738,779.0**	**325,372.0**	**165,329.0**	**236,046.0**	**368,911.0**	**393,140.0**	**317,925.0**	**263,332.0**	**443,628.0**	**217,494.0**	**351,002.0**
Gross Profits	**(157,428.9)**	**(189,296.0)**	**(112,412.0)**	**(176,790.0)**	**(162,043.0)**	**(221,522.0)**	**(161,026.0)**	**(96,795.0)**	**(3,727.0)**	**(76,050.0)**	**(16,508.0)**	**(91,898.0)**
G. Profit - Interests	**71,718.7**	**176,741.0**	**65,182.0**	**(82,120.0)**	**(47,427.0)**	**52,958.0**	**94,014.0**	**54,250.0**	**68,276.0**	**90,070.0**	**54,877.0**	**62,742.0**
Taxes												
Profits												
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Appendix F

New Zealand Currency

	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes	276.9					
Milk Sales	97,742.0	48,994.6	45,832.9	239,570.5	111,552.5	502,463.4
Winter Milk	27,132.2	14,231.6	11,374.5	56,347.6	35,976.3	158,929.6
Stock Sales cows	20,582.5	10,110.7	6,951.1	31,198.8	30,621.0	26,540.6
Calves sold	23,399.1	8,666.3	38,478.5	69,164.5	30,332.1	44,523.2
Total	**168,855.8**	**82,003.2**	**102,637.1**	**396,281.3**	**208,481.9**	**732,456.8**
Farm Cash Expenses						
Replacement	66,730.7	28,526.6	15,689.7	68,463.9	66,983.4	199,686.5
Pasture and Supplements	22,211.1	5,849.8	16,249.4	53,803.4	32,780.4	212,433.2
Fertiliser (incl nitrogen)	7,209.3	6,420.3	18,054.8	12,421.7	12,093.1	36,470.8
Animal Health	4,925.4	433.3	2,888.8	6,319.2	5,134.8	50,553.5
Wages	9,857.9	10,110.7	14,082.8	25,999.0	18,112.6	51,636.8
Total	**110,934.4**	**51,340.7**	**66,965.4**	**167,007.2**	**135,104.3**	**550,780.9**
Overheads						
Shed Expenses	2,166.6	216.7	2,888.8	3,611.0	1,960.8	14,443.9
Fences	722.2	-	-	1,083.3	722.2	361.1
Repairs and Maintenance	4,333.2	-	-	3,249.9	1,614.1	19,138.1
Ditches	-	-	-	1,083.3	-	-
Vehicle Expenses	-	830.5	-	7,221.9	-	15,166.1
Total	**7,221.9**	**1,047.2**	**2,888.8**	**16,249.4**	**4,297.1**	**49,109.2**
Depreciation	18,325.7	3,963.0	12,187.0	11,175.9	14,443.9	32,741.2
Interests	97,048.4	28,996.1	54,467.8	88,685.4	98,839.4	182,359.2
Total	**115,374.0**	**32,959.1**	**66,654.8**	**99,861.3**	**113,283.3**	**215,100.4**
Fire & Earthquake Insurance	541.6	460.0	1,083.3	722.2	314.2	1,444.4
Administration	43,331.6	6,499.7	4,333.2	7,221.9	28,887.7	-
Farm Manager Wage	-	-	-	43,331.6	43,331.6	43,331.6
Accountant	325.0	938.9	866.6	-	675.3	6,499.7
Taxes/ Rates	1,805.5	1,372.2	-	3,611.0	-	3,611.0
General Costs	433.3	1,083.3	4,333.2	2,527.7	1,592.4	16,249.4
ACC	-	381.3	288.9	577.8	-	-
Total	**46,437.0**	**10,735.4**	**10,905.1**	**57,992.1**	**74,801.2**	**71,136.1**
Total Costs	**(279,967.4)**	**(96,082.4)**	**(147,414.1)**	**(341,110.0)**	**(327,485.9)**	**(886,126.5)**
Total Income	**168,855.8**	**82,003.2**	**102,637.1**	**396,281.3**	**208,481.9**	**732,456.8**
Gross Profits	**(111,111.6)**	**(14,079.2)**	**(44,777.1)**	**55,171.3**	**(119,003.9)**	**(153,669.6)**
G. Profit - Interests Taxes	**(14,063.2)**	**14,916.9**	**9,690.8**	**143,856.7**	**(20,164.5)**	**28,689.6**
Profits						
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

New Zealand Currency

$/Per Liter

Table Revenue and Expenditure												
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	per liter	per liter	per liter	per liter	per liter	per liter	per liter	per liter	per liter	per liter	per liter	per liter
Milk Sales	0.2284	0.2287	0.3385	0.2184	0.2104	0.2066	0.2215	0.2181	0.2256	0.2188	0.2067	0.2230
Winter Milk	0.0391	0.0536	0.0678	0.0672	0.0617	0.1125	0.0512	0.0684	0.0479	0.0563	0.0676	0.0453
Milk Income	0.2674	0.2823	0.4063	0.2856	0.2720	0.3192	0.2727	0.2865	0.2735	0.2751	0.2742	0.2683
Stock Sales cows	0.0150	0.0194	0.0235	0.0142	0.0186	0.0148	0.0214	0.0322	0.0227	0.0171	0.0251	0.0270
Calves sold	0.0035	0.0064	0.0274	0.0128	0.0067	0.0059	0.0102	0.0067	0.0104	0.0058	0.0118	0.0207
Total	***0.2860***	***0.3082***	***0.4571***	***0.3125***	***0.2973***	***0.3399***	***0.3042***	***0.3254***	***0.3065***	***0.2980***	***0.3111***	***0.3161***
Farm Cash Expenses												
Replacement	0.0621	0.0551	0.0506	0.0333	0.0403	0.1622	0.0464	0.0393	0.0559	0.0470	0.0315	0.0504
Past.& Suppl.	0.0092	0.0162	0.0680	0.0577	0.0842	0.0336	0.0202	0.0614	0.0058	0.0574	0.0270	0.0614
Fertiliser (incl N)	0.0182	0.0182	0.0169	0.0265	0.0233	0.0322	0.0314	0.0065	0.0256	0.0272	0.0428	0.0243
Animal Health	0.0183	0.0193	0.0108	0.0312	0.0318	0.0132	0.0213	0.0158	0.0231	0.0175	0.0218	0.0134
Wages	0.0270	0.0304	0.0740	0.0571	0.0349	0.0166	0.0193	0.0307	0.0326	0.0168	0.0381	0.0180
Total	***0.1349***	***0.1392***	***0.2203***	***0.2057***	***0.2145***	***0.2578***	***0.1387***	***0.1537***	***0.1430***	***0.1659***	***0.1611***	***0.1676***
Overheads												
Shed Expenses	0.0032	0.0070	0.0141	0.0095	0.0041	0.0017	0.0019	0.0029	0.0049	0.0020	0.0031	0.0106
Fences	0.0016	0.0016	0.0049	0.0038	0.0028	0.0006	0.0012	0.0026	0.0019	0.0013	0.0051	0.0029
Rep & Mntce	0.0056	0.0068	0.0017	0.0085	0.0103	0.0010	0.0157	0.0041	0.0182	0.0007	0.0045	0.0023
Ditches	0.0024	0.0003	0.0035	-	0.0039	0.0005	0.0031	0.0031	0.0051	0.0020	0.0064	0.0018
Vehicle Expenses	0.0078	0.0132	0.0089	0.0378	0.0126	0.0033	0.0132	0.0082	0.0186	0.0040	0.0222	0.0122
Total	***0.0205***	***0.0290***	***0.0330***	***0.0595***	***0.0336***	***0.0071***	***0.0351***	***0.0208***	***0.0487***	***0.0101***	***0.0413***	***0.0298***
Depreciation	0.0239	0.0255	0.0324	0.0795	0.0283	0.0120	0.0352	0.0404	0.0119	0.0111	0.0130	0.0214
Interests	0.1657	0.1527	0.2495	0.1790	0.1444	0.2529	0.1974	0.1546	0.0838	0.1116	0.1021	0.1392
Total	***0.1896***	***0.1782***	***0.2819***	***0.2585***	***0.1727***	***0.2649***	***0.2326***	***0.1950***	***0.0958***	***0.1227***	***0.1151***	***0.1606***
Fire & Earthqk Ins..	0.0014	0.0010	0.0043	0.0102	0.0046	-	0.0046	-	0.0021	-	-	0.0003
Administration	0.0026	0.0021	-	0.0066	0.0038	0.0006	-	0.0399	0.0050	0.0034	0.0034	-
Farm Mnger Wage	0.0362	0.0190	0.0562	0.0571	0.0441	-	-	-	-	0.0302	-	0.0225
Accountant	0.0022	0.0019	0.0035	0.0284	0.0025	0.0010	-	0.0026	0.0022	0.0047	0.0067	0.0030
Taxes/ Rates	0.0034	0.0123	0.0091	0.0189	0.0058	0.0046	0.0046	0.0107	0.0062	0.0067	0.0072	0.0090
General Costs	0.0067	0.0026	0.0042	0.0009	0.0166	0.0043	0.0108	0.0008	0.0036	0.0034	-	0.0041
ACC	0.0024	0.0020	0.0025	0.0009	0.0032	0.0037	0.0023	0.0009	0.0043	0.0020	-	0.0020
Total	***0.0549***	***0.0408***	***0.0799***	***0.1230***	***0.0806***	***0.0142***	***0.0224***	***0.0549***	***0.0234***	***0.0504***	***0.0173***	***0.0408***
Total Costs	**(0.3999)**	**(0.3872)**	**(0.6151)**	**(0.6467)**	**(0.5014)**	**(0.5440)**	**(0.4288)**	**(0.4244)**	**(0.3109)**	**(0.3491)**	**(0.3347)**	**(0.3988)**
Total Income	**0.2860**	**0.3082**	**0.4571**	**0.3125**	**0.2973**	**0.3399**	**0.3042**	**0.3254**	**0.3065**	**0.2980**	**0.3111**	**0.3161**
Gross Profit	**(0.1139)**	**(0.0790)**	**(0.1579)**	**(0.3342)**	**(0.2041)**	**(0.2041)**	**(0.1246)**	**(0.0991)**	**(0.0043)**	**(0.0511)**	**(0.0236)**	**(0.0827)**
GP - Interests; before Taxes	**0.0519**	**0.0737**	**0.0916**	**(0.1552)**	**(0.0597)**	**0.0488**	**0.0728**	**0.0555**	**0.0795**	**0.0605**	**0.0785**	**0.0565**
Profits Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

New Zealand Currency

$/Per Liter

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes	Per Liter	Per Liter	Per Liter	Per Liter	Per Liter	Per Liter
Milk Sales	0.2513	0.2583	0.2604	0.3040	0.2646	0.2963
Winter Milk	0.0697	0.0750	0.0646	0.0715	0.0853	0.0937
Milk Income	0.3210	0.3333	0.3250	0.3755	0.3499	0.3900
Stock Sales cows	0.0529	0.0533	0.0395	0.0396	0.0726	0.0156
Calves sold	0.0602	0.0457	0.2186	0.0878	0.0719	0.0263
Total	***0.4341***	***0.4323***	***0.5831***	***0.5029***	***0.4945***	***0.4319***
Farm Cash Expenses						
Replacement	0.1715	0.1504	0.0891	0.0869	0.1589	0.1177
Past.& Suppl.	0.0571	0.0308	0.0923	0.0683	0.0777	0.1253
Fertiliser (incl N)	0.0185	0.0338	0.1026	0.0158	0.0287	0.0215
Animal Health	0.0127	0.0023	0.0164	0.0080	0.0122	0.0298
Wages	0.0253	0.0533	0.0800	0.0330	0.0430	0.0304
Total	***0.2852***	***0.2706***	***0.3804***	***0.2119***	***0.3204***	***0.3248***
Overheads						
Shed Expenses	0.0056	0.0011	0.0164	0.0046	0.0047	0.0085
Fences	0.0019	-	-	0.0014	0.0017	0.0002
Rep & Mntce	0.0111	-	-	0.0041	0.0038	0.0113
Ditches	-	-	-	0.0014	-	-
Vehicle Expenses	-	0.0044	-	0.0092	-	0.0089
Total	***0.0186***	***0.0055***	***0.0164***	***0.0206***	***0.0102***	***0.0290***
Depreciation	0.0471	0.0209	0.0692	0.0142	0.0343	0.0193
Interests	0.2495	0.1529	0.3094	0.1125	0.2344	0.1075
Total	***0.2966***	***0.1737***	***0.3787***	***0.1267***	***0.2687***	***0.1268***
Fire & Earthqk Ins..	0.0014	0.0024	0.0062	0.0009	0.0007	0.0009
Administration	0.1114	0.0343	0.0246	0.0092	0.0685	-
Farm Mnger Wage	-	-	-	0.0550	0.1028	0.0256
Accountant	0.0008	0.0049	0.0049	-	0.0016	0.0038
Taxes/ Rates	0.0046	0.0072	-	0.0046	-	0.0021
General Costs	0.0011	0.0057	0.0246	0.0032	0.0038	0.0096
ACC	-	0.0020	0.0016	0.0007	-	-
Total	***0.1194***	***0.0566***	***0.0620***	***0.0736***	***0.1774***	***0.0419***
Total Costs	**(0.7197)**	**(0.5065)**	**(0.8374)**	**(0.4329)**	**(0.7767)**	**(0.5225)**
Total Income	**0.4341**	**0.4323**	**0.5831**	**0.5029**	**0.4945**	**0.4319**
Gross Profit	**(0.2856)**	**(0.0742)**	**(0.2544)**	**0.0700**	**(0.2822)**	**(0.0906)**
GP - Interests; before Taxes	**(0.0362)**	**0.0786**	**0.0551**	**0.1826**	**(0.0478)**	**0.0169**
Profits						
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

New Zealand Currency

$ / Per Hectare

	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	per cow	per cow	per cow	per cow	per cow	per cow	per cow	per cow	per cow	per cow	per cow	per cow
Milk Sales	1,961.0	1,986.7	2,409.0	2,750.8	1,964.6	1,868.9	1,713.8	1,776.0	1,575.6	3,831.9	1,805.8	2,013.7
Winter Milk	335.6	465.4	482.5	846.4	576.1	1,017.9	396.3	556.7	334.5	985.8	590.4	409.1
Milk Income	2,296.6	2,452.1	2,891.5	3,597.1	2,540.8	2,886.8	2,110.1	2,332.7	1,910.1	4,817.7	2,396.2	2,422.8
Stock Sales cows	129.1	168.9	167.2	178.6	174.1	134.2	165.4	262.5	158.5	300.0	219.4	243.9
Calves sold	30.1	55.8	195.0	160.7	62.1	53.3	78.6	54.2	72.3	101.5	103.1	187.0
Stok + Caves	159.3	224.6	362.2	339.3	236.2	187.5	244.0	316.7	230.8	401.5	322.5	430.9
Total	***2,455.9***	***2,676.7***	***3,253.7***	***3,936.4***	***2,777.0***	***3,074.3***	***2,354.1***	***2,649.4***	***2,140.9***	***5,219.2***	***2,718.7***	***2,853.7***
Farm Cash Expenses												
Replacement	533.2	478.3	360.0	419.0	376.5	1,466.7	359.3	320.0	390.2	823.5	275.0	455.3
Past.& Suppl.	79.1	141.1	483.7	726.2	786.8	304.2	156.3	500.0	40.8	1,005.9	235.9	554.5
Fertiliser (incl N)	156.6	158.2	120.0	333.3	217.5	291.7	243.1	53.3	178.9	476.5	373.7	219.5
Animal Health	157.0	167.6	77.0	392.9	297.3	119.2	164.8	128.4	161.3	305.9	190.1	121.1
Wages	232.2	264.2	527.0	719.4	325.8	150.0	149.7	250.0	227.6	294.1	333.1	162.6
Total	***1,158.3***	***1,209.4***	***1,567.7***	***2,590.9***	***2,003.8***	***2,331.7***	***1,073.2***	***1,251.7***	***998.8***	***2,905.9***	***1,407.8***	***1,513.0***
Overheads												
Shed Expenses	27.4	60.7	100.0	119.0	38.7	15.4	15.0	23.3	34.4	35.3	26.7	95.9
Fences	13.4	14.2	35.0	47.6	25.7	5.8	9.6	20.8	13.1	23.5	44.2	26.0
Rep & Mntce	48.2	59.2	12.0	107.1	95.8	9.2	121.6	33.3	127.1	11.8	39.1	20.3
Ditches	20.3	2.6	25.0	-	36.2	4.2	24.0	25.0	35.8	35.3	56.3	16.3
Vehicle Expenses	66.7	114.8	63.0	476.2	117.5	29.8	101.8	66.7	130.1	70.6	194.2	110.6
Total	***176.0***	***251.4***	***235.0***	***750.0***	***313.9***	***64.3***	***271.9***	***169.2***	***340.4***	***176.5***	***360.5***	***269.1***
Depreciation	204.9	221.2	230.7	1,001.5	264.6	108.6	272.5	329.3	83.4	194.8	113.2	193.2
Interests	1,423.3	1,326.2	1,775.9	2,254.0	1,348.4	2,287.3	1,527.2	1,258.7	585.4	1,954.4	892.3	1,257.2
Total	***1,628.2***	***1,547.4***	***2,006.6***	***3,255.5***	***1,613.0***	***2,395.9***	***1,799.6***	***1,588.0***	***668.8***	***2,149.2***	***1,005.5***	***1,450.4***
Fire & Earthqk Ins..	11.8	8.6	30.5	128.7	42.8	-	35.9	-	14.4	-	-	2.4
Administration	21.9	18.1	-	83.3	35.3	5.0	-	325.0	35.0	58.8	29.4	-
Farm Mnger Wage	310.6	164.9	400.0	719.4	411.8	-	-	-	-	529.4	-	203.3
Accountant	18.6	16.9	25.0	357.1	23.2	9.2	-	20.8	15.4	82.4	59.0	26.8
Taxes/ Rates	29.4	106.6	65.0	238.1	54.5	41.7	35.9	87.5	43.1	117.6	62.9	81.3
General Costs	57.9	22.2	30.0	11.9	154.9	39.2	83.8	6.3	25.2	58.8	-	36.6
ACC	20.9	17.1	18.0	10.7	30.2	33.3	18.0	7.5	30.1	35.3	-	17.9
Total	***471.2***	***354.4***	***568.5***	***1,549.3***	***752.7***	***128.3***	***173.7***	***447.1***	***163.2***	***882.4***	***151.3***	***368.3***
Total Costs	**(3,433.7)**	**(3,362.6)**	**(4,377.8)**	**(8,145.7)**	**(4,683.4)**	**(4,920.3)**	**(3,318.4)**	**(3,456.0)**	**(2,171.2)**	**(6,113.9)**	**(2,925.0)**	**(3,600.8)**
Total Income	**2,455.9**	**2,676.7**	**3,253.7**	**3,936.4**	**2,777.0**	**3,074.3**	**2,354.1**	**2,649.4**	**2,140.9**	**5,219.2**	**2,718.7**	**2,853.7**
Total Revenue	**(977.8)**	**(685.9)**	**(1,124.1)**	**(4,209.3)**	**(1,906.4)**	**(1,846.0)**	**(964.2)**	**(806.6)**	**(30.3)**	**(894.7)**	**(206.4)**	**(747.1)**
Total Revenue - Intere	**445.5**	**640.4**	**651.8**	**(1,955.2)**	**(558.0)**	**441.3**	**563.0**	**452.1**	**555.1**	**1,059.6**	**686.0**	**510.1**
Taxes												
Profits												
Rentability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Appendix F

New Zealand Currency

$ / Per Hectare

	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes	Per Hectare	Per Hectare	Per Hectare	Per Hectare	Per Hectare	Per Hectare
Milk Sales	603.3	979.9	352.6	1,497.3	619.7	3,140.4
Winter Milk	167.5	284.6	87.5	352.2	199.9	993.3
Milk Income	770.8	1,264.5	440.1	1,849.5	819.6	4,133.7
Stock Sales cows	127.1	202.2	53.5	195.0	170.1	165.9
Calves sold	144.4	173.3	296.0	432.3	168.5	278.3
Stok + Caves	271.5	375.5	349.5	627.3	338.6	444.1
Total	***1,042.3***	***1,640.1***	***789.5***	***2,476.8***	***1,158.2***	***4,577.9***
Farm Cash Expenses						
Replacement	411.9	570.5	120.7	427.9	372.1	1,248.0
Past.& Suppl.	137.1	117.0	125.0	336.3	182.1	1,327.7
Fertiliser (incl N)	44.5	128.4	138.9	77.6	67.2	227.9
Animal Health	30.4	8.7	22.2	39.5	28.5	316.0
Wages	60.9	202.2	108.3	162.5	100.6	322.7
Total	***684.8***	***1,026.8***	***515.1***	***1,043.8***	***750.6***	***3,442.4***
Overheads						
Shed Expenses	13.4	4.3	22.2	22.6	10.9	90.3
Fences	4.5	-	-	6.8	4.0	2.3
Rep & Mntce	26.7	-	-	20.3	9.0	119.6
Ditches	-	-	-	6.8	-	-
Vehicle Expenses	-	16.6	-	45.1	-	94.8
Total	***44.6***	***20.9***	***22.2***	***101.6***	***23.9***	***306.9***
Depreciation	113.1	79.3	93.7	69.8	80.2	204.6
Interests	599.1	579.9	419.0	554.3	549.1	1,139.7
Total	***712.2***	***659.2***	***512.7***	***624.1***	***629.4***	***1,344.4***
Fire & Earthqk Ins..	3.3	9.2	8.3	4.5	1.7	9.0
Administration	267.5	130.0	33.3	45.1	160.5	-
Farm Mnger Wage	-	-	-	270.8	240.7	270.8
Accountant	2.0	18.8	6.7	-	3.8	40.6
Taxes/ Rates	11.1	27.4	-	22.6	-	22.6
General Costs	2.7	21.7	33.3	15.8	8.8	101.6
ACC	-	7.6	2.2	3.6	-	-
Total	***286.6***	***214.7***	***83.9***	***362.5***	***415.6***	***444.6***
Total Costs	**(1,728.2)**	**(1,921.6)**	**(1,134.0)**	**(2,131.9)**	**(1,819.4)**	**(5,538.3)**
Total Income	**1,042.3**	**1,640.1**	**789.5**	**2,476.8**	**1,158.2**	**4,577.9**
Total Revenue	**(685.9)**	**(281.6)**	**(344.4)**	**344.8**	**(661.1)**	**(960.4)**
Total Revenue - Intere	**(86.8)**	**298.3**	**74.5**	**899.1**	**(112.0)**	**179.3**
Taxes						
Profits						
Rentability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

New Zealand Currency

$ / Per Cow

	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	per cow	per cow	per cow	per cow	per cow	per cow	per cow	per cow	per cow	per cow	per cow	per cow
Milk Sales	1,025.1	1,085.8	1,095.0	924.3	835.0	975.1	1,100.8	592.0	775.2	958.0	963.1	825.6
Winter Milk	175.4	254.4	219.3	284.4	244.9	531.1	254.5	185.6	164.6	246.5	314.9	167.7
Milk Income	1,200.5	1,340.2	1,314.3	1,208.6	1,079.8	1,506.1	1,355.3	777.6	939.8	1,204.4	1,278.0	993.3
Stock Sales cows	67.5	92.3	76.0	60.0	74.0	70.0	106.3	87.5	78.0	75.0	117.0	100.0
Calves sold	15.8	30.5	88.6	54.0	26.4	27.8	50.5	18.1	35.6	25.4	55.0	76.7
Stok + Caves	83.3	122.8	164.6	114.0	100.4	97.8	156.7	105.6	113.6	100.4	172.0	176.7
Total	***1,283.8***	***1,462.9***	***1,479.0***	***1,322.6***	***1,180.2***	***1,604.0***	***1,512.1***	***883.1***	***1,053.3***	***1,304.8***	***1,450.0***	***1,170.0***
Farm Cash Expenses												
Replacement	278.7	261.4	163.6	140.8	160.0	765.2	230.8	106.7	192.0	205.9	146.7	186.7
Past.& Suppl.	41.4	77.1	219.9	244.0	334.4	158.7	100.4	166.7	20.1	251.5	125.8	227.3
Fertiliser (incl N)	81.9	86.5	54.5	112.0	92.5	152.2	156.2	17.8	88.0	119.1	199.3	90.0
Animal Health	82.1	91.6	35.0	132.0	126.3	62.2	105.9	42.8	79.4	76.5	101.4	49.7
Wages	121.4	144.4	239.5	241.7	138.4	78.3	96.2	83.3	112.0	73.5	177.7	66.7
Total	***605.5***	***661.0***	***712.6***	***870.5***	***851.6***	***1,216.5***	***689.3***	***417.2***	***491.4***	***726.5***	***750.8***	***620.3***
Overheads												
Shed Expenses	14.3	33.2	45.5	40.0	16.5	8.0	9.6	7.8	16.9	8.8	14.2	39.3
Fences	7.0	7.8	15.9	16.0	10.9	3.0	6.2	6.9	6.4	5.9	23.6	10.7
Rep & Mntce	25.2	32.3	5.5	36.0	40.7	4.8	78.1	11.1	62.5	2.9	20.9	8.3
Ditches	10.6	1.4	11.4	-	15.4	2.2	15.4	8.3	17.6	8.8	30.0	6.7
Vehicle Expenses	34.9	62.7	28.6	160.0	49.9	15.5	65.4	22.2	64.0	17.6	103.6	45.3
Total	***92.0***	***137.4***	***106.8***	***252.0***	***133.4***	***33.6***	***174.6***	***56.4***	***167.5***	***44.1***	***192.2***	***110.3***
Depreciation	107.1	120.9	104.9	336.5	112.5	56.7	175.0	109.8	41.0	48.7	60.4	79.2
Interests	744.0	724.8	807.2	757.4	573.1	1,193.4	980.9	419.6	288.0	488.6	475.9	515.5
Total	***851.1***	***845.7***	***912.1***	***1,093.8***	***685.5***	***1,250.1***	***1,155.9***	***529.3***	***329.1***	***537.3***	***536.3***	***594.7***
Fire & Earthqk Ins..	6.2	4.7	13.9	43.2	18.2	-	23.1	-	7.1	-	-	1.0
Administration	11.5	9.9	-	28.0	15.0	2.6	-	108.3	17.2	14.7	15.7	-
Farm Mnger Wage	162.3	90.1	181.8	241.7	175.0	-	-	-	-	132.4	-	83.3
Accountant	9.7	9.2	11.4	120.0	9.9	4.8	-	6.9	7.6	20.6	31.4	11.0
Taxes/ Rates	15.4	58.3	29.5	80.0	23.2	21.7	23.1	29.2	21.2	29.4	33.6	33.3
General Costs	30.3	12.1	13.6	4.0	65.9	20.4	53.8	2.1	12.4	14.7	-	15.0
ACC	10.9	9.3	8.2	3.6	12.8	17.4	11.5	2.5	14.8	8.8	-	7.3
Total	***246.3***	***193.7***	***258.4***	***520.6***	***319.9***	***67.0***	***111.5***	***149.0***	***80.3***	***220.6***	***80.7***	***151.0***
Total Costs	**(1,794.9)**	**(1,837.8)**	**(1,989.9)**	**(2,737.0)**	**(1,990.4)**	**(2,567.1)**	**(2,131.4)**	**(1,152.0)**	**(1,068.2)**	**(1,528.5)**	**(1,560.0)**	**(1,476.3)**
Total Income	**1,283.8**	**1,462.9**	**1,479.0**	**1,322.6**	**1,180.2**	**1,604.0**	**1,512.1**	**883.1**	**1,053.3**	**1,304.8**	**1,450.0**	**1,170.0**
Gross Profit	**(511.1)**	**(374.8)**	**(511.0)**	**(1,414.3)**	**(810.2)**	**(963.1)**	**(619.3)**	**(268.9)**	**(14.9)**	**(223.7)**	**(110.1)**	**(306.3)**
GP - Interests; before	**232.9**	**350.0**	**296.3**	**(657.0)**	**(237.1)**	**230.3**	**361.6**	**150.7**	**273.1**	**264.9**	**365.8**	**209.1**
Taxes												
Profits												
Rentability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Appendix F

New Zealand Currency

$ / Per Cow

	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes	$/cow	$/cow	$/cow	$/cow	$/cow	$/cow
Milk Sales	977.4	890.8	509.3	998.2	864.7	1,847.3
Winter Milk	271.3	258.8	126.4	234.8	278.9	584.3
Milk Income	1,248.7	1,149.6	635.6	1,233.0	1,143.6	2,431.6
Stock Sales cows	205.8	183.8	77.2	130.0	237.4	97.6
Calves sold	234.0	157.6	427.5	288.2	235.1	163.7
Stok + Caves	439.8	341.4	504.8	418.2	472.5	261.3
Total	***1,688.6***	***1,491.0***	***1,140.4***	***1,651.2***	***1,616.1***	***2,692.9***
Farm Cash Expenses						
Replacement	667.3	518.7	174.3	285.3	519.3	734.1
Past.& Suppl.	222.1	106.4	180.5	224.2	254.1	781.0
Fertiliser (incl N)	72.1	116.7	200.6	51.8	93.7	134.1
Animal Health	49.3	7.9	32.1	26.3	39.8	185.9
Wages	98.6	183.8	156.5	108.3	140.4	189.8
Total	***1,109.3***	***933.5***	***744.1***	***695.9***	***1,047.3***	***2,024.9***
Overheads						
Shed Expenses	21.7	3.9	32.1	15.0	15.2	53.1
Fences	7.2	-	-	4.5	5.6	1.3
Rep & Mntce	43.3	-	-	13.5	12.5	70.4
Ditches	-	-	-	4.5	-	-
Vehicle Expenses	-	15.1	-	30.1	-	55.8
Total	***72.2***	***19.0***	***32.1***	***67.7***	***33.3***	***180.5***
Depreciation	183.3	72.1	135.4	46.6	112.0	120.4
Interests	970.5	527.2	605.2	369.5	766.2	670.4
Total	***1,153.7***	***599.3***	***740.6***	***416.1***	***878.2***	***790.8***
Fire & Earthqk Ins..	5.4	8.4	12.0	3.0	2.4	5.3
Administration	433.3	118.2	48.1	30.1	223.9	-
Farm Mnger Wage	-	-	-	180.5	335.9	159.3
Accountant	3.2	17.1	9.6	-	5.2	23.9
Taxes/ Rates	18.1	24.9	-	15.0	-	13.3
General Costs	4.3	19.7	48.1	10.5	12.3	59.7
ACC	-	6.9	3.2	2.4	-	-
Total	***464.4***	***195.2***	***121.2***	***241.6***	***579.9***	***261.5***
Total Costs	**(2,799.7)**	**(1,747.0)**	**(1,637.9)**	**(1,421.3)**	**(2,538.7)**	**(3,257.8)**
Total Income	**1,688.6**	**1,491.0**	**1,140.4**	**1,651.2**	**1,616.1**	**2,692.9**
Gross Profit	**(1,111.1)**	**(256.0)**	**(497.5)**	**229.9**	**(922.5)**	**(565.0)**
GP - Interests; before Taxes Profits	**(140.6)**	**271.2**	**107.7**	**599.4**	**(156.3)**	**105.5**
Rentability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

Table Revenue and Expenditure												
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	418											
Milk Sales	209,333	363,552	159,723	76,602	110,723	148,693	189,768	141,307	128,493	215,956	95,784	164,225
Winter Milk	35,827	85,174	31,994	23,569	32,469	80,989	43,878	44,294	27,280	55,558	31,315	33,360
Stock Sales cows	13,784	30,905	11,086	4,973	9,813	10,675	18,316	20,886	12,929	16,907	11,636	19,891
Calves sold	3,217	10,204	12,929	4,475	3,501	4,243	8,702	4,308	5,896	5,719	5,470	15,250
Total	**262,162**	**489,835**	**215,732**	**109,619**	**156,506**	**244,600**	**260,665**	**210,795**	**174,598**	**294,140**	**144,206**	**232,726**
Farm Cash Expenses												
Replacement	56,921	87,520	23,869	11,669	21,217	116,694	39,782	25,460	31,826	46,412	14,587	37,130
Pasture and Supplements	8,447	25,822	32,071	20,223	44,340	24,201	17,305	39,782	3,331	56,689	12,514	45,219
Fertiliser (incl nitrogen)	16,721	28,955	7,956	9,282	12,259	23,206	26,919	4,243	14,587	26,853	19,822	17,902
Animal Health	16,765	30,672	5,105	10,940	16,753	9,481	18,251	10,216	13,154	17,239	10,081	9,879
Wages	24,791	48,341	34,942	20,034	18,359	11,935	16,576	19,891	18,558	16,576	17,670	13,261
Total	**123,645**	**221,310**	**103,944**	**72,149**	**112,928**	**185,517**	**118,833**	**99,593**	**81,456**	**163,769**	**74,674**	**123,390**
Overheads												
Shed Expenses	2,927	11,112	6,630	3,315	2,183	1,227	1,658	1,856	2,805	1,989	1,414	7,824
Fences	1,434	2,604	2,321	1,326	1,451	464	1,061	1,658	1,069	1,326	2,343	2,122
Repairs and Maintenance	5,140	10,827	796	2,984	5,398	729	13,460	2,652	10,365	663	2,076	1,658
Ditches	2,168	468	1,658	-	2,042	332	2,652	1,989	2,917	1,989	2,986	1,326
Vehicle Expenses	7,120	21,002	4,177	13,261	6,620	2,367	11,272	5,304	10,609	3,978	10,301	9,017
Total	**18,790**	**46,013**	**15,581**	**20,886**	**17,693**	**5,119**	**30,102**	**13,460**	**27,765**	**9,945**	**19,120**	**21,946**
Depreciation	21,873	40,478	15,296	27,888	14,912	8,641	30,168	26,201	6,803	10,979	6,002	15,754
Interests	151,932	242,695	117,751	62,769	75,994	181,989	169,100	100,148	47,740	110,143	47,331	102,531
Total	**173,805**	**283,173**	**133,047**	**90,657**	**90,906**	**190,631**	**199,268**	**126,349**	**54,543**	**121,122**	**53,333**	**118,285**
Fire & Earthquake Insurance	1,260	1,583	2,022	3,584	2,410	-	3,978	-	1,172	-	-	199
Administration	2,341	3,306	-	2,321	1,989	398	-	25,858	2,851	3,315	1,559	-
Farm Manager Wage	33,152	30,168	26,521	20,034	23,206	-	-	-	-	29,836	-	16,576
Accountant	1,989	3,093	1,658	9,945	1,309	729	-	1,658	1,260	4,641	3,127	2,188
Taxes/ Rates	3,140	19,509	4,310	6,630	3,071	3,315	3,978	6,962	3,514	6,630	3,338	6,630
General Costs	6,185	4,059	1,989	332	8,732	3,116	9,282	497	2,055	3,315	-	2,984
ACC	2,235	3,130	1,193	298	1,701	2,652	1,989	597	2,453	1,989	-	1,459
Total	**50,302**	**64,848**	**37,693**	**43,145**	**42,419**	**10,211**	**19,228**	**35,572**	**13,306**	**49,727**	**8,024**	**30,035**
Total Costs	**(366,543)**	**(615,344)**	**(290,265)**	**(226,836)**	**(263,946)**	**(391,477)**	**(367,430)**	**(274,973)**	**(177,069)**	**(344,564)**	**(155,151)**	**(293,657)**
Total Income	**262,162**	**489,835**	**215,732**	**109,619**	**156,506**	**244,600**	**260,665**	**210,795**	**174,598**	**294,140**	**144,206**	**232,726**
Gross Profit	**(104,381)**	**(125,509)**	**(74,533)**	**(117,218)**	**(107,440)**	**(146,876)**	**(106,766)**	**(64,178)**	**(2,471)**	**(50,424)**	**(10,945)**	**(60,931)**
GP - Interests	**47,552**	**117,185**	**43,218**	**(54,448)**	**(31,446)**	**35,113**	**62,334**	**35,970**	**45,269**	**59,719**	**36,385**	**41,600**
Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Profits	-	-	-	-	-	-	-	-	-	-	-	-
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	64,806	32,485	30,389	158,843	73,963	333,150
Winter Milk	17,990	9,436	7,542	37,360	23,853	105,376
Stock Sales cows	13,647	6,704	4,609	20,686	20,303	17,597
Calves sold	15,514	5,746	25,512	45,858	20,111	29,520
Total	**111,957**	**54,371**	**68,052**	**262,748**	**138,230**	**485,643**
Farm Cash Expenses						
Replacement	44,245	18,914	10,403	45,394	44,412	132,399
Pasture and Supplements	14,727	3,879	10,774	35,673	21,734	140,850
Fertiliser (incl nitrogen)	4,780	4,257	11,971	8,236	8,018	24,181
Animal Health	3,266	287	1,915	4,190	3,405	33,519
Wages	6,536	6,704	9,337	17,238	12,009	34,237
Total	**73,553**	**34,041**	**44,400**	**110,731**	**89,579**	**365,186**
Overheads						
Shed Expenses	1,437	144	1,915	2,394	1,300	9,577
Fences	479	-	-	718	479	239
Repairs and Maintenance	2,873	-	-	2,155	1,070	12,689
Ditches	-	-	-	718	-	-
Vehicle Expenses	-	551	-	4,788	-	10,056
Total	**4,788**	**694**	**1,915**	**10,774**	**2,849**	**32,561**
Depreciation	12,151	2,628	8,080	7,410	9,577	21,708
Interests	64,346	19,225	36,114	58,801	65,534	120,910
Total	**76,497**	**21,853**	**44,194**	**66,211**	**75,111**	**142,619**
Fire & Earthquake Insurance	359	305	718	479	208	958
Administration	28,730	4,310	2,873	4,788	19,154	-
Farm Manager Wage	-	-	-	28,730	28,730	28,730
Accountant	215	622	575	-	448	4,310
Taxes/ Rates	1,197	910	-	2,394	-	2,394
General Costs	287	718	2,873	1,676	1,056	10,774
ACC	-	253	192	383	-	-
Total	**30,789**	**7,118**	**7,230**	**38,451**	**49,596**	**47,166**
Total Costs	**(185,628)**	**(63,706)**	**(97,740)**	**(226,167)**	**(217,134)**	**(587,531)**
Total Income	**111,957**	**54,371**	**68,052**	**262,748**	**138,230**	**485,643**
Gross Profit	**(73,671)**	**(9,335)**	**(29,689)**	**36,580**	**(78,904)**	**(101,888)**
GP - Interests	**(9,324)**	**9,890**	**6,425**	**95,382**	**(13,370)**	**19,022**
Taxes	**-**	**-**	**-**	**-**	**-**	**-**
Profits	**-**	**-**	**-**	**-**	**-**	**-**
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

Table Revenue and Expenditure												
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	Per Liter $US											
Milk Sales	0.1514	0.1517	0.2244	0.1448	0.1395	0.1370	0.1468	0.1446	0.1496	0.1451	0.1370	0.1479
Winter Milk	0.0259	0.0355	0.0450	0.0446	0.0409	0.0746	0.0340	0.0453	0.0318	0.0373	0.0448	0.0300
Stock Sales cows	0.0100	0.0129	0.0156	0.0094	0.0124	0.0098	0.0142	0.0214	0.0151	0.0114	0.0166	0.0179
Calves sold	0.0023	0.0043	0.0182	0.0085	0.0044	0.0039	0.0067	0.0044	0.0069	0.0038	0.0078	0.0137
Total	**0.1896**	**0.2043**	**0.3031**	**0.2072**	**0.1971**	**0.2254**	**0.2017**	**0.2157**	**0.2032**	**0.1976**	**0.2063**	**0.2096**
Farm Cash Expenses												
Replacement	0.0412	0.0365	0.0335	0.0221	0.0267	0.1075	0.0308	0.0261	0.0370	0.0312	0.0209	0.0334
Pasture and Supplements	0.0061	0.0108	0.0451	0.0382	0.0559	0.0223	0.0134	0.0407	0.0039	0.0381	0.0179	0.0407
Fertiliser (incl nitrogen)	0.0121	0.0121	0.0112	0.0175	0.0154	0.0214	0.0208	0.0043	0.0170	0.0180	0.0284	0.0161
Animal Health	0.0121	0.0128	0.0072	0.0207	0.0211	0.0087	0.0141	0.0105	0.0153	0.0116	0.0144	0.0089
Wages	0.0179	0.0202	0.0491	0.0379	0.0231	0.0110	0.0128	0.0204	0.0216	0.0111	0.0253	0.0119
Total	**0.0894**	**0.0923**	**0.1460**	**0.1364**	**0.1422**	**0.1709**	**0.0920**	**0.1019**	**0.0948**	**0.1100**	**0.1068**	**0.1111**
Overheads												
Shed Expenses	0.0021	0.0046	0.0093	0.0063	0.0027	0.0011	0.0013	0.0019	0.0033	0.0013	0.0020	0.0070
Fences	0.0010	0.0011	0.0033	0.0025	0.0018	0.0004	0.0008	0.0017	0.0012	0.0009	0.0034	0.0019
Repairs and Maintenance	0.0037	0.0045	0.0011	0.0056	0.0068	0.0007	0.0104	0.0027	0.0121	0.0004	0.0030	0.0015
Ditches	0.0016	0.0002	0.0023	-	0.0026	0.0003	0.0021	0.0020	0.0034	0.0013	0.0043	0.0012
Vehicle Expenses	0.0052	0.0088	0.0059	0.0251	0.0083	0.0022	0.0087	0.0054	0.0123	0.0027	0.0147	0.0081
Total	**0.0136**	**0.0192**	**0.0219**	**0.0395**	**0.0223**	**0.0047**	**0.0233**	**0.0138**	**0.0323**	**0.0067**	**0.0274**	**0.0198**
Depreciation	0.0158	0.0169	0.0215	0.0527	0.0188	0.0080	0.0233	0.0268	0.0079	0.0074	0.0086	0.0142
Interests	0.1099	0.1012	0.1654	0.1187	0.0957	0.1677	0.1309	0.1025	0.0556	0.0740	0.0677	0.0923
Total	**0.1257**	**0.1181**	**0.1869**	**0.1714**	**0.1145**	**0.1756**	**0.1542**	**0.1293**	**0.0635**	**0.0814**	**0.0763**	**0.1065**
Fire & Earthquake Insurance	0.0009	0.0007	0.0028	0.0068	0.0030	-	0.0031	-	0.0014	-	-	0.0002
Administration	0.0017	0.0014	-	0.0044	0.0025	0.0004	-	0.0265	0.0033	0.0022	0.0022	-
Farm Manager Wage	0.0240	0.0126	0.0373	0.0379	0.0292	-	-	-	-	0.0200	-	0.0149
Accountant	0.0014	0.0013	0.0023	0.0188	0.0016	0.0007	-	0.0017	0.0015	0.0031	0.0045	0.0020
Taxes/ Rates	0.0023	0.0081	0.0061	0.0125	0.0039	0.0031	0.0031	0.0071	0.0041	0.0045	0.0048	0.0060
General Costs	0.0045	0.0017	0.0028	0.0006	0.0110	0.0029	0.0072	0.0005	0.0024	0.0022	-	0.0027
ACC	0.0016	0.0013	0.0017	0.0006	0.0021	0.0024	0.0015	0.0006	0.0029	0.0013	-	0.0013
Total	**0.0364**	**0.0271**	**0.0530**	**0.0816**	**0.0534**	**0.0094**	**0.0149**	**0.0364**	**0.0155**	**0.0334**	**0.0115**	**0.0270**
Total Costs	**(0.2651)**	**(0.2567)**	**(0.4078)**	**(0.4288)**	**(0.3325)**	**(0.3607)**	**(0.2843)**	**(0.2814)**	**(0.2061)**	**(0.2315)**	**(0.2219)**	**(0.2644)**
Total Income	**0.1896**	**0.2043**	**0.3031**	**0.2072**	**0.1971**	**0.2254**	**0.2017**	**0.2157**	**0.2032**	**0.1976**	**0.2063**	**0.2096**
Gross Profit	**(0.0755)**	**(0.0524)**	**(0.1047)**	**(0.2216)**	**(0.1353)**	**(0.1353)**	**(0.0826)**	**(0.0657)**	**(0.0029)**	**(0.0339)**	**(0.0157)**	**(0.0549)**
GP - Interests	**0.0344**	**0.0489**	**0.0607**	**(0.1029)**	**(0.0396)**	**0.0324**	**0.0482**	**0.0368**	**0.0527**	**0.0401**	**0.0521**	**0.0375**
Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Profits	-	-	-	-	-	-	-	-	-	-	-	-
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	0.1666	0.1712	0.1726	0.2016	0.1754	0.1964
Winter Milk	0.0462	0.0497	0.0428	0.0474	0.0566	0.0621
Stock Sales cows	0.0351	0.0353	0.0262	0.0263	0.0482	0.0104
Calves sold	0.0399	0.0303	0.1449	0.0582	0.0477	0.0174
Total	**0.2878**	**0.2866**	**0.3866**	**0.3334**	**0.3278**	**0.2864**
Farm Cash Expenses						
Replacement	0.1137	0.0997	0.0591	0.0576	0.1053	0.0781
Pasture and Supplements	0.0379	0.0204	0.0612	0.0453	0.0515	0.0831
Fertiliser (incl nitrogen)	0.0123	0.0224	0.0680	0.0105	0.0190	0.0143
Animal Health	0.0084	0.0015	0.0109	0.0053	0.0081	0.0198
Wages	0.0168	0.0353	0.0530	0.0219	0.0285	0.0202
Total	**0.1891**	**0.1794**	**0.2522**	**0.1405**	**0.2125**	**0.2153**
Overheads						
Shed Expenses	0.0037	0.0008	0.0109	0.0030	0.0031	0.0056
Fences	0.0012	-	-	0.0009	0.0011	0.0001
Repairs and Maintenance	0.0074	-	-	0.0027	0.0025	0.0075
Ditches	-	-	-	0.0009	-	-
Vehicle Expenses	-	0.0029	-	0.0061	-	0.0059
Total	**0.0123**	**0.0037**	**0.0109**	**0.0137**	**0.0068**	**0.0192**
Depreciation	0.0312	0.0139	0.0459	0.0094	0.0227	0.0128
Interests	0.1654	0.1013	0.2052	0.0746	0.1554	0.0713
Total	**0.1967**	**0.1152**	**0.2511**	**0.0840**	**0.1781**	**0.0841**
Fire & Earthquake Insurance	0.0009	0.0016	0.0041	0.0006	0.0005	0.0006
Administration	0.0739	0.0227	0.0163	0.0061	0.0454	-
Farm Manager Wage	-	-	-	0.0365	0.0681	0.0169
Accountant	0.0006	0.0033	0.0033	-	0.0011	0.0025
Taxes/ Rates	0.0031	0.0048	-	0.0030	-	0.0014
General Costs	0.0007	0.0038	0.0163	0.0021	0.0025	0.0064
ACC	-	0.0013	0.0011	0.0005	-	-
Total	**0.0792**	**0.0375**	**0.0411**	**0.0488**	**0.1176**	**0.0278**
Total Costs	**(0.4772)**	**(0.3358)**	**(0.5552)**	**(0.2870)**	**(0.5150)**	**(0.3464)**
Total Income	**0.2878**	**0.2866**	**0.3866**	**0.3334**	**0.3278**	**0.2864**
Gross Profit	**(0.1894)**	**(0.0492)**	**(0.1687)**	**0.0464**	**(0.1871)**	**(0.0601)**
GP - Interests	**(0.0240)**	**0.0521**	**0.0365**	**0.1210**	**(0.0317)**	**0.0112**
Taxes	-	-	-	-	-	-
Profits	-	-	-	-	-	-
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

Table Revenue and Expenditure												
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	Per Ha $US											
Milk Sales	1,300.21	1,317.22	1,597.23	1,823.85	1,302.63	1,239.11	1,136.34	1,177.56	1,044.66	2,540.66	1,197.30	1,335.17
Winter Milk	222.53	308.60	319.94	561.16	381.99	674.91	262.74	369.12	221.79	653.62	391.44	271.22
Stock Sales cows	85.62	111.98	110.86	118.40	115.45	88.96	109.68	174.05	105.11	198.91	145.45	161.72
Calves sold	19.98	36.97	129.29	106.56	41.19	35.36	52.11	35.90	47.93	67.28	68.38	123.98
Total	**1,628.34**	**1,774.76**	**2,157.32**	**2,609.97**	**1,841.25**	**2,038.33**	**1,560.87**	**1,756.62**	**1,419.49**	**3,460.47**	**1,802.57**	**1,892.08**
Farm Cash Expenses												
Replacement	353.55	317.10	238.69	277.84	249.61	972.45	238.22	212.17	258.74	546.03	182.33	301.87
Pasture and Supplements	52.46	93.56	320.71	481.49	521.65	201.67	103.62	331.52	27.08	666.93	156.43	367.63
Fertiliser (incl nitrogen)	103.86	104.91	79.56	221.01	144.23	193.38	161.19	35.36	118.59	315.92	247.78	145.54
Animal Health	104.13	111.13	51.05	260.48	197.09	79.01	109.29	85.13	106.94	202.81	126.02	80.32
Wages	153.98	175.15	349.42	477.00	215.98	99.45	99.26	165.76	150.88	195.01	220.87	107.81
Total	**767.98**	**801.85**	**1,039.44**	**1,717.82**	**1,328.57**	**1,545.97**	**711.57**	**829.94**	**662.24**	**1,926.70**	**933.43**	**1,003.17**
Overheads												
Shed Expenses	18.18	40.26	66.30	78.93	25.68	10.22	9.93	15.47	22.81	23.40	17.68	63.61
Fences	8.91	9.44	23.21	31.57	17.07	3.87	6.35	13.81	8.69	15.60	29.29	17.25
Repairs and Maintenance	31.93	39.23	7.96	71.04	63.50	6.08	80.60	22.10	84.26	7.80	25.95	13.48
Ditches	13.47	1.70	16.58	-	24.03	2.76	15.88	16.58	23.72	23.40	37.32	10.78
Vehicle Expenses	44.23	76.09	41.77	315.73	77.88	19.73	67.49	44.20	86.25	46.80	128.76	73.31
Total	**116.71**	**166.71**	**155.81**	**497.27**	**208.15**	**42.66**	**180.25**	**112.16**	**225.73**	**117.01**	**239.00**	**178.43**
Depreciation	135.86	146.66	152.96	664.00	175.43	72.01	180.65	218.34	55.31	129.16	75.03	128.08
Interests	943.68	879.33	1,177.51	1,494.51	894.05	1,516.58	1,012.57	834.57	388.13	1,295.80	591.63	833.59
Total	**1,079.54**	**1,025.99**	**1,330.47**	**2,158.50**	**1,069.48**	**1,588.59**	**1,193.22**	**1,052.91**	**443.44**	**1,424.96**	**666.66**	**961.67**
Fire & Earthquake Insurance	7.82	5.73	20.22	85.34	28.35	-	23.82	-	9.53	-	-	1.62
Administration	14.54	11.98	-	55.25	23.40	3.32	-	215.49	23.18	39.00	19.48	-
Farm Manager Wage	205.91	109.30	265.21	477.00	273.01	-	-	-	-	351.02	-	134.76
Accountant	12.35	11.21	16.58	236.80	15.40	6.08	-	13.81	10.24	54.60	39.09	17.79
Taxes/ Rates	19.50	70.69	43.10	157.87	36.13	27.63	23.82	58.02	28.57	78.00	41.73	53.91
General Costs	38.41	14.71	19.89	7.89	102.73	25.97	55.58	4.14	16.71	39.00	-	24.26
ACC	13.88	11.34	11.93	7.10	20.02	22.10	11.91	4.97	19.94	23.40	-	11.86
Total	**312.43**	**234.96**	**376.93**	**1,027.26**	**499.05**	**85.09**	**115.14**	**296.43**	**108.18**	**585.03**	**100.30**	**244.19**
Total Costs	**(2,276.66)**	**(2,229.51)**	**(2,902.65)**	**(5,400.86)**	**(3,105.25)**	**(3,262.30)**	**(2,200.18)**	**(2,291.44)**	**(1,439.58)**	**(4,053.69)**	**(1,939.39)**	**(2,387.46)**
Total Income	**1,628.34**	**1,774.76**	**2,157.32**	**2,609.97**	**1,841.25**	**2,038.33**	**1,560.87**	**1,756.62**	**1,419.49**	**3,460.47**	**1,802.57**	**1,892.08**
Gross Profit	**(648.33)**	**(454.74)**	**(745.33)**	**(2,790.90)**	**(1,264.00)**	**(1,223.97)**	**(639.31)**	**(534.82)**	**(20.09)**	**(593.22)**	**(136.82)**	**(495.38)**
GP - Interests	**295.35**	**424.58**	**432.18**	**(1,296.39)**	**(369.95)**	**292.61**	**373.26**	**299.75**	**368.04**	**702.58**	**454.82**	**338.21**
Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Profits	-	-	-	-	-	-	-	-	-	-	-	-
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	400.04	649.70	233.76	992.77	410.91	2,082.19
Winter Milk	111.05	188.72	58.01	233.50	132.52	658.60
Stock Sales cows	84.24	134.07	35.45	129.29	112.79	109.98
Calves sold	95.77	114.92	196.25	286.61	111.73	184.50
Total	**691.09**	**1,087.42**	**523.48**	**1,642.17**	**767.95**	**3,035.27**
Farm Cash Expenses						
Replacement	273.12	378.28	80.02	283.71	246.73	827.49
Pasture and Supplements	90.91	77.57	82.88	222.96	120.75	880.31
Fertiliser (incl nitrogen)	29.51	85.14	92.08	51.48	44.55	151.13
Animal Health	20.16	5.75	14.73	26.19	18.91	209.49
Wages	40.35	134.07	71.83	107.74	66.72	213.98
Total	**454.03**	**680.81**	**341.54**	**692.07**	**497.66**	**2,282.41**
Overheads						
Shed Expenses	8.87	2.87	14.73	14.96	7.22	59.85
Fences	2.96	-	-	4.49	2.66	1.50
Repairs and Maintenance	17.73	-	-	13.47	5.95	79.31
Ditches	-	-	-	4.49	-	-
Vehicle Expenses	-	11.01	-	29.93	-	62.85
Total	**29.56**	**13.89**	**14.73**	**67.34**	**15.83**	**203.51**
Depreciation	75.00	52.55	62.16	46.31	53.20	135.68
Interests	397.20	384.51	277.80	367.51	364.08	755.69
Total	**472.20**	**437.06**	**339.96**	**413.82**	**417.28**	**891.37**
Fire & Earthquake Insurance	2.22	6.10	5.53	2.99	1.16	5.99
Administration	177.35	86.19	22.10	29.93	106.41	-
Farm Manager Wage	-	-	-	179.56	159.61	179.56
Accountant	1.33	12.45	4.42	-	2.49	26.93
Taxes/ Rates	7.39	18.20	-	14.96	-	14.96
General Costs	1.77	14.37	22.10	10.47	5.87	67.34
ACC	-	5.06	1.47	2.39	-	-
Total	**190.06**	**142.36**	**55.62**	**240.32**	**275.53**	**294.78**
Total Costs	**(1,145.85)**	**(1,274.12)**	**(751.85)**	**(1,413.55)**	**(1,206.30)**	**(3,672.07)**
Total Income	**691.09**	**1,087.42**	**523.48**	**1,642.17**	**767.95**	**3,035.27**
Gross Profit	**(454.76)**	**(186.70)**	**(228.37)**	**228.63**	**(438.35)**	**(636.80)**
GP - Interests	**(57.56)**	**197.81**	**49.43**	**596.14**	**(74.28)**	**118.89**
Taxes	-	-	-	-	-	-
Profits	-	-	-	-	-	-
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

Table Revenue and Expenditure												
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	Per Cow $US											
Milk Sales	679.65	719.90	726.02	612.81	553.62	646.49	729.88	392.52	513.97	635.17	638.56	547.42
Winter Milk	116.32	168.66	145.43	188.55	162.35	352.13	168.76	123.04	109.12	163.40	208.77	111.20
Stock Sales cows	44.75	61.20	50.39	39.78	49.06	46.41	70.45	58.02	51.72	49.73	77.57	66.30
Calves sold	10.45	20.21	58.77	35.80	17.50	18.45	33.47	11.97	23.58	16.82	36.47	50.83
Total	**851.18**	**969.97**	**980.60**	**876.95**	**782.53**	**1,063.48**	**1,002.56**	**585.54**	**698.39**	**865.12**	**961.37**	**775.75**
Farm Cash Expenses												
Replacement	184.81	173.31	108.50	93.36	106.09	507.36	153.01	70.72	127.30	136.51	97.24	123.77
Pasture and Supplements	27.42	51.13	145.78	161.78	221.70	105.22	66.56	110.51	13.32	166.73	83.43	150.73
Fertiliser (incl nitrogen)	54.29	57.34	36.17	74.26	61.30	100.90	103.54	11.79	58.35	78.98	132.15	59.67
Animal Health	54.43	60.74	23.21	87.52	83.76	41.22	70.19	28.38	52.62	50.70	67.21	32.93
Wages	80.49	95.72	158.83	160.27	91.79	51.89	63.75	55.25	74.23	48.75	117.80	44.20
Total	**401.45**	**438.24**	**472.47**	**577.19**	**564.64**	**806.59**	**457.05**	**276.65**	**325.82**	**481.67**	**497.83**	**411.30**
Overheads												
Shed Expenses	9.50	22.00	30.14	26.52	10.91	5.33	6.38	5.16	11.22	5.85	9.43	26.08
Fences	4.66	5.16	10.55	10.61	7.25	2.02	4.08	4.60	4.28	3.90	15.62	7.07
Repairs and Maintenance	16.69	21.44	3.62	23.87	26.99	3.17	51.77	7.37	41.46	1.95	13.84	5.53
Ditches	7.04	0.93	7.53	-	10.21	1.44	10.20	5.53	11.67	5.85	19.90	4.42
Vehicle Expenses	23.12	41.59	18.99	106.09	33.10	10.29	43.35	14.73	42.43	11.70	68.67	30.06
Total	**61.01**	**91.12**	**70.82**	**167.08**	**88.47**	**22.25**	**115.78**	**37.39**	**111.06**	**29.25**	**127.47**	**73.15**
Depreciation	71.02	80.15	69.53	223.10	74.56	37.57	116.03	72.78	27.21	32.29	40.02	52.51
Interests	493.29	480.58	535.23	502.15	379.97	791.26	650.38	278.19	190.96	323.95	315.54	341.77
Total	**564.30**	**560.74**	**604.76**	**725.26**	**454.53**	**828.83**	**766.42**	**350.97**	**218.17**	**356.24**	**355.55**	**394.28**
Fire & Earthquake Insurance	4.09	3.13	9.19	28.67	12.05	-	15.30	-	4.69	-	-	0.66
Administration	7.60	6.55	-	18.56	9.95	1.73	-	71.83	11.40	9.75	10.39	-
Farm Manager Wage	107.64	59.74	120.55	160.27	116.03	-	-	-	-	87.75	-	55.25
Accountant	6.46	6.12	7.53	79.56	6.54	3.17	-	4.60	5.04	13.65	20.85	7.29
Taxes/ Rates	10.20	38.63	19.59	53.04	15.36	14.41	15.30	19.34	14.06	19.50	22.26	22.10
General Costs	20.08	8.04	9.04	2.65	43.66	13.55	35.70	1.38	8.22	9.75	-	9.95
ACC	7.26	6.20	5.42	2.39	8.51	11.53	7.65	1.66	9.81	5.85	-	4.86
Total	**163.32**	**128.41**	**171.33**	**345.16**	**212.09**	**44.39**	**73.95**	**98.81**	**53.22**	**146.26**	**53.49**	**100.12**
Total Costs	**(1,190.07)**	**(1,218.50)**	**(1,319.39)**	**(1,814.69)**	**(1,319.73)**	**(1,702.07)**	**(1,413.19)**	**(763.81)**	**(708.28)**	**(1,013.42)**	**(1,034.34)**	**(978.86)**
Total Income	**851.18**	**969.97**	**980.60**	**876.95**	**782.53**	**1,063.48**	**1,002.56**	**585.54**	**698.39**	**865.12**	**961.37**	**775.75**
Gross Profit	**(338.90)**	**(248.53)**	**(338.79)**	**(937.74)**	**(537.20)**	**(638.59)**	**(410.64)**	**(178.27)**	**(9.88)**	**(148.30)**	**(72.97)**	**(203.10)**
GP - Interests	**154.39**	**232.05**	**196.44**	**(435.59)**	**(157.23)**	**152.66**	**239.75**	**99.92**	**181.08**	**175.65**	**242.57**	**138.67**
Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Profits	-	-	-	-	-	-	-	-	-	-	-	-
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	648.06	590.64	337.65	661.85	573.36	1,224.82
Winter Milk	179.90	171.56	83.80	155.67	184.91	387.41
Stock Sales cows	136.47	121.89	51.21	86.19	157.39	64.70
Calves sold	155.14	104.47	283.47	191.08	155.90	108.53
Total	**1,119.57**	**988.56**	**756.13**	**1,094.78**	**1,071.55**	**1,785.45**
Farm Cash Expenses						
Replacement	442.45	343.89	115.59	189.14	344.28	486.76
Pasture and Supplements	147.27	70.52	119.71	148.64	168.48	517.83
Fertiliser (incl nitrogen)	47.80	77.40	133.01	34.32	62.16	88.90
Animal Health	32.66	5.22	21.28	17.46	26.39	123.23
Wages	65.36	121.89	103.75	71.83	93.10	125.87
Total	**735.53**	**618.92**	**493.34**	**461.38**	**694.41**	**1,342.60**
Overheads						
Shed Expenses	14.37	2.61	21.28	9.98	10.08	35.21
Fences	4.79	-	-	2.99	3.71	0.88
Repairs and Maintenance	28.73	-	-	8.98	8.30	46.65
Ditches	-	-	-	2.99	-	-
Vehicle Expenses	-	10.01	-	19.95	-	36.97
Total	**47.88**	**12.62**	**21.28**	**44.89**	**22.09**	**119.71**
Depreciation	121.51	47.77	89.78	30.88	74.24	79.81
Interests	643.46	349.55	401.27	245.01	508.01	444.52
Total	**764.97**	**397.33**	**491.05**	**275.88**	**582.25**	**524.33**
Fire & Earthquake Insurance	3.59	5.55	7.98	2.00	1.61	3.52
Administration	287.30	78.36	31.92	19.95	148.48	-
Farm Manager Wage	-	-	-	119.71	222.72	105.63
Accountant	2.15	11.32	6.38	-	3.47	15.84
Taxes/ Rates	11.97	16.54	-	9.98	-	8.80
General Costs	2.87	13.06	31.92	6.98	8.18	39.61
ACC	-	4.60	2.13	1.60	-	-
Total	**307.89**	**129.42**	**80.34**	**160.21**	**384.46**	**173.40**
Total Costs	**(1,856.28)**	**(1,158.29)**	**(1,086.00)**	**(942.36)**	**(1,683.21)**	**(2,160.04)**
Total Income	**1,119.57**	**988.56**	**756.13**	**1,094.78**	**1,071.55**	**1,785.45**
Gross Profit	**(736.71)**	**(169.73)**	**(329.87)**	**152.42**	**(611.66)**	**(374.59)**
GP - Interests	**(93.24)**	**179.83**	**71.39**	**397.42**	**(103.64)**	**69.93**
Taxes	-	-	-	-	-	-
Profits	-	-	-	-	-	-
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

Table Revenue and Expenditure												
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	277											
Milk Sales	87,433,867	151,847,398	66,712,871	31,994,750	46,246,610	62,105,795	79,261,863	59,020,749	53,668,721	90,200,206	40,007,008	68,593,253
Winter Milk	14,964,093	35,575,231	13,363,178	9,844,176	13,561,740	33,827,223	18,326,945	18,500,583	11,394,177	23,205,139	13,079,598	13,933,662
Stock Sales cows	5,757,460	12,908,452	4,630,338	2,077,006	4,098,625	4,458,639	7,650,305	8,723,424	5,400,215	7,061,820	4,860,193	8,308,023
Calves sold	1,343,834	4,262,016	5,400,215	1,869,305	1,462,212	1,772,378	3,634,760	1,799,518	2,462,498	2,388,557	2,284,706	6,369,484
Total	**109,499,254**	**204,593,097**	**90,106,602**	**45,785,238**	**65,369,187**	**102,164,036**	**108,873,872**	**88,044,274**	**72,925,610**	**122,855,721**	**60,231,505**	**97,204,423**
Farm Cash Expenses												
Replacement	23,774,792	36,555,301	9,969,628	4,874,040	8,861,891	48,740,402	16,616,046	10,634,269	13,292,837	19,385,387	6,092,550	15,508,310
Pasture and Supplements	3,527,986	10,785,199	13,395,302	8,446,490	18,519,968	10,108,095	7,227,980	16,616,046	1,391,317	23,677,866	5,226,854	18,886,906
Fertiliser (incl nitrogen)	6,984,001	12,093,989	3,323,209	3,877,077	5,120,512	9,692,694	11,243,524	1,772,378	6,092,550	11,215,831	8,279,222	7,477,221
Animal Health	7,002,279	12,810,971	2,132,393	4,569,413	6,997,294	3,960,158	7,622,888	4,267,001	5,494,096	7,200,287	4,210,783	4,126,318
Wages	10,354,843	20,190,988	14,594,427	8,367,841	7,668,028	4,984,814	6,923,353	8,308,023	7,751,385	6,923,353	7,380,294	5,538,682
Total	**51,643,901**	**92,436,449**	**43,414,959**	**30,134,861**	**47,167,693**	**77,486,161**	**49,633,791**	**41,597,717**	**34,022,185**	**68,402,723**	**31,189,703**	**51,537,436**
Overheads												
Shed Expenses	1,222,664	4,641,139	2,769,341	1,384,671	911,667	512,328	692,335	775,415	1,171,708	830,802	590,700	3,267,822
Fences	599,008	1,087,797	969,269	553,868	605,932	193,854	443,095	692,335	446,418	553,868	978,685	886,189
Repairs and Maintenance	2,147,070	4,522,334	332,321	1,246,203	2,254,521	304,628	5,621,762	1,107,736	4,329,034	276,934	867,081	692,335
Ditches	905,575	195,515	692,335	-	852,957	138,467	1,107,736	830,802	1,218,510	830,802	1,247,034	553,868
Vehicle Expenses	2,973,995	8,771,888	1,744,685	5,538,682	2,764,910	988,655	4,707,880	2,215,473	4,430,946	1,661,605	4,302,448	3,766,304
Total	**7,848,312**	**19,218,673**	**6,507,951**	**8,723,424**	**7,389,986**	**2,137,931**	**12,572,808**	**5,621,762**	**11,596,615**	**4,154,012**	**7,985,949**	**9,166,519**
Depreciation	9,135,813	16,906,827	6,388,870	11,648,125	6,228,248	3,609,282	12,600,502	10,943,605	2,841,344	4,585,475	2,507,086	6,579,954
Interests	63,458,762	101,368,127	49,181,835	26,217,351	31,741,079	76,012,872	70,629,273	41,829,511	19,940,086	46,004,293	19,768,941	42,825,089
Total	**72,594,575**	**118,274,954**	**55,570,704**	**37,865,476**	**37,969,327**	**79,622,154**	**83,229,774**	**52,773,116**	**22,781,430**	**50,589,768**	**22,276,027**	**49,405,043**
Fire & Earthquake Insurance	526,175	661,042	844,649	1,497,106	1,006,655	-	1,661,605	-	489,619	-	-	83,080
Administration	977,854	1,380,793	-	969,269	830,802	166,160	-	10,800,430	1,190,817	1,384,671	651,072	-
Farm Manager Wage	13,846,705	12,600,502	11,077,364	8,367,841	9,692,694	-	-	-	-	12,462,035	-	6,923,353
Accountant	830,802	1,291,898	692,335	4,154,012	546,668	304,628	-	692,335	526,175	1,938,539	1,306,021	913,883
Taxes/ Rates	1,311,560	8,148,509	1,800,072	2,769,341	1,282,759	1,384,671	1,661,605	2,907,808	1,467,751	2,769,341	1,394,363	2,769,341
General Costs	2,583,241	1,695,391	830,802	138,467	3,647,222	1,301,590	3,877,077	207,701	858,496	1,384,671	-	1,246,203
ACC	933,545	1,307,406	498,481	124,620	710,613	1,107,736	830,802	249,241	1,024,656	830,802	-	609,255
Total	**21,009,882**	**27,085,540**	**15,743,704**	**18,020,656**	**17,717,413**	**4,264,785**	**8,031,089**	**14,857,514**	**5,557,514**	**20,770,058**	**3,351,456**	**12,545,115**
Total Costs	**(153,096,672)**	**(257,015,615)**	**(121,237,318)**	**(94,744,417)**	**(110,244,419)**	**(163,511,031)**	**(153,467,462)**	**(114,850,110)**	**(73,957,744)**	**(143,916,559)**	**(64,803,135)**	**(122,654,113)**
Total Income	**109,499,254**	**204,593,097**	**90,106,602**	**45,785,238**	**65,369,187**	**102,164,036**	**108,873,872**	**88,044,274**	**72,925,610**	**122,855,721**	**60,231,505**	**97,204,423**
Gross Profit	**(43,597,418)**	**(52,422,517)**	**(31,130,716)**	**(48,959,180)**	**(44,875,232)**	**(61,346,996)**	**(44,593,590)**	**(26,805,836)**	**(1,032,133)**	**(21,060,838)**	**(4,571,630)**	**(25,449,690)**
GP - Interests	**19,861,345**	**48,945,610**	**18,051,119**	**(22,741,828)**	**(13,134,154)**	**14,665,876**	**26,035,682**	**15,023,675**	**18,907,953**	**24,943,454**	**15,197,311**	**17,375,399**
Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Profits	-	-	-	-	-	-	-	-	-	-	-	-
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Table Revenue and Expenditure	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	27,068,094	13,568,285	12,692,700	66,345,240	30,892,689	139,149,252
Winter Milk	7,513,828	3,941,210	3,150,000	15,604,576	9,963,064	44,013,024
Stock Sales cows	5,700,000	2,800,000	1,925,000	8,640,000	8,480,000	7,350,000
Calves sold	6,480,000	2,400,000	10,656,000	19,154,000	8,400,000	12,330,000
Total	**46,761,922**	**22,709,495**	**28,423,700**	**109,743,816**	**57,735,753**	**202,842,276**
Farm Cash Expenses						
Replacement	18,480,000	7,900,000	4,345,000	18,960,000	18,550,000	55,300,000
Pasture and Supplements	6,151,000	1,620,000	4,500,000	14,900,000	9,078,000	58,830,000
Fertiliser (incl nitrogen)	1,996,510	1,778,000	5,000,000	3,440,000	3,349,000	10,100,000
Animal Health	1,364,000	120,000	800,000	1,750,000	1,422,000	14,000,000
Wages	2,730,000	2,800,000	3,900,000	7,200,000	5,016,000	14,300,000
Total	**30,721,510**	**14,218,000**	**18,545,000**	**46,250,000**	**37,415,000**	**152,530,000**
Overheads						
Shed Expenses	600,000	60,000	800,000	1,000,000	543,000	4,000,000
Fences	200,000	-	-	300,000	200,000	100,000
Repairs and Maintenance	1,200,000	-	-	900,000	447,000	5,300,000
Ditches	-	-	-	300,000	-	-
Vehicle Expenses	-	230,000	-	2,000,000	-	4,200,000
Total	**2,000,000**	**290,000**	**800,000**	**4,500,000**	**1,190,000**	**13,600,000**
Depreciation	5,075,000	1,097,500	3,375,000	3,095,000	4,000,000	9,067,143
Interests	26,876,000	8,030,000	15,084,000	24,560,000	27,372,000	50,501,494
Total	**31,951,000**	**9,127,500**	**18,459,000**	**27,655,000**	**31,372,000**	**59,568,637**
Fire & Earthquake Insurance	150,000	127,400	300,000	200,000	87,000	400,000
Administration	12,000,000	1,800,000	1,200,000	2,000,000	8,000,000	-
Farm Manager Wage	-	-	-	12,000,000	12,000,000	12,000,000
Accountant	90,000	260,000	240,000	-	187,000	1,800,000
Taxes/ Rates	500,000	380,000	-	1,000,000	-	1,000,000
General Costs	120,000	300,000	1,200,000	700,000	441,000	4,500,000
ACC	-	105,600	80,000	160,000	-	-
Total	**12,860,000**	**2,973,000**	**3,020,000**	**16,060,000**	**20,715,000**	**19,700,000**
Total Costs	**(77,532,510)**	**(26,608,500)**	**(40,824,000)**	**(94,465,000)**	**(90,692,000)**	**(245,398,637)**
Total Income	**46,761,922**	**22,709,495**	**28,423,700**	**109,743,816**	**57,735,753**	**202,842,276**
Gross Profit	**(30,770,588)**	**(3,899,005)**	**(12,400,300)**	**15,278,816**	**(32,956,247)**	**(42,556,361)**
GP - Interests	**(3,894,588)**	**4,130,995**	**2,683,700**	**39,838,816**	**(5,584,247)**	**7,945,133**
Taxes	-	-	-	-	-	-
Profits	-	-	-	-	-	-
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

Table Revenue and Expenditure												
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	Per Liter $Ch											
Milk Sales	63.2	63.3	93.7	60.5	58.3	57.2	61.3	60.4	62.5	60.6	57.2	61.8
Winter Milk	10.8	14.8	18.8	18.6	17.1	31.2	14.2	18.9	13.3	15.6	18.7	12.5
Stock Sales cows	4.2	5.4	6.5	3.9	5.2	4.1	5.9	8.9	6.3	4.7	7.0	7.5
Calves sold	1.0	1.8	7.6	3.5	1.8	1.6	2.8	1.8	2.9	1.6	3.3	5.7
Total	**79.2**	**85.3**	**126.6**	**86.5**	**82.3**	**94.1**	**84.2**	**90.1**	**84.9**	**82.5**	**86.2**	**87.5**
Farm Cash Expenses	-	-	-	-	-	-	-	-	-	-	-	-
Replacement	17.2	15.2	14.0	9.2	11.2	44.9	12.9	10.9	15.5	13.0	8.7	14.0
Pasture and Supplements	2.6	4.5	18.8	16.0	23.3	9.3	5.6	17.0	1.6	15.9	7.5	17.0
Fertiliser (incl nitrogen)	5.1	5.0	4.7	7.3	6.4	8.9	8.7	1.8	7.1	7.5	11.8	6.7
Animal Health	5.1	5.3	3.0	8.6	8.8	3.6	5.9	4.4	6.4	4.8	6.0	3.7
Wages	7.5	8.4	20.5	15.8	9.7	4.6	5.4	8.5	9.0	4.7	10.6	5.0
Total	**37.4**	**38.6**	**61.0**	**57.0**	**59.4**	**71.4**	**38.4**	**42.6**	**39.6**	**46.0**	**44.6**	**46.4**
Overheads	-	-	-	-	-	-	-	-	-	-	-	-
Shed Expenses	0.9	1.9	3.9	2.6	1.1	0.5	0.5	0.8	1.4	0.6	0.8	2.9
Fences	0.4	0.5	1.4	1.0	0.8	0.2	0.3	0.7	0.5	0.4	1.4	0.8
Repairs and Maintenance	1.6	1.9	0.5	2.4	2.8	0.3	4.4	1.1	5.0	0.2	1.2	0.6
Ditches	0.7	0.1	1.0	-	1.1	0.1	0.9	0.9	1.4	0.6	1.8	0.5
Vehicle Expenses	2.2	3.7	2.5	10.5	3.5	0.9	3.6	2.3	5.2	1.1	6.2	3.4
Total	**5.7**	**8.0**	**9.1**	**16.5**	**9.3**	**2.0**	**9.7**	**5.8**	**13.5**	**2.8**	**11.4**	**8.3**
Depreciation	6.6	7.1	9.0	22.0	7.8	3.3	9.8	11.2	3.3	3.1	3.6	5.9
Interests	45.9	42.3	69.1	49.6	40.0	70.0	54.7	42.8	23.2	30.9	28.3	38.6
Total	**52.5**	**49.3**	**78.1**	**71.6**	**47.8**	**73.4**	**64.4**	**54.0**	**26.5**	**34.0**	**31.9**	**44.5**
	-	-	-	-	-	-	-	-	-	-	-	-
Fire & Earthquake Insurance	0.4	0.3	1.2	2.8	1.3	-	1.3	-	0.6	-	-	0.1
Administration	0.7	0.6	-	1.8	1.0	0.2	-	11.1	1.4	0.9	0.9	-
Farm Manager Wage	10.0	5.3	15.6	15.8	12.2	-	-	-	-	8.4	-	6.2
Accountant	0.6	0.5	1.0	7.9	0.7	0.3	-	0.7	0.6	1.3	1.9	0.8
Taxes/ Rates	0.9	3.4	2.5	5.2	1.6	1.3	1.3	3.0	1.7	1.9	2.0	2.5
General Costs	1.9	0.7	1.2	0.3	4.6	1.2	3.0	0.2	1.0	0.9	-	1.1
ACC	0.7	0.5	0.7	0.2	0.9	1.0	0.6	0.3	1.2	0.6	-	0.5
Total	**15.2**	**11.3**	**22.1**	**34.1**	**22.3**	**3.9**	**6.2**	**15.2**	**6.5**	**14.0**	**4.8**	**11.3**
Total Costs	**(110.7)**	**(107.2)**	**(170.3)**	**(179.1)**	**(138.9)**	**(150.7)**	**(118.8)**	**(117.5)**	**(86.1)**	**(96.7)**	**(92.7)**	**(110.4)**
Total Income	**79.2**	**85.3**	**126.6**	**86.5**	**82.3**	**94.1**	**84.2**	**90.1**	**84.9**	**82.5**	**86.2**	**87.5**
Gross Profit	**(31.5)**	**(21.9)**	**(43.7)**	**(92.5)**	**(56.5)**	**(56.5)**	**(34.5)**	**(27.4)**	**(1.2)**	**(14.1)**	**(6.5)**	**(22.9)**
GP - Interests	**14.4**	**20.4**	**25.4**	**(43.0)**	**(16.5)**	**13.5**	**20.1**	**15.4**	**22.0**	**16.8**	**21.7**	**15.6**
Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Profits	-	-	-	-	-	-	-	-	-	-	-	-
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	69.6	71.5	72.1	84.2	73.3	82.0
Winter Milk	19.3	20.8	17.9	19.8	23.6	26.0
Stock Sales cows	14.7	14.8	10.9	11.0	20.1	4.3
Calves sold	16.7	12.7	60.5	24.3	19.9	7.3
Total	**120.2**	**119.7**	**161.5**	**139.3**	**136.9**	**119.6**
Farm Cash Expenses	-	-	-	-	-	-
Replacement	47.5	41.6	24.7	24.1	44.0	32.6
Pasture and Supplements	15.8	8.5	25.6	18.9	21.5	34.7
Fertiliser (incl nitrogen)	5.1	9.4	28.4	4.4	7.9	6.0
Animal Health	3.5	0.6	4.5	2.2	3.4	8.3
Wages	7.0	14.8	22.2	9.1	11.9	8.4
Total	**79.0**	**74.9**	**105.4**	**58.7**	**88.7**	**89.9**
Overheads	-	-	-	-	-	-
Shed Expenses	1.5	0.3	4.5	1.3	1.3	2.4
Fences	0.5	-	-	0.4	0.5	0.1
Repairs and Maintenance	3.1	-	-	1.1	1.1	3.1
Ditches	-	-	-	0.4	-	-
Vehicle Expenses	-	1.2	-	2.5	-	2.5
Total	**5.1**	**1.5**	**4.5**	**5.7**	**2.8**	**8.0**
Depreciation	13.0	5.8	19.2	3.9	9.5	5.3
Interests	69.1	42.3	85.7	31.2	64.9	29.8
Total	**82.1**	**48.1**	**104.9**	**35.1**	**74.4**	**35.1**
	-	-	-	-	-	-
Fire & Earthquake Insurance	0.4	0.7	1.7	0.3	0.2	0.2
Administration	30.8	9.5	6.8	2.5	19.0	-
Farm Manager Wage	-	-	-	15.2	28.5	7.1
Accountant	0.2	1.4	1.4	-	0.4	1.1
Taxes/ Rates	1.3	2.0	-	1.3	-	0.6
General Costs	0.3	1.6	6.8	0.9	1.0	2.7
ACC	-	0.6	0.5	0.2	-	-
Total	**33.1**	**15.7**	**17.2**	**20.4**	**49.1**	**11.6**
Total Costs	**(199.3)**	**(140.3)**	**(231.9)**	**(119.9)**	**(215.1)**	**(144.7)**
Total Income	**120.2**	**119.7**	**161.5**	**139.3**	**136.9**	**119.6**
Gross Profit	**(79.1)**	**(20.6)**	**(70.4)**	**19.4**	**(78.2)**	**(25.1)**
GP - Interests	**(10.0)**	**21.8**	**15.2**	**50.6**	**(13.2)**	**4.7**
Taxes	-	-	-	-	-	-
Profits	-	-	-	-	-	-
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

Table Revenue and Expenditure												
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	Per ha. $Ch											
Milk Sales	543,067.5	550,171.7	667,128.7	761,779.8	544,077.8	517,548.3	474,621.9	491,839.6	436,331.1	1,061,178.9	500,087.6	557,668.7
Winter Milk	92,944.7	128,895.8	133,631.8	234,385.2	159,549.9	281,893.5	109,742.2	154,171.5	92,635.6	273,001.6	163,495.0	113,281.8
Stock Sales cows	35,760.6	46,769.8	46,303.4	49,452.5	48,219.1	37,155.3	45,810.2	72,695.2	43,904.2	83,080.2	60,752.4	67,544.9
Calves sold	8,346.8	15,442.1	54,002.1	44,507.3	17,202.5	14,769.8	21,765.0	14,996.0	20,020.3	28,100.7	28,558.8	51,784.4
Total	**680,119.6**	**741,279.3**	**901,066.0**	**1,090,124.7**	**769,049.3**	**851,367.0**	**651,939.4**	**733,702.3**	**592,891.1**	**1,445,361.4**	**752,893.8**	**790,279.9**
Farm Cash Expenses												
Replacement	147,669.5	132,446.7	99,696.3	116,048.6	104,257.5	406,170.0	99,497.3	88,618.9	108,071.8	228,063.4	76,156.9	126,083.8
Pasture and Supplements	21,913.0	39,076.8	133,953.0	201,106.9	217,882.0	84,234.1	43,281.3	138,467.1	11,311.5	278,563.1	65,335.7	153,552.1
Fertiliser (incl nitrogen)	43,378.9	43,818.8	33,232.1	92,311.4	60,241.3	80,772.4	67,326.5	14,769.8	49,532.9	131,951.0	103,490.3	60,790.4
Animal Health	43,492.4	46,416.6	21,323.9	108,795.5	82,321.1	33,001.3	45,646.0	35,558.3	44,667.4	84,709.3	52,634.8	33,547.3
Wages	64,315.8	73,155.8	145,944.3	199,234.3	90,212.1	41,540.1	41,457.2	69,233.5	63,019.4	81,451.2	92,253.7	45,029.9
Total	**320,769.6**	**334,914.7**	**434,149.6**	**717,496.7**	**554,914.0**	**645,718.0**	**297,208.3**	**346,647.6**	**276,603.1**	**804,737.9**	**389,871.3**	**419,003.5**
Overheads												
Shed Expenses	7,594.2	16,815.7	27,693.4	32,968.3	10,725.5	4,269.4	4,145.7	6,461.8	9,526.1	9,774.1	7,383.8	26,567.7
Fences	3,720.5	3,941.3	9,692.7	13,187.3	7,128.6	1,615.4	2,653.3	5,769.5	3,629.4	6,516.1	12,233.6	7,204.8
Repairs and Maintenance	13,335.8	16,385.3	3,323.2	29,671.5	26,523.8	2,538.6	33,663.2	9,231.1	35,195.4	3,258.0	10,838.5	5,628.7
Ditches	5,624.7	708.4	6,923.4	-	10,034.8	1,153.9	6,633.2	6,923.4	9,906.6	9,774.1	15,587.9	4,503.0
Vehicle Expenses	18,472.0	31,782.2	17,446.8	131,873.4	32,528.4	8,238.8	28,190.9	18,462.3	36,023.9	19,548.3	53,780.6	30,620.4
Total	**48,747.3**	**69,632.9**	**65,079.5**	**207,700.6**	**86,941.0**	**17,816.1**	**75,286.3**	**46,848.0**	**94,281.4**	**48,870.7**	**99,824.4**	**74,524.5**
Depreciation	56,744.2	61,256.6	63,888.7	277,336.3	73,273.5	30,077.4	75,452.1	91,196.7	23,100.4	53,946.8	31,338.6	53,495.6
Interests	394,153.8	367,275.8	491,818.3	624,222.6	373,424.5	633,440.6	422,929.8	348,579.3	162,114.5	541,227.0	247,111.8	348,171.5
Total	**450,898.0**	**428,532.4**	**555,707.0**	**901,559.0**	**446,698.0**	**663,517.9**	**498,381.9**	**439,776.0**	**185,214.9**	**595,173.7**	**278,450.3**	**401,667.0**
Fire & Earthquake Insurance	3,268.2	2,395.1	8,446.5	35,645.4	11,843.0	-	9,949.7	-	3,980.6	-	-	675.4
Administration	6,073.6	5,002.9	-	23,077.8	9,774.1	1,384.7	-	90,003.6	9,681.4	16,290.2	8,138.4	-
Farm Manager Wage	86,004.4	45,654.0	110,773.6	199,234.3	114,031.7	-	-	-	-	146,612.2	-	56,287.4
Accountant	5,160.3	4,680.8	6,923.4	98,905.0	6,431.4	2,538.6	-	5,769.5	4,277.8	22,806.3	16,325.3	7,429.9
Taxes/ Rates	8,146.3	29,523.6	18,000.7	65,936.7	15,091.3	11,538.9	9,949.7	24,231.7	11,932.9	32,580.5	17,429.5	22,515.0
General Costs	16,045.0	6,142.7	8,308.0	3,296.8	42,908.5	10,846.6	23,216.0	1,730.8	6,979.6	16,290.2	-	10,131.7
ACC	5,798.4	4,737.0	4,984.8	2,967.2	8,360.2	9,231.1	4,974.9	2,077.0	8,330.5	9,774.1	-	4,953.3
Total	**130,496.2**	**98,136.0**	**157,437.0**	**429,063.2**	**208,440.2**	**35,539.9**	**48,090.4**	**123,812.6**	**45,183.0**	**244,353.6**	**41,893.2**	**101,992.8**
Total Costs	**(950,911.0)**	**(931,216.0)**	**(1,212,373.2)**	**(2,255,819.5)**	**(1,296,993.2)**	**(1,362,591.9)**	**(918,966.8)**	**(957,084.2)**	**(601,282.5)**	**(1,693,136.0)**	**(810,039.2)**	**(997,187.9)**
Total Income	**680,119.6**	**741,279.3**	**901,066.0**	**1,090,124.7**	**769,049.3**	**851,367.0**	**651,939.4**	**733,702.3**	**592,891.1**	**1,445,361.4**	**752,893.8**	**790,279.9**
Gross Profit	**(270,791.4)**	**(189,936.7)**	**(311,307.2)**	**(1,165,694.8)**	**(527,943.9)**	**(511,225.0)**	**(267,027.5)**	**(223,382.0)**	**(8,391.3)**	**(247,774.6)**	**(57,145.4)**	**(206,908.0)**
GP - Interests	**123,362.4**	**177,339.2**	**180,511.2**	**(541,472.1)**	**(154,519.5)**	**122,215.6**	**155,902.3**	**125,197.3**	**153,723.2**	**293,452.4**	**189,966.4**	**141,263.4**
Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Profits	-	-	-	-	-	-	-	-	-	-	-	-
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	167,087.0	271,365.7	97,636.2	414,657.8	171,626.1	869,682.8
Winter Milk	46,381.7	78,824.2	24,230.8	97,528.6	55,350.4	275,081.4
Stock Sales cows	35,185.2	56,000.0	14,807.7	54,000.0	47,111.1	45,937.5
Calves sold	40,000.0	48,000.0	81,969.2	119,712.5	46,666.7	77,062.5
Total	**288,653.8**	**454,189.9**	**218,643.8**	**685,898.9**	**320,754.2**	**1,267,764.2**
Farm Cash Expenses						
Replacement	114,074.1	158,000.0	33,423.1	118,500.0	103,055.6	345,625.0
Pasture and Supplements	37,969.1	32,400.0	34,615.4	93,125.0	50,433.3	367,687.5
Fertiliser (incl nitrogen)	12,324.1	35,560.0	38,461.5	21,500.0	18,605.6	63,125.0
Animal Health	8,419.8	2,400.0	6,153.8	10,937.5	7,900.0	87,500.0
Wages	16,851.9	56,000.0	30,000.0	45,000.0	27,866.7	89,375.0
Total	**189,639.0**	**284,360.0**	**142,653.8**	**289,062.5**	**207,861.1**	**953,312.5**
Overheads						
Shed Expenses	3,703.7	1,200.0	6,153.8	6,250.0	3,016.7	25,000.0
Fences	1,234.6	-	-	1,875.0	1,111.1	625.0
Repairs and Maintenance	7,407.4	-	-	5,625.0	2,483.3	33,125.0
Ditches	-	-	-	1,875.0	-	-
Vehicle Expenses	-	4,600.0	-	12,500.0	-	26,250.0
Total	**12,345.7**	**5,800.0**	**6,153.8**	**28,125.0**	**6,611.1**	**85,000.0**
Depreciation	31,327.2	21,950.0	25,961.5	19,343.8	22,222.2	56,669.6
Interests	165,901.2	160,600.0	116,030.8	153,500.0	152,066.7	315,634.3
Total	**197,228.4**	**182,550.0**	**141,992.3**	**172,843.8**	**174,288.9**	**372,304.0**
Fire & Earthquake Insurance	925.9	2,548.0	2,307.7	1,250.0	483.3	2,500.0
Administration	74,074.1	36,000.0	9,230.8	12,500.0	44,444.4	-
Farm Manager Wage	-	-	-	75,000.0	66,666.7	75,000.0
Accountant	555.6	5,200.0	1,846.2	-	1,038.9	11,250.0
Taxes/ Rates	3,086.4	7,600.0	-	6,250.0	-	6,250.0
General Costs	740.7	6,000.0	9,230.8	4,375.0	2,450.0	28,125.0
ACC	-	2,112.0	615.4	1,000.0	-	-
Total	**79,382.7**	**59,460.0**	**23,230.8**	**100,375.0**	**115,083.3**	**123,125.0**
Total Costs	**(478,595.7)**	**(532,170.0)**	**(314,030.8)**	**(590,406.3)**	**(503,844.4)**	**(1,533,741.5)**
Total Income	**288,653.8**	**454,189.9**	**218,643.8**	**685,898.9**	**320,754.2**	**1,267,764.2**
Gross Profit	**(189,941.9)**	**(77,980.1)**	**(95,386.9)**	**95,492.6**	**(183,090.3)**	**(265,977.3)**
GP - Interests	**(24,040.7)**	**82,619.9**	**20,643.8**	**248,992.6**	**(31,023.6)**	**49,657.1**
Taxes	-	-	-	-	-	-
Profits	-	-	-	-	-	-
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

Table Revenue and Expenditure												
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	Per Cow $Ch											
Milk Sales	283,876.2	300,687.9	303,240.3	255,958.0	231,233.1	270,025.2	304,853.3	163,946.5	214,674.9	265,294.7	266,713.4	228,644.2
Winter Milk	48,584.7	70,446.0	60,741.7	78,753.4	67,808.7	147,074.9	70,488.2	51,390.5	45,576.7	68,250.4	87,197.3	46,445.5
Stock Sales cows	18,693.1	25,561.3	21,047.0	16,616.0	20,493.1	19,385.4	29,424.2	24,231.7	21,600.9	20,770.1	32,401.3	27,693.4
Calves sold	4,363.1	8,439.6	24,546.4	14,954.4	7,311.1	7,706.0	13,979.8	4,998.7	9,850.0	7,025.2	15,231.4	21,231.6
Total	**355,517.1**	**405,134.8**	**409,575.5**	**366,281.9**	**326,845.9**	**444,191.5**	**418,745.7**	**244,567.4**	**291,702.4**	**361,340.4**	**401,543.4**	**324,014.7**
Farm Cash Expenses												
Replacement	77,190.9	72,386.7	45,316.5	38,992.3	44,309.5	211,914.8	63,907.9	29,539.6	53,171.3	57,015.8	40,617.0	51,694.4
Pasture and Supplements	11,454.5	21,356.8	60,887.7	67,571.9	92,599.8	43,948.2	27,799.9	46,155.7	5,565.3	69,640.8	34,845.7	62,956.4
Fertiliser (incl nitrogen)	22,675.3	23,948.5	15,105.5	31,016.6	25,602.6	42,142.1	43,244.3	4,923.3	24,370.2	32,987.7	55,194.8	24,924.1
Animal Health	22,734.7	25,368.3	9,692.7	36,555.3	34,986.5	17,218.1	29,318.8	11,852.8	21,976.4	21,177.3	28,071.9	13,754.4
Wages	33,619.6	39,982.2	66,338.3	66,942.7	38,340.1	21,673.1	26,628.3	23,077.8	31,005.5	20,362.8	49,202.0	18,462.3
Total	**167,675.0**	**183,042.5**	**197,340.7**	**241,078.9**	**235,838.5**	**336,896.4**	**190,899.2**	**115,549.2**	**136,088.7**	**201,184.5**	**207,931.4**	**171,791.5**
Overheads												
Shed Expenses	3,969.7	9,190.4	12,587.9	11,077.4	4,558.3	2,227.5	2,662.8	2,153.9	4,686.8	2,443.5	3,938.0	10,892.7
Fences	1,944.8	2,154.1	4,405.8	4,430.9	3,029.7	842.8	1,704.2	1,923.2	1,785.7	1,629.0	6,524.6	2,954.0
Repairs and Maintenance	6,971.0	8,955.1	1,510.5	9,969.6	11,272.6	1,324.5	21,622.2	3,077.0	17,316.1	814.5	5,780.5	2,307.8
Ditches	2,940.2	387.2	3,147.0	-	4,264.8	602.0	4,260.5	2,307.8	4,874.0	2,443.5	8,313.6	1,846.2
Vehicle Expenses	9,655.8	17,370.1	7,930.4	44,309.5	13,824.6	4,298.5	18,107.2	6,154.1	17,723.8	4,887.1	28,683.0	12,554.3
Total	**25,481.5**	**38,056.8**	**29,581.6**	**69,787.4**	**36,949.9**	**9,295.4**	**48,357.0**	**15,616.0**	**46,386.5**	**12,217.7**	**53,239.7**	**30,555.1**
Depreciation	29,661.7	33,478.9	29,040.3	93,185.0	31,141.2	15,692.5	48,463.5	30,398.9	11,365.4	13,486.7	16,713.9	21,933.2
Interests	206,034.9	200,729.0	223,553.8	209,738.8	158,705.4	330,490.7	271,651.0	116,193.1	79,760.3	135,306.7	131,792.9	142,750.3
Total	**235,696.7**	**234,207.8**	**252,594.1**	**302,923.8**	**189,846.6**	**346,183.3**	**320,114.5**	**146,592.0**	**91,125.7**	**148,793.4**	**148,506.8**	**164,683.5**
Fire & Earthquake Insurance	1,708.4	1,309.0	3,839.3	11,976.8	5,033.3	-	6,390.8	-	1,958.5	-	-	276.9
Administration	3,174.9	2,734.2	-	7,754.2	4,154.0	722.4	-	30,001.2	4,763.3	4,072.6	4,340.5	-
Farm Manager Wage	44,956.8	24,951.5	50,351.7	66,942.7	48,463.5	-	-	-	-	36,653.0	-	23,077.8
Accountant	2,697.4	2,558.2	3,147.0	33,232.1	2,733.3	1,324.5	-	1,923.2	2,104.7	5,701.6	8,706.8	3,046.3
Taxes/ Rates	4,258.3	16,135.7	8,182.1	22,154.7	6,413.8	6,020.3	6,390.8	8,077.2	5,871.0	8,145.1	9,295.8	9,231.1
General Costs	8,387.1	3,357.2	3,776.4	1,107.7	18,236.1	5,659.1	14,911.8	576.9	3,434.0	4,072.6	-	4,154.0
ACC	3,031.0	2,588.9	2,265.8	997.0	3,553.1	4,816.2	3,195.4	692.3	4,098.6	2,443.5	-	2,030.9
Total	**68,213.9**	**53,634.7**	**71,562.3**	**144,165.2**	**88,587.1**	**18,542.5**	**30,888.8**	**41,270.9**	**22,230.1**	**61,088.4**	**22,343.0**	**41,817.0**
Total Costs	**(497,067.1)**	**(508,941.8)**	**(551,078.7)**	**(757,955.3)**	**(551,222.1)**	**(710,917.5)**	**(590,259.5)**	**(319,028.1)**	**(295,831.0)**	**(423,284.0)**	**(432,020.9)**	**(408,847.0)**
Total Income	**355,517.1**	**405,134.8**	**409,575.5**	**366,281.9**	**326,845.9**	**444,191.5**	**418,745.7**	**244,567.4**	**291,702.4**	**361,340.4**	**401,543.4**	**324,014.7**
Gross Profit	**(141,550.1)**	**(103,807.0)**	**(141,503.3)**	**(391,673.4)**	**(224,376.2)**	**(266,726.1)**	**(171,513.8)**	**(74,460.7)**	**(4,128.5)**	**(61,943.6)**	**(30,477.5)**	**(84,832.3)**
GP - Interests	**64,484.9**	**96,922.0**	**82,050.5**	**(181,934.6)**	**(65,670.8)**	**63,764.7**	**100,137.2**	**41,732.4**	**75,631.8**	**73,363.1**	**101,315.4**	**57,918.0**
Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Profits	-	-	-	-	-	-	-	-	-	-	-	-
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	270,680.9	246,696.1	141,030.0	276,438.5	239,478.2	511,578.1
Winter Milk	75,138.3	71,658.4	35,000.0	65,019.1	77,233.1	161,812.6
Stock Sales cows	57,000.0	50,909.1	21,388.9	36,000.0	65,736.4	27,022.1
Calves sold	64,800.0	43,636.4	118,400.0	79,808.3	65,116.3	45,330.9
Total	**467,619.2**	**412,899.9**	**315,818.9**	**457,265.9**	**447,564.0**	**745,743.7**
Farm Cash Expenses						
Replacement	184,800.0	143,636.4	48,277.8	79,000.0	143,798.4	203,308.8
Pasture and Supplements	61,510.0	29,454.5	50,000.0	62,083.3	70,372.1	216,286.8
Fertiliser (incl nitrogen)	19,965.1	32,327.3	55,555.6	14,333.3	25,961.2	37,132.4
Animal Health	13,640.0	2,181.8	8,888.9	7,291.7	11,023.3	51,470.6
Wages	27,300.0	50,909.1	43,333.3	30,000.0	38,883.7	52,573.5
Total	**307,215.1**	**258,509.1**	**206,055.6**	**192,708.3**	**290,038.8**	**560,772.1**
Overheads						
Shed Expenses	6,000.0	1,090.9	8,888.9	4,166.7	4,209.3	14,705.9
Fences	2,000.0	-	-	1,250.0	1,550.4	367.6
Repairs and Maintenance	12,000.0	-	-	3,750.0	3,465.1	19,485.3
Ditches	-	-	-	1,250.0	-	-
Vehicle Expenses	-	4,181.8	-	8,333.3	-	15,441.2
Total	**20,000.0**	**5,272.7**	**8,888.9**	**18,750.0**	**9,224.8**	**50,000.0**
Depreciation	50,750.0	19,954.5	37,500.0	12,895.8	31,007.8	33,335.1
Interests	268,760.0	146,000.0	167,600.0	102,333.3	212,186.0	185,667.3
Total	**319,510.0**	**165,954.5**	**205,100.0**	**115,229.2**	**243,193.8**	**219,002.3**
Fire & Earthquake Insurance	1,500.0	2,316.4	3,333.3	833.3	674.4	1,470.6
Administration	120,000.0	32,727.3	13,333.3	8,333.3	62,015.5	-
Farm Manager Wage	-	-	-	50,000.0	93,023.3	44,117.6
Accountant	900.0	4,727.3	2,666.7	-	1,449.6	6,617.6
Taxes/ Rates	5,000.0	6,909.1	-	4,166.7	-	3,676.5
General Costs	1,200.0	5,454.5	13,333.3	2,916.7	3,418.6	16,544.1
ACC	-	1,920.0	888.9	666.7	-	-
Total	**128,600.0**	**54,054.5**	**33,555.6**	**66,916.7**	**160,581.4**	**72,426.5**
Total Costs	**(775,325.1)**	**(483,790.9)**	**(453,600.0)**	**(393,604.2)**	**(703,038.8)**	**(902,200.9)**
Total Income	**467,619.2**	**412,899.9**	**315,818.9**	**457,265.9**	**447,564.0**	**745,743.7**
Gross Profit	**(307,705.9)**	**(70,891.0)**	**(137,781.1)**	**63,661.7**	**(255,474.8)**	**(156,457.2)**
GP - Interests	**(38,945.9)**	**75,109.0**	**29,818.9**	**165,995.1**	**(43,288.7)**	**29,210.0**
Taxes	-	-	-	-	-	-
Profits	-	-	-	-	-	-
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

Table Revenue and Expenditure						
Incomes	**Ch A**	**Ch B**	**Ch C**	**Ch D**	**Ch E**	**Ch F**
Milk Sales	72,832	36,508	34,152	178,515	83,123	374,409
Winter Milk	20,217	10,605	8,476	41,987	26,808	118,426
Stock Sales cows	15,337	7,534	5,180	23,248	22,817	19,777
Calves sold	17,436	6,458	28,672	51,538	22,602	33,176
Total	**125,822**	**61,104**	**76,480**	**295,288**	**155,350**	**545,787**
Farm Cash Expenses						
Replacement	49,724	21,257	11,691	51,016	49,912	148,796
Pasture and Supplements	16,550	4,359	12,108	40,091	24,426	158,294
Fertiliser (incl nitrogen)	5,372	4,784	13,453	9,256	9,011	27,176
Animal Health	3,670	323	2,153	4,709	3,826	37,670
Wages	7,346	7,534	10,494	19,373	13,497	38,477
Total	**82,662**	**38,256**	**49,899**	**124,445**	**100,672**	**410,412**
Overheads						
Shed Expenses	1,614	161	2,153	2,691	1,461	10,763
Fences	538	-	-	807	538	269
Repairs and Maintenance	3,229	-	-	2,422	1,203	14,261
Ditches	-	-	-	807	-	-
Vehicle Expenses	-	619	-	5,381	-	11,301
Total	**5,381**	**780**	**2,153**	**12,108**	**3,202**	**36,594**
Depreciation	13,655	2,953	9,081	8,328	10,763	24,397
Interests	72,315	21,606	40,586	66,084	73,650	135,884
Total	**85,971**	**24,559**	**49,668**	**74,411**	**84,413**	**160,281**
Fire & Earthquake Insurance	404	343	807	538	234	1,076
Administration	32,288	4,843	3,229	5,381	21,526	-
Farm Manager Wage	-	-	-	32,288	32,288	32,288
Accountant	242	700	646	-	503	4,843
Taxes/ Rates	1,345	1,022	-	2,691	-	2,691
General Costs	323	807	3,229	1,883	1,187	12,108
ACC	-	284	215	431	-	-
Total	**34,602**	**7,999**	**8,126**	**43,213**	**55,738**	**53,007**
Total Costs	**(208,617)**	**(71,595)**	**(109,845)**	**(254,177)**	**(244,025)**	**(660,294)**
Total Income	**125,822**	**61,104**	**76,480**	**295,288**	**155,350**	**545,787**
Gross Profit	**(82,794)**	**(10,491)**	**(33,365)**	**41,111**	**(88,675)**	**(114,506)**
GP - Interests	**(10,479)**	**11,115**	**7,221**	**107,194**	**(15,026)**	**21,378**
Taxes						
Profits						
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

NZ Currency

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes	Per Liter	Per Liter	Per Liter	Per Liter	Per Liter	Per Liter
Milk Sales	0.1872	0.1925	0.1940	0.2265	0.1971	0.2208
Winter Milk	0.0520	0.0559	0.0481	0.0533	0.0636	0.0698
Milk Income	0.2392	0.2484	0.2422	0.2798	0.2607	0.2906
Stock Sales cows	0.0394	0.0397	0.0294	0.0295	0.0541	0.0117
Calves sold	0.0448	0.0340	0.1629	0.0654	0.0536	0.0196
Total	**0.3235**	**0.3221**	**0.4345**	**0.3747**	**0.3685**	**0.3218**
Farm Cash Expenses						
Replacement	0.1278	0.1121	0.0664	0.0647	0.1184	0.0877
Past.& Suppl.	0.0425	0.0230	0.0688	0.0509	0.0579	0.0933
Fertiliser (incl N)	0.0138	0.0252	0.0764	0.0117	0.0214	0.0160
Animal Health	0.0094	0.0017	0.0122	0.0060	0.0091	0.0222
Wages	0.0189	0.0397	0.0596	0.0246	0.0320	0.0227
Total	**0.2125**	**0.2017**	**0.2835**	**0.1579**	**0.2388**	**0.2420**
Overheads						
Shed Expenses	0.0042	0.0009	0.0122	0.0034	0.0035	0.0063
Fences	0.0014	-	-	0.0010	0.0013	0.0002
Rep & Mntce	0.0083	-	-	0.0031	0.0029	0.0084
Ditches	-	-	-	0.0010	-	-
Vehicle Expenses	-	0.0033	-	0.0068	-	0.0067
Total	**0.0138**	**0.0041**	**0.0122**	**0.0154**	**0.0076**	**0.0216**
Depreciation	0.0351	0.0156	0.0516	0.0106	0.0255	0.0144
Interests	0.1859	0.1139	0.2306	0.0839	0.1747	0.0801
Total	**0.2210**	**0.1295**	**0.2822**	**0.0944**	**0.2002**	**0.0945**
Fire & Earthqk Ins..	0.0010	0.0018	0.0046	0.0007	0.0006	0.0006
Administration	0.0830	0.0255	0.0183	0.0068	0.0511	-
Farm Mnger Wage	-	-	-	0.0410	0.0766	0.0190
Accountant	0.0006	0.0037	0.0037	-	0.0012	0.0029
Taxes/ Rates	0.0035	0.0054	-	0.0034	-	0.0016
General Costs	0.0008	0.0043	0.0183	0.0024	0.0028	0.0071
ACC	-	0.0015	0.0012	0.0005	-	-
Total	**0.0890**	**0.0422**	**0.0462**	**0.0548**	**0.1322**	**0.0313**
Total Costs	**(0.5363)**	**(0.3774)**	**(0.6240)**	**(0.3226)**	**(0.5788)**	**(0.3893)**
Total Income	**0.3235**	**0.3221**	**0.4345**	**0.3747**	**0.3685**	**0.3218**
Gross Profit	**(0.2128)**	**(0.0553)**	**(0.1895)**	**0.0522**	**(0.2103)**	**(0.0675)**
Gross Profit - Interests; be	**(0.0269)**	**0.0586**	**0.0410**	**0.1360**	**(0.0356)**	**0.0126**
Taxes						
Profits						
Rentability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

NZ Currency

A.E.R., $ / Per Hectare

Table Revenue and Expenditure	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	449.6	730.2	262.7	1,115.7	461.8	2,340.1
Winter Milk	124.8	212.1	65.2	262.4	148.9	740.2
Milk Income	574.4	942.3	327.9	1,378.1	610.7	3,080.2
Stock Sales cows	94.7	150.7	39.8	145.3	126.8	123.6
Calves sold	107.6	129.2	220.6	322.1	125.6	207.4
Stok + Caves	202.3	279.8	260.4	467.4	252.3	331.0
Total	**776.7**	**1,222.1**	**588.3**	**1,845.5**	**863.1**	**3,411.2**
Farm Cash Expenses						
Replacement	306.9	425.1	89.9	318.8	277.3	930.0
Past.& Suppl.	102.2	87.2	93.1	250.6	135.7	989.3
Fertiliser (incl N)	33.2	95.7	103.5	57.9	50.1	169.9
Animal Health	22.7	6.5	16.6	29.4	21.3	235.4
Wages	45.3	150.7	80.7	121.1	75.0	240.5
Total	**510.3**	**765.1**	**383.8**	**777.8**	**559.3**	**2,565.1**
Overheads						
Shed Expenses	10.0	3.2	16.6	16.8	8.1	67.3
Fences	3.3	-	-	5.0	3.0	1.7
Rep & Mntce	19.9	-	-	15.1	6.7	89.1
Ditches	-	-	-	5.0	-	-
Vehicle Expenses	-	12.4	-	33.6	-	70.6
Total	**33.2**	**15.6**	**16.6**	**75.7**	**17.8**	**228.7**
Depreciation	84.3	59.1	69.9	52.0	59.8	152.5
Interests	446.4	432.1	312.2	413.0	409.2	849.3
Total	**530.7**	**491.2**	**382.1**	**465.1**	**469.0**	**1,001.8**
Fire & Earthqk Ins..	2.5	6.9	6.2	3.4	1.3	6.7
Administration	199.3	96.9	24.8	33.6	119.6	-
Farm Mnger Wage	-	-	-	201.8	179.4	201.8
Accountant	1.5	14.0	5.0	-	2.8	30.3
Taxes/ Rates	8.3	20.4	-	16.8	-	16.8
General Costs	2.0	16.1	24.8	11.8	6.6	75.7
ACC	-	5.7	1.7	2.7	-	-
Total	**213.6**	**160.0**	**62.6**	**270.1**	**309.7**	**331.3**
Total Costs	**(1,287.8)**	**(1,431.9)**	**(845.0)**	**(1,588.6)**	**(1,355.7)**	**(4,126.8)**
Total Income	**776.7**	**1,222.1**	**588.3**	**1,845.5**	**863.1**	**3,411.2**
Gross Profit	**(511.1)**	**(209.8)**	**(256.7)**	**256.9**	**(492.6)**	**(715.7)**
G. P. - Interests; before taxes	**(64.7)**	**222.3**	**55.5**	**670.0**	**(83.5)**	**133.6**
Taxes						
Profits						
Rentability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

NZ Currency

Table Revenue and Expenditure	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes	Per Hectare	Per Hectare	Per Hectare	Per Hectare	Per Hectare	Per Hectare
Milk Sales	728.3	663.8	379.5	743.8	644.4	1,376.5
Winter Milk	202.2	192.8	94.2	174.9	207.8	435.4
Milk Income	930.5	856.6	473.6	918.8	852.2	1,811.9
Stock Sales cows	153.4	137.0	57.6	96.9	176.9	72.7
Calves sold	174.4	117.4	318.6	214.7	175.2	122.0
Stok + Caves	327.7	254.4	376.1	311.6	352.1	194.7
Total	**1,258.2**	**1,111.0**	**849.8**	**1,230.4**	**1,204.3**	**2,006.6**
Farm Cash Expenses						
Replacement	497.2	386.5	129.9	212.6	386.9	547.0
Past.& Suppl.	165.5	79.3	134.5	167.0	189.4	582.0
Fertiliser (incl N)	53.7	87.0	149.5	38.6	69.9	99.9
Animal Health	36.7	5.9	23.9	19.6	29.7	138.5
Wages	73.5	137.0	116.6	80.7	104.6	141.5
Total	**826.6**	**695.6**	**554.4**	**518.5**	**780.4**	**1,508.9**
Overheads						
Shed Expenses	16.1	2.9	23.9	11.2	11.3	39.6
Fences	5.4	-	-	3.4	4.2	1.0
Rep & Mntce	32.3	-	-	10.1	9.3	52.4
Ditches	-	-	-	3.4	-	-
Vehicle Expenses	-	11.3	-	22.4	-	41.5
Total	**53.8**	**14.2**	**23.9**	**50.5**	**24.8**	**134.5**
Depreciation	136.6	53.7	100.9	34.7	83.4	89.7
Interests	723.2	392.8	451.0	275.3	570.9	499.6
Total	**859.7**	**446.5**	**551.9**	**310.0**	**654.4**	**589.3**
Fire & Earthqk Ins..	4.0	6.2	9.0	2.2	1.8	4.0
Administration	322.9	88.1	35.9	22.4	166.9	-
Farm Mnger Wage	-	-	-	134.5	250.3	118.7
Accountant	2.4	12.7	7.2	-	3.9	17.8
Taxes/ Rates	13.5	18.6	-	11.2	-	9.9
General Costs	3.2	14.7	35.9	7.8	9.2	44.5
ACC	-	5.2	2.4	1.8	-	-
Total	**346.0**	**145.4**	**90.3**	**180.1**	**432.1**	**194.9**
Total Costs	**(2,086.2)**	**(1,301.7)**	**(1,220.5)**	**(1,059.1)**	**(1,891.7)**	**(2,427.6)**
Total Income	**1,258.2**	**1,111.0**	**849.8**	**1,230.4**	**1,204.3**	**2,006.6**
Gross Profit	**(827.9)**	**(190.7)**	**(370.7)**	**171.3**	**(687.4)**	**(421.0)**
G.P - Interests; before taxes	**(104.8)**	**202.1**	**80.2**	**446.6**	**(116.5)**	**78.6**
Taxes						
Profits						
Profitability	-1.16%	4.12%	1.42%	12.98%	-1.63%	1.26%

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	36,664	18,378	17,192	89,864	41,844	188,477
Winter Milk	10,177	5,338	4,267	21,136	13,495	59,616
Stock Sales cows	7,721	3,793	2,607	11,703	11,486	9,956
Calves sold	8,777	3,251	14,434	25,944	11,378	16,701
Total	**63,339**	**30,760**	**38,500**	**148,648**	**78,203**	**274,749**
Farm Cash Expenses						
Replacement	25,031	10,701	5,885	25,681	25,126	74,904
Pasture and Supplements	8,332	2,194	6,095	20,182	12,296	79,685
Fertiliser (incl nitrogen)	2,704	2,408	6,772	4,659	4,536	13,680
Animal Health	1,848	163	1,084	2,370	1,926	18,963
Wages	3,698	3,793	5,283	9,752	6,794	19,369
Total	**41,612**	**19,258**	**25,119**	**62,646**	**50,679**	**206,602**
Overheads						
Shed Expenses	813	81	1,084	1,354	735	5,418
Fences	271	-	-	406	271	135
Repairs and Maintenance	1,625	-	-	1,219	605	7,179
Ditches	-	-	-	406	-	-
Vehicle Expenses	-	312	-	2,709	-	5,689
Total	**2,709**	**393**	**1,084**	**6,095**	**1,612**	**18,421**
Depreciation	6,874	1,487	4,571	4,192	5,418	12,281
Interests	36,403	10,877	20,431	33,266	37,075	68,404
Total	**43,278**	**12,363**	**25,003**	**37,459**	**42,493**	**80,686**
Fire & Earthquake Insurance	203	173	406	271	118	542
Administration	16,254	2,438	1,625	2,709	10,836	-
Farm Manager Wage	-	-	-	16,254	16,254	16,254
Accountant	122	352	325	-	253	2,438
Taxes/ Rates	677	515	-	1,354	-	1,354
General Costs	163	406	1,625	948	597	6,095
ACC	-	143	108	217	-	-
Total	**17,419**	**4,027**	**4,091**	**21,753**	**28,058**	**26,684**
Total Costs	**(105,018)**	**(36,041)**	**(55,296)**	**(127,953)**	**(122,842)**	**(332,392)**
Total Income	**63,339**	**30,760**	**38,500**	**148,648**	**78,203**	**274,749**
Gross Profit	**(41,679)**	**(5,281)**	**(16,796)**	**20,695**	**(44,639)**	**(57,642)**
GP - Interests	**(5,275)**	**5,595**	**3,635**	**53,962**	**(7,564)**	**10,762**
Taxes	-	-	-	-	-	-
Profits	-	-	-	-	-	-
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

US Currency

A.E.R., $/ per Liter

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	0.09	0.10	0.10	0.11	0.10	0.11
Winter Milk	0.03	0.03	0.02	0.03	0.03	0.04
Stock Sales cows	0.02	0.02	0.01	0.01	0.03	0.01
Calves sold	0.02	0.02	0.08	0.03	0.03	0.01
Total	**0.16**	**0.16**	**0.22**	**0.19**	**0.19**	**0.16**
Farm Cash Expenses						
Replacement	0.06	0.06	0.03	0.03	0.06	0.04
Pasture and Supplements	0.02	0.01	0.03	0.03	0.03	0.05
Fertiliser (incl nitrogen)	0.01	0.01	0.04	0.01	0.01	0.01
Animal Health	0.00	0.00	0.01	0.00	0.00	0.01
Wages	0.01	0.02	0.03	0.01	0.02	0.01
Total	**0.11**	**0.10**	**0.14**	**0.08**	**0.12**	**0.12**
Overheads						
Shed Expenses	0.00	0.00	0.01	0.00	0.00	0.00
Fences	0.00	-	-	0.00	0.00	0.00
Repairs and Maintenance	0.00	-	-	0.00	0.00	0.00
Ditches	-	-	-	0.00	-	-
Vehicle Expenses	-	0.00	-	0.00	-	0.00
Total	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**
Depreciation	0.02	0.01	0.03	0.01	0.01	0.01
Interests	0.09	0.06	0.12	0.04	0.09	0.04
Total	**0.11**	**0.07**	**0.14**	**0.05**	**0.10**	**0.05**
Fire & Earthquake Insurance	0.00	0.00	0.00	0.00	0.00	0.00
Administration	0.04	0.01	0.01	0.00	0.03	-
Farm Manager Wage	-	-	-	0.02	0.04	0.01
Accountant	0.00	0.00	0.00	-	0.00	0.00
Taxes/ Rates	0.00	0.00	-	0.00	-	0.00
General Costs	0.00	0.00	0.01	0.00	0.00	0.00
ACC	-	0.00	0.00	0.00	-	-
Total	**0.04**	**0.02**	**0.02**	**0.03**	**0.07**	**0.02**
Total Costs	**(0.27)**	**(0.19)**	**(0.31)**	**(0.16)**	**(0.29)**	**(0.20)**
Total Income	**0.16**	**0.16**	**0.22**	**0.19**	**0.19**	**0.16**
Gross Profit	**(0.11)**	**(0.03)**	**(0.10)**	**0.03**	**(0.11)**	**(0.03)**
GP - Interests	**(0.01)**	**0.03**	**0.02**	**0.07**	**(0.02)**	**0.01**
Taxes	-	-	-	-	-	-
Profits	-	-	-	-	-	-
Profitability	**-1.16%**	**4.12%**	**1.42%**	**12.98%**	**-1.63%**	**1.26%**

US Currency

A.E.R., $/ Per Hectare

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	226.32	367.56	132.25	561.65	232.47	1,177.98
Winter Milk	62.82	106.77	32.82	132.10	74.97	372.60
Stock Sales cows	47.66	75.85	20.06	73.14	63.81	62.22
Calves sold	54.18	65.02	111.03	162.15	63.21	104.38
Total	**390.98**	**615.20**	**296.15**	**929.05**	**434.46**	**1,717.18**
Farm Cash Expenses						
Replacement	154.51	214.01	45.27	160.51	139.59	468.15
Pasture and Supplements	51.43	43.89	46.89	126.14	68.31	498.03
Fertiliser (incl nitrogen)	16.69	48.17	52.10	29.12	25.20	85.50
Animal Health	11.40	3.25	8.34	14.81	10.70	118.52
Wages	22.83	75.85	40.63	60.95	37.75	121.06
Total	**256.87**	**385.16**	**193.22**	**391.53**	**281.55**	**1,291.26**
Overheads						
Shed Expenses	5.02	1.63	8.34	8.47	4.09	33.86
Fences	1.67	-	-	2.54	1.50	0.85
Repairs and Maintenance	10.03	-	-	7.62	3.36	44.87
Ditches	-	-	-	2.54	-	-
Vehicle Expenses	-	6.23	-	16.93	-	35.56
Total	**16.72**	**7.86**	**8.34**	**38.10**	**8.95**	**115.13**
Depreciation	42.43	29.73	35.16	26.20	30.10	76.76
Interests	224.71	217.53	157.16	207.92	205.97	427.53
Total	**267.15**	**247.26**	**192.33**	**234.12**	**236.07**	**504.28**
Fire & Earthquake Insurance	1.25	3.45	3.13	1.69	0.65	3.39
Administration	100.33	48.76	12.50	16.93	60.20	-
Farm Manager Wage	-	-	-	101.59	90.30	101.59
Accountant	0.75	7.04	2.50	-	1.41	15.24
Taxes/ Rates	4.18	10.29	-	8.47	-	8.47
General Costs	1.00	8.13	12.50	5.93	3.32	38.10
ACC	-	2.86	0.83	1.35	-	-
Total	**107.52**	**80.54**	**31.47**	**135.96**	**155.88**	**166.77**
Total Costs	**(648.26)**	**(720.82)**	**(425.35)**	**(799.70)**	**(682.46)**	**(2,077.45)**
Total Income	**390.98**	**615.20**	**296.15**	**929.05**	**434.46**	**1,717.18**
Gross Profit	**(257.28)**	**(105.62)**	**(129.20)**	**129.34**	**(248.00)**	**(360.27)**
GP - Interests	**(32.56)**	**111.91**	**27.96**	**337.26**	**(42.02)**	**67.26**
Taxes	-	-	-	-	-	-
Profits	-	-	-	-	-	-
Profitability	-1.16%	4.12%	1.42%	12.98%	-1.63%	1.26%

US Currency

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes						
Milk Sales	366.64	334.15	191.02	374.44	324.37	692.93
Winter Milk	101.77	97.06	47.41	88.07	104.61	219.17
Stock Sales cows	77.21	68.96	28.97	48.76	89.04	36.60
Calves sold	87.77	59.11	160.37	108.10	88.20	61.40
Total	**633.39**	**559.27**	**427.78**	**619.37**	**606.22**	**1,010.11**
Farm Cash Expenses						
Replacement	250.31	194.56	65.39	107.01	194.77	275.38
Pasture and Supplements	83.32	39.90	67.72	84.09	95.32	292.96
Fertiliser (incl nitrogen)	27.04	43.79	75.25	19.41	35.16	50.30
Animal Health	18.48	2.96	12.04	9.88	14.93	69.72
Wages	36.98	68.96	58.69	40.63	52.67	71.21
Total	**416.12**	**350.15**	**279.10**	**261.02**	**392.86**	**759.56**
Overheads						
Shed Expenses	8.13	1.48	12.04	5.64	5.70	19.92
Fences	2.71	-	-	1.69	2.10	0.50
Repairs and Maintenance	16.25	-	-	5.08	4.69	26.39
Ditches	-	-	-	1.69	-	-
Vehicle Expenses	-	5.66	-	11.29	-	20.92
Total	**27.09**	**7.14**	**12.04**	**25.40**	**12.49**	**67.72**
Depreciation	68.74	27.03	50.79	17.47	42.00	45.15
Interests	364.03	197.76	227.01	138.61	287.41	251.49
Total	**432.78**	**224.79**	**277.81**	**156.08**	**329.41**	**296.64**
Fire & Earthquake Insurance	2.03	3.14	4.51	1.13	0.91	1.99
Administration	162.54	44.33	18.06	11.29	84.00	-
Farm Manager Wage	-	-	-	67.72	126.00	59.76
Accountant	1.22	6.40	3.61	-	1.96	8.96
Taxes/ Rates	6.77	9.36	-	5.64	-	4.98
General Costs	1.63	7.39	18.06	3.95	4.63	22.41
ACC	-	2.60	1.20	0.90	-	-
Total	**174.19**	**73.22**	**45.45**	**90.64**	**217.51**	**98.10**
Total Costs	**(1,050.18)**	**(655.29)**	**(614.40)**	**(533.14)**	**(952.26)**	**(1,222.03)**
Total Income	**633.39**	**559.27**	**427.78**	**619.37**	**606.22**	**1,010.11**
Gross Profit	**(416.79)**	**(96.02)**	**(186.62)**	**86.23**	**(346.04)**	**(211.92)**
GP - Interests	**(52.75)**	**101.73**	**40.39**	**224.84**	**(58.63)**	**39.56**
Taxes	-	-	-	-	-	-
Profits	-	-	-	-	-	-
Profitability	-1.16%	4.12%	1.42%	12.98%	-1.63%	1.26%

Table Revenue and Expenditure												
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	371.6507	371.6507	371.6507	371.6507	371.6507	371.6507	371.6507	371.6507	371.6507	371.6507	371.6507	371.6507
Milk Sales	117,337,871	203,782,025	89,529,910	42,937,549	62,063,809	83,347,129	106,370,890	79,206,940	72,024,419	121,050,349	53,690,147	92,053,419
Winter Milk	20,082,091	47,742,621	17,933,633	13,211,067	18,200,106	45,396,761	24,595,100	24,828,125	15,291,196	31,141,727	17,553,063	18,699,233
Stock Sales cows	7,726,618	17,323,382	6,214,000	2,787,380	5,500,430	5,983,576	10,266,851	11,706,997	7,247,189	9,477,093	6,522,470	11,149,521
Calves sold	1,803,450	5,719,704	7,247,189	2,508,642	1,962,316	2,378,564	4,877,915	2,414,986	3,304,718	3,205,487	3,066,118	8,547,966
Total	**146,950,030**	**274,567,732**	**120,924,732**	**61,444,639**	**87,726,661**	**137,106,031**	**146,110,756**	**118,157,049**	**97,867,522**	**164,874,657**	**80,831,797**	**130,450,139**
Farm Cash Expenses												
Replacement	31,906,213	49,057,892	13,379,425	6,541,052	11,892,822	65,410,523	22,299,042	14,271,387	17,839,234	26,015,549	8,176,315	20,812,439
Pasture and Supplements	4,734,623	14,473,937	17,976,744	11,335,346	24,854,141	13,565,251	9,700,083	22,299,042	1,867,173	31,776,135	7,014,535	25,346,578
Fertiliser (incl nitrogen)	9,372,659	16,230,358	4,459,808	5,203,110	6,871,821	13,007,775	15,089,018	2,378,564	8,176,315	15,051,853	11,110,869	10,034,569
Animal Health	9,397,188	17,192,561	2,861,710	6,132,237	9,390,498	5,314,605	10,230,057	5,726,394	7,373,178	9,662,918	5,650,949	5,537,595
Wages	13,896,391	27,096,681	19,585,992	11,229,798	10,290,636	6,689,713	9,291,268	11,149,521	10,402,503	9,291,268	9,904,491	7,433,014
Total	**69,307,074**	**124,051,429**	**58,263,680**	**40,441,543**	**63,299,919**	**103,987,866**	**66,609,468**	**55,824,908**	**45,658,403**	**91,797,723**	**41,857,160**	**69,164,195**
Overheads												
Shed Expenses	1,640,838	6,228,494	3,716,507	1,858,254	1,223,474	687,554	929,127	1,040,622	1,572,454	1,114,952	792,731	4,385,478
Fences	803,880	1,459,844	1,300,777	743,301	813,172	260,155	594,641	929,127	599,101	743,301	1,313,414	1,189,282
Repairs and Maintenance	2,881,408	6,069,056	445,981	1,672,428	3,025,608	408,816	7,544,509	1,486,603	5,809,644	371,651	1,163,638	929,127
Ditches	1,215,298	262,385	929,127	-	1,144,684	185,825	1,486,603	1,114,952	1,635,263	1,114,952	1,673,543	743,301
Vehicle Expenses	3,991,157	11,772,036	2,341,399	7,433,014	3,710,561	1,326,793	6,318,062	2,973,206	5,946,411	2,229,904	5,773,965	5,054,450
Total	**10,532,581**	**25,791,815**	**8,733,791**	**11,706,997**	**9,917,499**	**2,869,143**	**16,872,942**	**7,544,509**	**15,562,873**	**5,574,761**	**10,717,291**	**12,301,638**
Depreciation	12,260,431	22,689,275	8,573,982	15,632,000	8,358,424	4,843,724	16,910,107	14,686,521	3,813,136	6,153,792	3,364,556	8,830,421
Interests	85,162,836	136,037,907	66,002,934	35,184,172	42,597,117	102,010,684	94,785,795	56,135,980	26,759,965	61,738,614	26,530,285	57,472,064
Total	**97,423,267**	**158,727,183**	**74,576,916**	**50,816,172**	**50,955,541**	**106,854,408**	**111,695,901**	**70,822,501**	**30,573,102**	**67,892,407**	**29,894,841**	**66,302,485**
Fire & Earthquake Insurance	706,136	887,130	1,133,535	2,009,144	1,350,950	-	2,229,904	-	657,078	-	-	111,495
Administration	1,312,299	1,853,050	-	1,300,777	1,114,952	222,990	-	14,494,377	1,598,098	1,858,254	873,751	-
Farm Manager Wage	18,582,535	16,910,107	14,866,028	11,229,798	13,007,775	-	-	-	-	16,724,282	-	9,291,268
Accountant	1,114,952	1,733,751	929,127	5,574,761	733,638	408,816	-	929,127	706,136	2,601,555	1,752,705	1,226,447
Taxes/ Rates	1,760,138	10,935,450	2,415,730	3,716,507	1,721,486	1,858,254	2,229,904	3,902,332	1,969,749	3,716,507	1,871,261	3,716,507
General Costs	3,466,758	2,275,246	1,114,952	185,825	4,894,640	1,746,758	5,203,110	278,738	1,152,117	1,858,254	-	1,672,428
ACC	1,252,835	1,754,563	668,971	167,243	953,656	1,486,603	1,114,952	334,486	1,375,108	1,114,952	-	817,632
Total	**28,195,652**	**36,349,297**	**21,128,342**	**24,184,054**	**23,777,097**	**5,723,421**	**10,777,870**	**19,939,060**	**7,458,286**	**27,873,803**	**4,497,717**	**16,835,777**
Total Costs	**(205,458,574)**	**(344,919,723)**	**(162,702,730)**	**(127,148,766)**	**(147,950,056)**	**(219,434,838)**	**(205,956,182)**	**(154,130,978)**	**(99,252,664)**	**(193,138,692)**	**(86,967,009)**	**(164,604,095)**
Total Income	**146,950,030**	**274,567,732**	**120,924,732**	**61,444,639**	**87,726,661**	**137,106,031**	**146,110,756**	**118,157,049**	**97,867,522**	**164,874,657**	**80,831,797**	**130,450,139**
Gross Profit	**(58,508,543)**	**(70,351,991)**	**(41,777,998)**	**(65,704,127)**	**(60,223,394)**	**(82,328,806)**	**(59,845,426)**	**(35,973,930)**	**(1,385,142)**	**(28,264,036)**	**(6,135,212)**	**(34,153,956)**
GP - Interests	**26,654,293**	**65,685,916**	**24,224,936**	**(30,519,955)**	**(17,626,278)**	**19,681,878**	**34,940,369**	**20,162,050**	**25,374,823**	**33,474,579**	**20,395,073**	**23,318,108**
Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Profits	-	-	-	-	-	-	-	-	-	-	-	-
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Chile Currency

A.E.R., $ / per Liter

Table Revenue and Expenditure	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes												
Milk Sales	84.9	85.0	125.8	81.2	78.2	76.8	82.3	81.1	83.8	81.3	76.8	82.9
Winter Milk	14.5	19.9	25.2	25.0	22.9	41.8	19.0	25.4	17.8	20.9	25.1	16.8
Stock Sales cows	5.6	7.2	8.7	5.3	6.9	5.5	7.9	12.0	8.4	6.4	9.3	10.0
Calves sold	1.3	2.4	10.2	4.7	2.5	2.2	3.8	2.5	3.8	2.2	4.4	7.7
Total	**106.3**	**114.5**	**169.9**	**116.1**	**110.5**	**126.3**	**113.1**	**120.9**	**113.9**	**110.8**	**115.6**	**117.5**
Farm Cash Expenses												
Replacement	23.1	20.5	18.8	12.4	15.0	60.3	17.3	14.6	20.8	17.5	11.7	18.7
Pasture and Supplements	3.4	6.0	25.3	21.4	31.3	12.5	7.5	22.8	2.2	21.3	10.0	22.8
Fertiliser (incl nitrogen)	6.8	6.8	6.3	9.8	8.7	12.0	11.7	2.4	9.5	10.1	15.9	9.0
Animal Health	6.8	7.2	4.0	11.6	11.8	4.9	7.9	5.9	8.6	6.5	8.1	5.0
Wages	10.1	11.3	27.5	21.2	13.0	6.2	7.2	11.4	12.1	6.2	14.2	6.7
Total	**50.1**	**51.7**	**81.9**	**76.4**	**79.7**	**95.8**	**51.5**	**57.1**	**53.2**	**61.7**	**59.9**	**62.3**
Overheads												
Shed Expenses	1.2	2.6	5.2	3.5	1.5	0.6	0.7	1.1	1.8	0.7	1.1	3.9
Fences	0.6	0.6	1.8	1.4	1.0	0.2	0.5	1.0	0.7	0.5	1.9	1.1
Repairs and Maintenance	2.1	2.5	0.6	3.2	3.8	0.4	5.8	1.5	6.8	0.2	1.7	0.8
Ditches	0.9	0.1	1.3	-	1.4	0.2	1.2	1.1	1.9	0.7	2.4	0.7
Vehicle Expenses	2.9	4.9	3.3	14.1	4.7	1.2	4.9	3.0	6.9	1.5	8.3	4.6
Total	**7.6**	**10.8**	**12.3**	**22.1**	**12.5**	**2.6**	**13.1**	**7.7**	**18.1**	**3.7**	**15.3**	**11.1**
Depreciation	8.9	9.5	12.0	29.5	10.5	4.5	13.1	15.0	4.4	4.1	4.8	8.0
Interests	61.6	56.8	92.7	66.5	53.7	94.0	73.3	57.5	31.2	41.5	38.0	51.8
Total	**70.5**	**66.2**	**104.8**	**96.1**	**64.2**	**98.5**	**86.4**	**72.5**	**35.6**	**45.6**	**42.8**	**59.7**
Fire & Earthquake Insurance	0.5	0.4	1.6	3.8	1.7	-	1.7	-	0.8	-	-	0.1
Administration	0.9	0.8	-	2.5	1.4	0.2	-	14.8	1.9	1.2	1.2	-
Farm Manager Wage	13.4	7.1	20.9	21.2	16.4	-	-	-	-	11.2	-	8.4
Accountant	0.8	0.7	1.3	10.5	0.9	0.4	-	1.0	0.8	1.7	2.5	1.1
Taxes/ Rates	1.3	4.6	3.4	7.0	2.2	1.7	1.7	4.0	2.3	2.5	2.7	3.3
General Costs	2.5	0.9	1.6	0.4	6.2	1.6	4.0	0.3	1.3	1.2	-	1.5
ACC	0.9	0.7	0.9	0.3	1.2	1.4	0.9	0.3	1.6	0.7	-	0.7
Total	**20.4**	**15.2**	**29.7**	**45.7**	**30.0**	**5.3**	**8.3**	**20.4**	**8.7**	**18.7**	**6.4**	**15.2**
Total Costs	**(148.6)**	**(143.9)**	**(228.6)**	**(240.3)**	**(186.4)**	**(202.2)**	**(159.4)**	**(157.7)**	**(115.5)**	**(129.7)**	**(124.4)**	**(148.2)**
Total Income	**106.3**	**114.5**	**169.9**	**116.1**	**110.5**	**126.3**	**113.1**	**120.9**	**113.9**	**110.8**	**115.6**	**117.5**
Gross Profit	**(42.3)**	**(29.3)**	**(58.7)**	**(124.2)**	**(75.9)**	**(75.9)**	**(46.3)**	**(36.8)**	**(1.6)**	**(19.0)**	**(8.8)**	**(30.8)**
GP - Interests	**19.3**	**27.4**	**34.0**	**(57.7)**	**(22.2)**	**18.1**	**27.0**	**20.6**	**29.5**	**22.5**	**29.2**	**21.0**
Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Profits	-	-	-	-	-	-	-	-	-	-	-	-
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Table Revenue and Expenditure												
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes												
Milk Sales	728,807	738,341	895,299	1,022,323	730,162	694,559	636,951	660,058	585,564	1,424,122	671,127	748,402
Winter Milk	124,733	172,981	179,336	314,549	214,119	378,306	147,276	206,901	124,319	366,373	219,413	152,026
Stock Sales cows	47,991	62,766	62,140	66,366	64,711	49,863	61,478	97,558	58,920	111,495	81,531	90,647
Calves sold	11,202	20,724	72,472	59,730	23,086	19,821	29,209	20,125	26,868	37,712	38,326	69,496
Total	**912,733**	**994,811**	**1,209,247**	**1,462,968**	**1,032,078**	**1,142,550**	**874,915**	**984,642**	**795,671**	**1,939,702**	**1,010,397**	**1,060,570**
Farm Cash Expenses												
Replacement	198,175	177,746	133,794	155,739	139,916	545,088	133,527	118,928	145,034	306,065	102,204	169,207
Pasture and Supplements	29,408	52,442	179,767	269,889	292,402	113,044	58,084	185,825	15,180	373,837	87,682	206,070
Fertiliser (incl nitrogen)	58,215	58,806	44,598	123,884	80,845	108,398	90,353	19,821	66,474	177,081	138,886	81,582
Animal Health	58,368	62,292	28,617	146,006	110,476	44,288	61,258	47,720	59,945	113,681	70,637	45,021
Wages	86,313	98,176	195,860	267,376	121,066	55,748	55,636	92,913	84,573	109,309	123,806	60,431
Total	**430,479**	**449,462**	**582,637**	**962,894**	**744,705**	**866,566**	**398,859**	**465,208**	**371,207**	**1,079,973**	**523,215**	**562,311**
Overheads												
Shed Expenses	10,192	22,567	37,165	44,244	14,394	5,730	5,564	8,672	12,784	13,117	9,909	35,654
Fences	4,993	5,289	13,008	17,698	9,567	2,168	3,561	7,743	4,871	8,745	16,418	9,669
Repairs and Maintenance	17,897	21,989	4,460	39,820	35,595	3,407	45,177	12,388	47,233	4,372	14,545	7,554
Ditches	7,548	951	9,291	-	13,467	1,549	8,902	9,291	13,295	13,117	20,919	6,043
Vehicle Expenses	24,790	42,652	23,414	176,977	43,654	11,057	37,833	24,777	48,345	26,234	72,175	41,093
Total	**65,420**	**93,449**	**87,338**	**278,738**	**116,676**	**23,910**	**101,036**	**62,871**	**126,527**	**65,585**	**133,966**	**100,013**
Depreciation	76,152	82,208	85,740	372,190	98,334	40,364	101,258	122,388	31,001	72,398	42,057	71,792
Interests	528,962	492,891	660,029	837,718	501,143	850,089	567,580	467,800	217,561	726,337	331,629	467,253
Total	**605,113**	**575,098**	**745,769**	**1,209,909**	**599,477**	**890,453**	**668,838**	**590,188**	**248,562**	**798,734**	**373,686**	**539,045**
Fire & Earthquake Insurance	4,386	3,214	11,335	47,837	15,894	-	13,353	-	5,342	-	-	906
Administration	8,151	6,714	-	30,971	13,117	1,858	-	120,786	12,993	21,862	10,922	-
Farm Manager Wage	115,419	61,269	148,660	267,376	153,033	-	-	-	-	196,756	-	75,539
Accountant	6,925	6,282	9,291	132,732	8,631	3,407	-	7,743	5,741	30,607	21,909	9,971
Taxes/ Rates	10,933	39,621	24,157	88,488	20,253	15,485	13,353	32,519	16,014	43,724	23,391	30,216
General Costs	21,533	8,244	11,150	4,424	57,584	14,556	31,156	2,323	9,367	21,862	-	13,597
ACC	7,782	6,357	6,690	3,982	11,219	12,388	6,676	2,787	11,180	13,117	-	6,647
Total	**175,128**	**131,700**	**211,283**	**575,811**	**279,731**	**47,695**	**64,538**	**166,159**	**60,636**	**327,927**	**56,221**	**136,876**
Total Costs	**(1,276,140)**	**(1,249,709)**	**(1,627,027)**	**(3,027,352)**	**(1,740,589)**	**(1,828,624)**	**(1,233,271)**	**(1,284,425)**	**(806,932)**	**(2,272,220)**	**(1,087,088)**	**(1,338,245)**
Total Income	**912,733**	**994,811**	**1,209,247**	**1,462,968**	**1,032,078**	**1,142,550**	**874,915**	**984,642**	**795,671**	**1,939,702**	**1,010,397**	**1,060,570**
Gross Profit	**(363,407)**	**(254,899)**	**(417,780)**	**(1,564,384)**	**(708,511)**	**(686,073)**	**(358,356)**	**(299,783)**	**(11,261)**	**(332,518)**	**(76,690)**	**(277,674)**
GP - Interests	**165,555**	**237,992**	**242,249**	**(726,666)**	**(207,368)**	**164,016**	**209,224**	**168,017**	**206,299**	**393,819**	**254,938**	**189,578**
Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Profits	-	-	-	-	-	-	-	-	-	-	-	-
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Table Revenue and Expenditure	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes												
Milk Sales	380,967	403,529	406,954	343,500	310,319	362,379	409,119	220,019	288,098	356,030	357,934	306,845
Winter Milk	65,202	94,540	81,517	105,689	91,001	197,377	94,597	68,967	61,165	91,593	117,020	62,331
Stock Sales cows	25,086	34,304	28,245	22,299	27,502	26,016	39,488	32,519	28,989	27,874	43,483	37,165
Calves sold	5,855	11,326	32,942	20,069	9,812	10,342	18,761	6,708	13,219	9,428	20,441	28,493
Total	**477,110**	**543,698**	**549,658**	**491,557**	**438,633**	**596,113**	**561,964**	**328,214**	**391,470**	**484,925**	**538,879**	**434,834**
Farm Cash Expenses												
Replacement	103,592	97,144	60,816	52,328	59,464	284,394	85,766	39,643	71,357	76,516	54,509	69,375
Pasture and Supplements	15,372	28,661	81,712	90,683	124,271	58,979	37,308	61,942	7,469	93,459	46,764	84,489
Fertiliser (incl nitrogen)	30,431	32,139	20,272	41,625	34,359	56,556	58,035	6,607	32,705	44,270	74,072	33,449
Animal Health	30,510	34,045	13,008	49,058	46,952	23,107	39,346	15,907	29,493	28,420	37,673	18,459
Wages	45,118	53,657	89,027	89,838	51,453	29,086	35,736	30,971	41,610	27,327	66,030	24,777
Total	**225,023**	**245,646**	**264,835**	**323,532**	**316,500**	**452,121**	**256,190**	**155,069**	**182,634**	**269,993**	**279,048**	**230,547**
Overheads												
Shed Expenses	5,327	12,334	16,893	14,866	6,117	2,989	3,574	2,891	6,290	3,279	5,285	14,618
Fences	2,610	2,891	5,913	5,946	4,066	1,131	2,287	2,581	2,396	2,186	8,756	3,964
Repairs and Maintenance	9,355	12,018	2,027	13,379	15,128	1,777	29,017	4,129	23,239	1,093	7,758	3,097
Ditches	3,946	520	4,223	-	5,723	808	5,718	3,097	6,541	3,279	11,157	2,478
Vehicle Expenses	12,958	23,311	10,643	59,464	18,553	5,769	24,300	8,259	23,786	6,559	38,493	16,848
Total	**34,197**	**51,073**	**39,699**	**93,656**	**49,587**	**12,475**	**64,896**	**20,957**	**62,251**	**16,396**	**71,449**	**41,005**
Depreciation	39,807	44,929	38,973	125,056	41,792	21,060	65,039	40,796	15,253	18,099	22,430	29,435
Interests	276,503	269,382	300,013	281,473	212,986	443,525	364,561	155,933	107,040	181,584	176,869	191,574
Total	**316,309**	**314,311**	**338,986**	**406,529**	**254,778**	**464,584**	**429,600**	**196,729**	**122,292**	**199,684**	**199,299**	**221,008**
Fire & Earthquake Insurance	2,293	1,757	5,152	16,073	6,755	-	8,577	-	2,628	-	-	372
Administration	4,261	3,669	-	10,406	5,575	970	-	40,262	6,392	5,465	5,825	-
Farm Manager Wage	60,333	33,485	67,573	89,838	65,039	-	-	-	-	49,189	-	30,971
Accountant	3,620	3,433	4,223	44,598	3,668	1,777	-	2,581	2,825	7,652	11,685	4,088
Taxes/ Rates	5,715	21,654	10,981	29,732	8,607	8,079	8,577	10,840	7,879	10,931	12,475	12,388
General Costs	11,256	4,505	5,068	1,487	24,473	7,595	20,012	774	4,608	5,465	-	5,575
ACC	4,068	3,474	3,041	1,338	4,768	6,463	4,288	929	5,500	3,279	-	2,725
Total	**91,544**	**71,979**	**96,038**	**193,472**	**118,885**	**24,884**	**41,453**	**55,386**	**29,833**	**81,982**	**29,985**	**56,119**
Total Costs	**(667,073)**	**(683,009)**	**(739,558)**	**(1,017,190)**	**(739,750)**	**(954,065)**	**(792,139)**	**(428,142)**	**(397,011)**	**(568,055)**	**(579,780)**	**(548,680)**
Total Income	**477,110**	**543,698**	**549,658**	**491,557**	**438,633**	**596,113**	**561,964**	**328,214**	**391,470**	**484,925**	**538,879**	**434,834**
Gross Profit	**(189,963)**	**(139,311)**	**(189,900)**	**(525,633)**	**(301,117)**	**(357,951)**	**(230,175)**	**(99,928)**	**(5,541)**	**(83,130)**	**(40,901)**	**(113,847)**
GP - Interests	**86,540**	**130,071**	**110,113**	**(244,160)**	**(88,131)**	**85,573**	**134,386**	**56,006**	**101,499**	**98,455**	**135,967**	**77,727**
Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Profits	-	-	-	-	-	-	-	-	-	-	-	-
Profitability	**2.50%**	**3.86%**	**2.94%**	**-6.94%**	**-3.31%**	**1.54%**	**2.95%**	**2.87%**	**7.44%**	**4.34%**	**6.15%**	**3.25%**

Appendix G

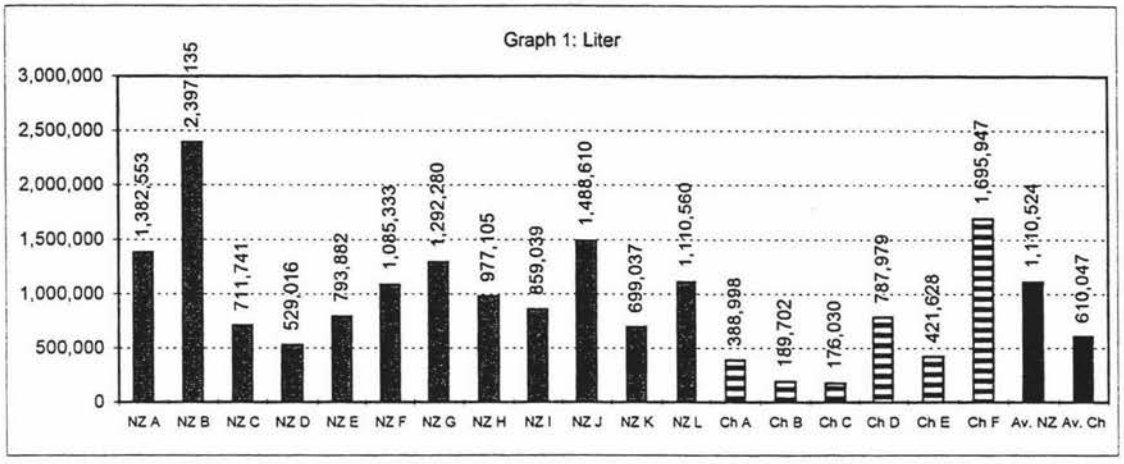
Comparison of all farmers

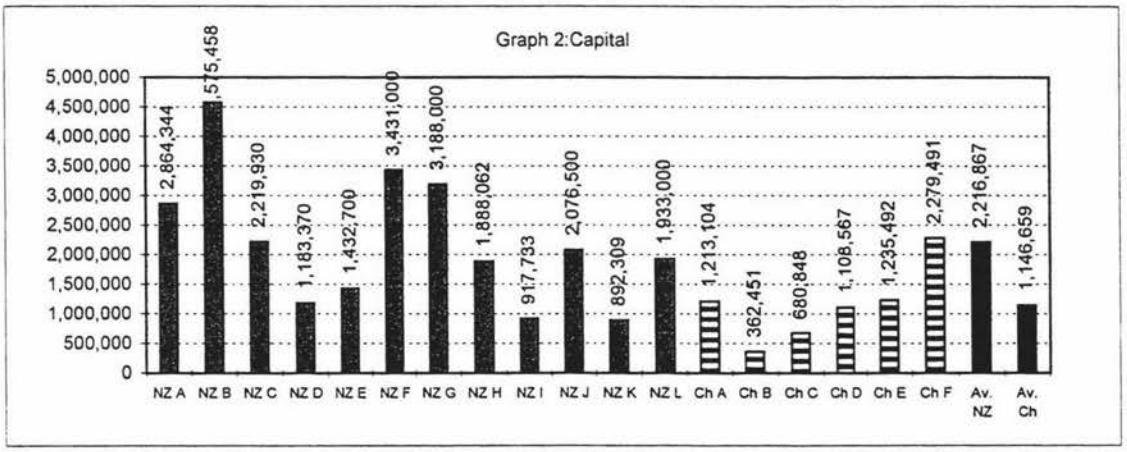
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I
Climate	temp	temperate	cool winter /	temperate	temperate	temperate	temperate	Temperate	Temperate
Rainfall summer		wet	warm summer	insufficient	even	insufficient	summery dry	insufficient	sufficient
winter		dry		excessive		excessive	winter wet	excessive	enough
		av. 900 mm/year	900 mm/ year						
Drainage and flooding condit	moderate	*	moderate	moderate	moderate	good	*	moderate	moderate
Soil	sandy loam	silt loam	clay loam	sandy loam	sandy loam		clay loam	sandy loam	,peat, sandy loam
		*	free draining soils, sub soil drainage installed				*	sub surface drainage tiles/moles	
Land									
Hectares	161 ha	276	100	42	85	120	87	120	123
Value equivalent of renting i	617	625	741	750	500	10000 - $15000	500	180	208
Number of shares	157,500	179,305	86,000	39,000	60,000	80,000	100,000	115,062	64,000
Price of shares	2	$1.50	$1.50	$1.00	1.5		$1.80	$1.00	
Which company	Kiwi	Kiwi Dairies	Kiwi	NZDG	Kiwi	Kiwi	Kiwi	Kiwi	kiwi
Animals									
Breed	Friesian	Friesian	Friesian	Friesian	olstein Friesian	esian / Holstein	Friesian	Friesian	Friesian
Bovine Tuberculosis clear	yes 2 years	yes	yes	yes	yes 5 years	yes	clear	yes	yes
Bovine Brucellosis clear	yes	yes	yes	yes	yes	yes	clear	yes	yes
Does the herd have Pedigree	no	no	no	istered pedigree	20	no	no	no	no
Calving period	20-Ap / May	April / May	April	-March / 01-Jun		1- March / May	March /15 May	April / May	March / April
	25-Jul / Sept	Aug / Oct	November	15 - Aug / Oct	25- Jul/ Sept.	1- Aug / Oct	0 Aug / 15 Oct	Aug / Sept	July / Sept
Technology									
Type of milk shed	herring bone	rotary	herring bone	herring bone	herring bone	bone 14 a side	rotary	rotary	herring bone
Elimination Effluent	rrigation system	twin pond	ditch	irrigation	1 km ditch	rrigation system	surface disposal	long ditch	irrigated
		irrigate from second					pumped to paddocks		
Automatic Cup Removers	no	no	no	no	no	no	no	yes	no

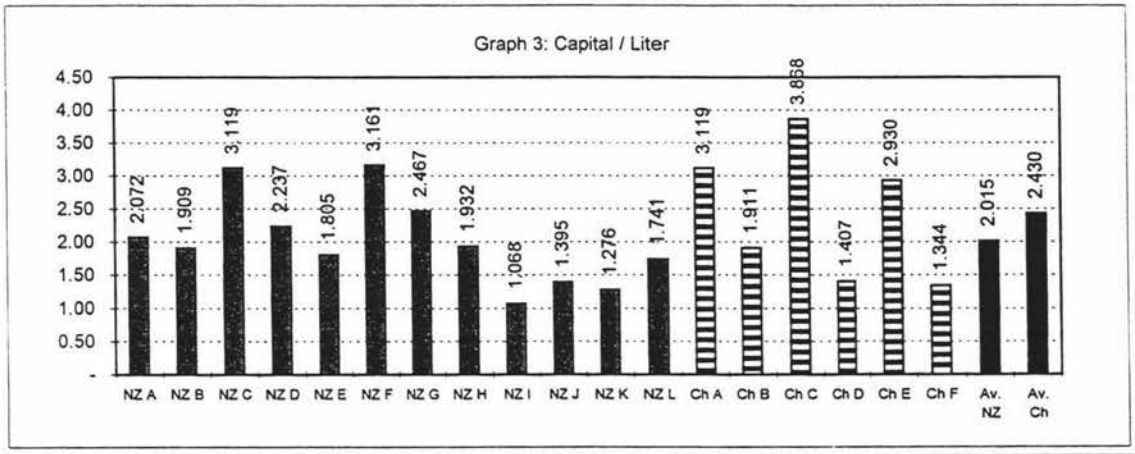
	NZ J	NZ K	NZ L	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Climate	temperate	temperate		Temperate -cold	template	ot dry /cold wet	template	template	template
Rainfall summer	insufficient -	insufficient	insufficient	enough	insufficient	insufficient	insufficient	insufficient	insufficient
winter	on average -		enough	excessive	sufficient	excessive		excessive	excessive
	.- rain every 3rd year								
Drainage and flooding condit	1/2 good; 1/2 mo	moderate	good	moderate	moderate	moderate	good	moderate	good
Soil	/2 sandy loam;	clay loam	clay loam	clay loam		clay loam			loam
Land	1/2 clay								
Hectares				162	50	130	160	180	160
Value equivalent of renting i	85	60	123	70,000	3,000,000		50,000	40,000	100,000
Number of shares	700	$300	200						159,468
Price of shares	115,000	85,215	47,000						510
Which company	$2.00	$1.00	$2.00			Soalva	uesos Dollinco	Nestle	Colun Ltd.
Animals	NZDG	NZDG	NZCDC						
Breed				Red German	German Red	German Red	German Red	Red German	Black Frison
	Friesian		Friesian		Mixed/ Fresian	Hybrid with Hereford and Angus			
Bovine Tuberculosis clear	yes	yes	yes	yes	yes	yes	almost	yes	yes
Bovine Brucellosis clear	yes	yes	yes	yes	yes	yes	almost	yes	yes
Does the herd have Pedigree	yes	no	no	yes	no	no	no	no	yes
Calving period	April / May	0 - March / Jun	2 months	year round	March	Feb / March	March	March	Feb
	July / Sept	20 - Aug / Oct	2 months		Sept	Aug / Sept.	to September	Oct	Sept.
Technology									
Type of milk shed	36 bail rotary	13 herring bone	herring bone	herring bone	other	tramps	herring bone	herring bone	individual cage
Elimination Effluent	irrigation	xidation ponds	rrigation system	pond	ditch	ditch	on by aspersion	ditch	irrigation from
		slummy tank							decanting pon
Automatic Cup Removers	yes	no	no	no	no	no	no	no	yes

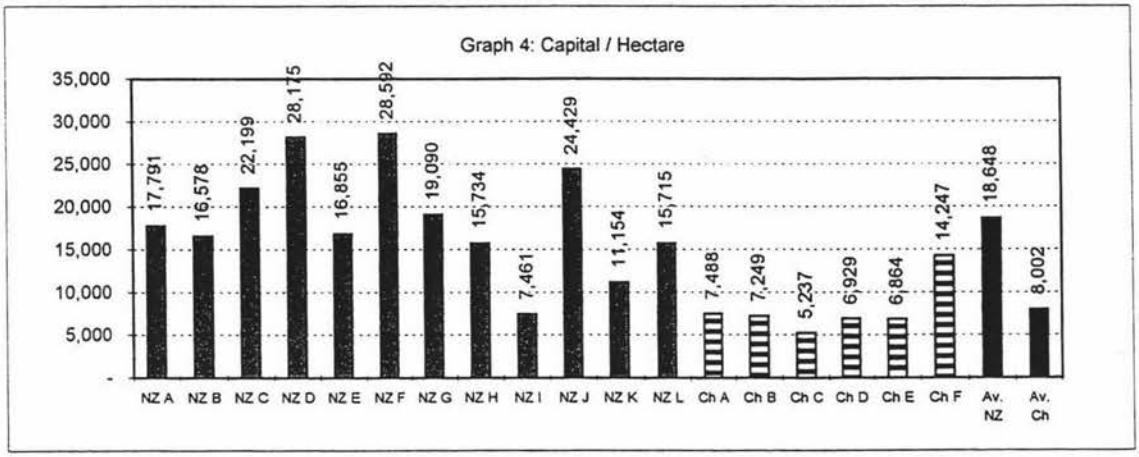
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
LITRES	1,382,553	2,397,135	711,741	529,016	793,882	1,085,333	1,292,280	977,105	859,039	1,488,610	699,037	1,110,560
INCOME	369,756	676,777	289,152	151,079	215,966	346,411	352,390	279,927	234,940	409,503	191,694	298,002
CAPITAL	2,864,344	4,575,458	2,219,930	1,183,370	1,432,700	3,431,000	3,188,000	1,888,062	917,733	2,076,500	892,309	1,933,000
Machinery & Building	458,304	452,500	432,350	414,370	332,700	127,000	810,000	417,000	92,353	384,500	155,965	381,300
Cows	261,800	404,000	176,000	100,000	160,000	184,000	208,000	288,000	200,000	272,000	120,000	240,000
Land	1,986,740	3,450,000	1,482,580	630,000	850,000	3,000,000	1,990,000	1,068,000	511,680	1,190,000	480,000	1,217,700
Shares	157,500	268,958	129,000	39,000	90,000	120,000	180,000	115,062	96,000	230,000	136,344	94,000
Capital/ Liter	2.07	1.91	3.12	2.24	1.80	3.16	2.47	1.93	1.07	1.39	1.28	1.74
Capital / Hectare	17,791	16,578	22,199	28,175	16,855	28,592	19,090	15,734	7,461	24,429	11,154	15,715
Capital / Per Cow	9,300	9,060	10,091	9,467	7,164	14,917	12,262	5,245	3,671	6,107	5,949	6,443
Value of Land/ha	12,340	12,500	14,826	15,000	10,000	25,000	11,916	8,900	4,160	14,000	6,000	9,900
Variable Capital	877,604	1,125,458	737,350	553,370	582,700	431,000	1,198,000	820,062	388,353	886,500	412,309	715,300
Var. Capital/Land	0.442	0.326	0.497	0.878	0.686	0.144	0.602	0.768	0.759	0.745	0.859	0.587
Var. Cap./liter	0.635	0.470	1.036	1.046	0.734	0.397	0.927	0.839	0.452	0.596	0.590	0.644
Var. Cap. - Cows	615,804	721,458	561,350	453,370	422,700	247,000	990,000	532,062	188,353	614,500	292,309	475,300
Var Cap. - Cow/ ha	3,825	2,614	5,614	10,795	4,973	2,058	5,928	4,434	1,531	7,229	3,654	3,864
Var Cap. - Cow /cow	1,999	1,429	2,552	3,627	2,114	1,074	3,808	1,478	753	1,807	1,949	1,584
Cows	308	505	220	125	200	230	260	360	250	340	150	300
Hectares	161	276	100	42	85	120	167	120	123	85	80	123
Liters/cow	4,489	4,747	3,235	4,232	3,969	4,719	4,970	2,714	3,436	4,378	4,660	3,702
Liters/Hectare	8,587	8,685	7,117	12,596	9,340	9,044	7,738	8,143	6,984	17,513	8,738	9,029
Cow / Hectare	1.9	1.8	2.2	3.0	2.4	1.9	1.6	3.0	2.0	4.0	1.9	2.4

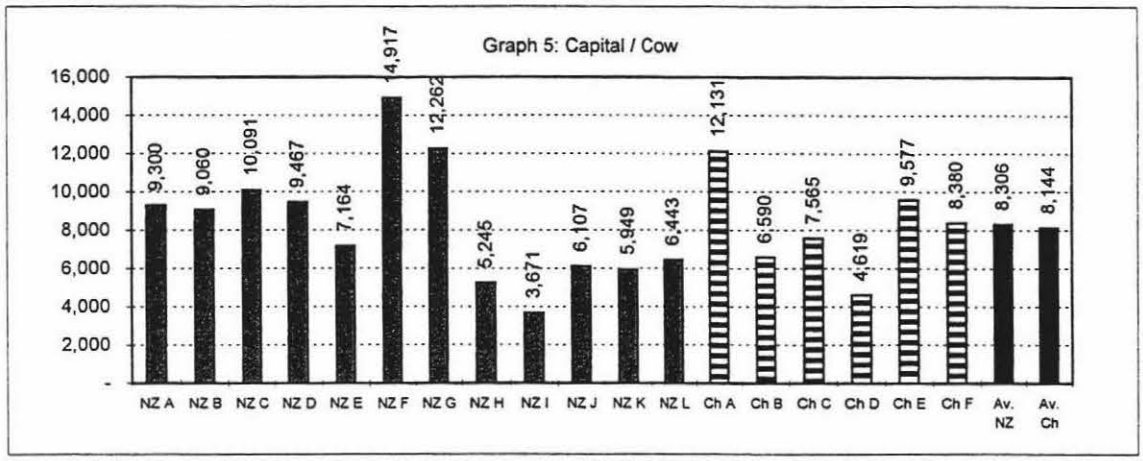
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F	Av. NZ	Av. Ch
LITRES	388,998	189,702	176,030	787,979	421,628	1,695,947	1,110,524	610,047
INCOME	124,874	63,226	57,207	295,918	147,529	661,393	317,966	225,025
CAPITAL	1,213,104	362,451	680,848	1,108,567	1,235,492	2,279,491	2,216,867	1,146,659
Machinery & Buildings	242,476	67,345	129,995	188,492	552,478	442,344	371,529	270,522
Cows	151,661	78,448	128,370	342,320	163,035	387,962	217,817	208,633
Land	818,967	216,658	422,483	577,755	519,979	1,155,510	1,488,058	618,559
Shares	0	0	0	0	0	293,675	137,989	48,946
Capital/ Liter	3.12	1.91	3.87	1.41	2.93	1.34	2.015	2.430
Capital / Hectare	7,488	7,249	5,237	6,929	6,864	14,247	18,648	8,002
Capital / Per Cow	12,131	6,590	7,565	4,619	9,577	8,380	8,306	8,144
Value of Land/ha	5,055	4,333	3,250	3,611	2,889	7,222	12,045	4,393
Variable Capital	394,137	145,793	258,365	530,812	715,513	1,123,981	727,334	528,100
Variable Capital/Land	0.481	0.673	0.612	0.919	1.376	0.973	0.608	0.839
Variable Capital/liter	1.013	0.769	1.468	0.674	1.697	0.663	0.697	1.047
Variable Capital - Cows	242,476	67,345	129,995	188,492	552,478	736,019	509,517	319,468
Var Capital - Cow/ ha	1,497	1,347	1,000	1,178	3,069	4,600	4,710	2,115
Var Capital- Cow /cow	2,425	1,224	1,444	785	4,283	2,706	2,014	2,145
Cows	100	55	90	240	129	272	258	148
Hectares	162	50	130	160	180	160	117	140
Liters/cow	3,890	3,449	1,956	3,283	3,268	6,235	4,104	3,680
Liters/Hectare	2,401	3,794	1,354	4,925	2,342	10,600	9,460	4,236
Cow / Hectare	0.6	1.1	0.7	1.5	0.7	1.7	2.341	1.054

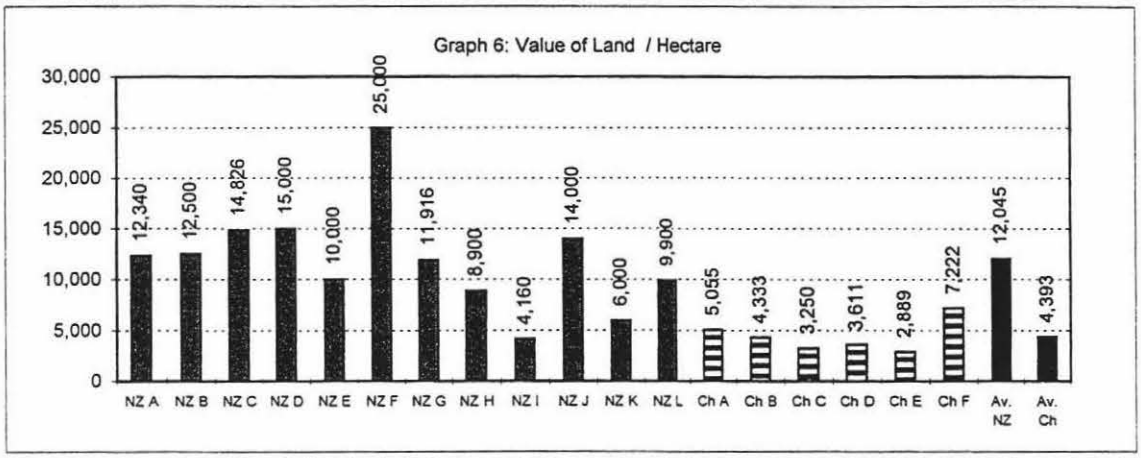

Graph 1: Liter
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
1,382,553
2,397,135
711,741
529,016
793,882
1,085,333
1,292,280
977,105
859,039
1,488,610
699,037
1,110,560
388,998
189,702
176,030
787,979
421,628
1,695,947
1,110,524
610,047
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch

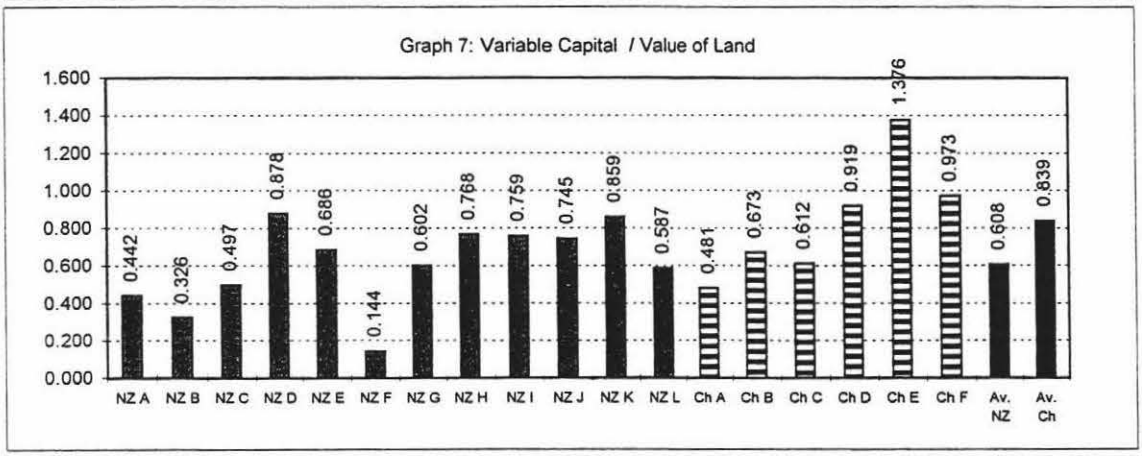

Graph 2:Capital
5,000,000
4,500,000
4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
2,864,344
4,575,458
2,219,930
1,183,370
1,432,700
3,431,000
3,188,000
1,888,062
917,793
2,076,500
892,309
1,933,000
1,213,104
362,451
680,848
1,108,567
1,235,492
2,279,491
2,216,867
1,146,659
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch

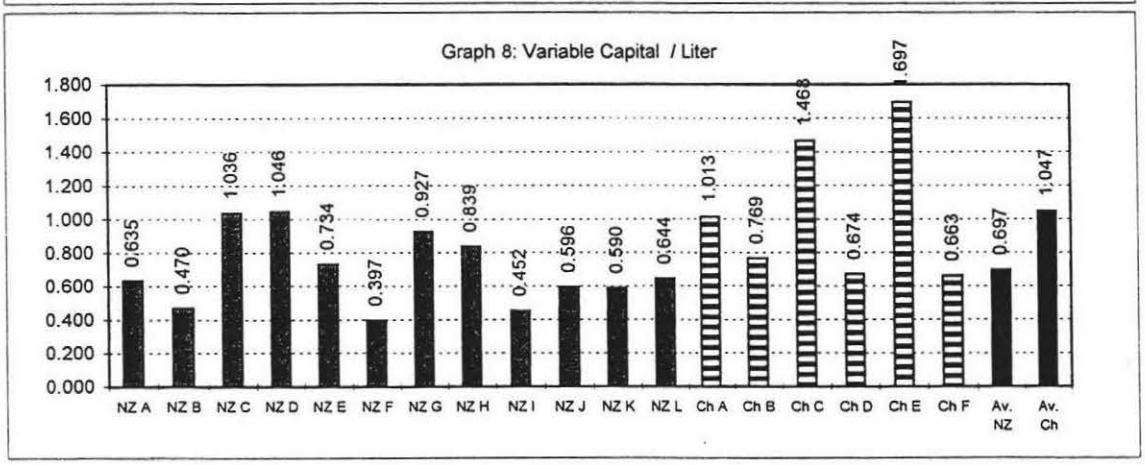

Graph 3: Capital / Liter
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
-
2.072
1.909
3.119
2.237
1.805
3.161
2.467
1.932
1.068
1.395
1.276
1.741
3.119
1.911
3.858
1.407
2.930
1.344
2.015
2.430
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch

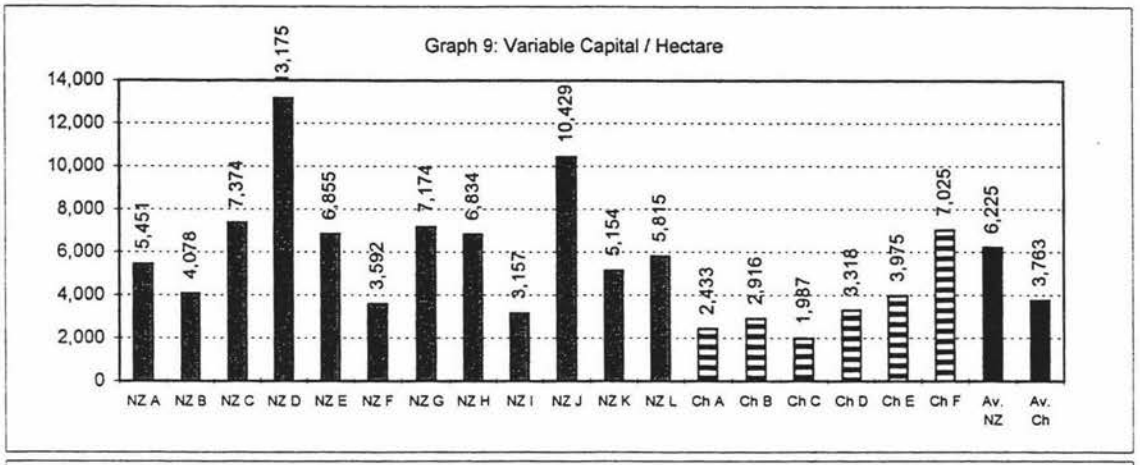

Graph 4: Capital / Hectare
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
17,791
16,578
22,199
28,175
16,855
28,592
19,090
15,734
7,461
24,429
11,154
15,715
7,488
7,249
5,237
6,929
6,864
14,247
18,648
8,002
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch

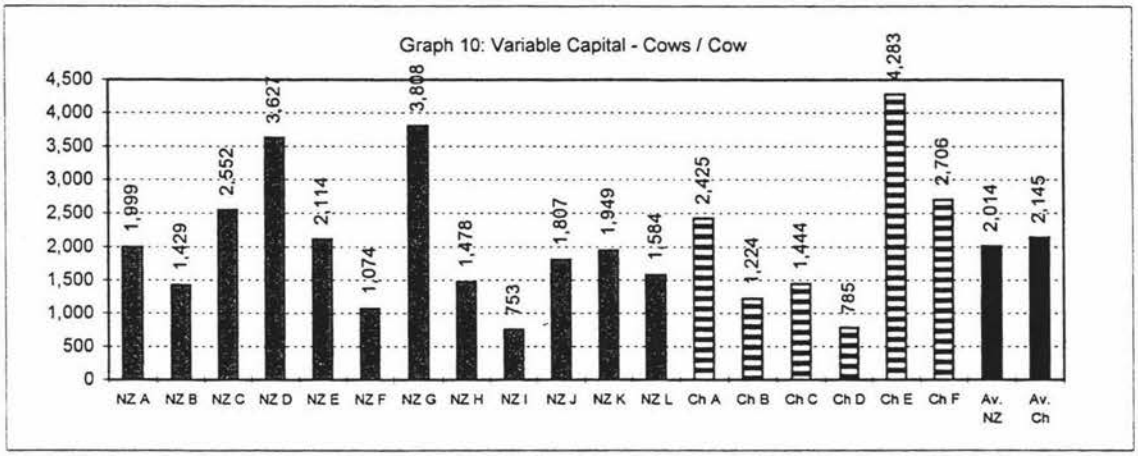

Graph 5: Capital / Cow
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
9,300
9,060
10,091
9,467
7,164
14,917
12,262
5,245
3,671
6,107
5,949
6,443
12,131
6,590
7,565
4,619
9,577
8,380
8,306
8,144
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch

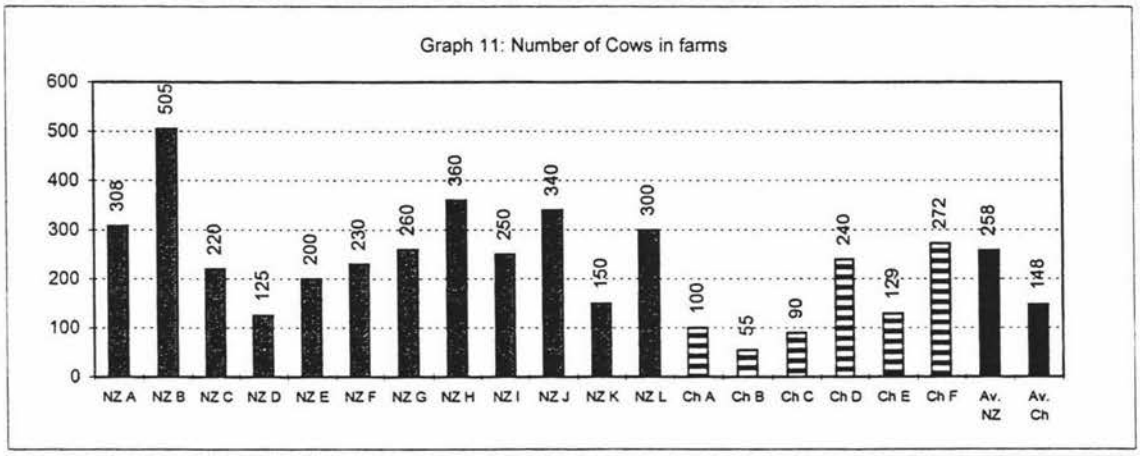

Graph 6: Value of Land / Hectare
30,000
25,000
20,000
15,000
10,000
5,000
0
12,340
12,500
14,826
15,000
10,000
25,000
11,916
8,900
4,160
14,000
6,000
9,900
5,055
4,333
3,250
3,611
2,889
7,222
12,045
4,393
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch

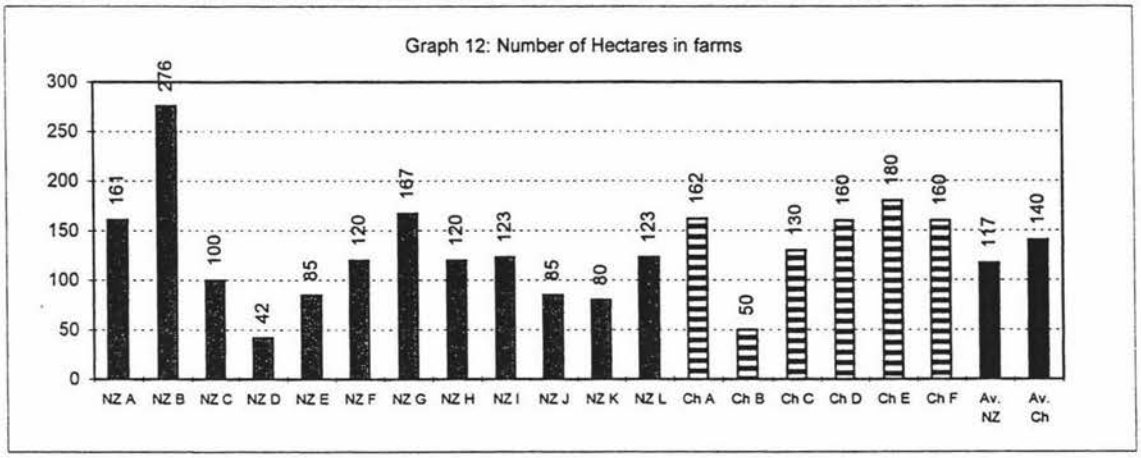

Graph 7: Variable Capital / Value of Land
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0.442
0.326
0.497
0.878
0.686
0.144
0.602
0.768
0.759
0.745
0.859
0.587
0.481
0.673
0.612
0.919
1.376
0.973
0.608
0.839
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch

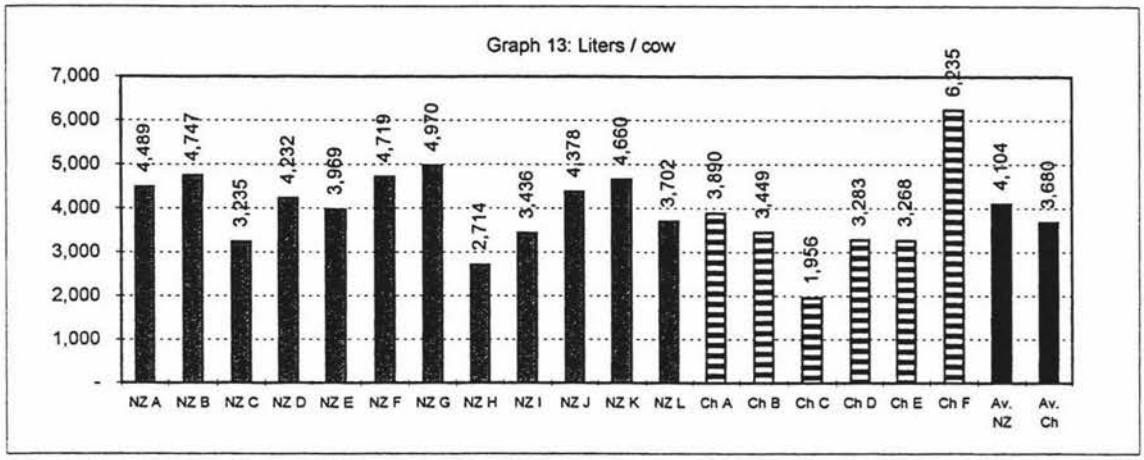

Graph 8: Variable Capital / Liter
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0.635
0.470
1.036
1.046
0.734
0.397
0.927
0.839
0.452
0.596
0.590
0.644
1.013
0.769
1.468
0.674
1.697
0.663
0.697
1.047
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch

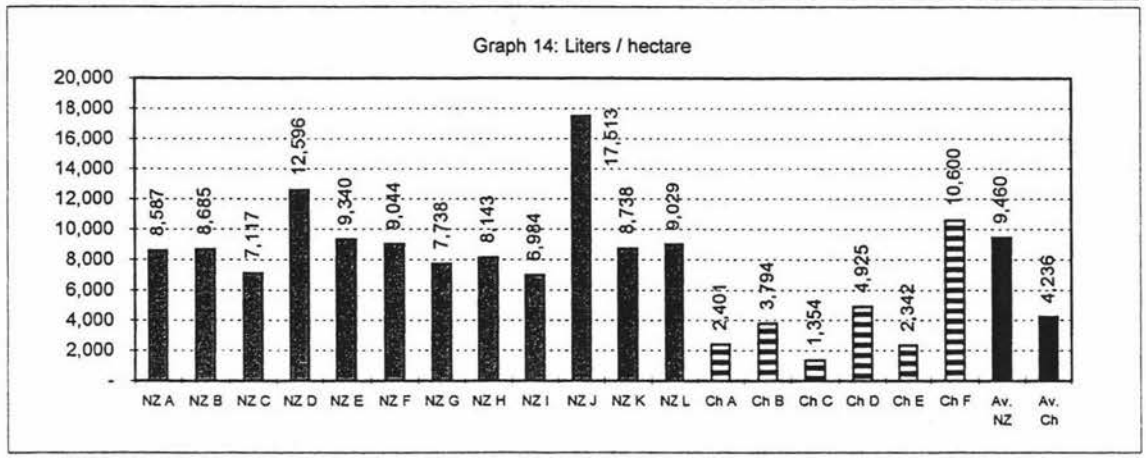

Graph 9: Variable Capital / Hectare
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
5,451
4,078
7,374
13,175
6,855
3,592
7,174
6,834
3,157
10,429
5,154
5,815
2,433
2,916
1,987
3,318
3,975
7,025
6,225
3,763
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch

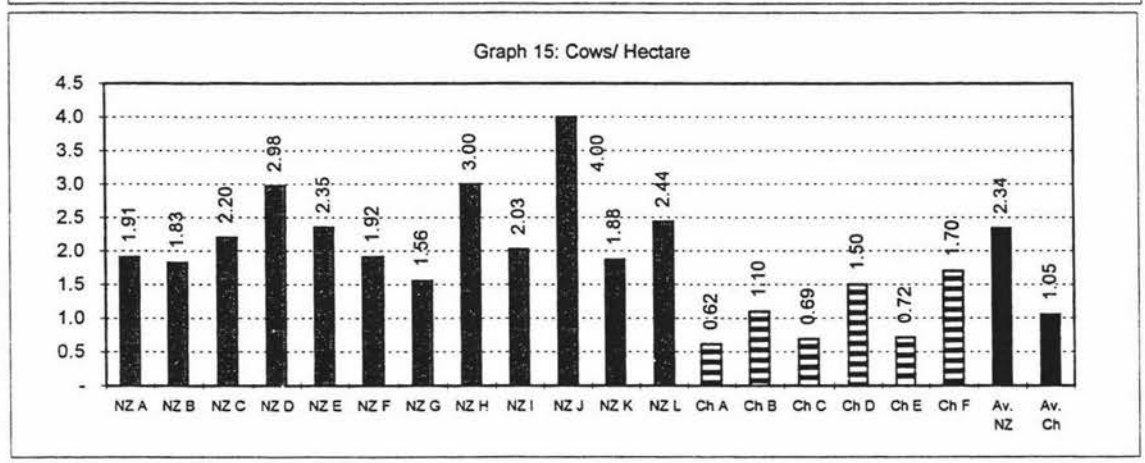

Graph 10: Variable Capital - Cows / Cow
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1,999
1,429
2,552
3,627
2,114
1,074
3,808
1,478
753
1,807
1,949
1,584
2,425
1,224
1,444
785
4,283
2,706
2,014
2,145
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch


Graph 11: Number of Cows in farms
600
500
400
300
200
100
0
308
505
220
125
200
230
260
360
250
340
150
300
100
55
90
240
129
272
258
148
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch

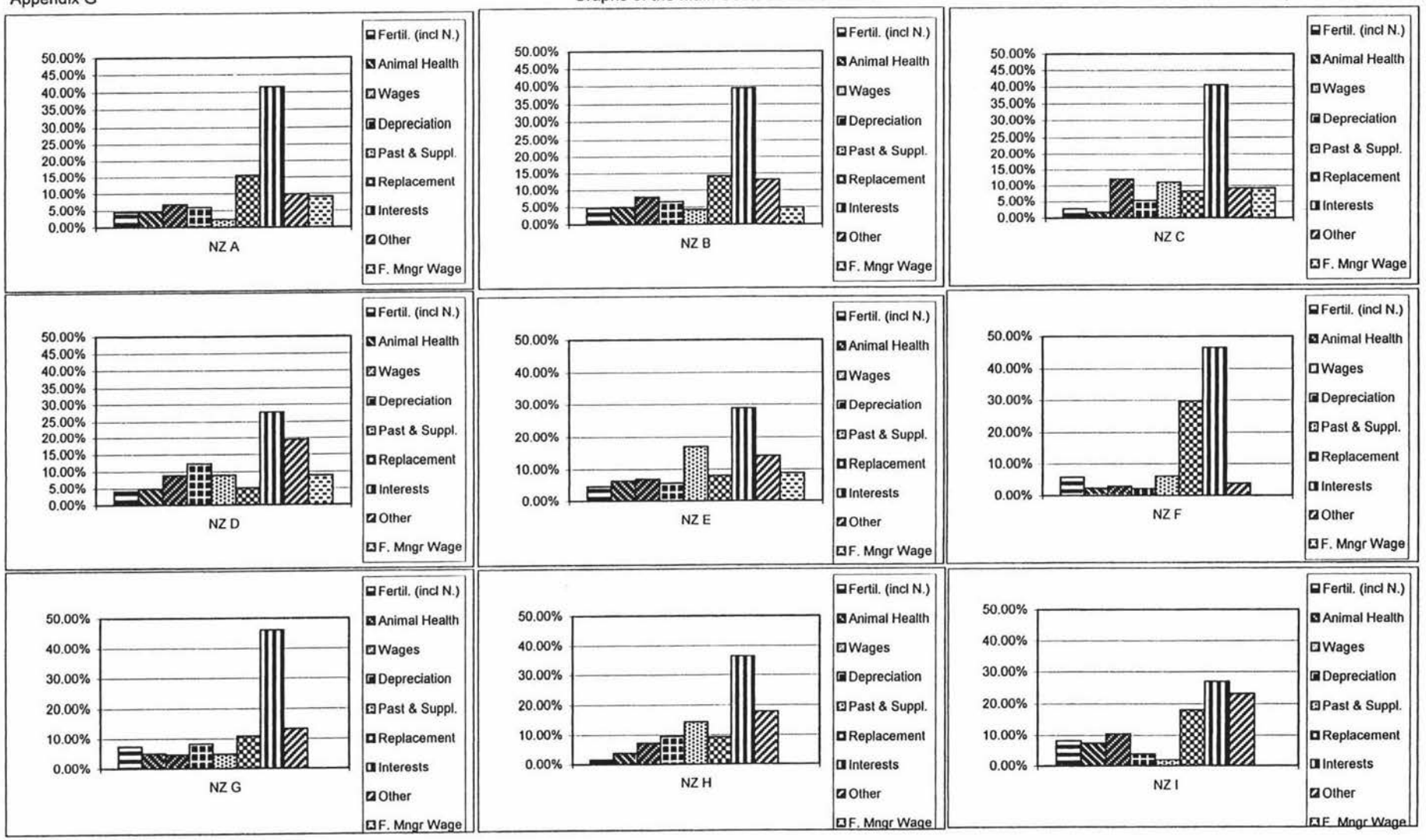

Graph 12: Number of Hectares in farms
300
250
200
150
100
50
0
161
276
100
42
85
120
167
120
123
85
80
123
162
50
130
160
180
160
117
140
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch


Graph 13: Liters / cow
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
4,489
4,747
3,235
4,232
3,969
4,719
4,970
2,714
3,436
4,378
4,660
3,702
3,890
3,449
1,956
3,283
3,268
6,235
4,104
3,680
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch


Graph 14: Liters / hectare
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
8,587
8,685
7,117
12,596
9,340
9,044
7,738
8,143
6,984
17,513
8,738
9,029
2,401
3,794
1,354
4,925
2,342
10,600
9,460
4,236
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch

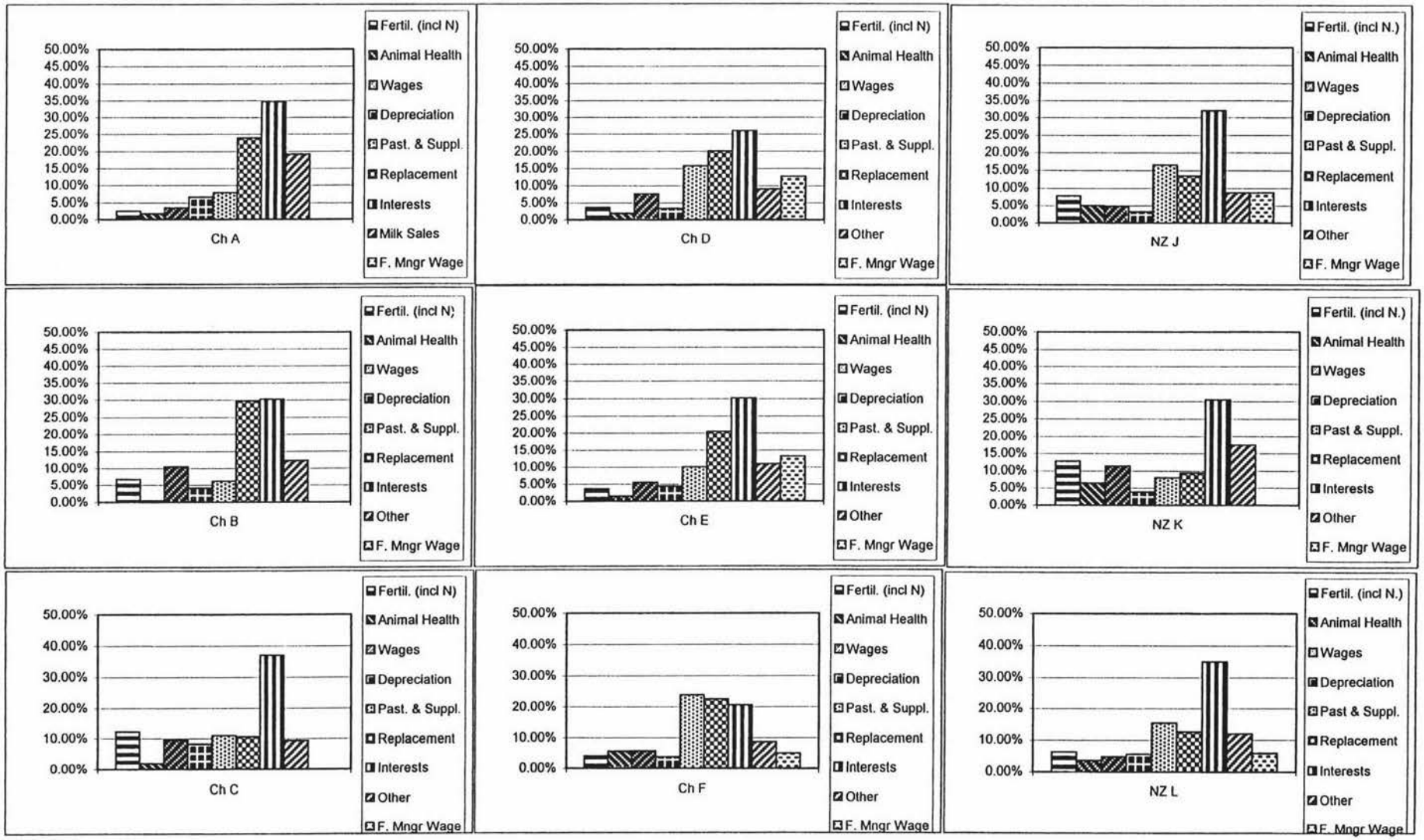

Graph 15: Cows/ Hectare
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
-
1.91
1.83
2.20
2.98
2.35
1.92
1.56
3.00
2.03
4.00
1.88
2.44
0.62
1.10
0.69
1.50
0.72
1.70
2.34
1.05
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F Av. NZ Av. Ch

Graphs of the Main Costs of Each Farmer



Graphs of the Main Costs of Each Farmer

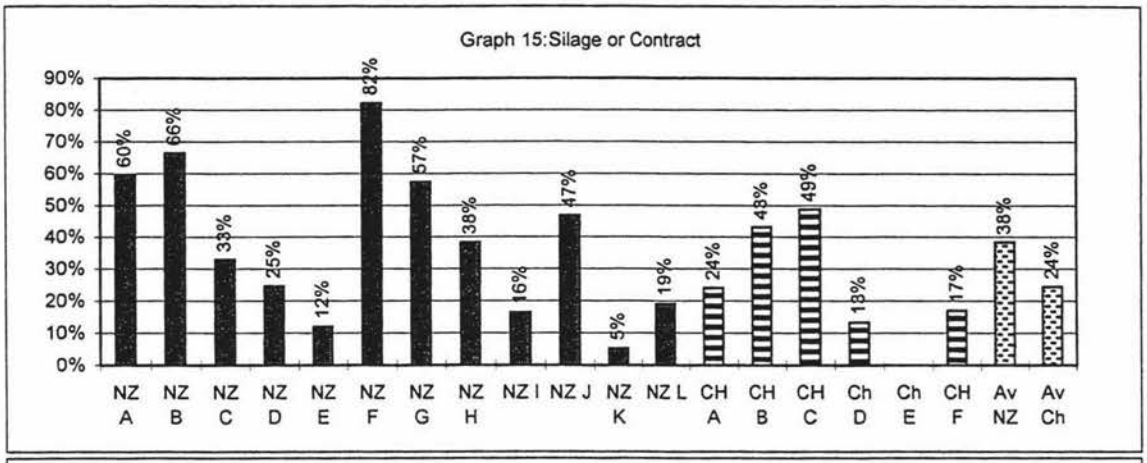
O.E.R., % of the Total Costs

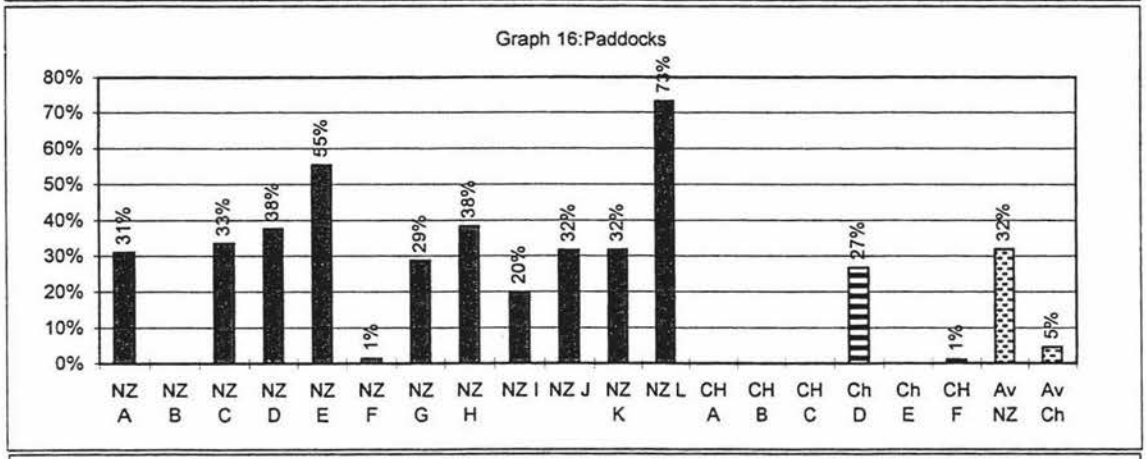


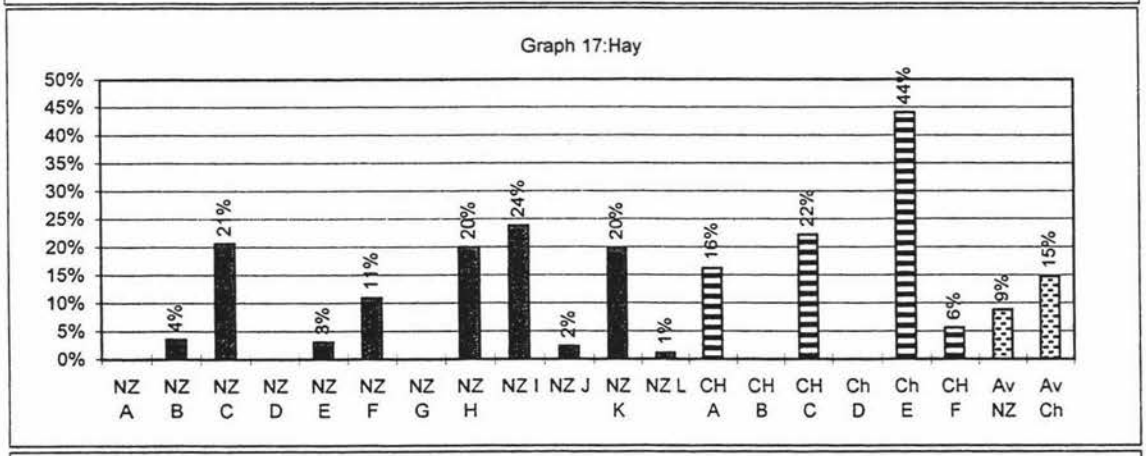
Feeding	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L	CH A	CH B	CH C	Ch D	Ch E	CH F	Av NZ	Av Ch
Silage	36%	7%	31%	25%	12%	82%		28%	16%	35%	5%	6%	24%	43%	27%	13%		17%	24%	21%
Contractor costs.	24%	59%	2%				57%	10%		12%		13%			22%				15%	4%
Grazing	5%		25%	33%	49%			30%		29%	28%	73%							23%	0%
P. Regrasing, Renovation	26%		9%	5%	7%	1%	29%	8%	20%	2%	4%					27%		1%	9%	5%
Hay		4%	21%		3%	11%		20%	24%	2%	20%	1%	16%		22%		44%	6%	9%	15%
Concentrate													39%		11%	40%	39%	55%	0%	31%
Meal		9%		16%		3%			16%		31%	4%	13%					15%	7%	5%
Cropping		9%	12%											44%					2%	7%
Feed					5%												15%		0%	2%
Alfalfa		7%								18%						17%			2%	3%
Alfalfa Hay					9%														1%	0%
Mineral Salts	8%			8%						1%	5%		3%	12%	7%	1%	2%	5%	2%	5%
Agronomist					1%		6%						4%						1%	1%
Weed and Pest Control	1%	5%	1%	13%	13%	3%	8%	3%	24%	1%	7%	3%			11%	1%		1%	7%	2%

Feeding	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L	CH A	CH B	CH C	Ch D	Ch E	CH F	Av NZ	Av Ch
Silage or Contract	60%	66%	33%	25%	12%	82%	57%	38%	16%	47%	5%	19%	24%	43%	49%	13%		17%	38%	24%
Paddocks	31%		33%	38%	55%	1%	29%	38%	20%	32%	32%	73%				27%		1%	32%	5%
Hay		4%	21%		3%	11%		20%	24%	2%	20%	1%	16%		22%		44%	6%	9%	15%
Concentrate													39%		11%	40%	39%	55%	0%	31%

50% - above
35% - 49%
20 % - 35%
10 % - 19%
0 % - 9 %


Graph 15:Silage or Contract
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
60%
66%
33%
25%
12%
82%
57%
38%
16%
47%
5%
19%
24%
48%
49%
13%
17%
38%
24%
NZ A
NZ B
NZ C
NZ D
NZ E
NZ F
NZ G
NZ H
NZ I
NZ J
NZ K
NZ L
CH A
CH B
CH C
Ch D
Ch E
CH F
Av NZ
Av Ch


Graph 16:Paddocks
80%
70%
60%
50%
40%
30%
20%
10%
0%
31%
33%
38%
55%
1%
29%
38%
20%
32%
32%
73%
27%
1%
32%
5%
NZ A
NZ B
NZ C
NZ D
NZ E
NZ F
NZ G
NZ H
NZ I
NZ J
NZ K
NZ L
CH A
CH B
CH C
Ch D
Ch E
CH F
Av NZ
Av Ch


Graph 17:Hay
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
4%
21%
3%
11%
20%
24%
2%
20%
1%
16%
22%
44%
6%
9%
15%
NZ A
NZ B
NZ C
NZ D
NZ E
NZ F
NZ G
NZ H
NZ I
NZ J
NZ K
NZ L
CH A
CH B
CH C
Ch D
Ch E
CH F
Av NZ
Av Ch

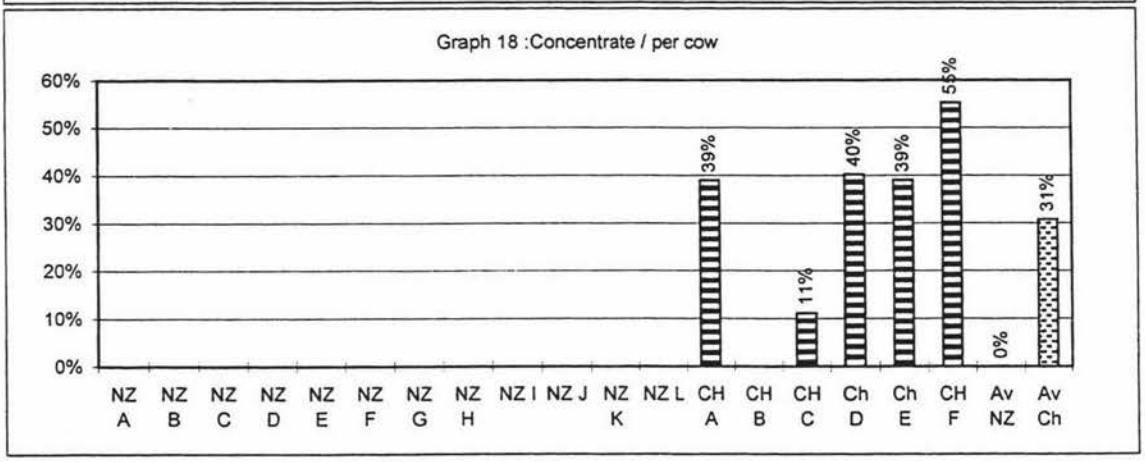

Graph 18 :Concentrate / per cow
60%
50%
40%
30%
20%
10%
0%
39%
11%
40%
39%
56%
0%
31%
NZ A
NZ B
NZ C
NZ D
NZ E
NZ F
NZ G
NZ H
NZ I
NZ J
NZ K
NZ L
CH A
CH B
CH C
Ch D
Ch E
CH F
Av NZ
Av Ch

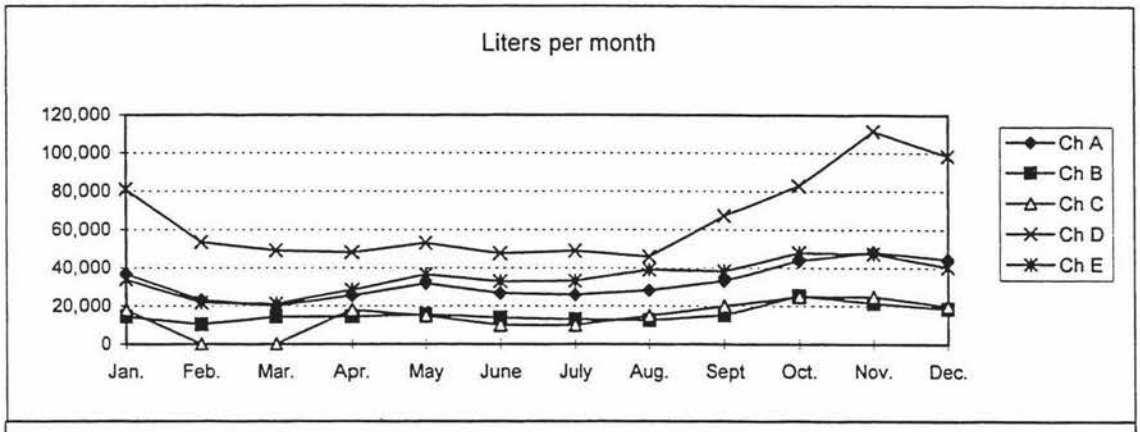
Table Revenue and Expenditure	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes												
Milk Sales	79.85%	74.22%	74.04%	69.88%	70.75%	60.79%	72.80%	67.04%	73.59%	73.42%	66.42%	70.57%
Winter Milk	13.67%	17.39%	14.83%	21.50%	20.75%	33.11%	16.83%	21.01%	15.62%	18.89%	21.72%	14.33%
Totals Milk	93.51%	91.61%	88.87%	91.38%	91.49%	93.90%	89.63%	88.05%	89.22%	92.31%	88.14%	84.90%
Stock Sales cows	5.26%	6.31%	5.14%	4.54%	6.27%	4.36%	7.03%	9.91%	7.41%	5.75%	8.07%	8.55%
Calves sold	1.23%	2.08%	5.99%	4.08%	2.24%	1.73%	3.34%	2.04%	3.38%	1.94%	3.79%	6.55%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Farm Cash Expenses												
Replacement	15.53%	14.22%	8.22%	5.14%	8.04%	29.81%	10.83%	9.26%	17.97%	13.47%	9.40%	12.64%
Pasture and Supplements	2.30%	4.20%	11.05%	8.92%	16.80%	6.18%	4.71%	14.47%	1.88%	16.45%	8.07%	15.40%
Fertiliser (incl nitrogen)	4.56%	4.71%	2.74%	4.09%	4.64%	5.93%	7.33%	1.54%	8.24%	7.79%	12.78%	6.10%
Animal Health	4.57%	4.98%	1.76%	4.82%	6.35%	2.42%	4.97%	3.72%	7.43%	5.00%	6.50%	3.36%
Wages	6.76%	7.86%	12.04%	8.83%	6.96%	3.05%	4.51%	7.23%	10.48%	4.81%	11.39%	4.52%
Total	**33.73%**	**35.97%**	**35.81%**	**31.81%**	**42.78%**	**47.39%**	**32.34%**	**36.22%**	**46.00%**	**47.53%**	**48.13%**	**42.02%**
Overheads												
Shed Expenses	0.80%	1.81%	2.28%	1.46%	0.83%	0.31%	0.45%	0.68%	1.58%	0.58%	0.91%	2.66%
Fences	0.39%	0.42%	0.80%	0.58%	0.55%	0.12%	0.29%	0.60%	0.60%	0.38%	1.51%	0.72%
Repairs and Maintenance	1.40%	1.76%	0.27%	1.32%	2.05%	0.19%	3.66%	0.96%	5.85%	0.19%	1.34%	0.56%
Ditches	0.59%	0.08%	0.57%	0.00%	0.77%	0.08%	0.72%	0.72%	1.65%	0.58%	1.92%	0.45%
Vehicle Expenses	1.94%	3.41%	1.44%	5.85%	2.51%	0.60%	3.07%	1.93%	5.99%	1.15%	6.64%	3.07%
Total	**5.13%**	**7.48%**	**5.37%**	**9.21%**	**6.70%**	**1.31%**	**8.19%**	**4.89%**	**15.68%**	**2.89%**	**12.32%**	**7.47%**
Depreciation	5.97%	6.58%	5.27%	12.29%	5.65%	2.21%	8.21%	9.53%	3.84%	3.19%	3.87%	5.36%
Interests	41.45%	39.44%	40.57%	27.67%	28.79%	46.49%	46.02%	36.42%	26.96%	31.97%	30.51%	34.92%
Total	**47.42%**	**46.02%**	**45.84%**	**39.97%**	**34.44%**	**48.70%**	**54.23%**	**45.95%**	**30.80%**	**35.15%**	**34.37%**	**40.28%**
Fire & Earthquake Insurance	0.34%	0.26%	0.70%	1.58%	0.91%	0.00%	1.08%	0.00%	0.66%	0.00%	0.00%	0.07%
Administration	0.64%	0.54%	0.00%	1.02%	0.75%	0.10%	0.00%	9.40%	1.61%	0.96%	1.00%	0.00%
Farm Manager Wage	9.04%	4.90%	9.14%	8.83%	8.79%	0.00%	0.00%	0.00%	0.00%	8.66%	0.00%	5.64%
Accountant	0.54%	0.50%	0.57%	4.38%	0.50%	0.19%	0.00%	0.60%	0.71%	1.35%	2.02%	0.75%
Taxes/ Rates	0.86%	3.17%	1.48%	2.92%	1.16%	0.85%	1.08%	2.53%	1.98%	1.92%	2.15%	2.26%
General Costs	1.69%	0.66%	0.69%	0.15%	3.31%	0.80%	2.53%	0.18%	1.16%	0.96%	0.00%	1.02%
ACC	0.61%	0.51%	0.41%	0.13%	0.64%	0.68%	0.54%	0.22%	1.39%	0.58%	0.00%	0.50%
Total	**13.72%**	**10.54%**	**12.99%**	**19.02%**	**16.07%**	**2.61%**	**5.23%**	**12.94%**	**7.51%**	**14.43%**	**5.17%**	**10.23%**
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Other	9.81%	13.11%	9.22%	19.40%	13.98%	3.92%	13.43%	17.83%	23.19%	8.66%	17.50%	12.06%
Replacement	15.53%	14.22%	8.22%	5.14%	8.04%	29.81%	10.83%	9.26%	17.97%	13.47%	9.40%	12.64%
Past & Suppl.	2.30%	4.20%	11.05%	8.92%	16.80%	6.18%	4.71%	14.47%	1.88%	16.45%	8.07%	15.40%
Fertil. (incl N.)	4.56%	4.71%	2.74%	4.09%	4.64%	5.93%	7.33%	1.54%	8.24%	7.79%	12.78%	6.10%
Animal Health	4.57%	4.98%	1.76%	4.82%	6.35%	2.42%	4.97%	3.72%	7.43%	5.00%	6.50%	3.36%
Wages	6.76%	7.86%	12.04%	8.83%	6.96%	3.05%	4.51%	7.23%	10.48%	4.81%	11.39%	4.52%
Depreciation	5.97%	6.58%	5.27%	12.29%	5.65%	2.21%	8.21%	9.53%	3.84%	3.19%	3.87%	5.36%
Interests	41.45%	39.44%	40.57%	27.67%	28.79%	46.49%	46.02%	36.42%	26.96%	31.97%	30.51%	34.92%
F. Mngr Wage	9.04%	4.90%	9.14%	8.83%	8.79%	0.00%	0.00%	0.00%	0.00%	8.66%	0.00%	5.64%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

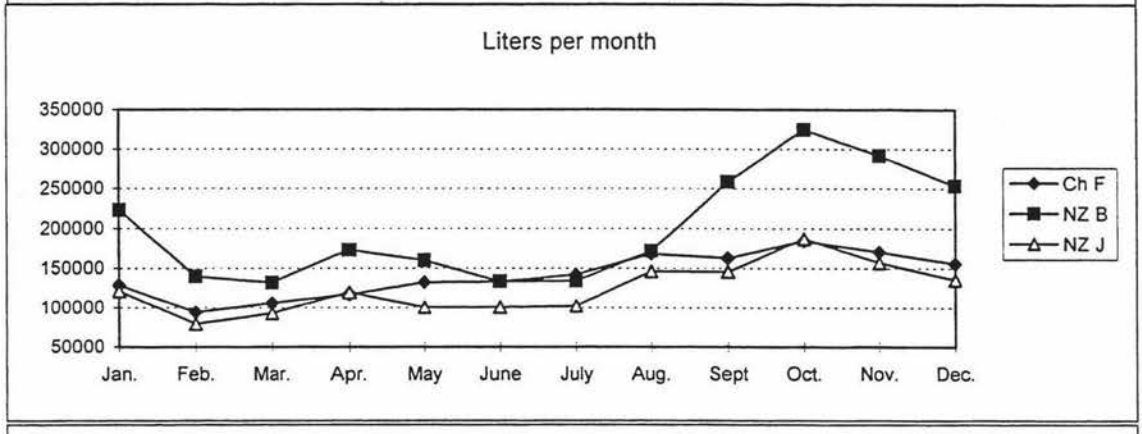
Table Revenue and Expenditure	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes	276.9341					
Milk Sales	57.88%	59.75%	44.66%	60.45%	53.51%	68.60%
Winter Milk	16.07%	17.35%	11.08%	14.22%	17.26%	21.70%
Totals Milk	73.95%	77.10%	55.74%	74.67%	70.76%	90.30%
Stock Sales cows	12.19%	12.33%	6.77%	7.87%	14.69%	3.62%
Calves sold	13.86%	10.57%	37.49%	17.45%	14.55%	6.08%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Farm Cash Expenses						
Replacement	23.84%	29.69%	10.64%	20.07%	20.45%	22.53%
Pasture and Supplements	7.93%	6.09%	11.02%	15.77%	10.01%	23.97%
Fertiliser (incl nitrogen)	2.58%	6.68%	12.25%	3.64%	3.69%	4.12%
Animal Health	1.76%	0.45%	1.96%	1.85%	1.57%	5.71%
Wages	3.52%	10.52%	9.55%	7.62%	5.53%	5.83%
Total	**39.62%**	**53.43%**	**45.43%**	**48.96%**	**41.26%**	**62.16%**
Overheads						
Shed Expenses	0.77%	0.23%	1.96%	1.06%	0.60%	1.63%
Fences	0.26%	0.00%	0.00%	0.32%	0.22%	0.04%
Repairs and Maintenance	1.55%	0.00%	0.00%	0.95%	0.49%	2.16%
Ditches	0.00%	0.00%	0.00%	0.32%	0.00%	0.00%
Vehicle Expenses	0.00%	0.86%	0.00%	2.12%	0.00%	1.71%
Total	**2.58%**	**1.09%**	**1.96%**	**4.76%**	**1.31%**	**5.54%**
Depreciation	6.55%	4.12%	8.27%	3.28%	4.41%	3.69%
Interests	34.66%	30.18%	36.95%	26.00%	30.18%	20.58%
Total	**41.21%**	**34.30%**	**45.22%**	**29.28%**	**34.59%**	**24.27%**
Fire & Earthquake Insurance	0.19%	0.48%	0.73%	0.21%	0.10%	0.16%
Administration	15.48%	6.76%	2.94%	2.12%	8.82%	0.00%
Farm Manager Wage	0.00%	0.00%	0.00%	12.70%	13.23%	4.89%
Accountant	0.12%	0.98%	0.59%	0.00%	0.21%	0.73%
Taxes/ Rates	0.64%	1.43%	0.00%	1.06%	0.00%	0.41%
General Costs	0.15%	1.13%	2.94%	0.74%	0.49%	1.83%
ACC	0.00%	0.40%	0.20%	0.17%	0.00%	0.00%
Total	**16.59%**	**11.17%**	**7.40%**	**17.00%**	**22.84%**	**8.03%**
Total Cost	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

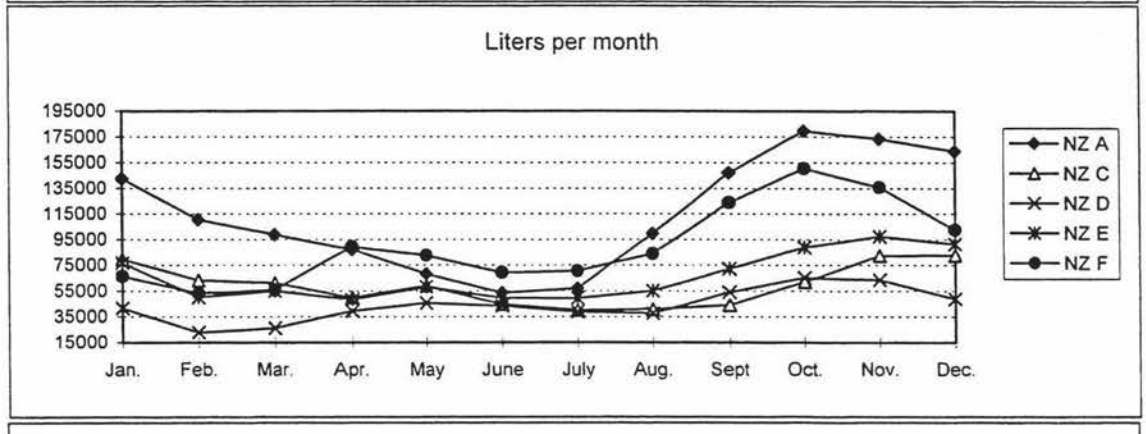
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Fertil. (incl N)	2.58%	6.68%	12.25%	3.64%	3.69%	4.12%
Animal Health	1.76%	0.45%	1.96%	1.85%	1.57%	5.71%
Wages	3.52%	10.52%	9.55%	7.62%	5.53%	5.83%
Depreciation	6.55%	4.12%	8.27%	3.28%	4.41%	3.69%
Past. & Suppl.	7.93%	6.09%	11.02%	15.77%	10.01%	23.97%
Replacement	23.84%	29.69%	10.64%	20.07%	20.45%	22.53%
Interests	34.66%	30.18%	36.95%	26.00%	30.18%	20.58%
Other	19.17%	12.26%	9.36%	9.06%	10.92%	8.68%
F. Mngr Wage	0.00%	0.00%	0.00%	12.70%	13.23%	4.89%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

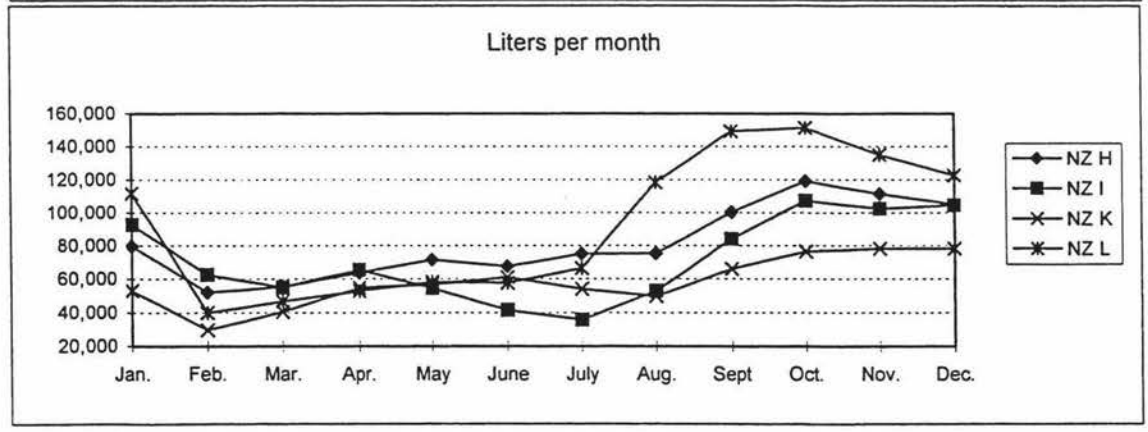
Table Revenue and Expenditure												
	NZ A	NZ B	NZ C	NZ D	NZ E	NZ F	NZ G	NZ H	NZ I	NZ J	NZ K	NZ L
Incomes	No interest	No interest	No interest	No interest	No interest	No interest	No interest	No interest	No interest	No interest	No interest	No interest
Milk Sales	79.85%	74.22%	74.04%	69.88%	70.75%	60.79%	72.80%	67.04%	73.59%	73.42%	66.42%	70.57%
Winter Milk	13.67%	17.39%	14.83%	21.50%	20.75%	33.11%	16.83%	21.01%	15.62%	18.89%	21.72%	14.33%
Stock Sales cows	5.26%	6.31%	5.14%	4.54%	6.27%	4.36%	7.03%	9.91%	7.41%	5.75%	8.07%	8.55%
Calves sold	1.23%	2.08%	5.99%	4.08%	2.24%	1.73%	3.34%	2.04%	3.38%	1.94%	3.79%	6.55%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Farm Cash Expenses												
Repl	26.68%	23.59%	14.00%	7.27%	11.44%	55.70%	20.47%	14.56%	24.83%	19.80%	13.53%	19.45%
Past. & Suppl.	3.96%	6.96%	18.81%	12.60%	23.90%	11.55%	8.90%	22.76%	2.60%	24.18%	11.61%	23.68%
Fert (incl N)	7.84%	7.80%	4.67%	5.78%	6.61%	11.08%	13.85%	2.43%	11.38%	11.45%	18.38%	9.38%
An. Health	7.86%	8.27%	2.99%	6.82%	9.03%	4.53%	9.39%	5.84%	10.26%	7.35%	9.35%	5.17%
Wages	11.62%	13.03%	20.49%	12.48%	9.89%	5.70%	8.53%	11.38%	14.48%	7.07%	16.39%	6.95%
Total	**57.95%**	**59.64%**	**60.97%**	**44.96%**	**60.86%**	**88.56%**	**61.14%**	**56.97%**	**63.56%**	**69.86%**	**69.26%**	**64.63%**
Overheads												
Shed Expenses	1.37%	2.99%	3.89%	2.07%	1.18%	0.59%	0.85%	1.06%	2.19%	0.85%	1.31%	4.10%
Fences	0.67%	0.70%	1.36%	0.83%	0.78%	0.22%	0.55%	0.95%	0.83%	0.57%	2.17%	1.11%
Repairs and Maintenance	2.41%	2.92%	0.47%	1.86%	2.91%	0.35%	6.93%	1.52%	8.09%	0.28%	1.93%	0.87%
Ditches	1.02%	0.13%	0.97%	0.00%	1.10%	0.16%	1.36%	1.14%	2.28%	0.85%	2.77%	0.69%
Veh. Exp.	3.34%	5.66%	2.45%	8.26%	3.57%	1.13%	5.80%	3.03%	8.28%	1.70%	9.55%	4.72%
Total	**8.81%**	**12.40%**	**9.14%**	**13.01%**	**9.54%**	**2.44%**	**15.49%**	**7.70%**	**21.66%**	**4.24%**	**17.73%**	**11.49%**
Deprec.	10.25%	10.91%	8.97%	17.38%	8.04%	4.12%	15.52%	14.99%	5.31%	4.68%	5.57%	8.25%
Interests	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	**10.25%**	**10.91%**	**8.97%**	**17.38%**	**8.04%**	**4.12%**	**15.52%**	**14.99%**	**5.31%**	**4.68%**	**5.57%**	**8.25%**
Administration	1.10%	0.89%	0.00%	1.45%	1.07%	0.19%	0.00%	14.79%	2.22%	1.41%	1.45%	0.00%
F.Mger Wage	15.54%	8.13%	15.56%	12.48%	12.51%	0.00%	0.00%	0.00%	0.00%	12.73%	0.00%	8.68%
Accountant	0.93%	0.83%	0.97%	6.20%	0.71%	0.35%	0.00%	0.95%	0.98%	1.98%	2.90%	1.15%
Rates	1.47%	5.26%	2.53%	4.13%	1.66%	1.58%	2.05%	3.98%	2.74%	2.83%	3.10%	3.47%
General Costs	2.90%	1.09%	1.17%	0.21%	4.71%	1.49%	4.78%	0.28%	1.60%	1.41%	0.00%	1.56%
ACC	1.05%	0.84%	0.70%	0.19%	0.92%	1.27%	1.02%	0.34%	1.91%	0.85%	0.00%	0.76%
Total	**22.99%**	**17.05%**	**20.92%**	**24.65%**	**21.56%**	**4.87%**	**7.85%**	**20.35%**	**9.47%**	**21.21%**	**7.44%**	**15.63%**
Total Costs	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table Revenue and Expenditure						
	Ch A	Ch B	Ch C	Ch D	Ch E	Ch F
Incomes	276.9341					
Milk Sales	57.88%	59.75%	44.66%	60.45%	53.51%	68.60%
Winter Milk	16.07%	17.35%	11.08%	14.22%	17.26%	21.70%
Totals Milk	73.95%	77.10%	55.74%	74.67%	70.76%	90.30%
Stock Sales cows	12.19%	12.33%	6.77%	7.87%	14.69%	3.62%
Calves sold	13.86%	10.57%	37.49%	17.45%	14.55%	6.08%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Farm Cash Expenses						
Replacement	36.48%	42.52%	16.88%	27.12%	29.30%	28.37%
Pasture and Supplements	12.14%	8.72%	17.48%	21.31%	14.34%	30.19%
Fertiliser (incl nitrogen)	3.94%	9.57%	19.43%	4.92%	5.29%	5.18%
Animal Health	2.69%	0.65%	3.11%	2.50%	2.25%	7.18%
Wages	5.39%	15.07%	15.15%	10.30%	7.92%	7.34%
Total	**60.65%**	**76.53%**	**72.05%**	**66.16%**	**59.09%**	**78.26%**
Overheads						
Shed Expenses	1.18%	0.32%	3.11%	1.43%	0.86%	2.05%
Fences	0.39%	0.00%	0.00%	0.43%	0.32%	0.05%
Repairs and Maintenance	2.37%	0.00%	0.00%	1.29%	0.71%	2.72%
Ditches	0.00%	0.00%	0.00%	0.43%	0.00%	0.00%
Vehicle Expenses	0.00%	1.24%	0.00%	2.86%	0.00%	2.15%
Total	**3.95%**	**1.56%**	**3.11%**	**6.44%**	**1.88%**	**6.98%**
Depreciation	10.02%	5.91%	13.11%	4.43%	6.32%	4.65%
Interests	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	**10.02%**	**5.91%**	**13.11%**	**4.43%**	**6.32%**	**4.65%**
Fire & Earthquake Insurance	0.30%	0.69%	1.17%	0.29%	0.14%	0.21%
Administration	23.69%	9.69%	4.66%	2.86%	12.63%	0.00%
Farm Manager Wage	0.00%	0.00%	0.00%	17.17%	18.95%	6.16%
Accountant	0.18%	1.40%	0.93%	0.00%	0.30%	0.92%
Taxes/ Rates	0.99%	2.05%	0.00%	1.43%	0.00%	0.51%
General Costs	0.24%	1.61%	4.66%	1.00%	0.70%	2.31%
ACC	0.00%	0.57%	0.31%	0.23%	0.00%	0.00%
Total	**25.39%**	**16.00%**	**11.73%**	**22.97%**	**32.71%**	**10.11%**
Total Cost	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**


Liters per month
120,000
100,000
80,000
60,000
40,000
20,000
0
Jan. Feb. Mar. Apr. May June July Aug. Sept Oct. Nov. Dec.
Ch A
Ch B
Ch C
Ch D
Ch E

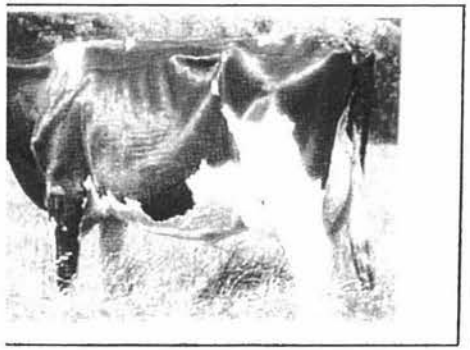

Liters per month
350000
300000
250000
200000
150000
100000
50000
Jan. Feb. Mar. Apr. May June July Aug. Sept Oct. Nov. Dec.
Ch F
NZ B
NZ J


Liters per month
195000
175000
155000
135000
115000
95000
75000
55000
35000
15000
Jan. Feb. Mar. Apr. May June July Aug. Sept Oct. Nov. Dec.
NZ A
NZ C
NZ D
NZ E
NZ F


Liters per month
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
Jan. Feb. Mar. Apr. May June July Aug. Sept Oct. Nov. Dec.
NZ H
NZ I
NZ K
NZ L

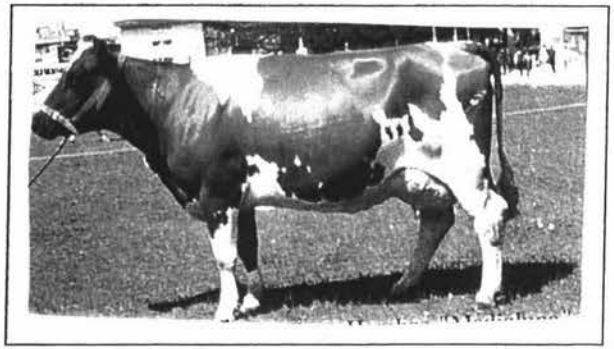
Picture of Breeds used in farms of the research

Freisian Cow



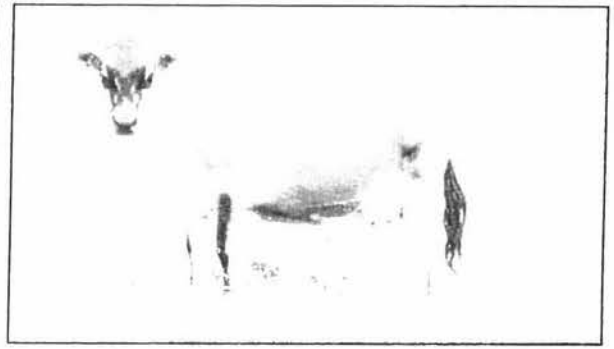
Light Image Library Ltd- G. Meadows

Picture 4: German Red Cow



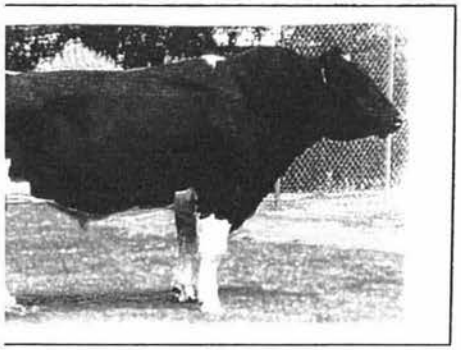
Source: "Overo Colorado", German Red Magazine, Apr.'97

Picture 5: Jersey Cows



Source : Key - Light Image Library Ltd - G. Meadows

reisian Bull



nforma 45", Cooprinsem Bulletin, Sep/Oct.'98

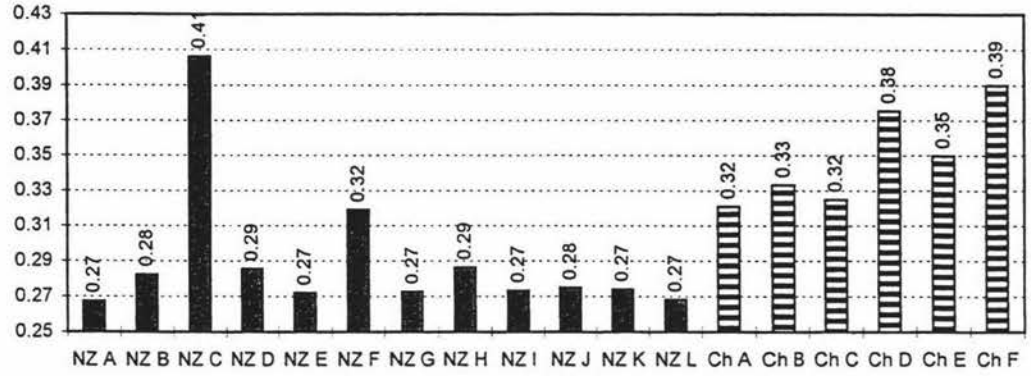
Picture 7: German Red Bull

Source: "Overo Colorado", German Red Magazine, Apr.'97

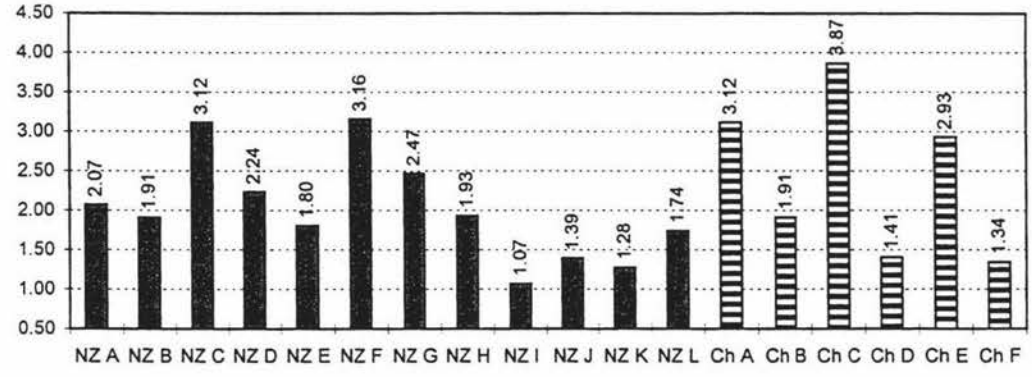
Appendix H

Comparison of Countries in terms of the Official Exchange Rate

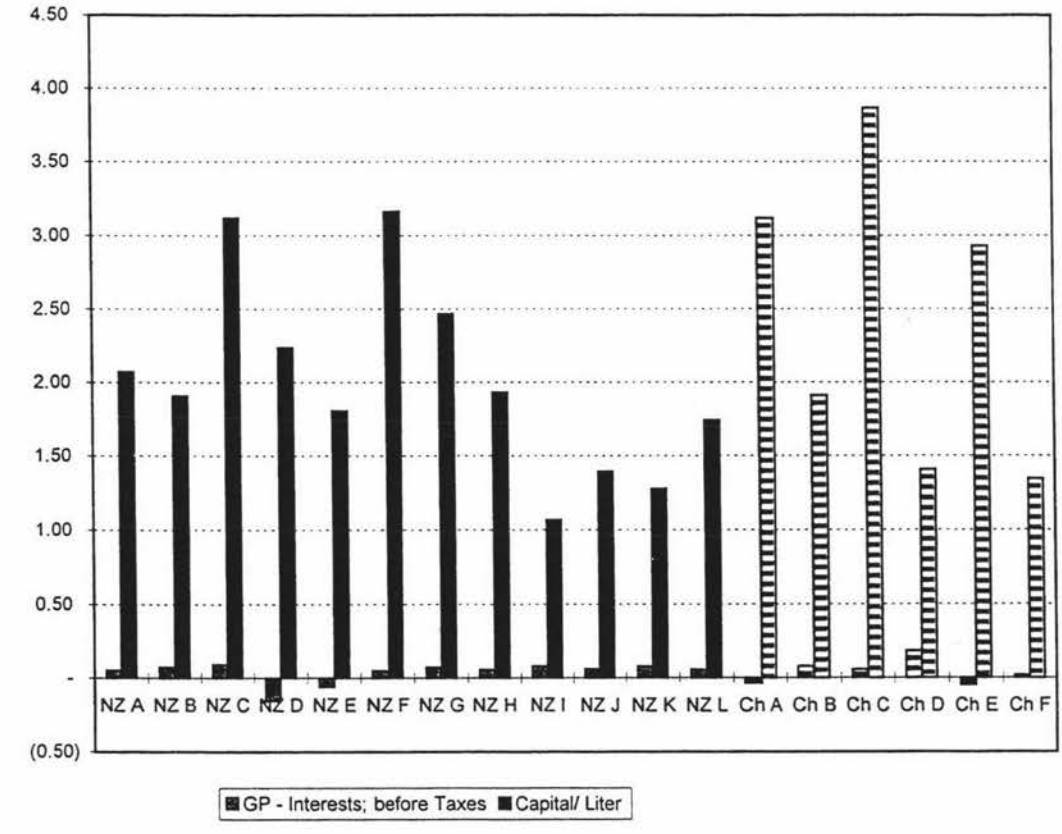
Graph 1:Cents / Liters



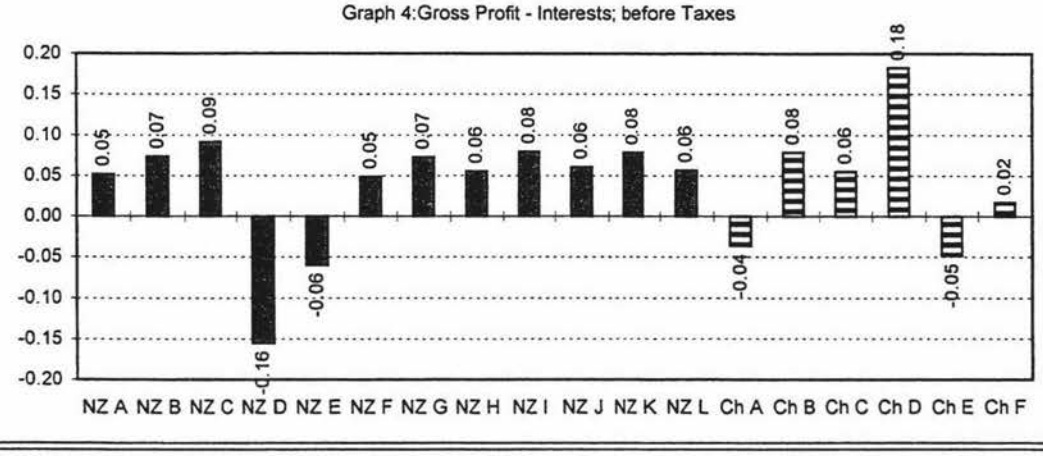
Graph 2: Capital / Liters



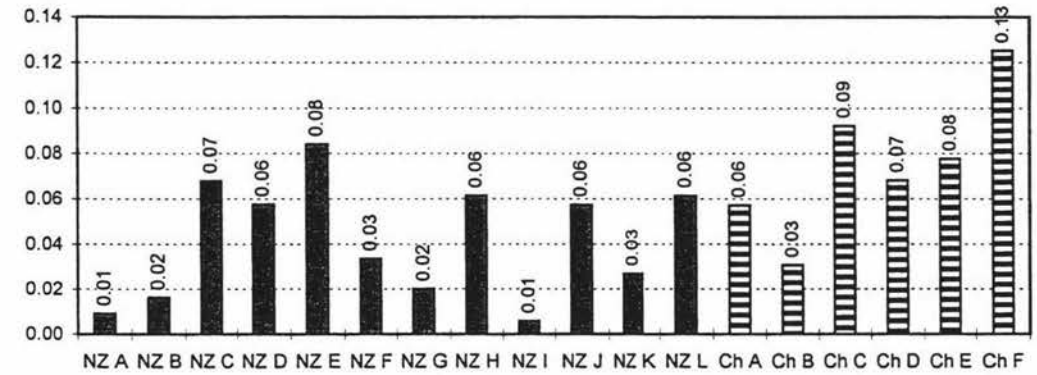
Graph 3: Relationship, capitla/p.l. v/s Income/p.l.



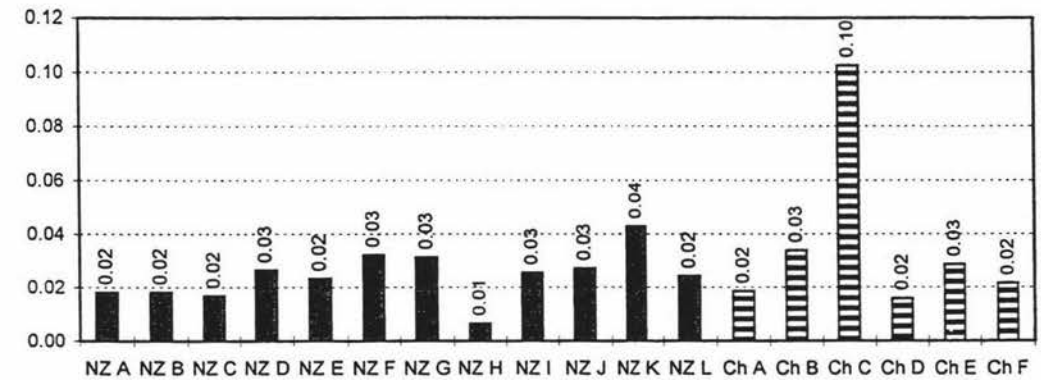
Graph 4:Gross Profit - Interests; before Taxes



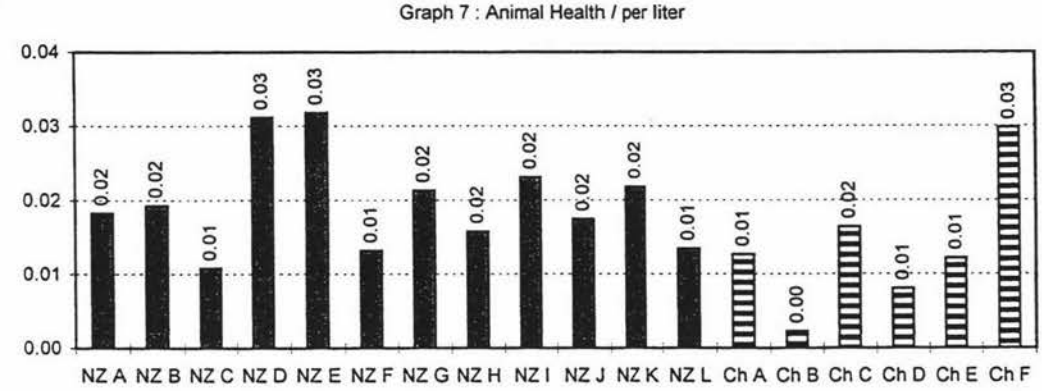
Graph 5: Pasture & Supplements / per liter.

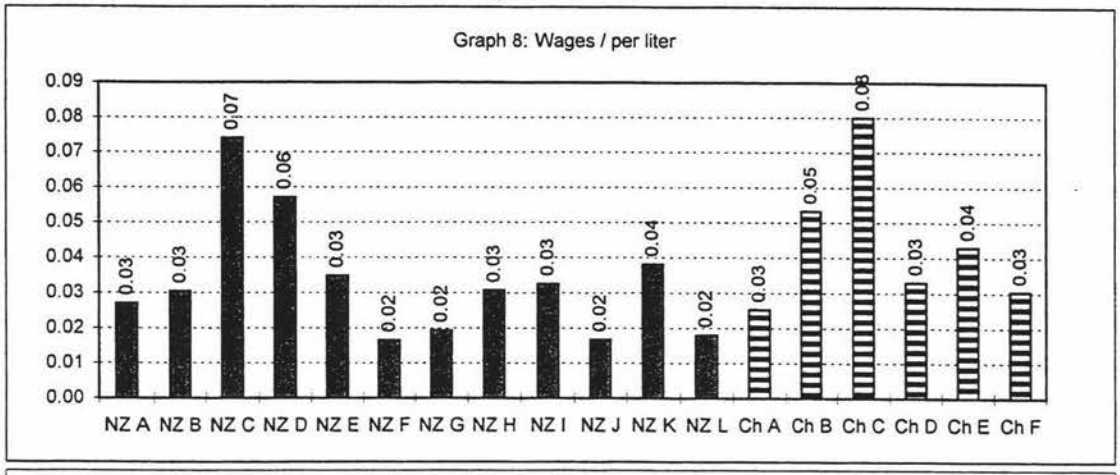


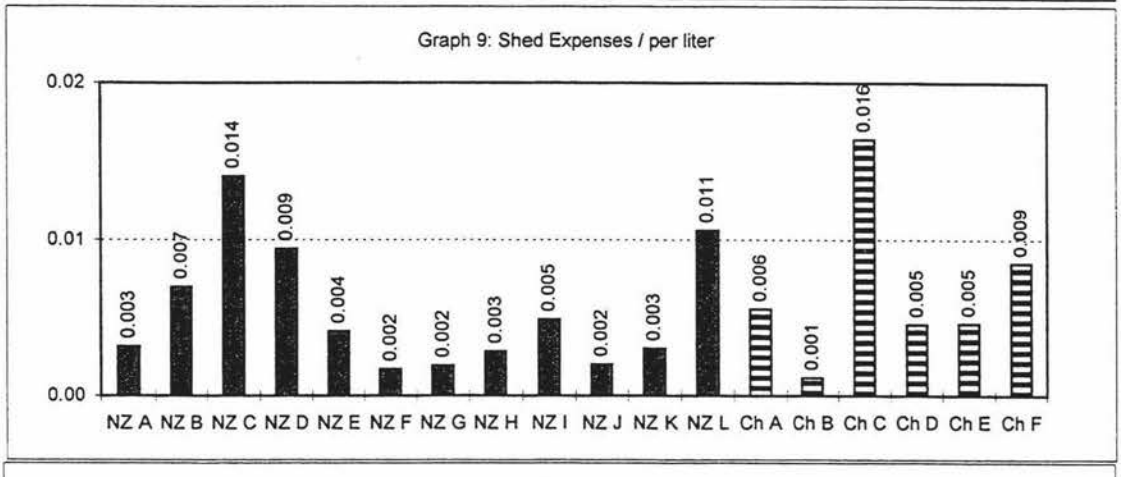
Graph 6 :Fertiliser (incl N) / per liter

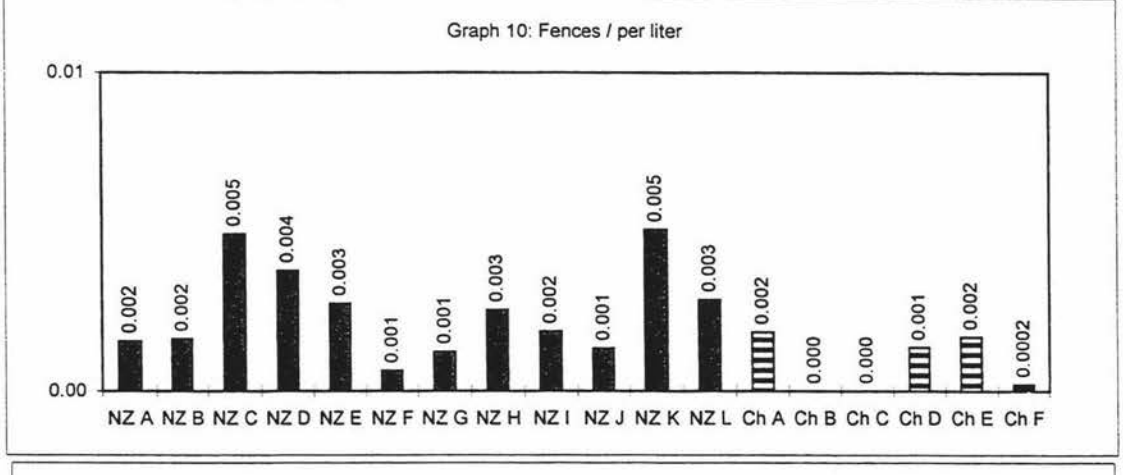


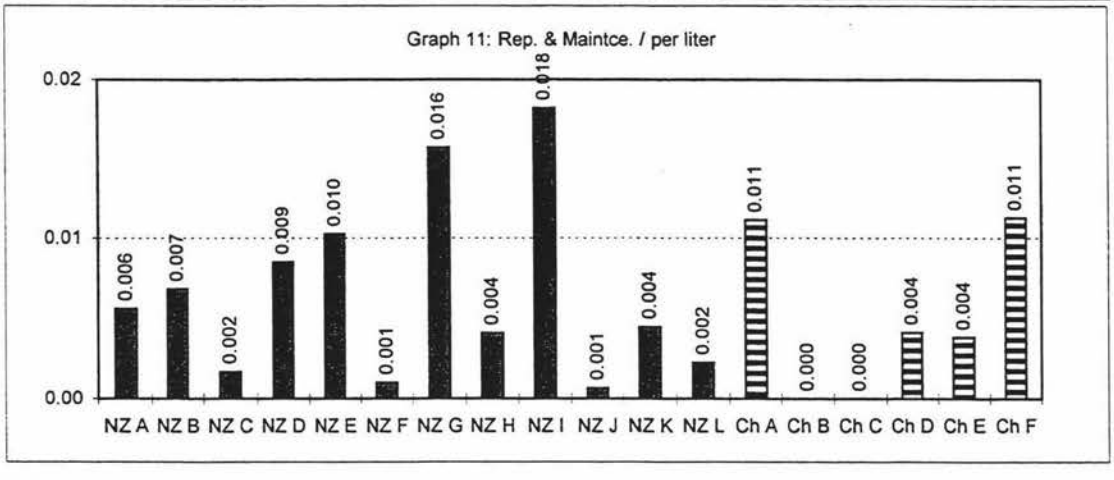
Graph 7 : Animal Health / per liter



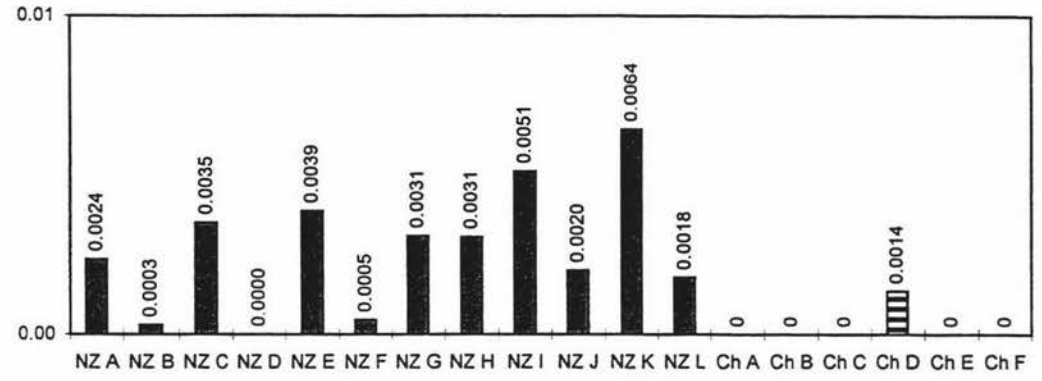

Graph 8: Wages / per liter
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0.03 0.03 0.07 0.06 0.03 0.02 0.02 0.03 0.03 0.02 0.04 0.02 0.03 0.05 0.08 0.03 0.04 0.03
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F


Graph 9: Shed Expenses / per liter
0.02
0.01
0.00
0.003 0.007 0.014 0.009 0.004 0.002 0.002 0.003 0.005 0.002 0.003 0.011 0.006 0.001 0.016 0.005 0.005 0.009
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

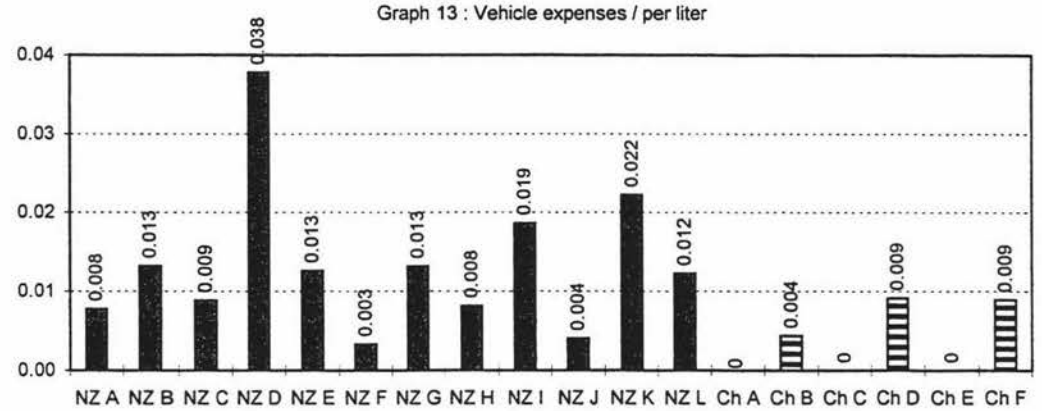

Graph 10: Fences / per liter
0.01
0.00
0.002 0.002 0.005 0.004 0.003 0.001 0.001 0.003 0.002 0.001 0.005 0.003 0.002 0.000 0.000 0.001 0.002 0.0002
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F


Graph 11: Rep. & Maintce. / per liter
0.02
0.01
0.00
0.006 0.007 0.002 0.009 0.010 0.001 0.016 0.004 0.018 0.001 0.004 0.002 0.011 0.000 0.000 0.004 0.004 0.011
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

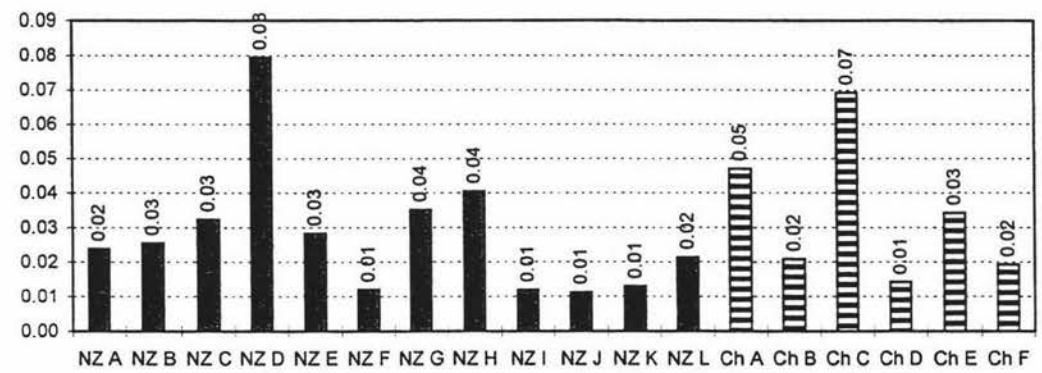
Graph 12: Ditches / per liter



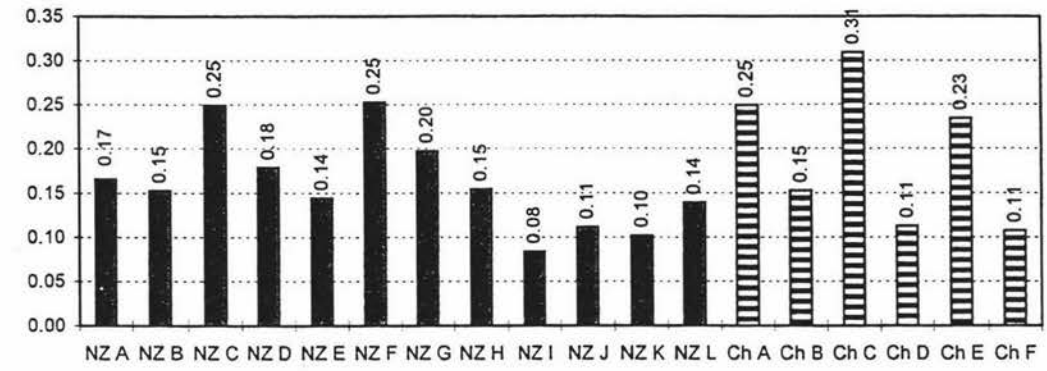
Graph 13 : Vehicle expenses / per liter



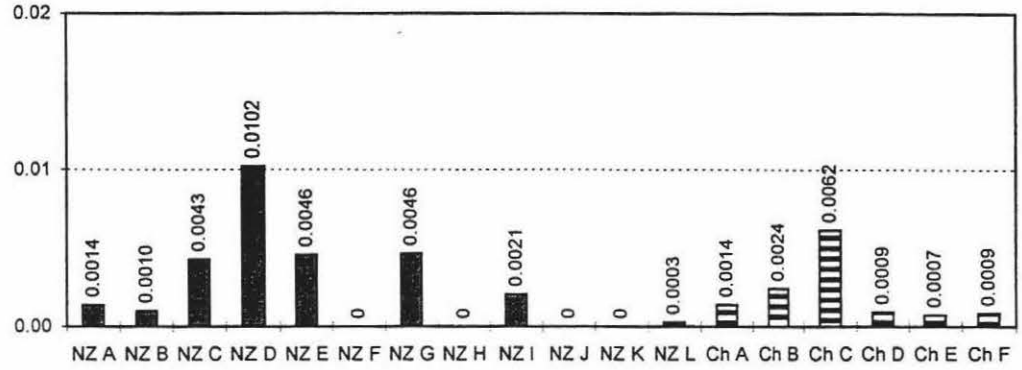
Graph 14: Depreciation / per liter



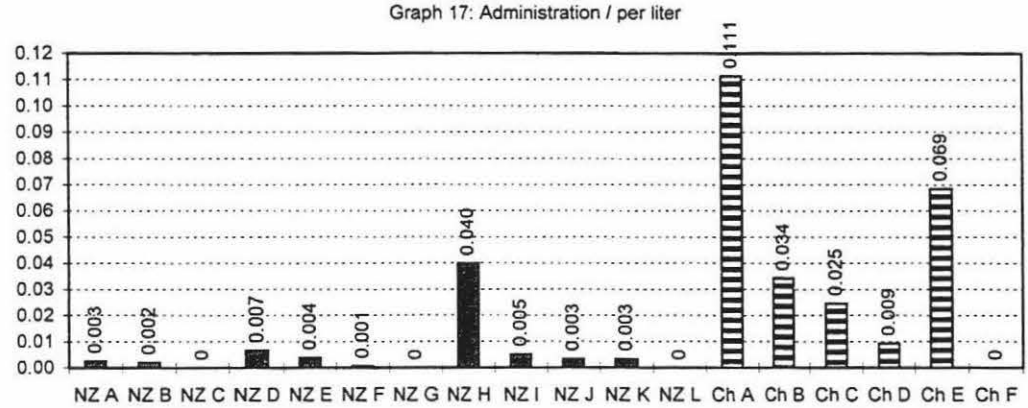
Graph 15: Interests / per liter



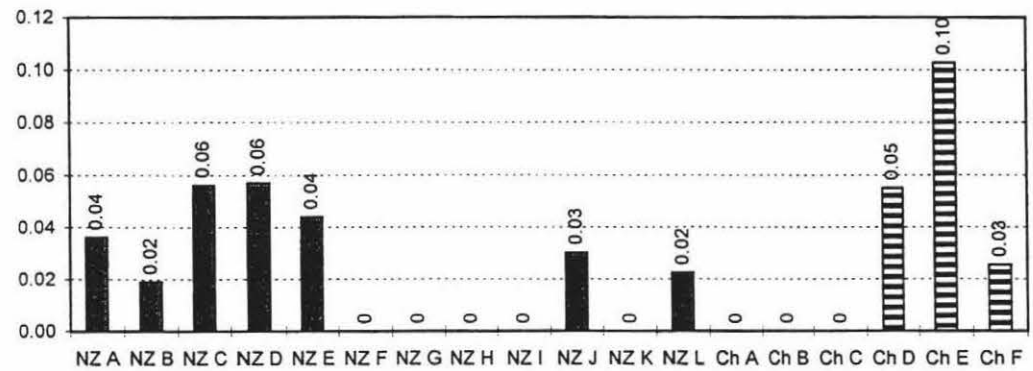
Graph 16: Eathqueake & Fire insurance / per liter



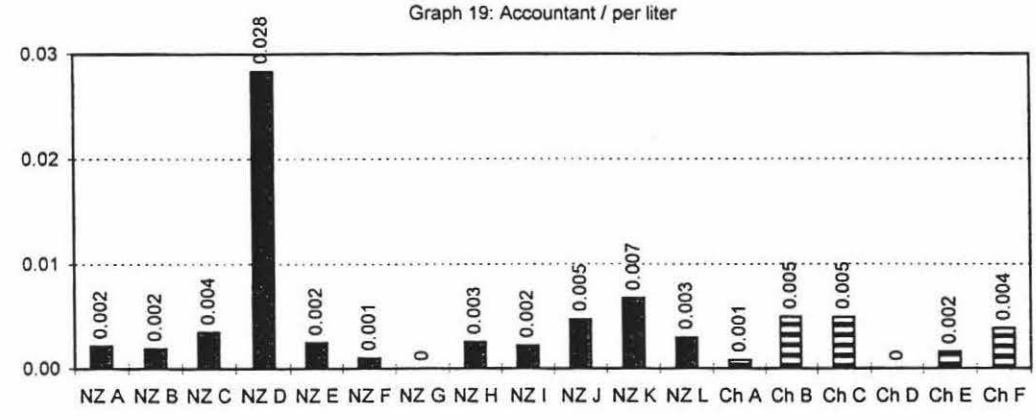
Graph 17: Administration / per liter

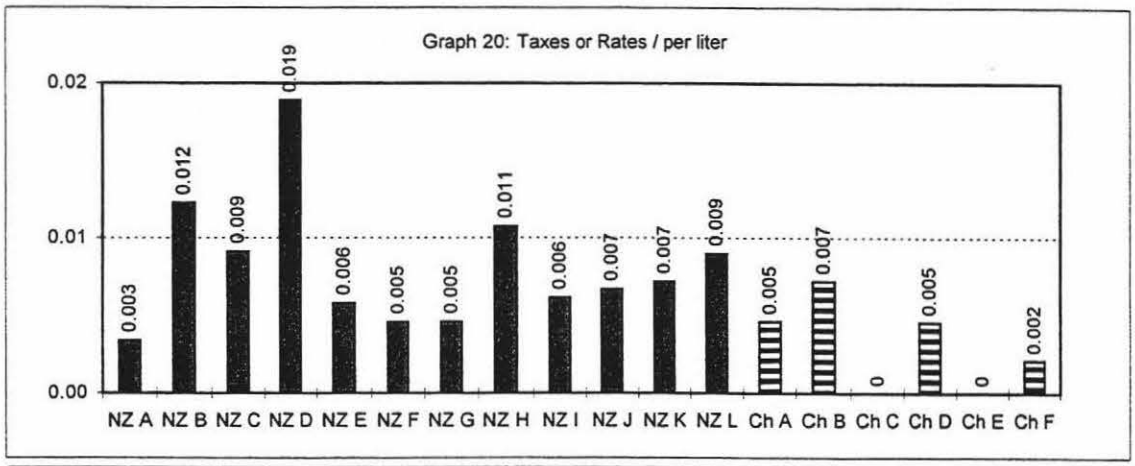


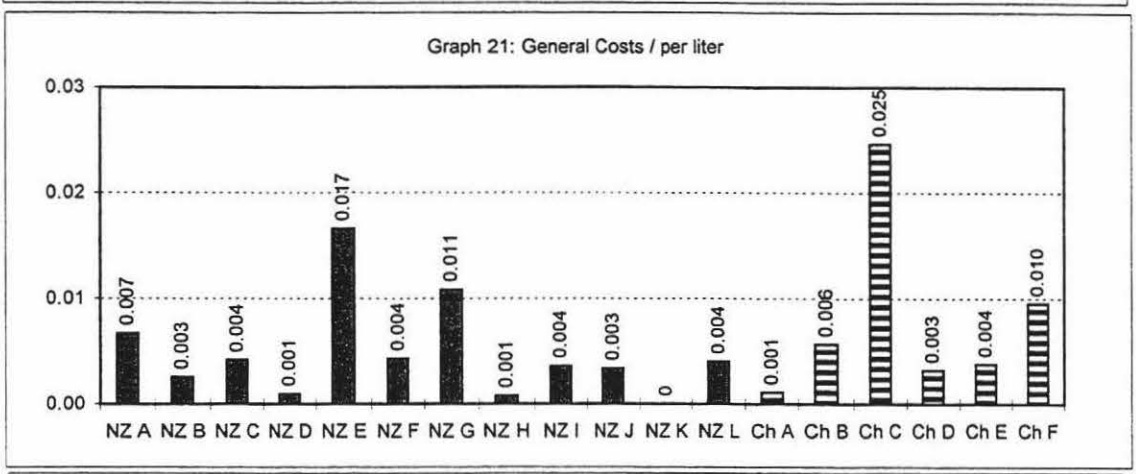
Graph 18: Farm Manager Wage / per liter

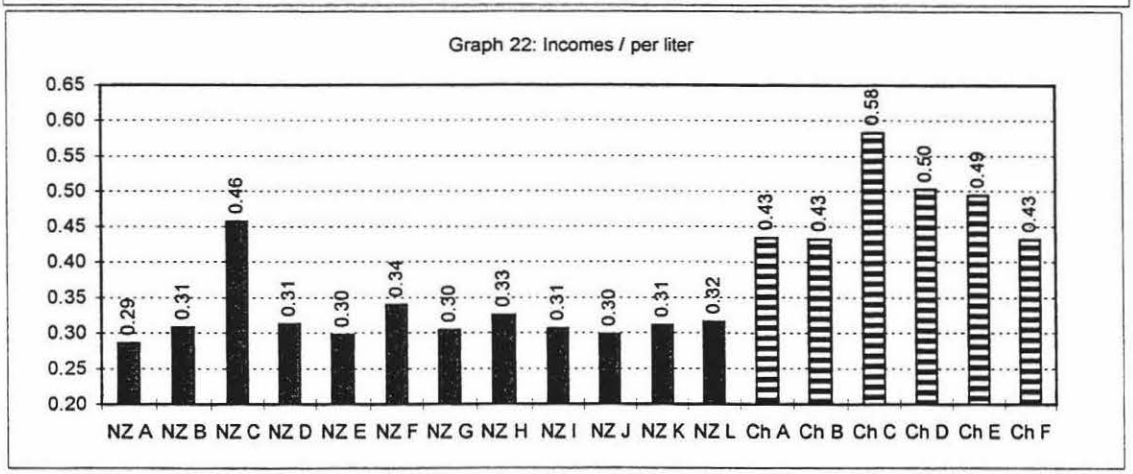


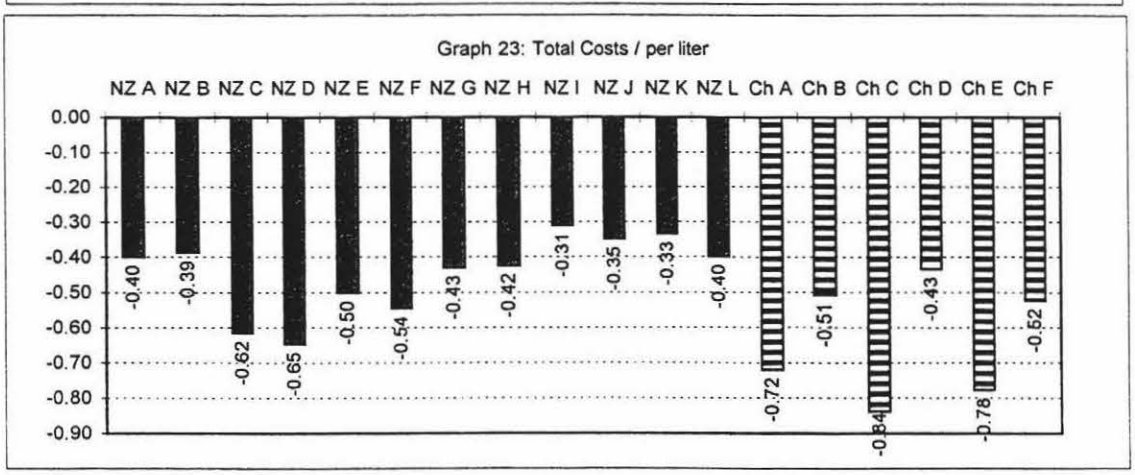
Graph 19: Accountant / per liter



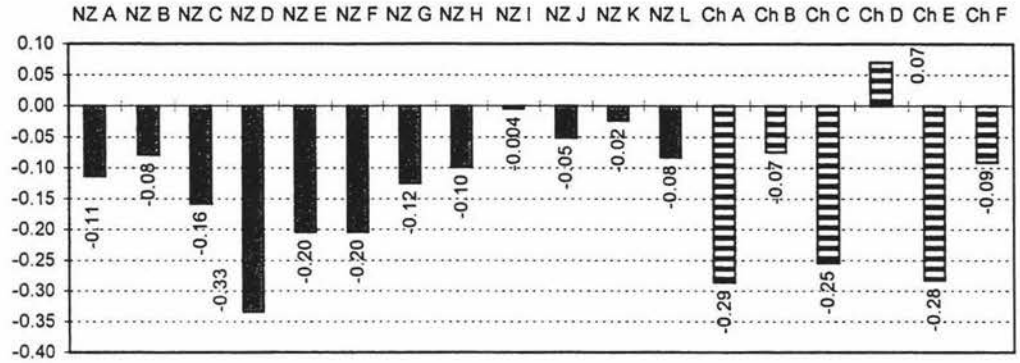

Graph 20: Taxes or Rates / per liter
0.02
0.01
0.00
0.003
0.012
0.009
0.019
0.006
0.005
0.005
0.011
0.006
0.007
0.007
0.009
0.005
0.007
0
0.005
0
0.002
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F


Graph 21: General Costs / per liter
0.03
0.02
0.01
0.00
0.007
0.003
0.004
0.001
0.017
0.004
0.011
0.001
0.004
0.003
0
0.004
0.001
0.006
0.025
0.003
0.004
0.010
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

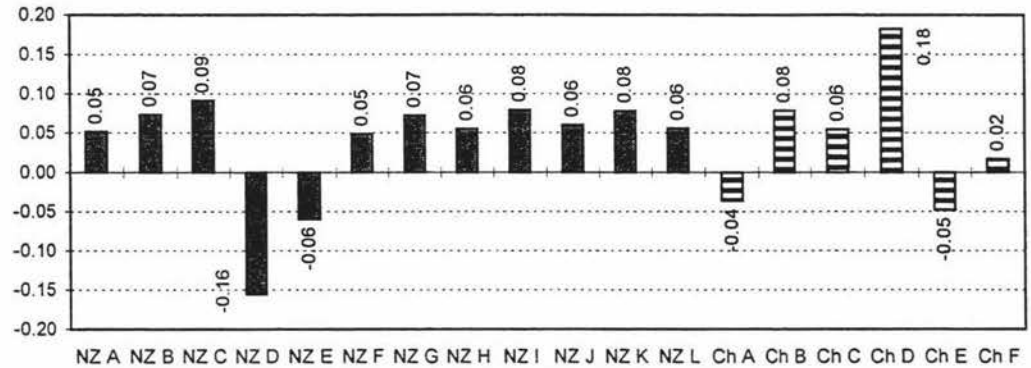

Graph 22: Incomes / per liter
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.29
0.31
0.46
0.31
0.30
0.34
0.30
0.33
0.31
0.30
0.31
0.32
0.43
0.43
0.58
0.50
0.49
0.43
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F


Graph 23: Total Costs / per liter
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F
0.00
-0.10
-0.20
-0.30
-0.40
-0.50
-0.60
-0.70
-0.80
-0.90
-0.40
-0.39
-0.62
-0.65
-0.50
-0.54
-0.43
-0.42
-0.31
-0.35
-0.33
-0.40
-0.72
-0.51
-0.84
-0.43
-0.78
-0.52

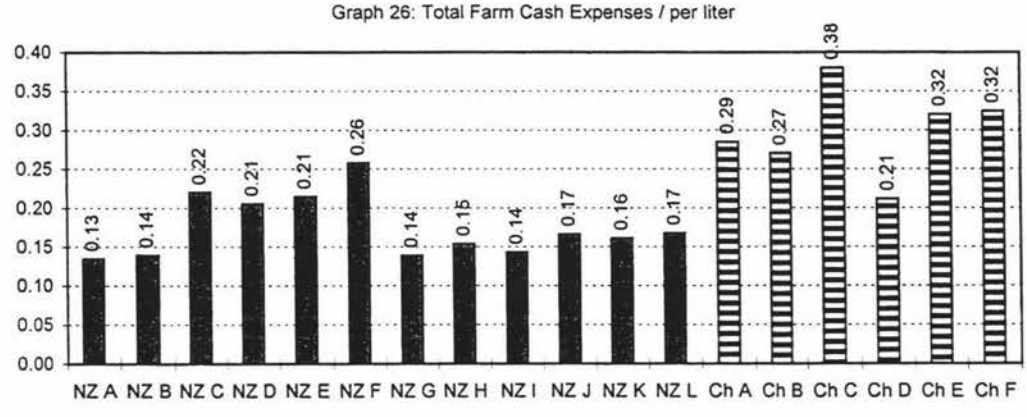
Graph 24: Gross Profit / per liter



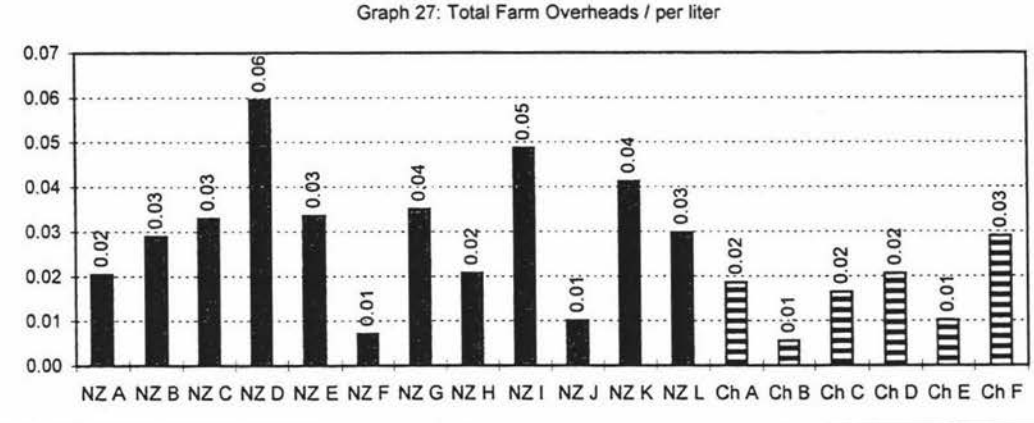
Graph 25: GP. - Interest / per liter



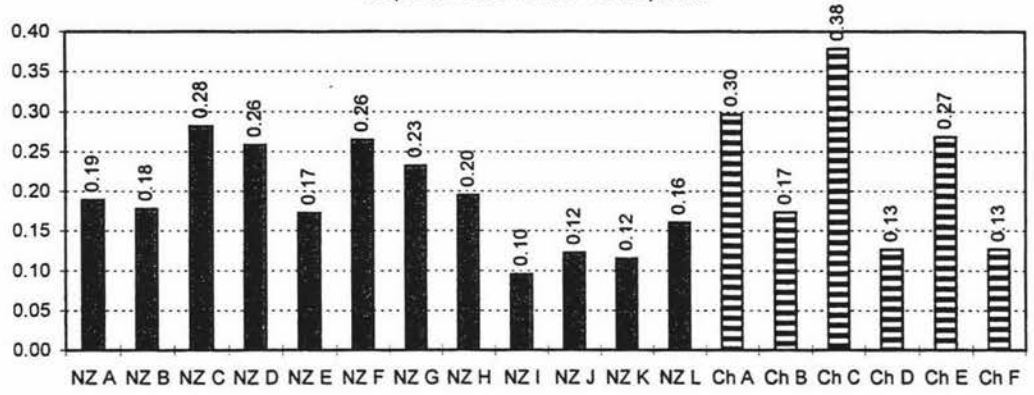
Graph 26: Total Farm Cash Expenses / per liter



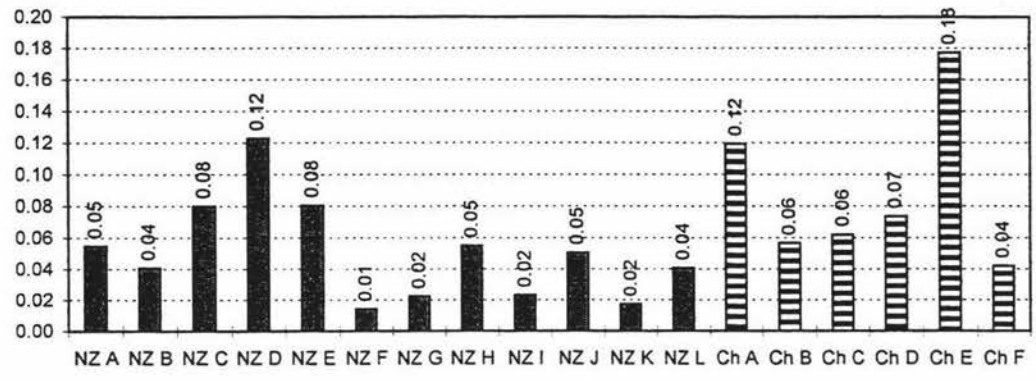
Graph 27: Total Farm Overheads / per liter



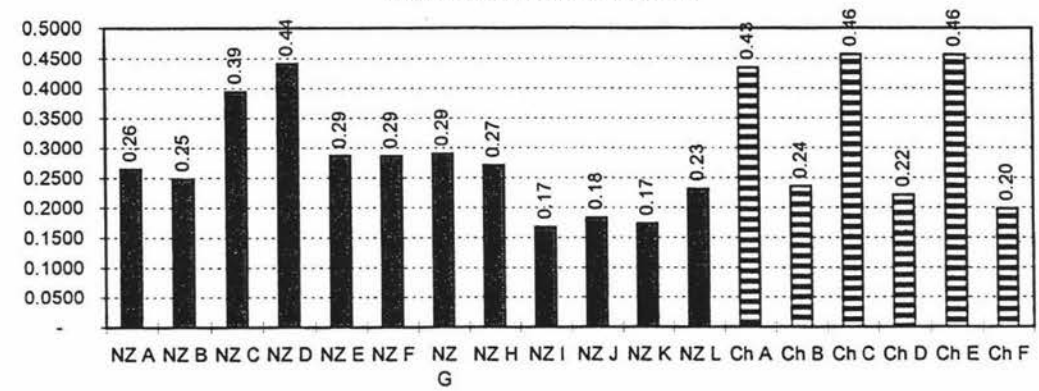
Graph 28: Total Financial Costs / per liter



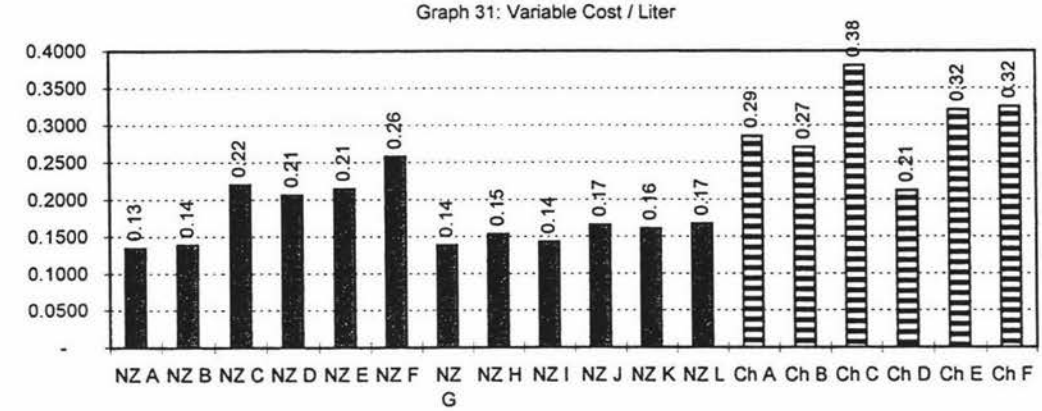
Graph 29: Total Business Overheads / per liter

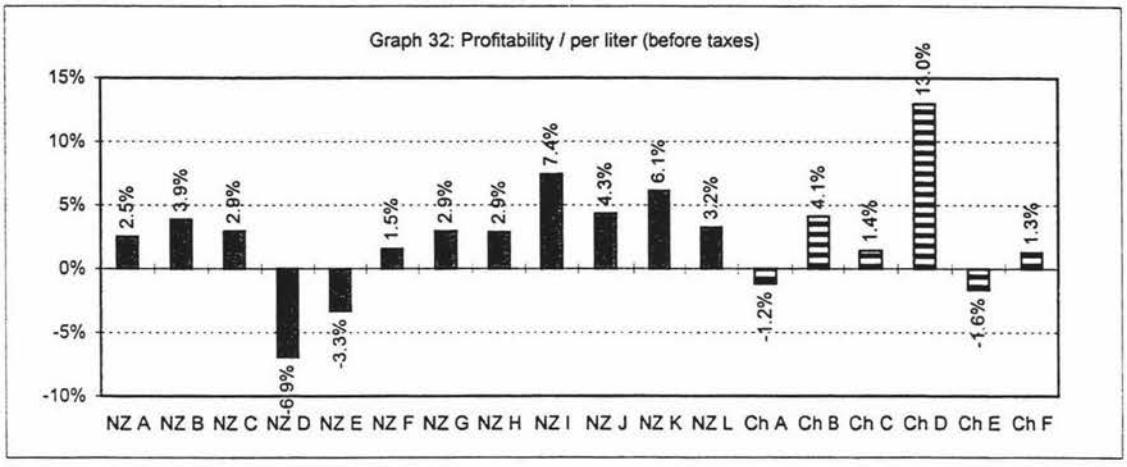


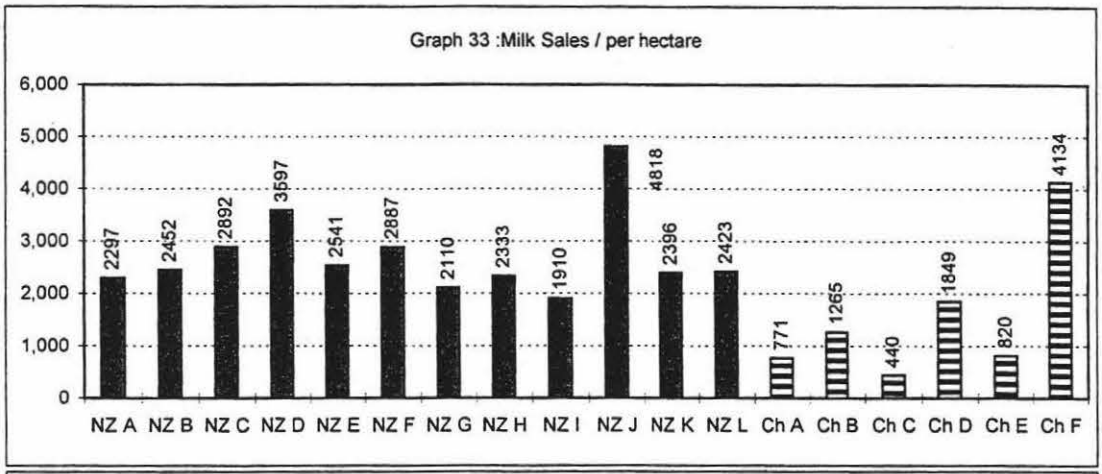
Graph 30: Total Fixed Costs / per liter

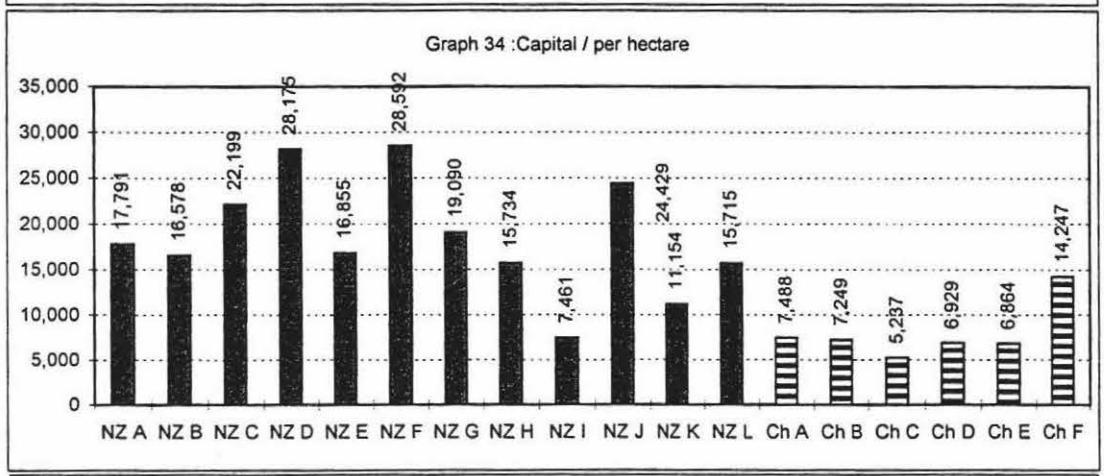


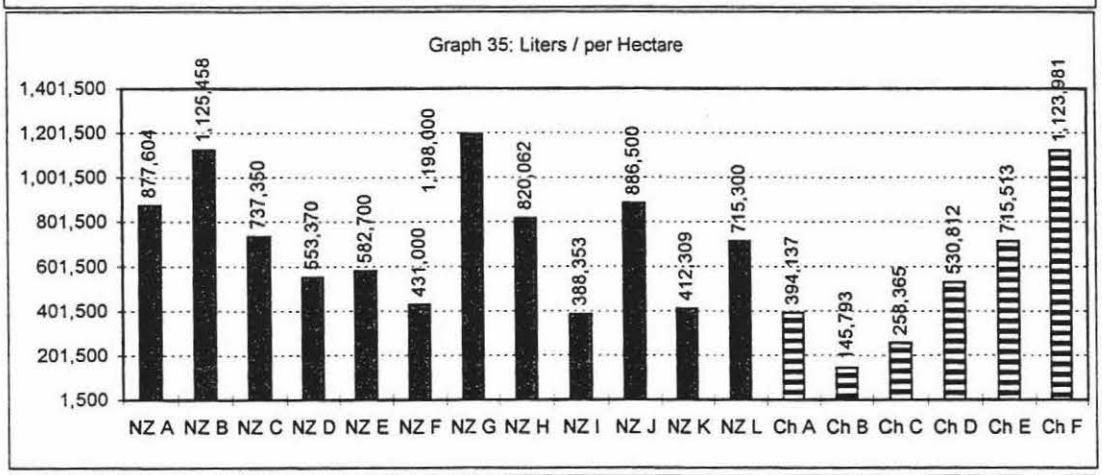
Graph 31: Variable Cost / Liter

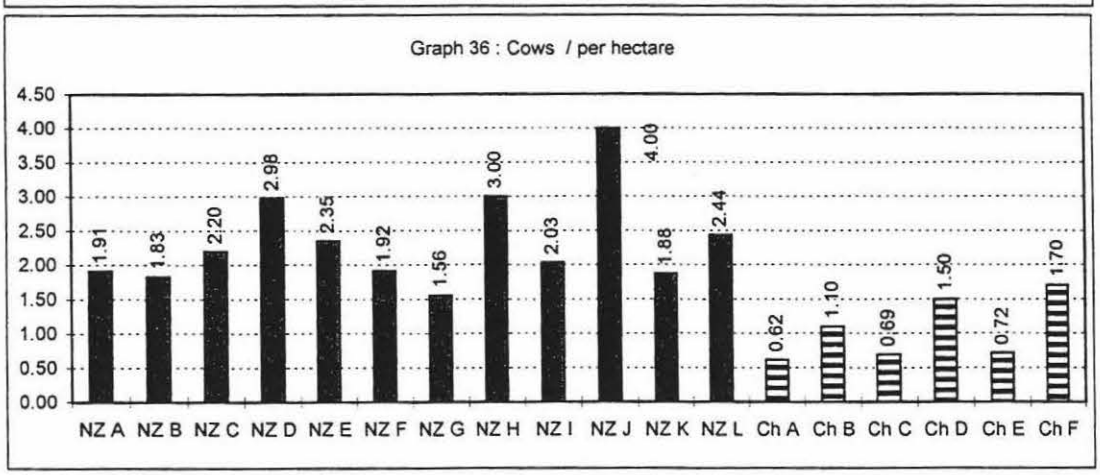


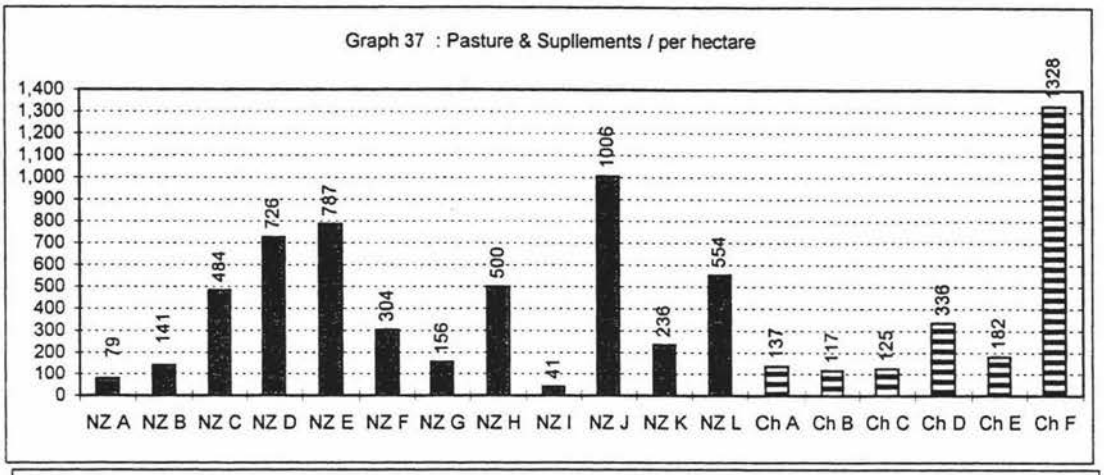

Graph 32: Profitability / per liter (before taxes)
15%
10%
5%
0%
-5%
-10%
2.5%
3.9%
2.9%
-6.9%
-3.3%
1.5%
2.9%
2.9%
7.4%
4.3%
6.1%
3.2%
-1.2%
4.1%
1.4%
13.0%
-1.6%
1.3%
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

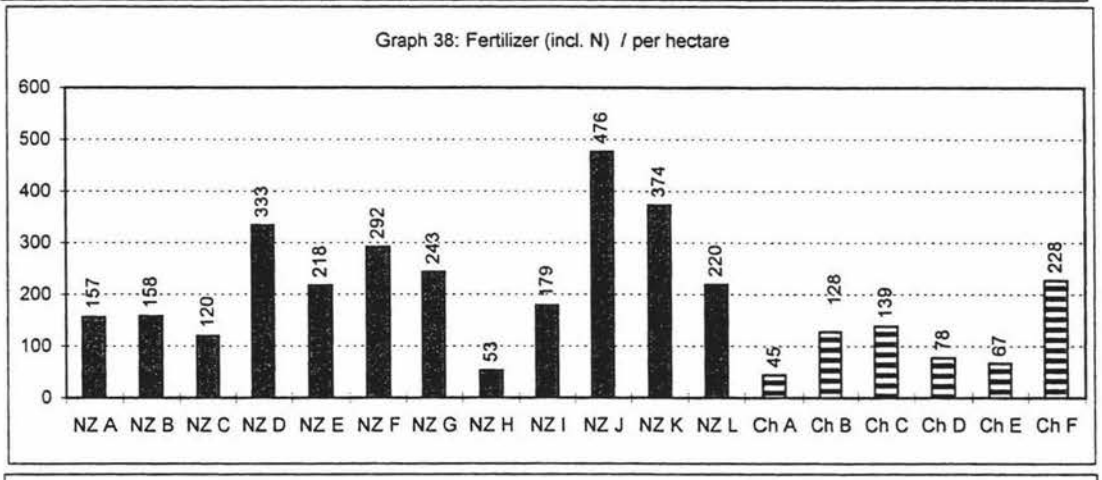

Graph 33 :Milk Sales / per hectare
6,000
5,000
4,000
3,000
2,000
1,000
0
2297
2452
2892
3597
2541
2887
2110
2333
1910
4818
2396
2423
771
1265
440
1849
820
4134
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

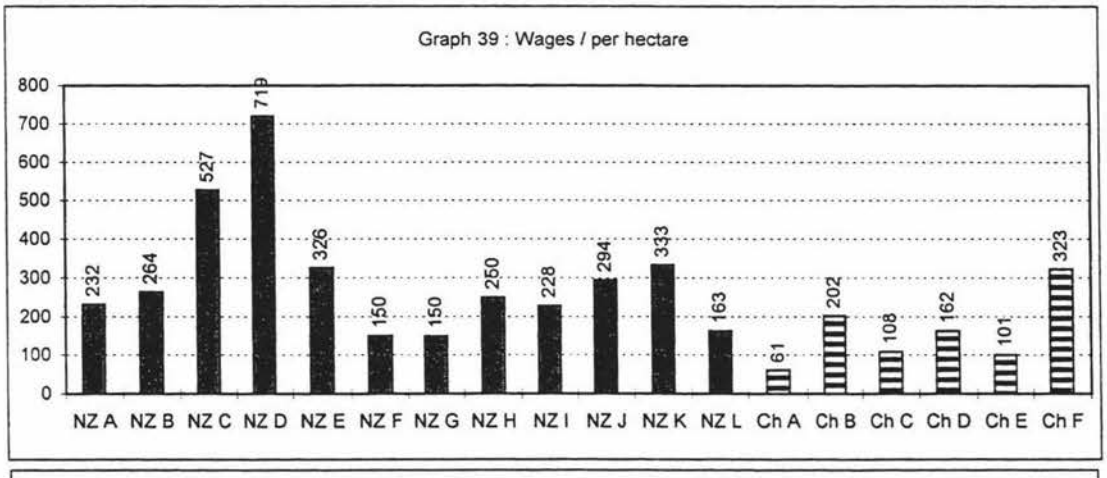

Graph 34 :Capital / per hectare
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
17,791
16,578
22,199
28,175
16,855
28,592
19,090
15,734
7,461
24,429
11,154
15,715
7,488
7,249
5,237
6,929
6,864
14,247
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

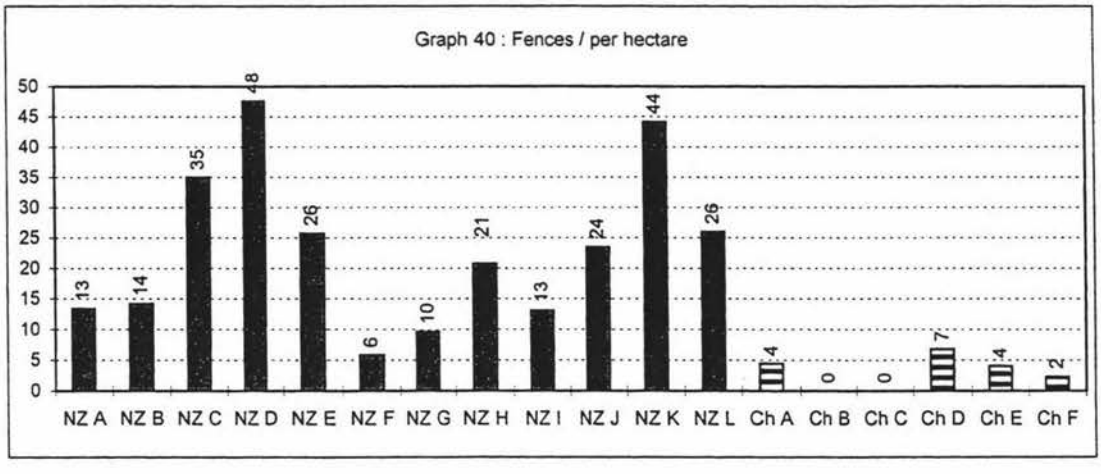

Graph 35: Liters / per Hectare
1,401,500
1,201,500
1,001,500
801,500
601,500
401,500
201,500
1,500
877,604
1,125,458
737,350
553,370
582,700
431,000
1,198,000
820,062
388,353
886,500
412,309
715,300
394,137
145,793
258,365
530,812
715,513
1,123,981
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F


Graph 36 : Cows / per hectare
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
1.91
1.83
2.20
2.98
2.35
1.92
1.56
3.00
2.03
4.00
1.88
2.44
0.62
1.10
0.69
1.50
0.72
1.70
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

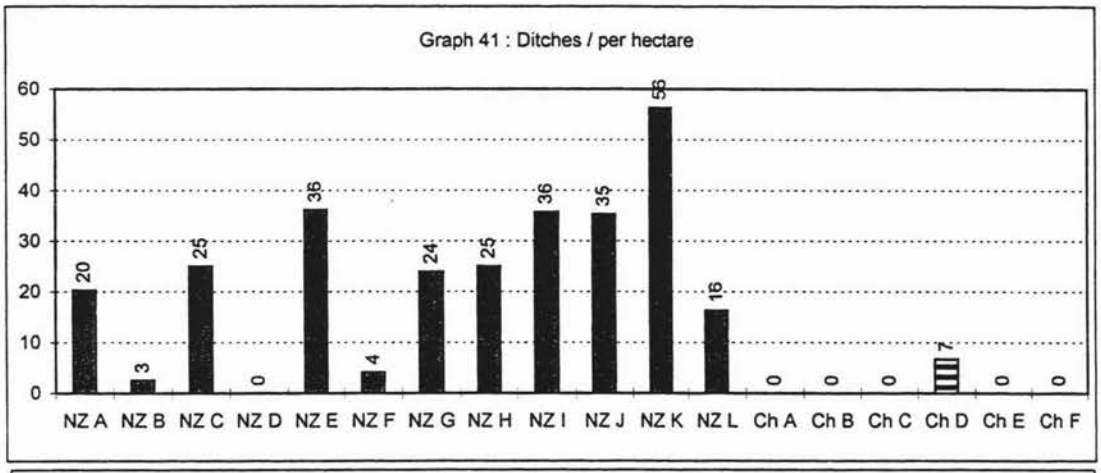

Graph 37 : Pasture & Supllements / per hectare
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
79
141
484
726
787
304
156
500
41
1006
236
554
137
117
125
336
182
328
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F


Graph 38: Fertilizer (incl. N) / per hectare
600
500
400
300
200
100
0
157
158
120
333
218
292
243
53
179
476
374
220
45
128
139
78
67
228
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

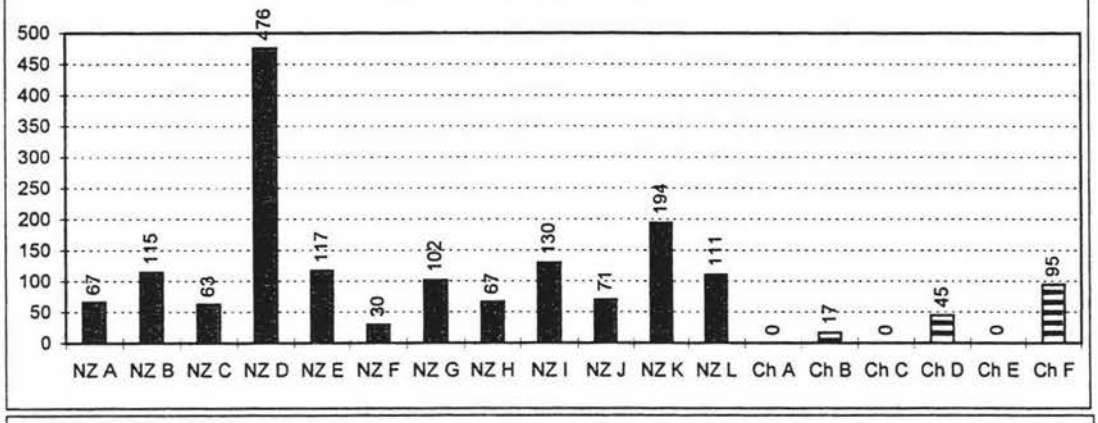

Graph 39 : Wages / per hectare
800
700
600
500
400
300
200
100
0
232
264
527
719
326
150
150
250
228
294
333
163
61
202
108
162
101
323
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F


Graph 40 : Fences / per hectare
50
45
40
35
30
25
20
15
10
5
0
13
14
35
48
26
6
10
21
13
24
44
26
4
0
0
7
4
2
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

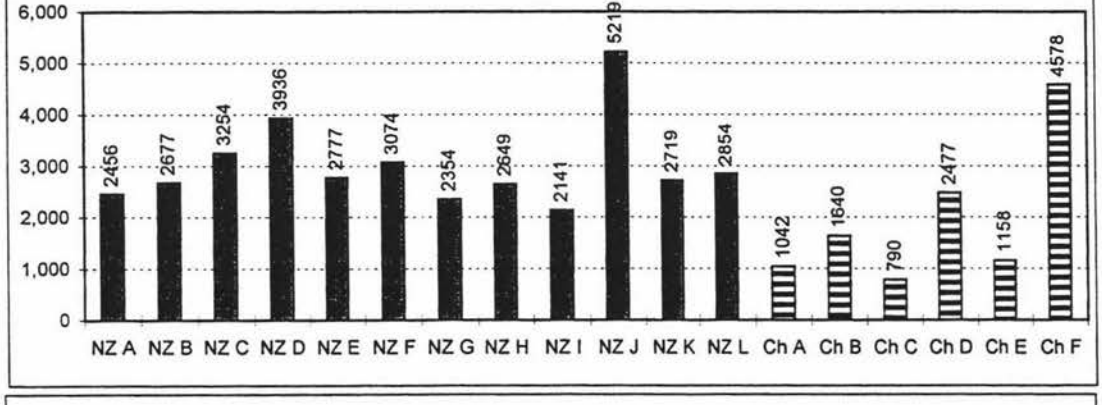
Graph 41 : Ditches / per hectare



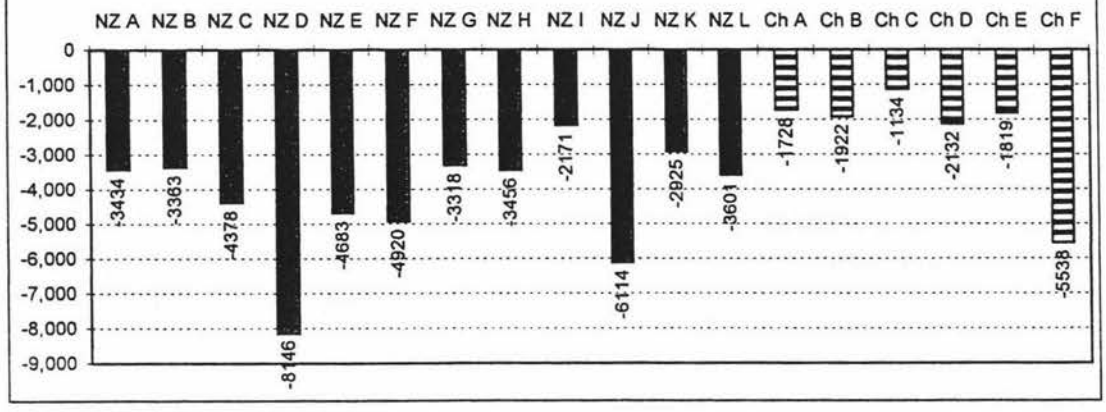
Graph 42 : Vehicle Expenses / per hectare

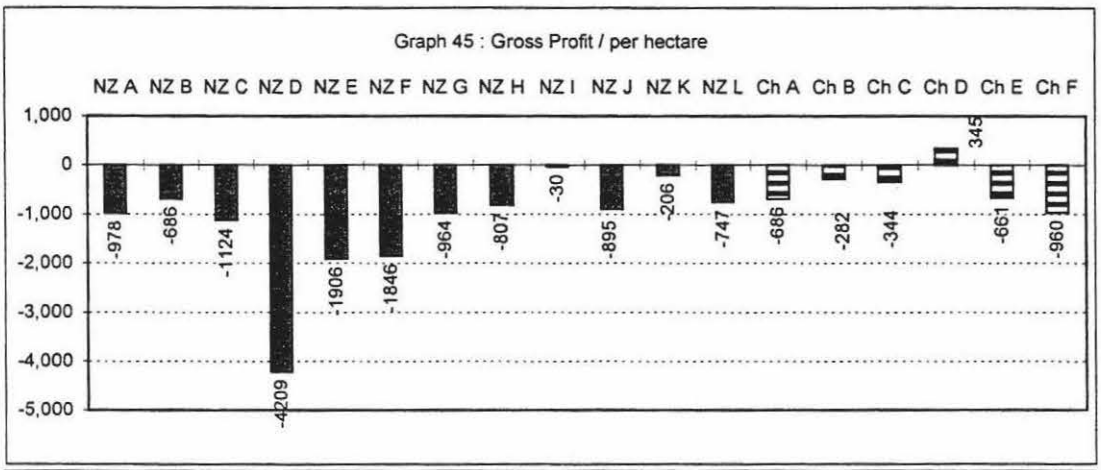


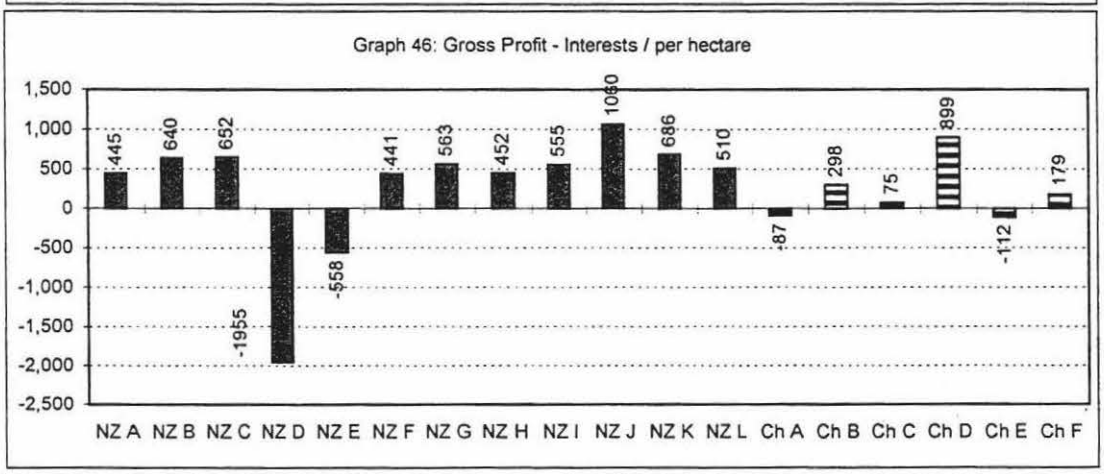
Graph 43 : Total Income / per hectare

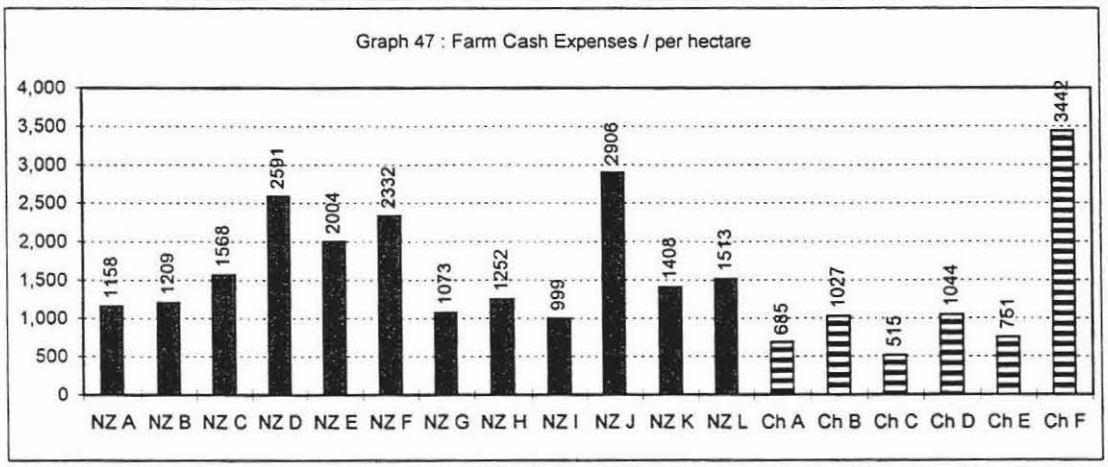


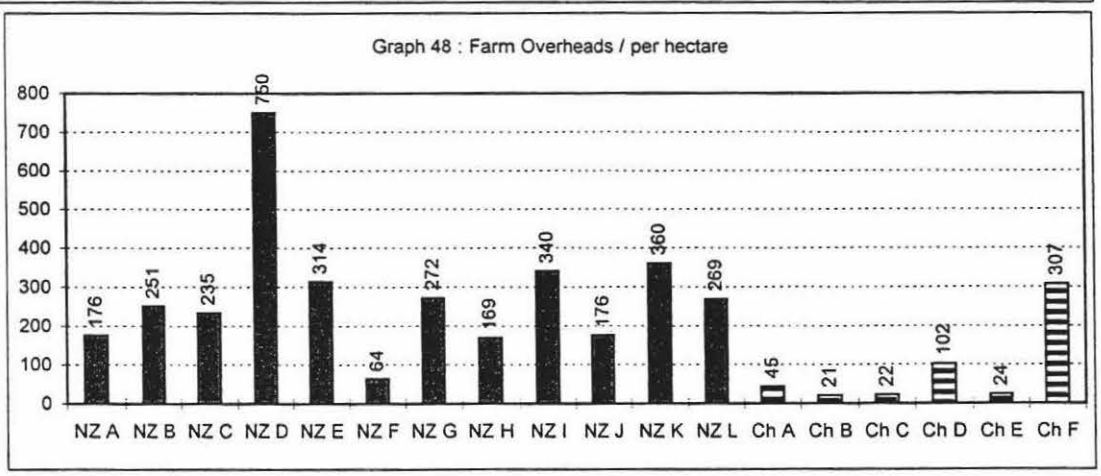
Graph 44 : Total Costs / per hectare



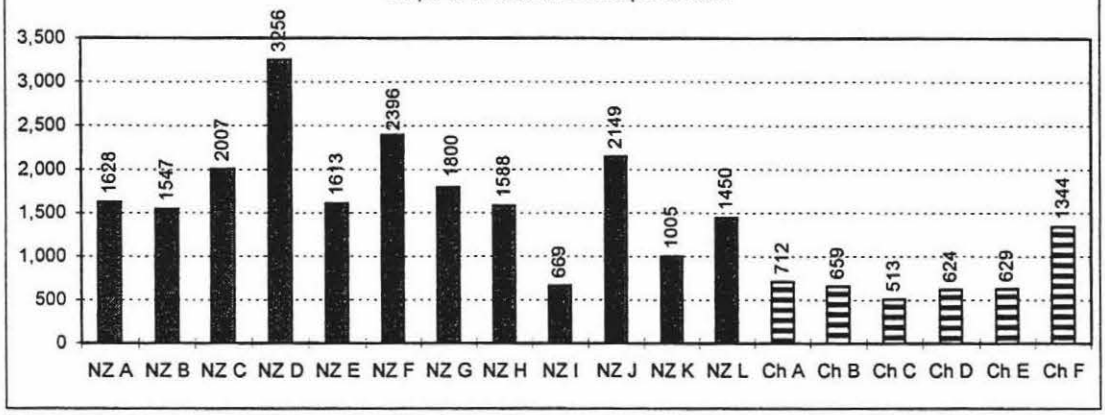

Graph 45 : Gross Profit / per hectare
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F
1,000
0
-1,000
-2,000
-3,000
-4,000
-5,000
-978
-686
-1124
-4209
-1906
-1846
-964
-807
-30
-895
-206
-747
-686
-282
-344
345
-661
-960


Graph 46: Gross Profit - Interests / per hectare
1,500
1,000
500
0
-500
-1,000
-1,500
-2,000
-2,500
445
640
652
-1955
-2000
-558
441
563
452
555
1060
686
510
-87
298
75
899
-112
179
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

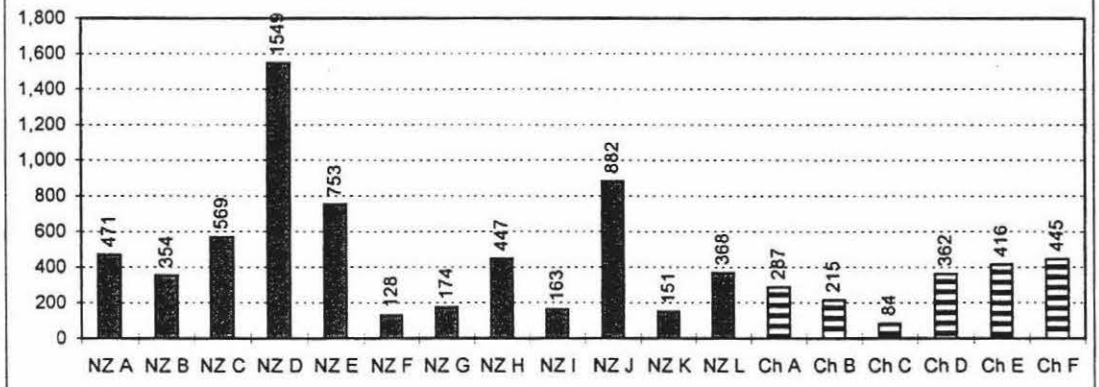

Graph 47 : Farm Cash Expenses / per hectare
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1158
1209
1568
2591
2004
2332
1073
1252
999
2906
1408
1513
685
1027
515
1044
761
3442
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F


Graph 48 : Farm Overheads / per hectare
800
700
600
500
400
300
200
100
0
176
251
235
750
314
64
272
169
340
176
360
269
45
21
22
102
24
307
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

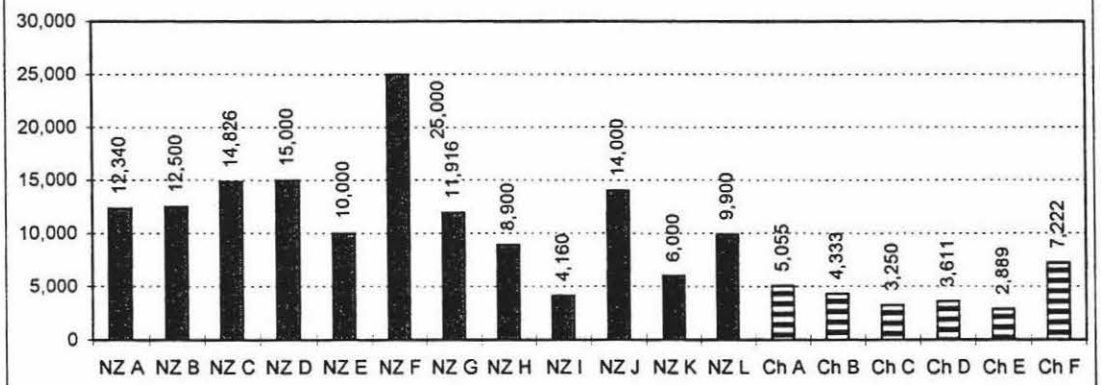
Graph 49 : Financial Costs / per hectare



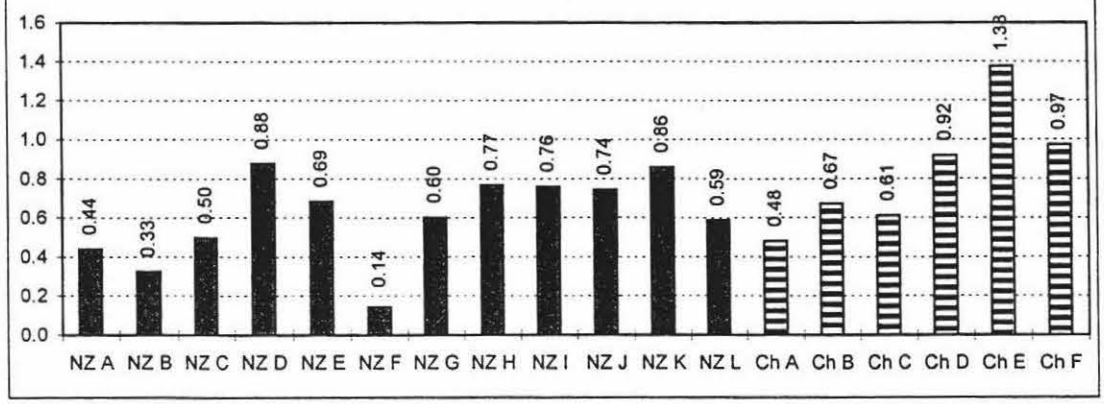
Graph 50 : Business Overheads / per hectare



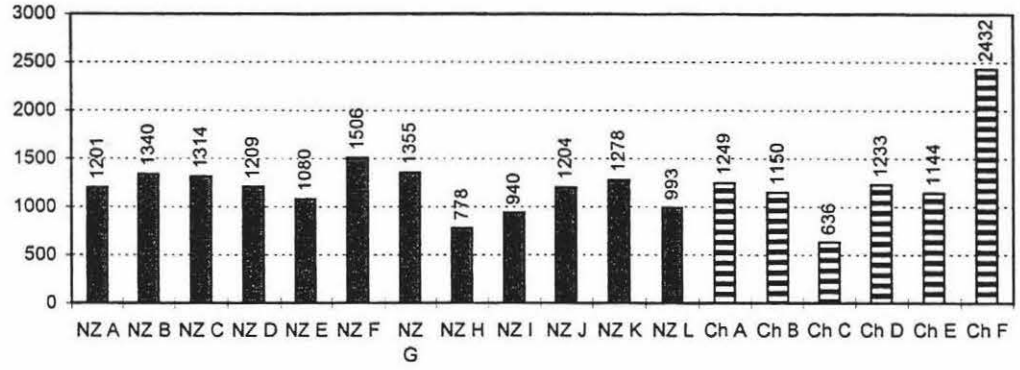
Graph 51 : Value of Land / per hectare



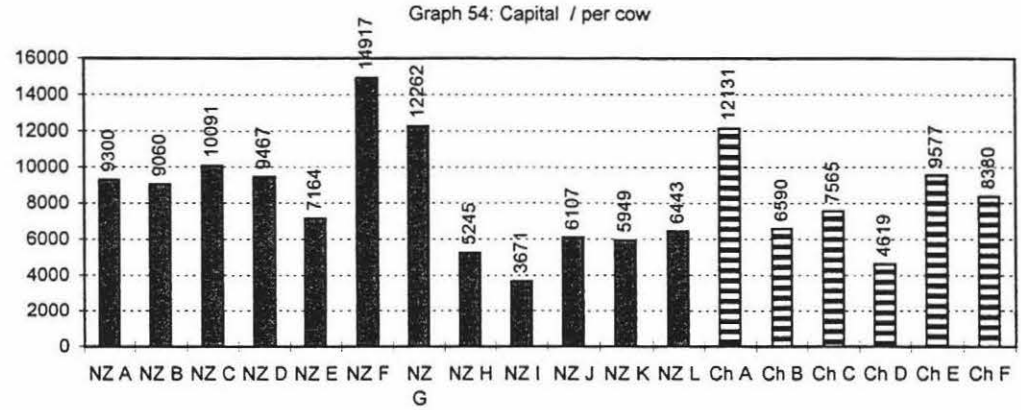
Graph 52 : Variable Capital / Value of Land



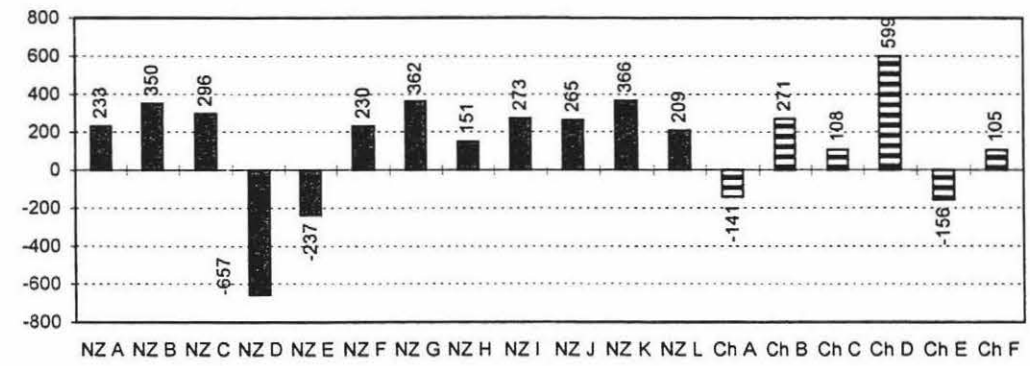
Graph 53: Milk Sales / per cow



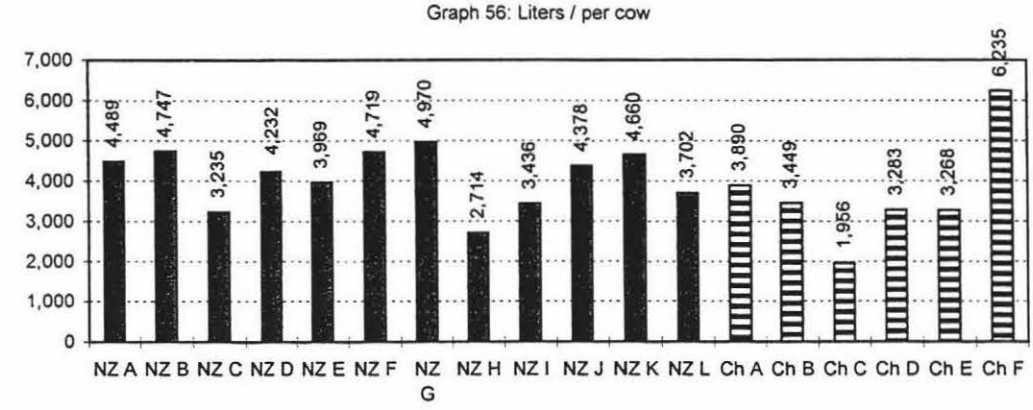
Graph 54: Capital / per cow



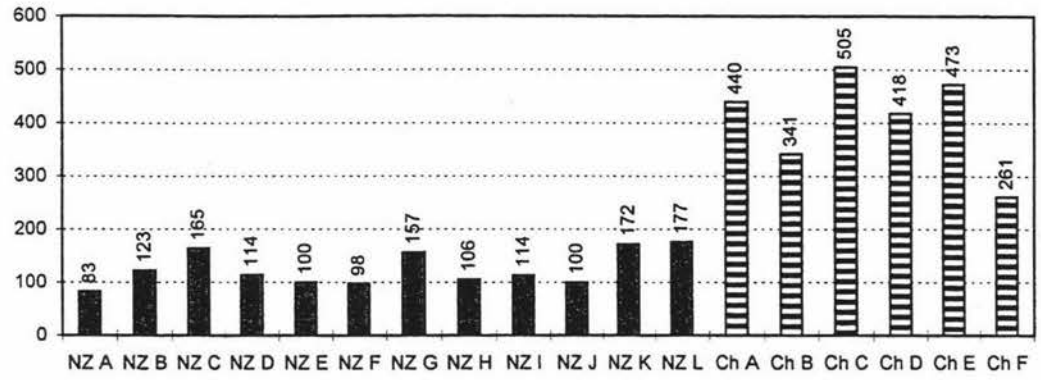
Graph 55: GP - Interest before taxes/ per cow



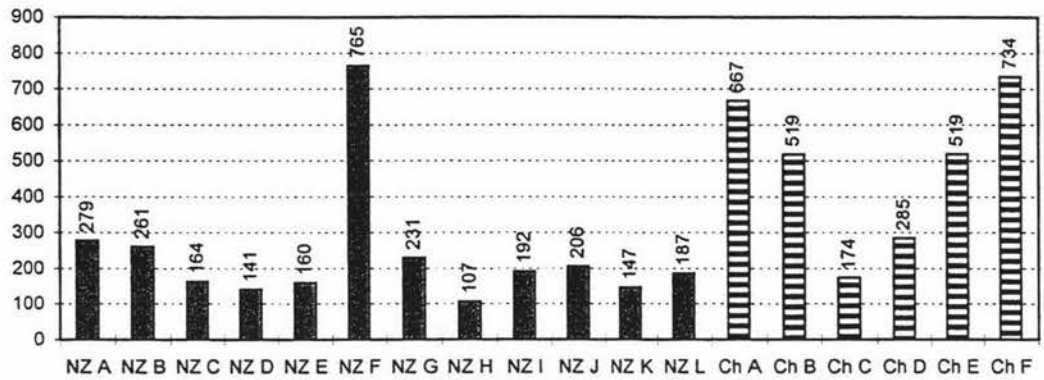
Graph 56: Liters / per cow



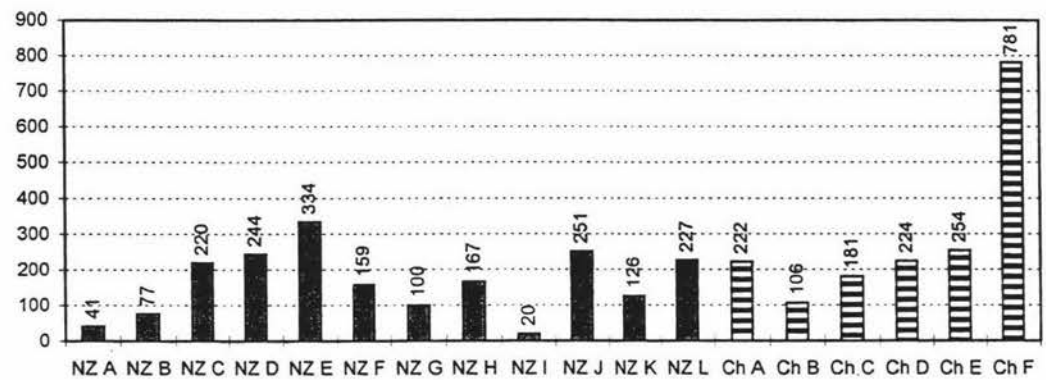
Graph 57: Sales of Calves + Cows / per cow



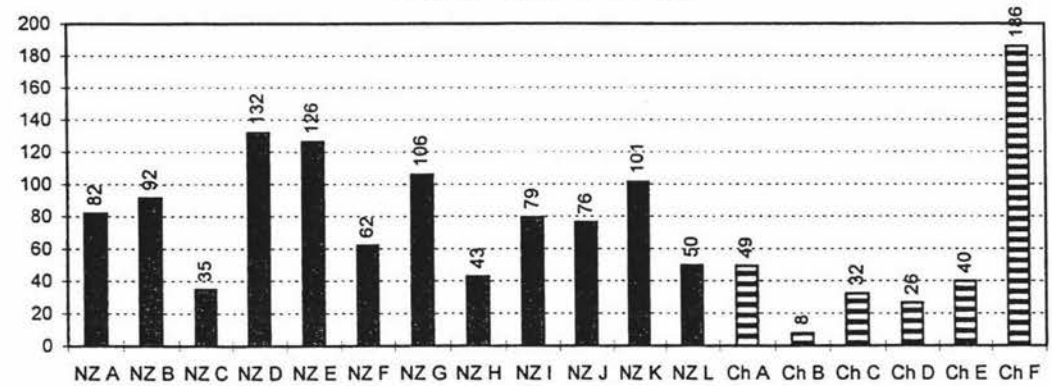
Graph 58: Replacemet / per cow



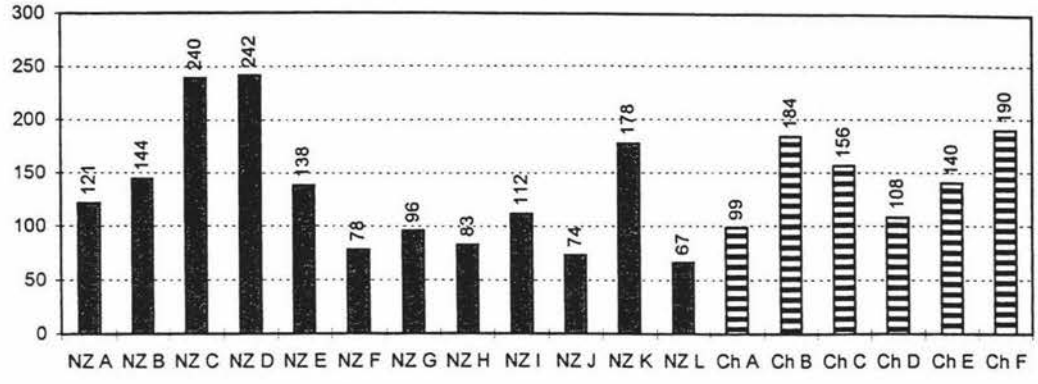
Graph 59 : Pasture & Supllements / per cow



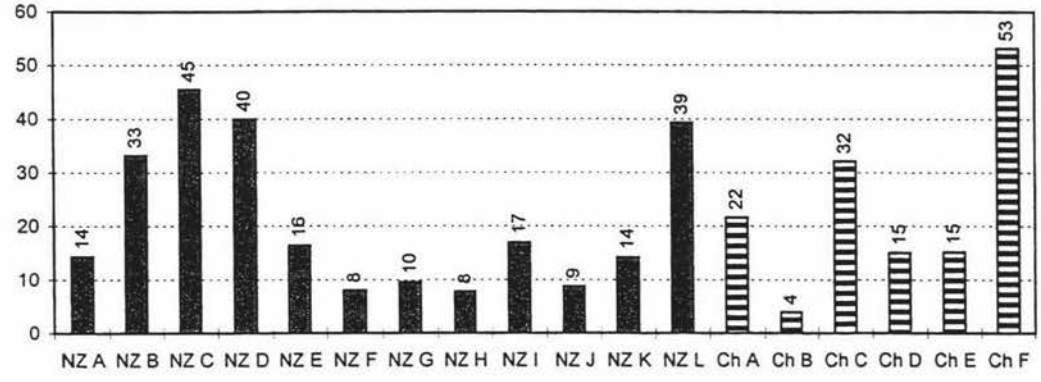
Graph 60 : Animal Health / per cow



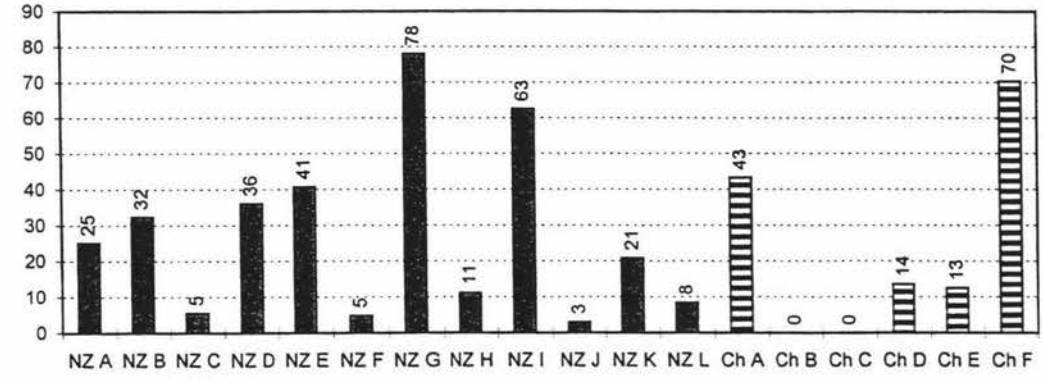
Graph 61 : Wages / per cow



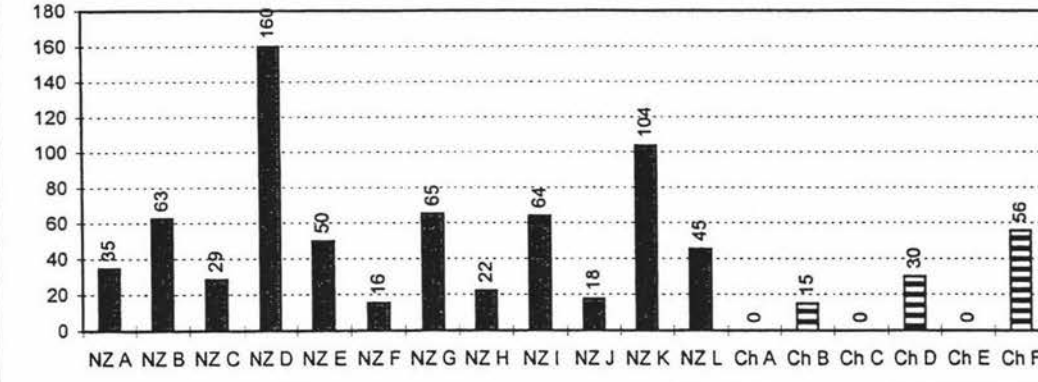
Graph 62 : Shed Expenses / per cow



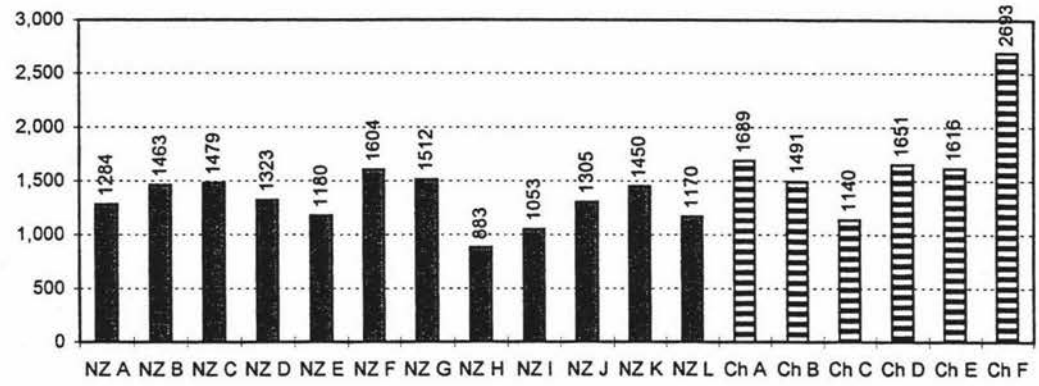
Graph 63 : Repairs and Maintainance / per cow



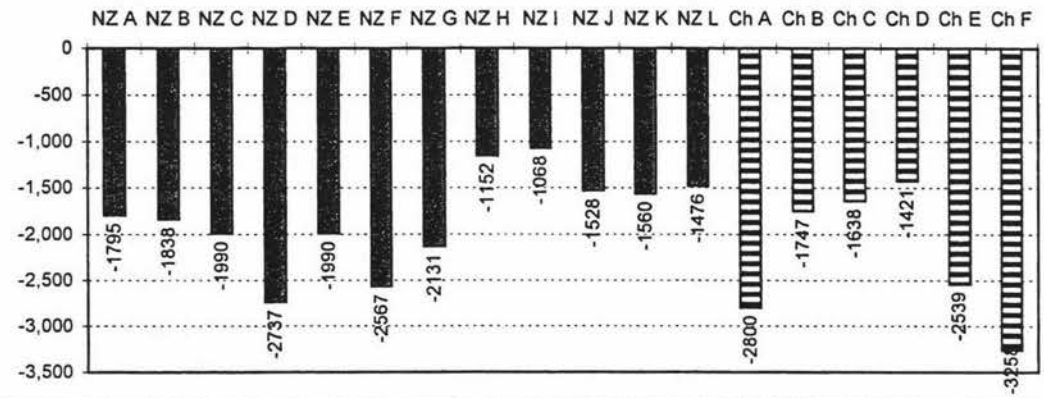
Graph 64 : Vehicle Expenses / per cow



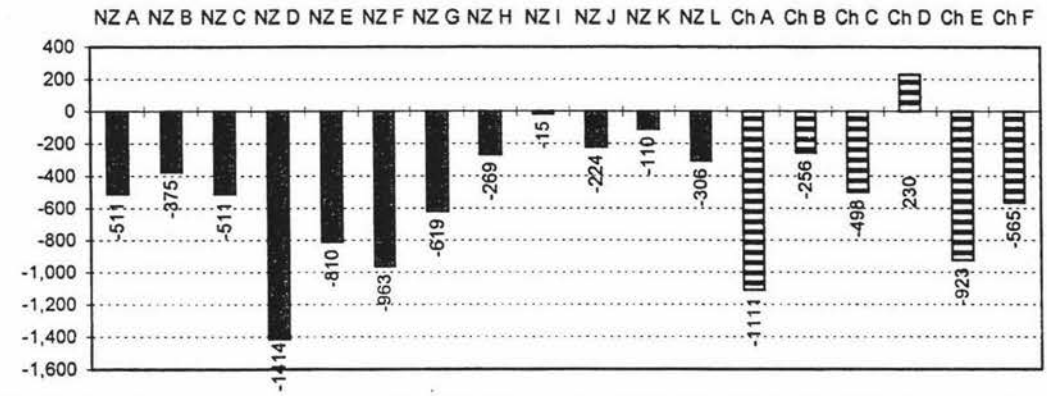
Graph 65 : Total Income / per cow



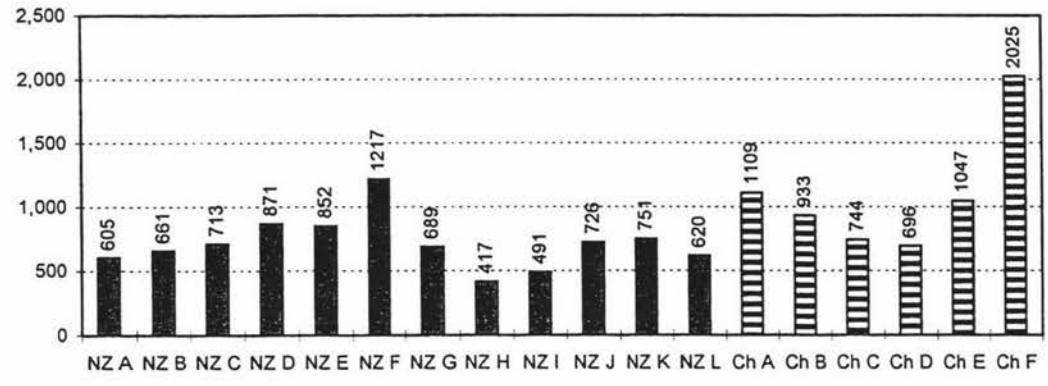
Graph 66 : Total Costs / per cow



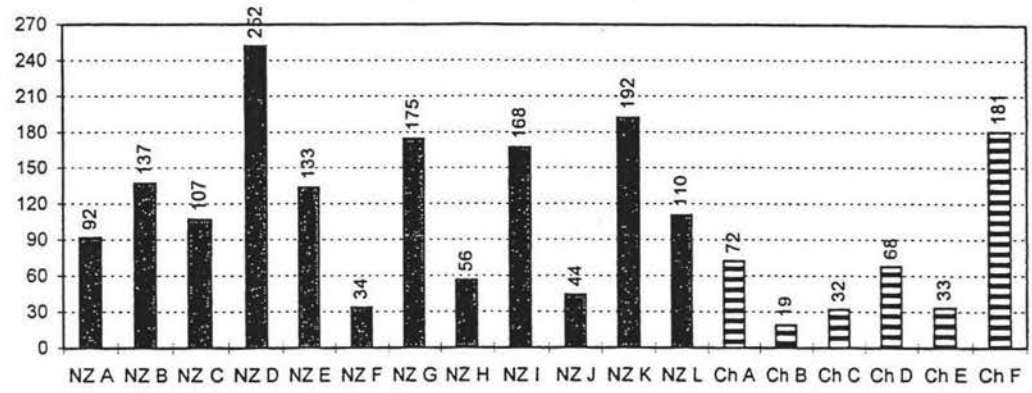
Graph 67 : Gross Profit / per cow



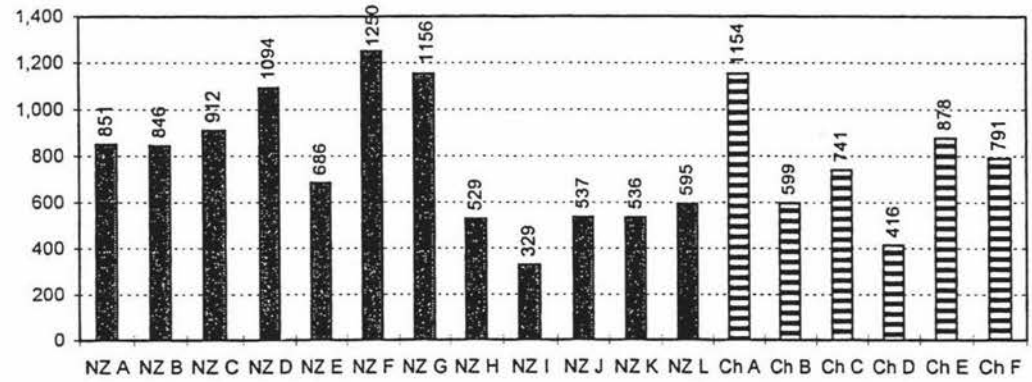
Graph 68 : Farm Cash Expenses / per cow



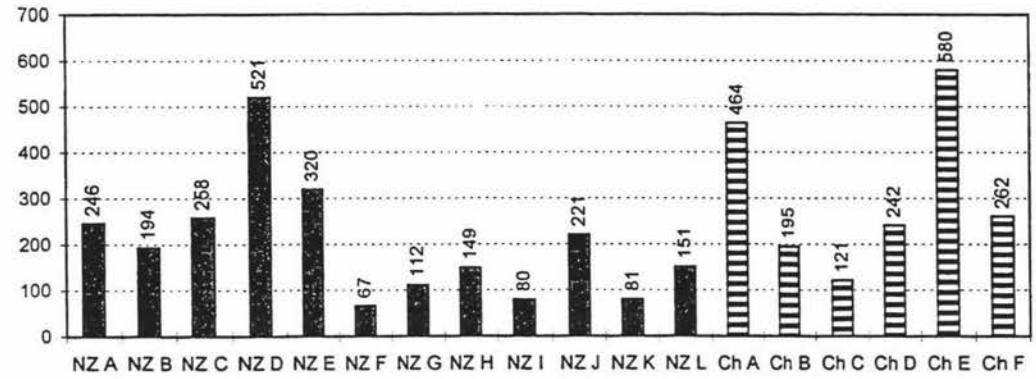
Graph 69 : Farm Overheads / per cow



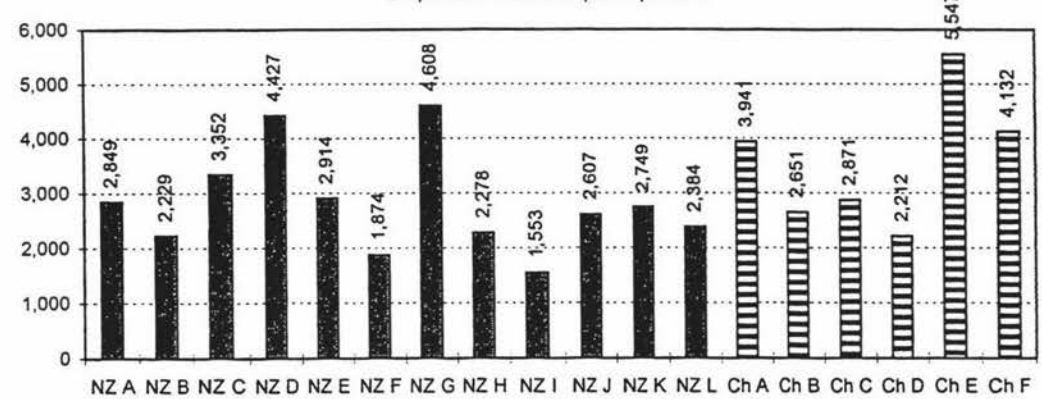
Graph 70 : Financial Costs / per cow



Graph 71 : Business Overheads / per cow



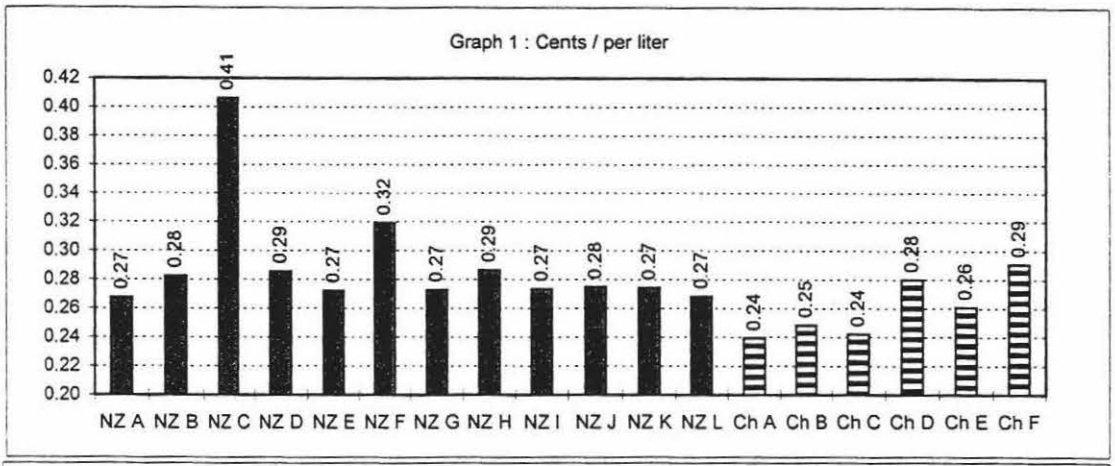
Graph 72 : Variable Capital / per cow

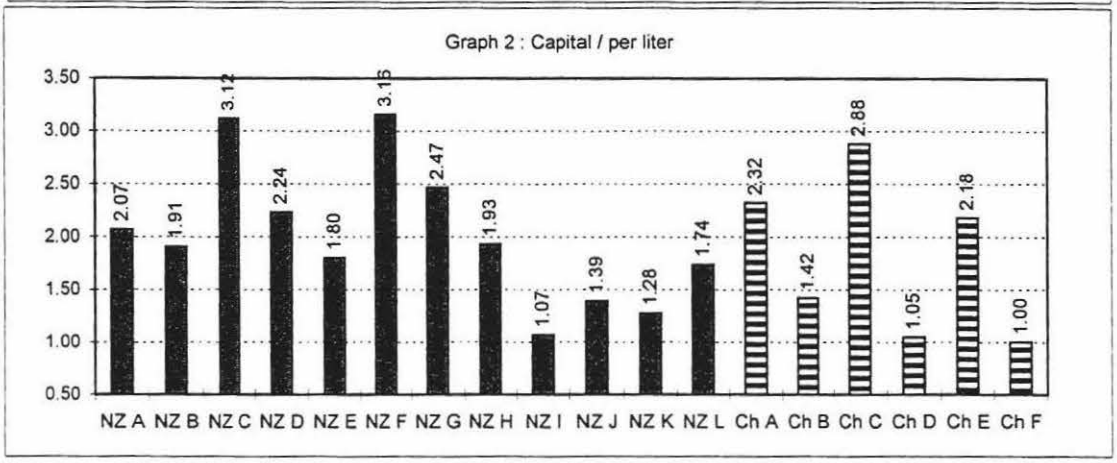


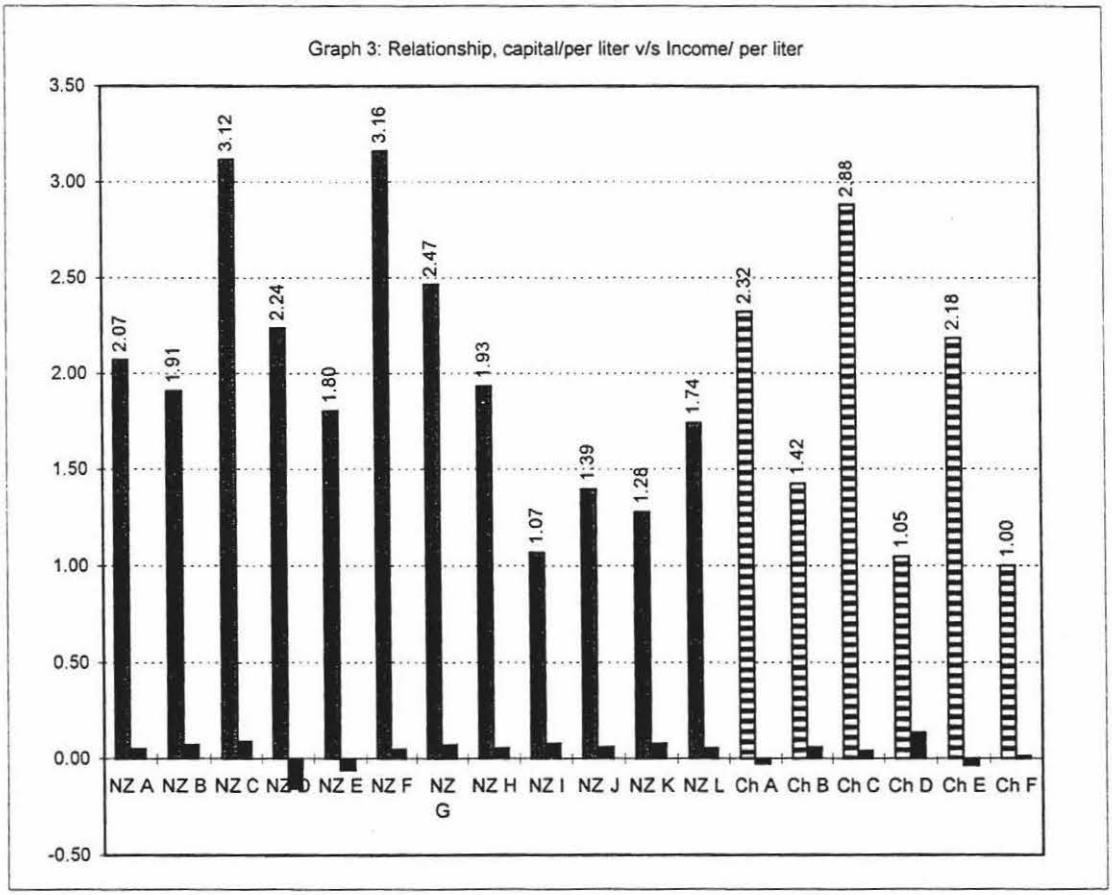
Appendix I

Comparison of Countries in terms of the Estimated Exchange Rate

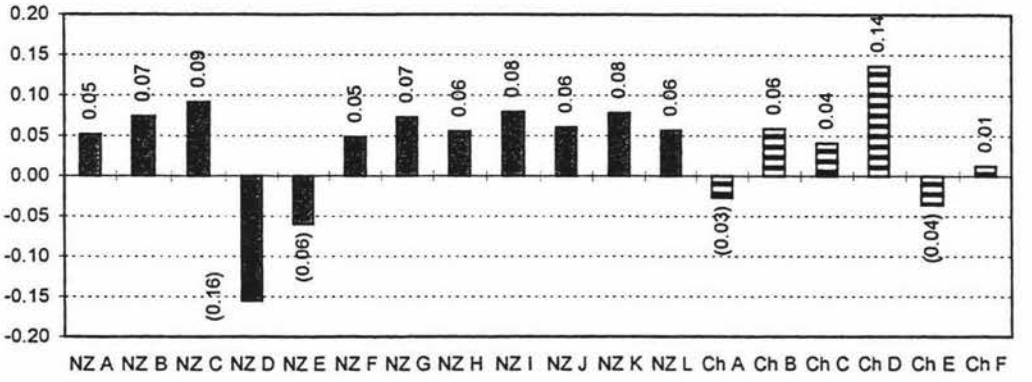
Appendix I Comparisons between both countries A.E.R, Per Liter 300 .



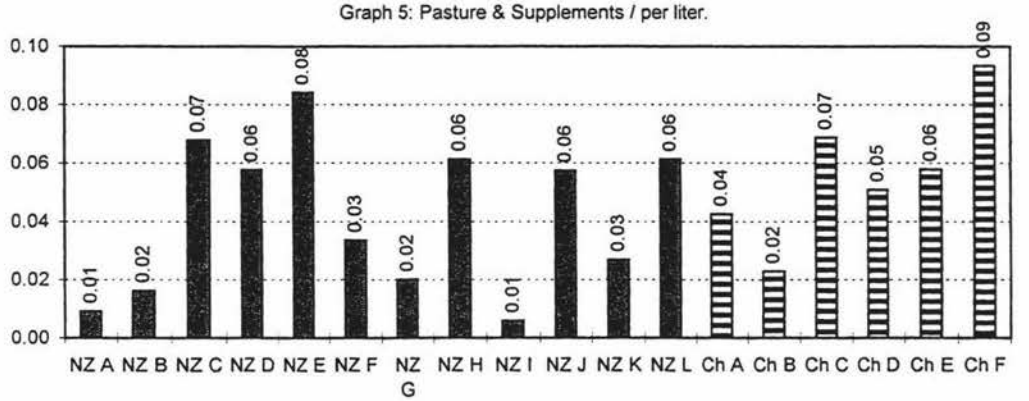




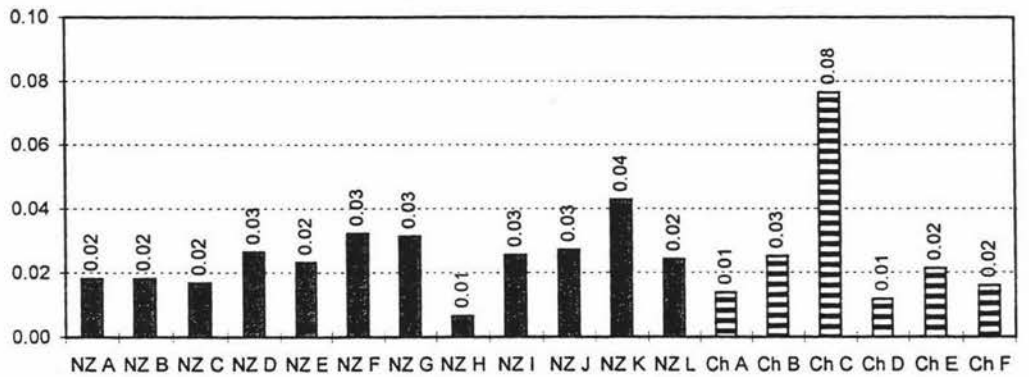
Graph 4: Gross Profit - Interests; before Taxes



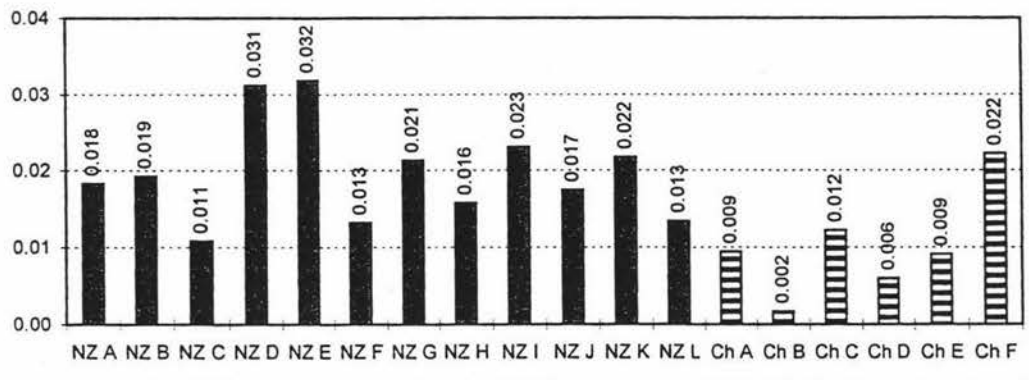
Graph 5: Pasture & Supplements / per liter.

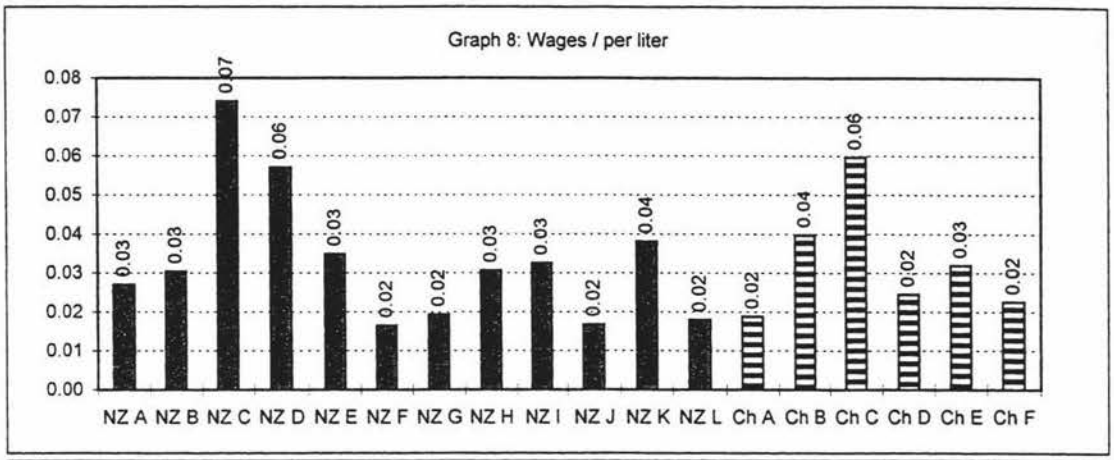


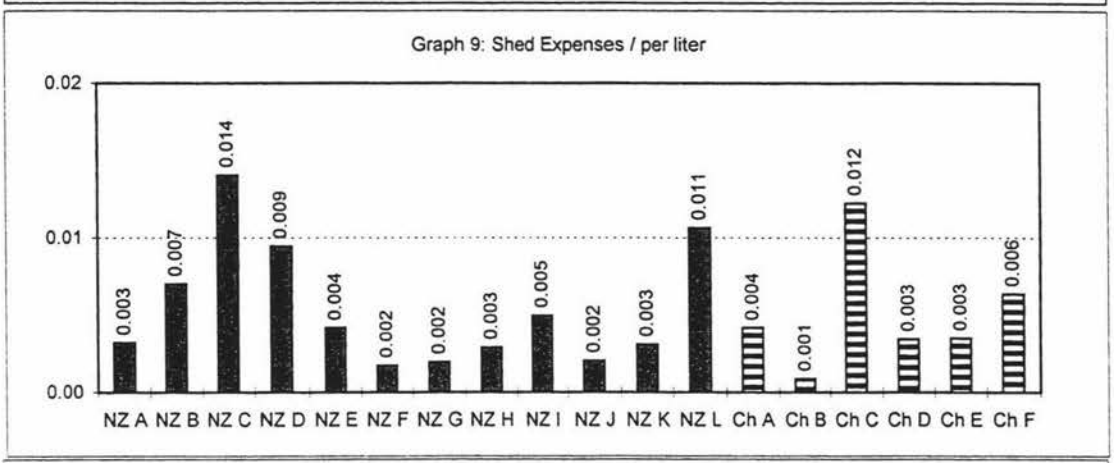
Graph 6 :Fertiliser (incl N) / per liter

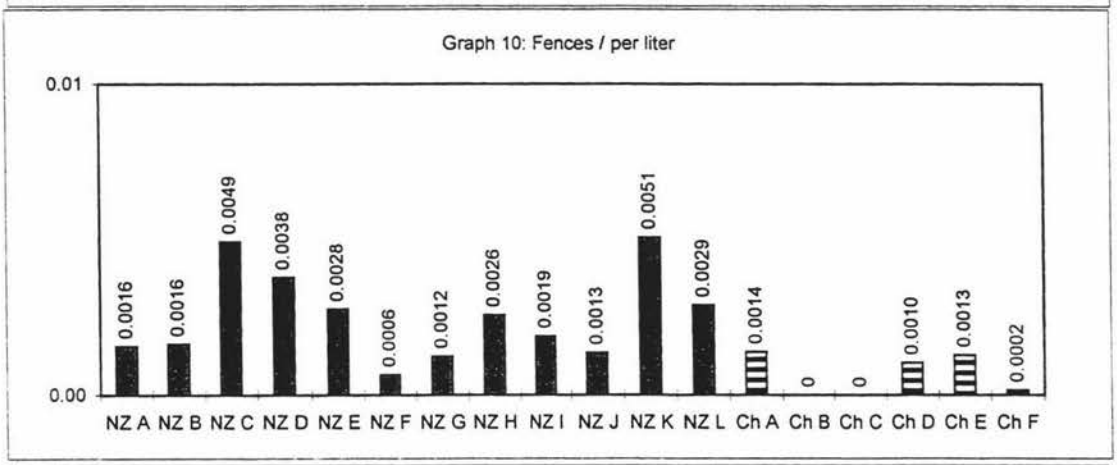


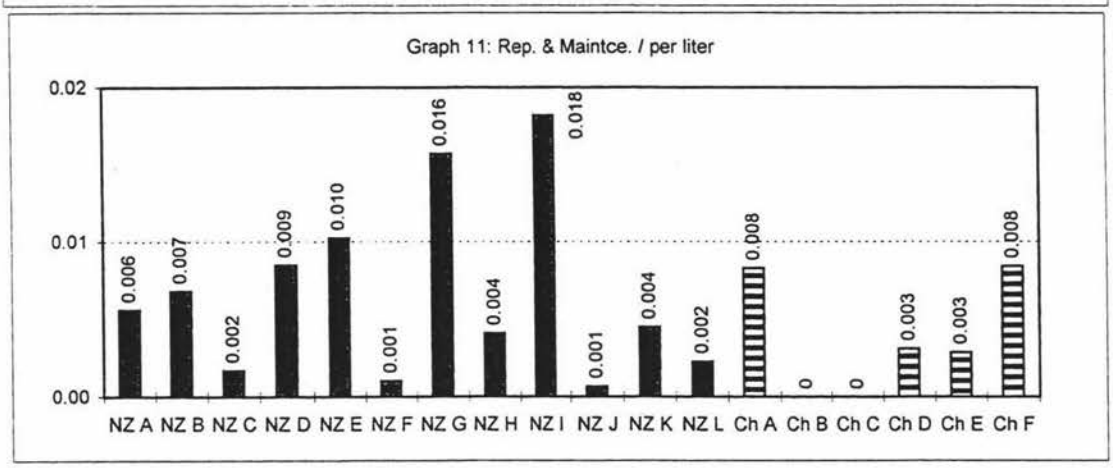
Graph 7 : Animal Health / per liter



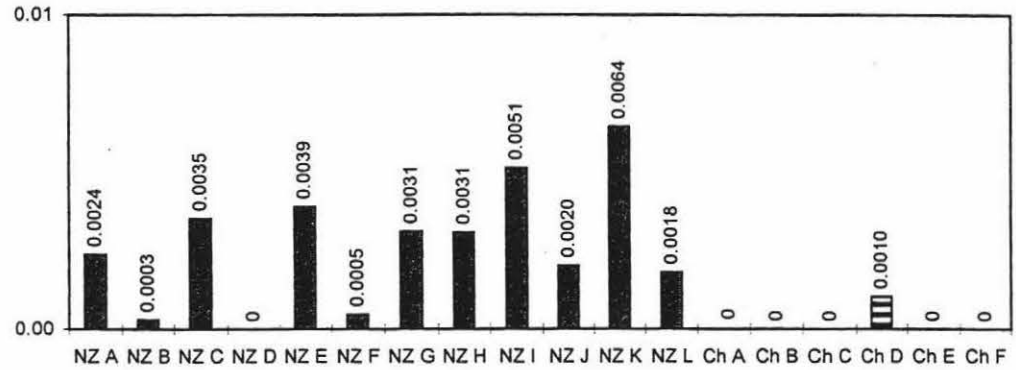

Graph 8: Wages / per liter
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0.03 0.03 0.07 0.06 0.03 0.02 0.02 0.03 0.03 0.02 0.04 0.02 0.02 0.04 0.06 0.02 0.03 0.02
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F


Graph 9: Shed Expenses / per liter
0.02
0.01
0.00
0.003 0.007 0.014 0.009 0.004 0.002 0.002 0.003 0.005 0.002 0.003 0.011 0.004 0.001 0.012 0.003 0.003 0.006
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

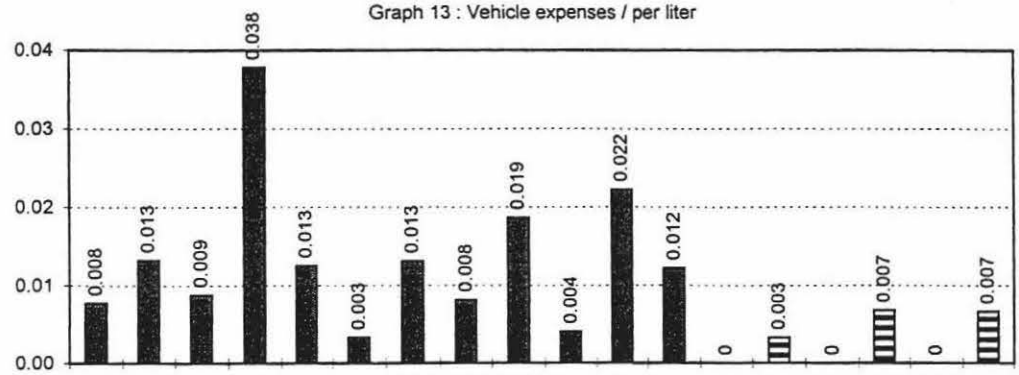

Graph 10: Fences / per liter
0.01
0.00
0.0016 0.0016 0.0049 0.0038 0.0028 0.0006 0.0012 0.0026 0.0019 0.0013 0.0051 0.0029 0.0014 0 0 0.0010 0.0013 0.0002
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F


Graph 11: Rep. & Maintce. / per liter
0.02
0.01
0.00
0.006 0.007 0.002 0.009 0.010 0.001 0.016 0.004 0.018 0.001 0.004 0.002 0.008 0 0 0.003 0.003 0.008
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

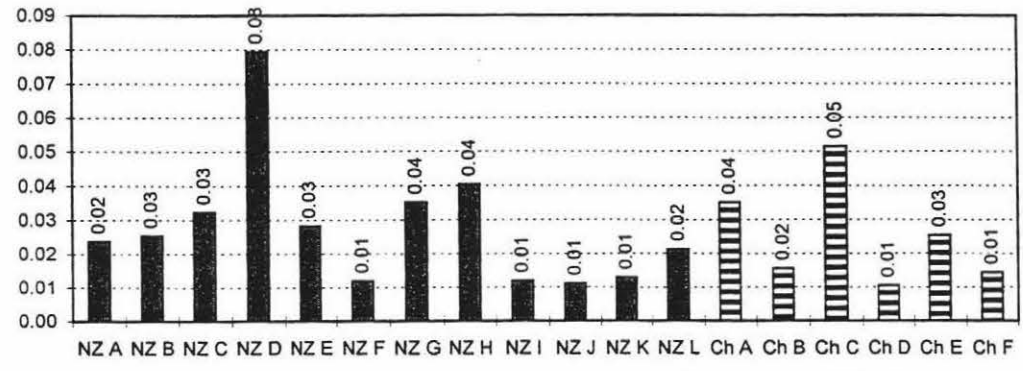
Graph 12: Ditches / per liter



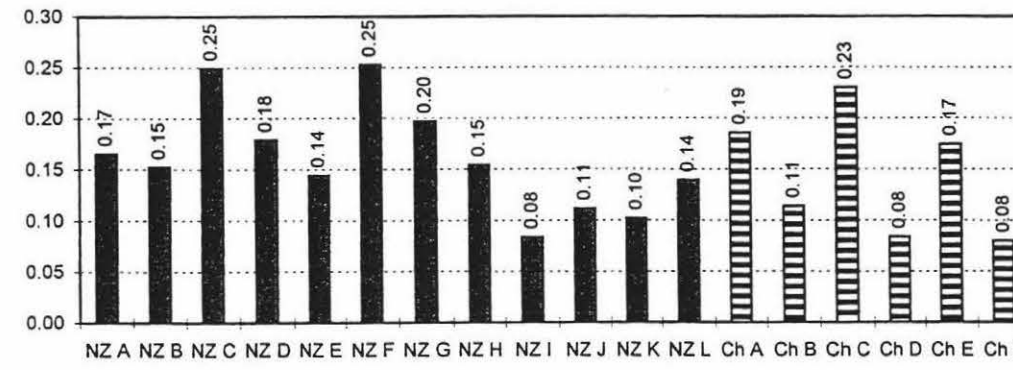
Graph 13 : Vehicle expenses / per liter



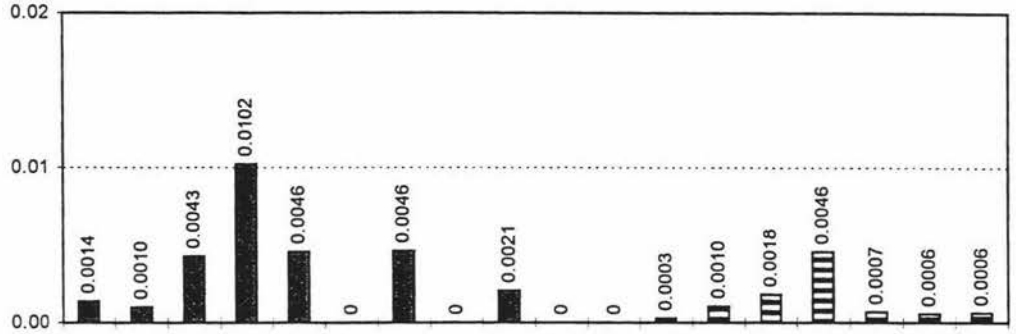
Graph 14: Depreciation / per liter



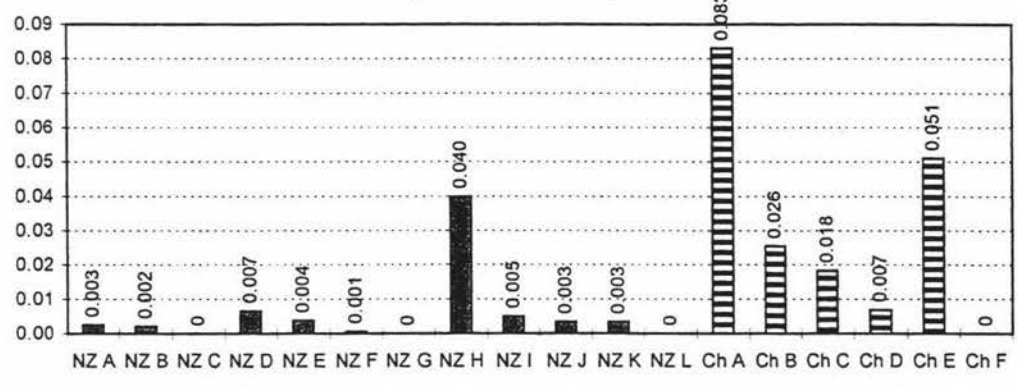
Graph 15: Interests / per liter



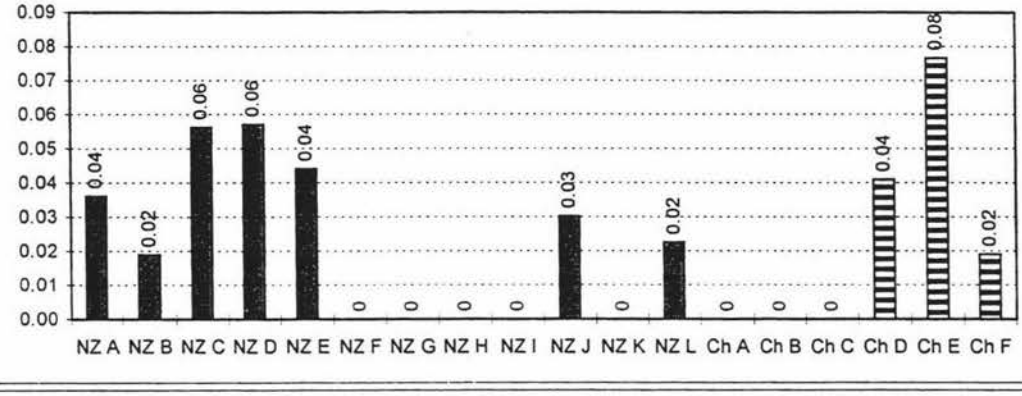
Graph 16: Eathqueake & Fire insurance / per liter



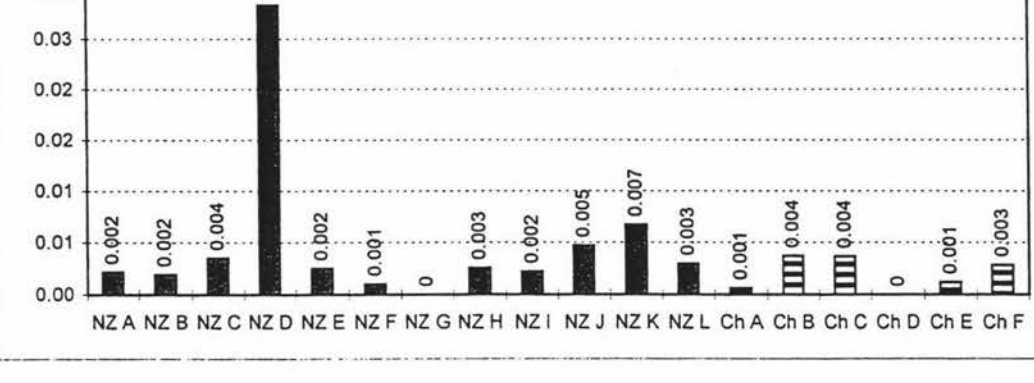
Graph 17: Administration / per liter



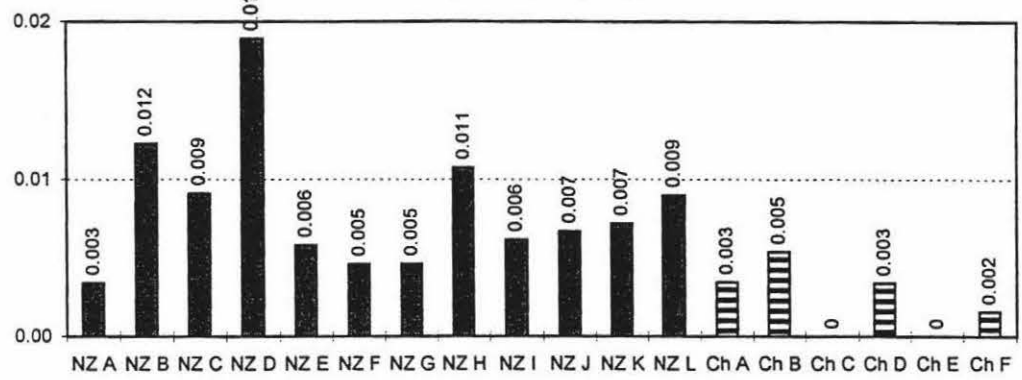
Graph 18: Farm Manager Wage / per liter



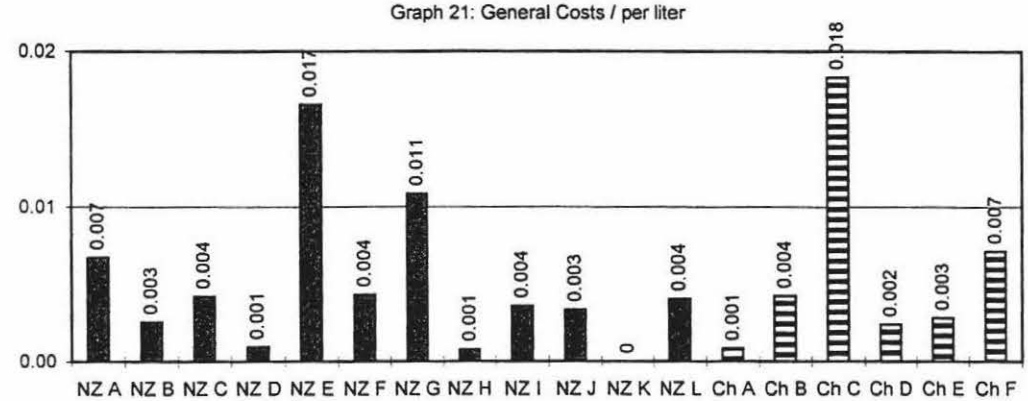
Graph 19: Accountant / per liter



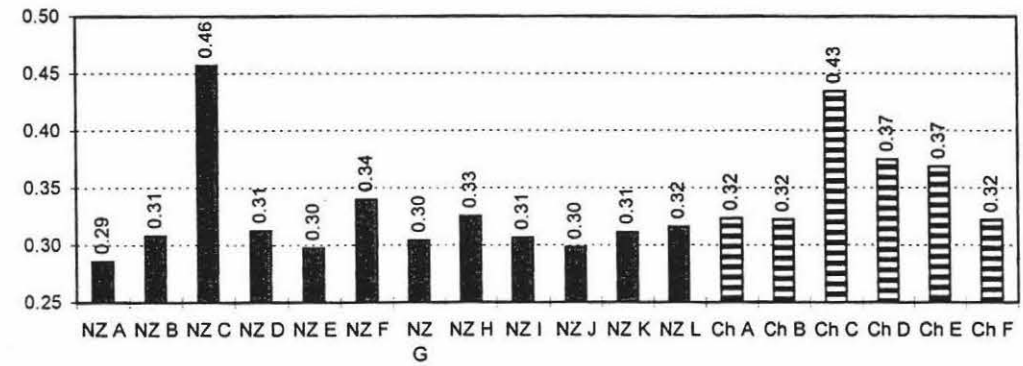
Graph 20: Taxes / per liter



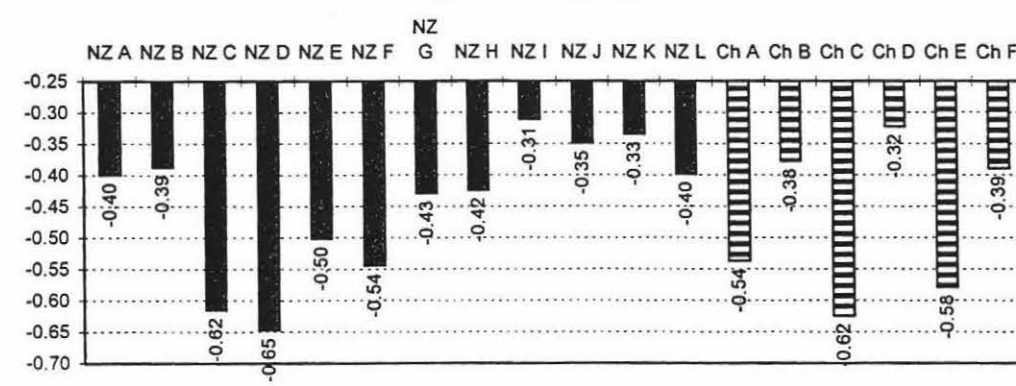
Graph 21: General Costs / per liter



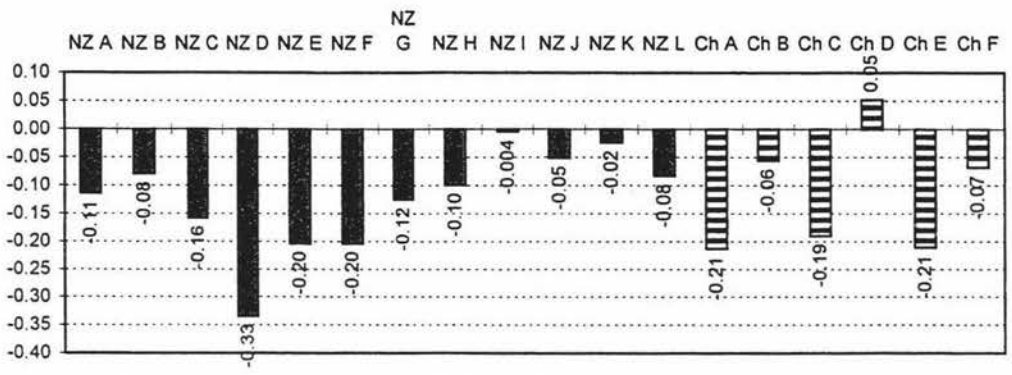
Graph 22: Incomes / per liter



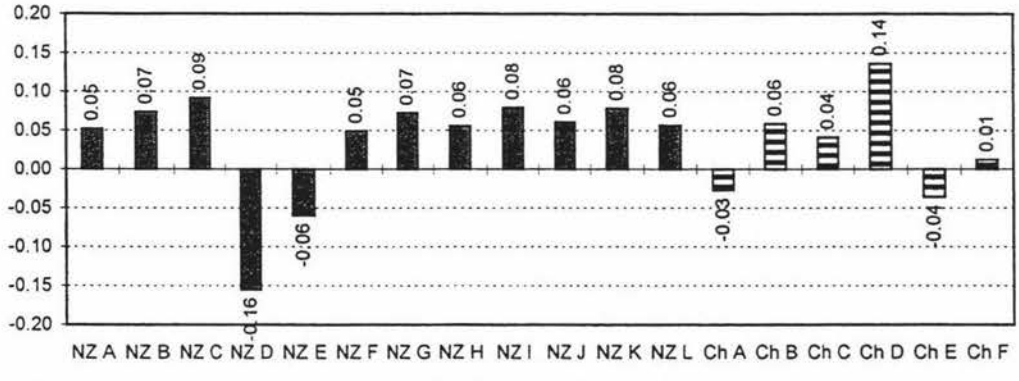
Graph 23: Total Costs / per liter



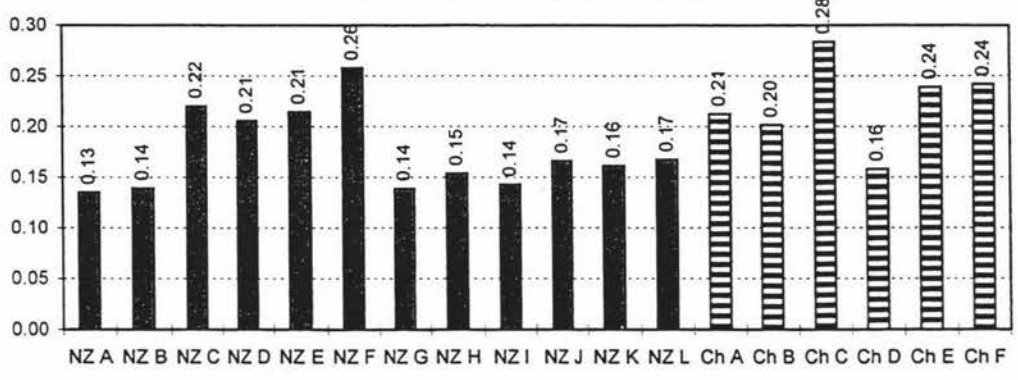
Graph 24: Gross Profit / per liter



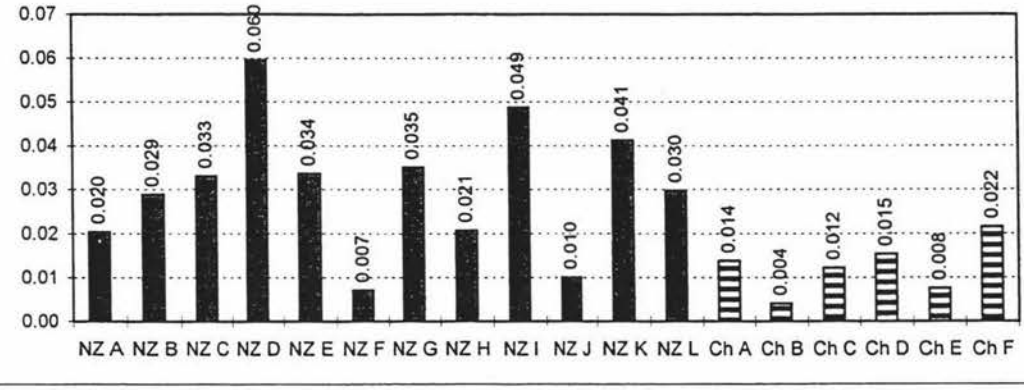
Graph 25: GP. - Interest / per liter



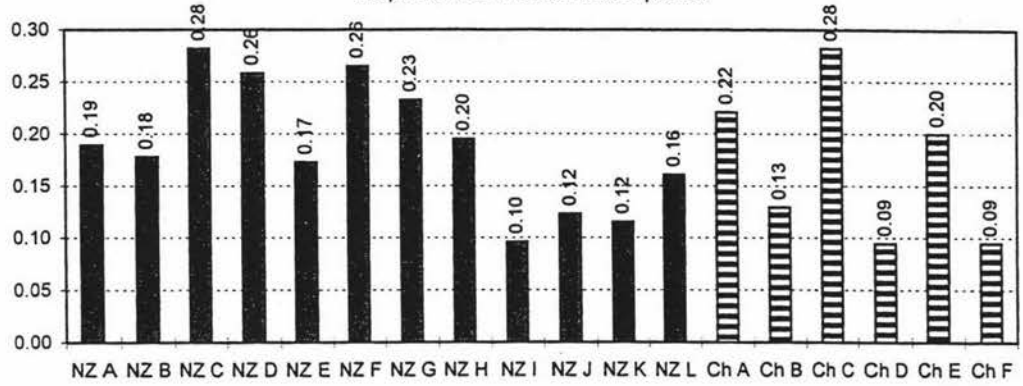
Graph 26: Total Farm Expenses / per liter



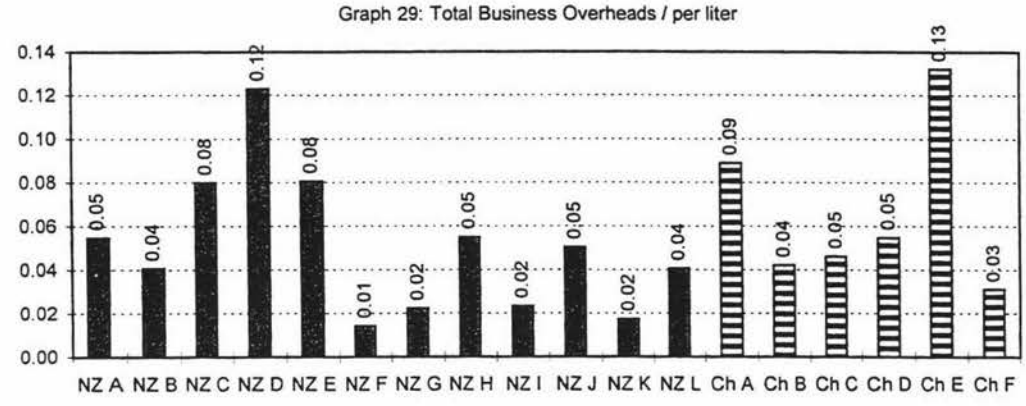
Graph 27: Total Farm Overheads / per liter



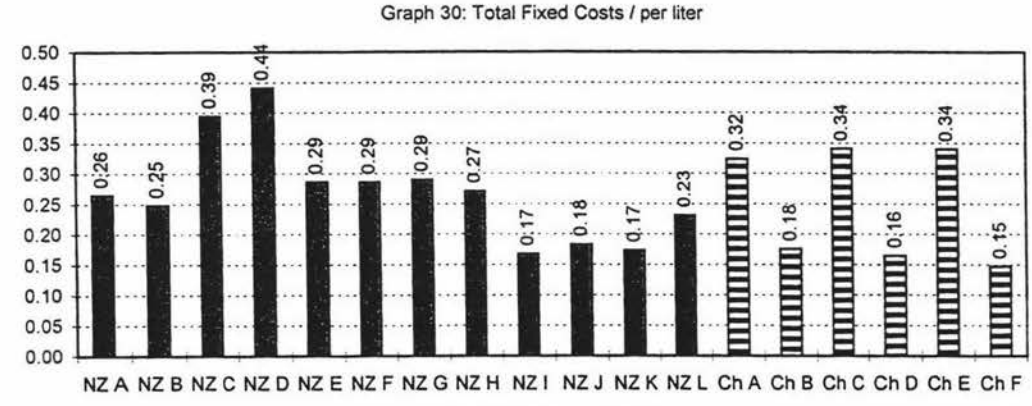
Graph 28: Total Financial Costs / per liter



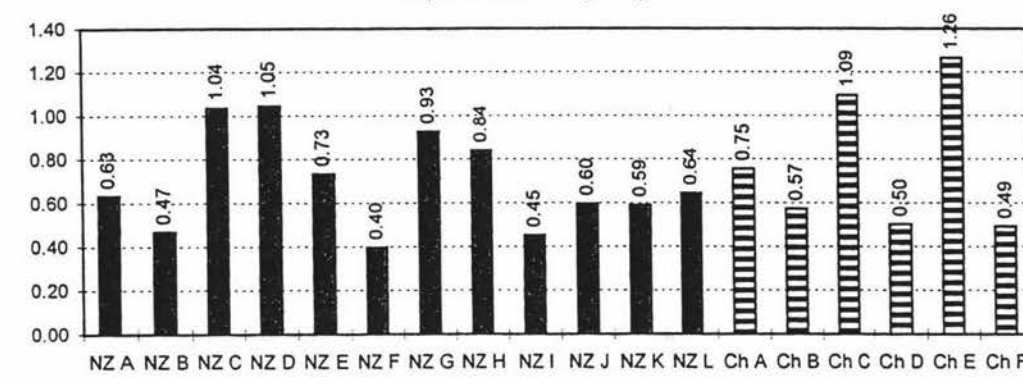
Graph 29: Total Business Overheads / per liter

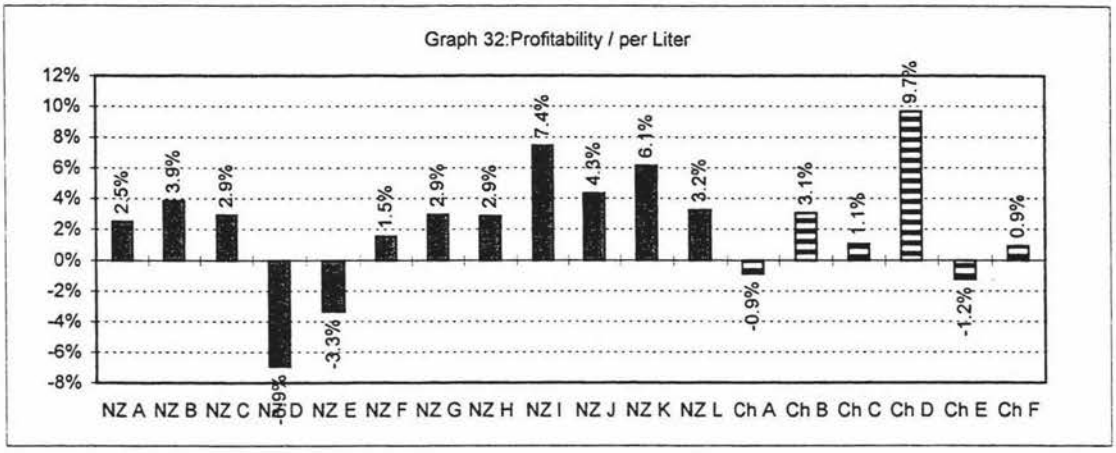


Graph 30: Total Fixed Costs / per liter

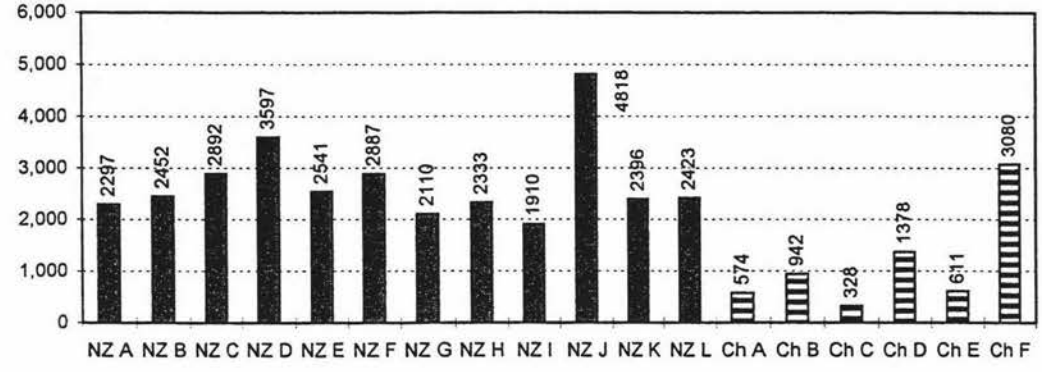


Graph 31: Variable Capital / per liter

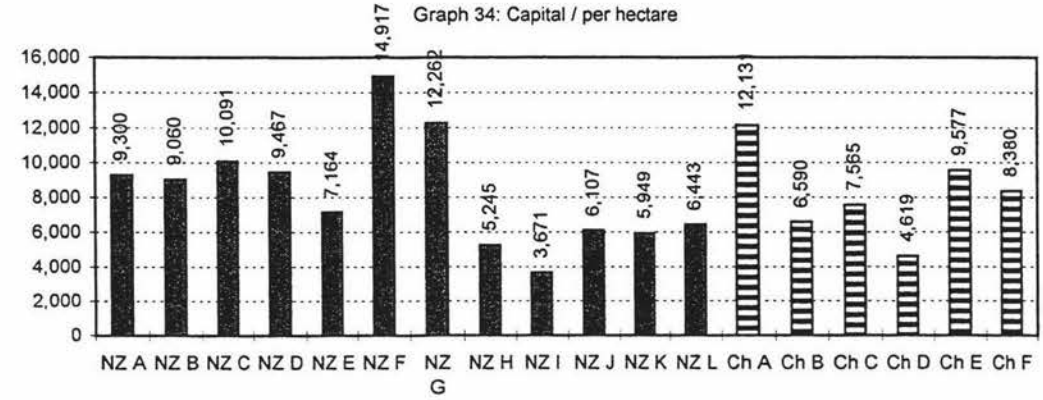



Graph 32:Profitability / per Liter
12%
10%
8%
6%
4%
2%
0%
-2%
-4%
-6%
-8%
2.5%
3.9%
2.9%
-7.9%
-3.3%
1.5%
2.9%
2.9%
7.4%
4.3%
6.1%
3.2%
-0.9%
3.1%
1.1%
9.7%
-1.2%
0.9%
NZ A NZ B NZ C NZ D NZ E NZ F NZ G NZ H NZ I NZ J NZ K NZ L Ch A Ch B Ch C Ch D Ch E Ch F

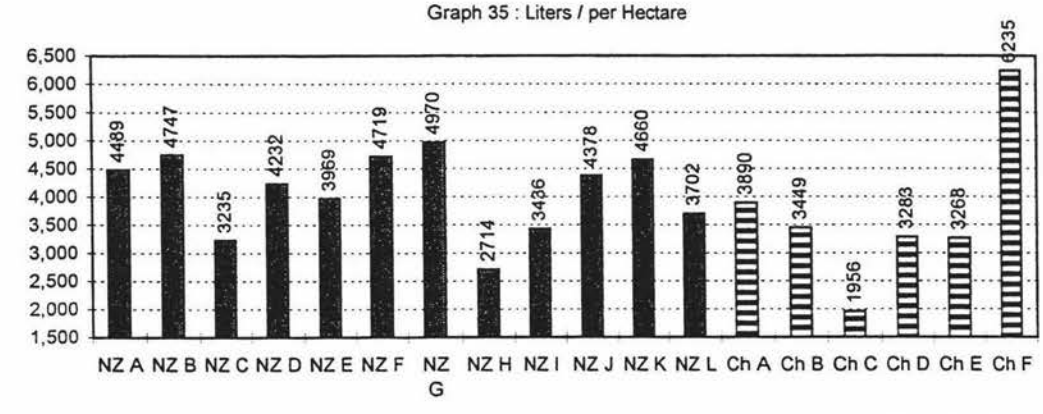
Graph 33 :Milk Sales / per hectare



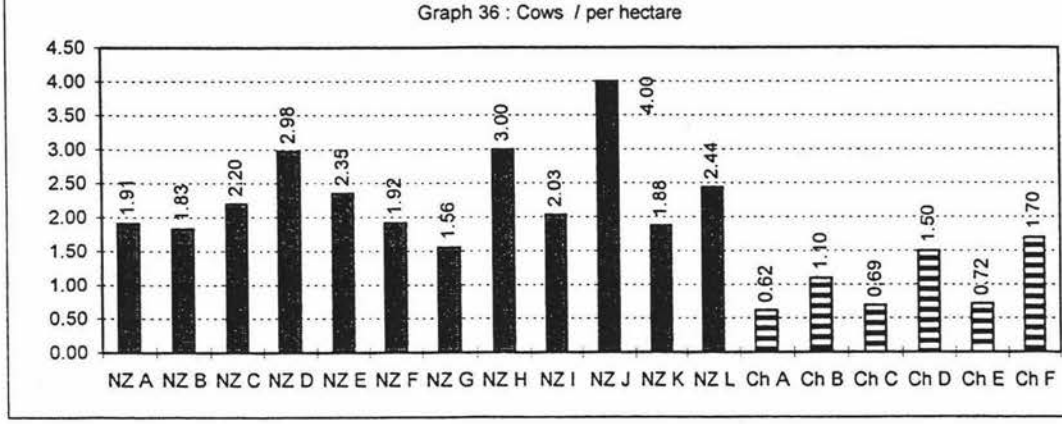
Graph 34: Capital / per hectare



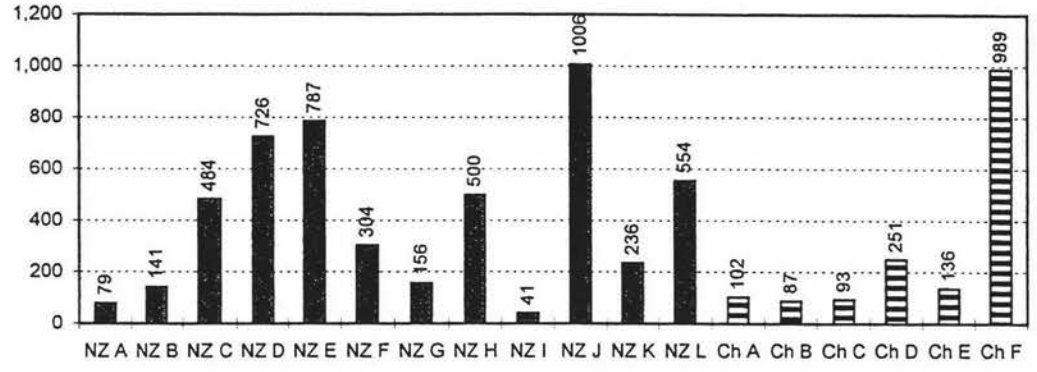
Graph 35 : Liters / per Hectare



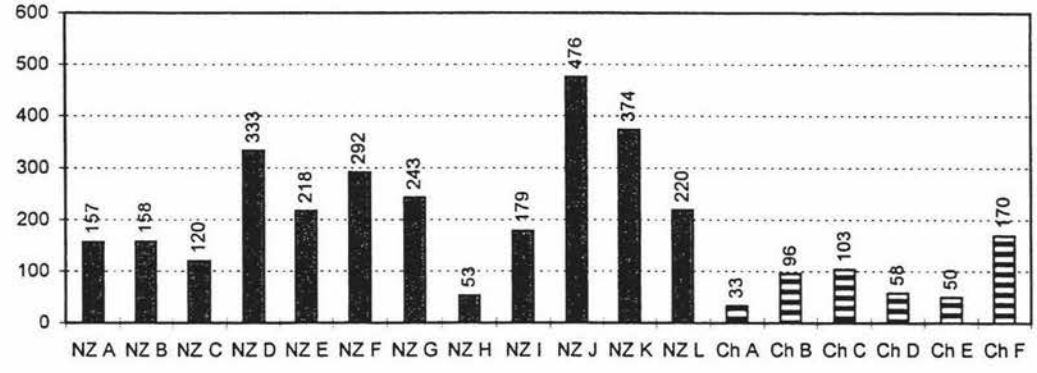
Graph 36 : Cows / per hectare



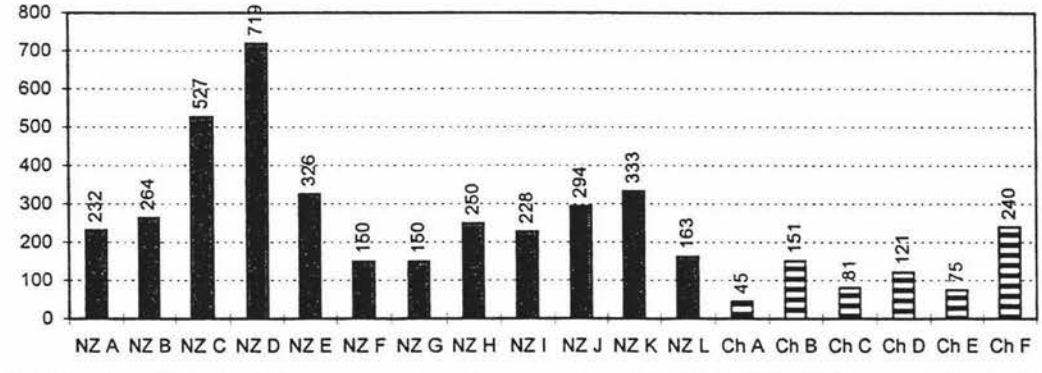
Graph 37 : Pasture & Supllements / per hectare



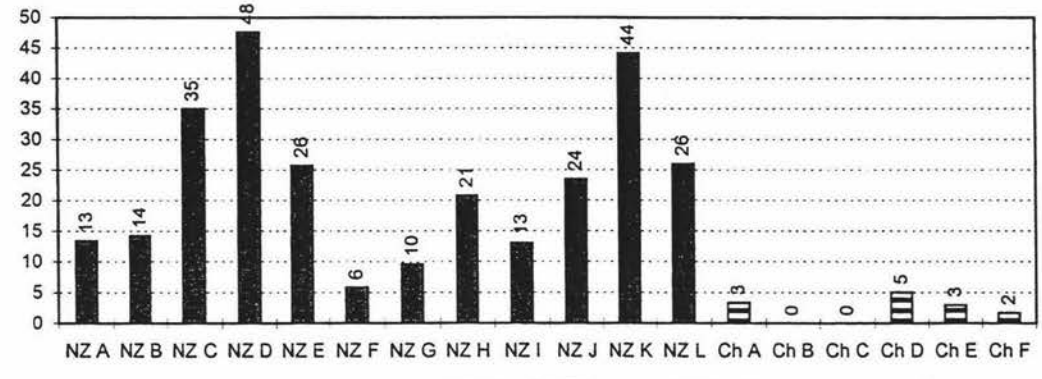
Graph 38: Fertilizer (incl. N) / per hectare



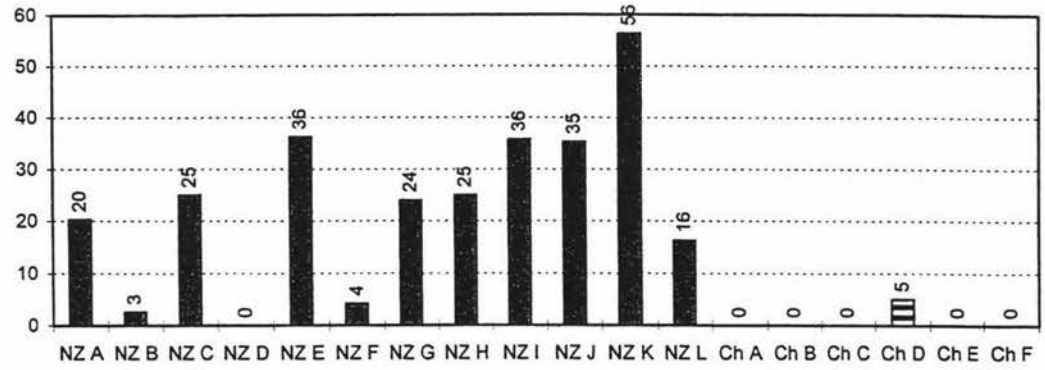
Graph 39 : Wages / per hectare



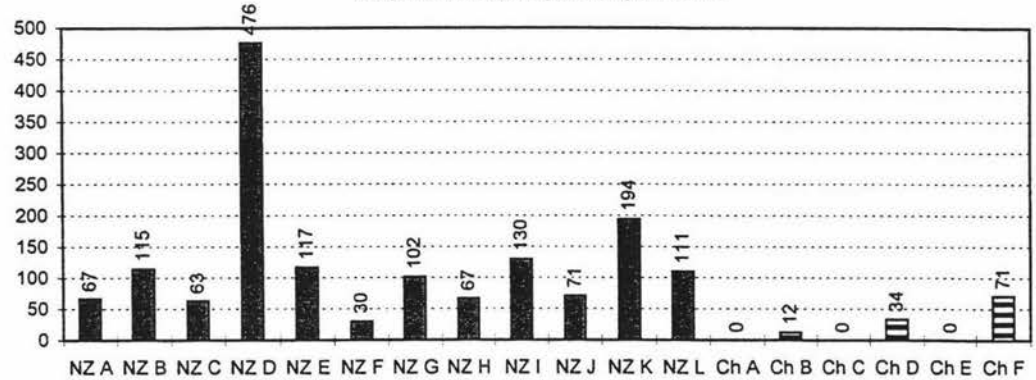
Graph 40 : Fences / per hectare



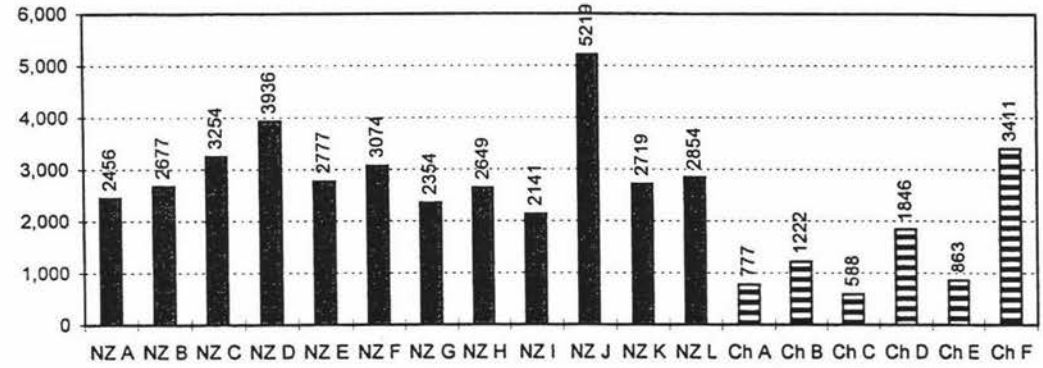
Graph 41 : Ditches / per hectare



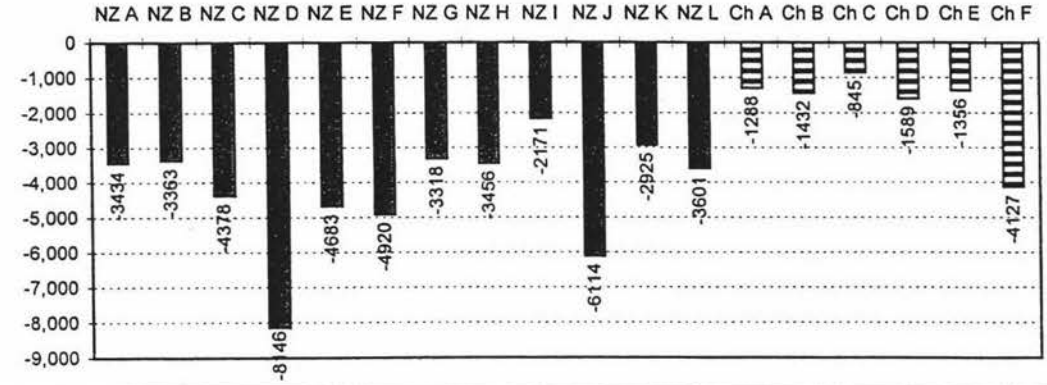
Graph 42 : Vehicle Expenses / per hectare



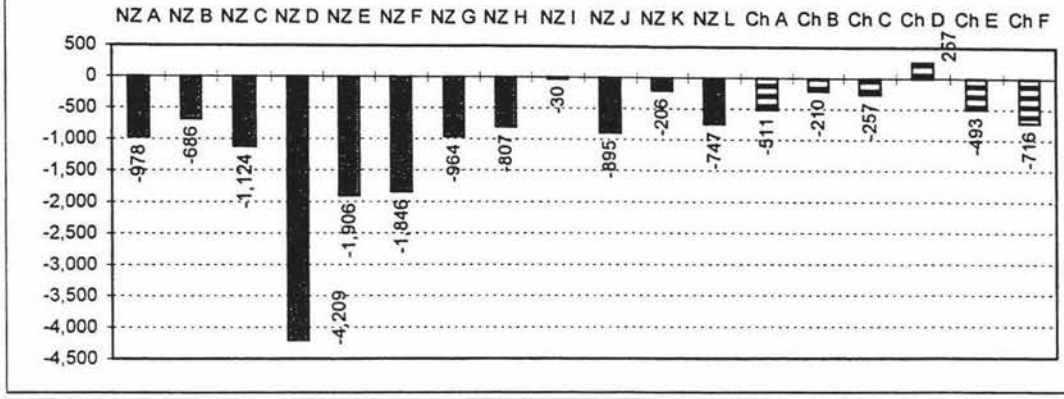
Graph 43 : Total Income / per hectare



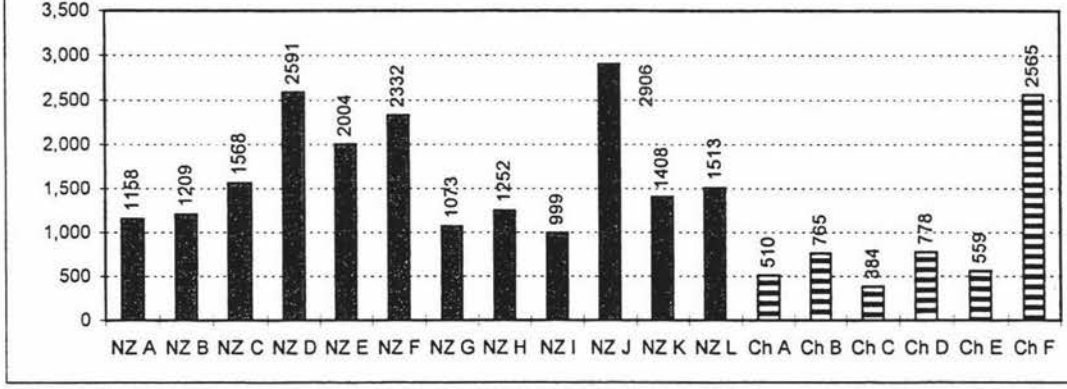
Graph 44 : Total Costs / per hectare



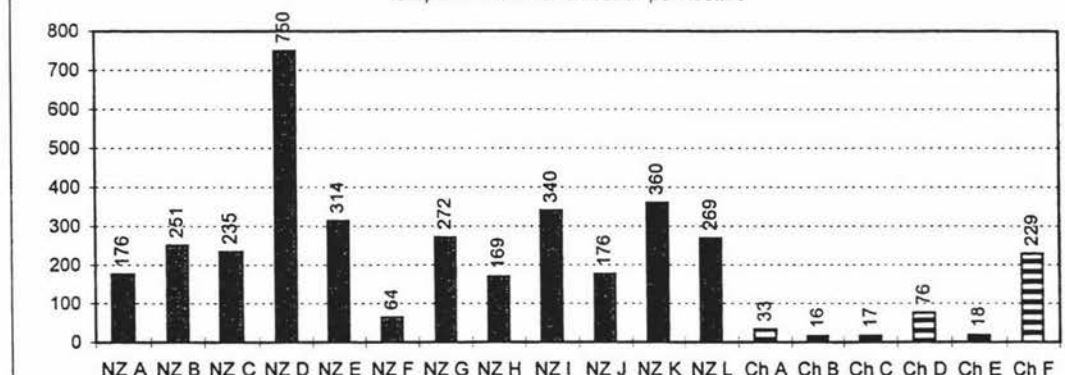
Graph 45 : Gross Profit / per hectare



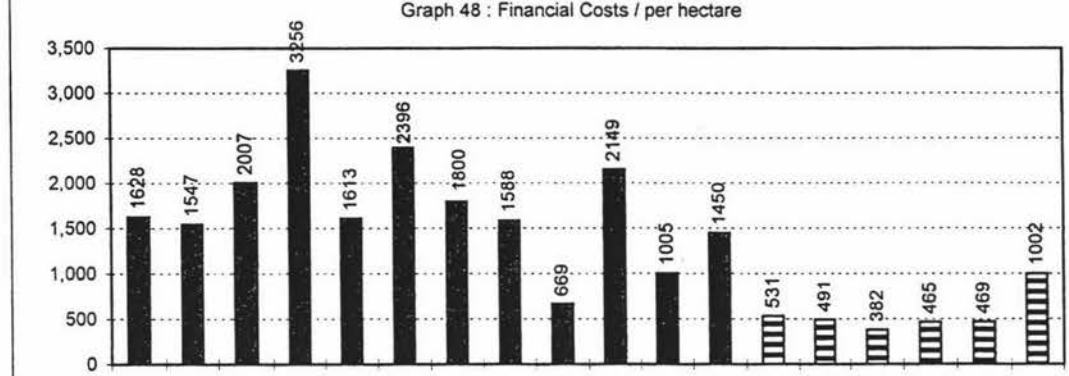
Graph 46 : Farm Cash Expenses / per hectare



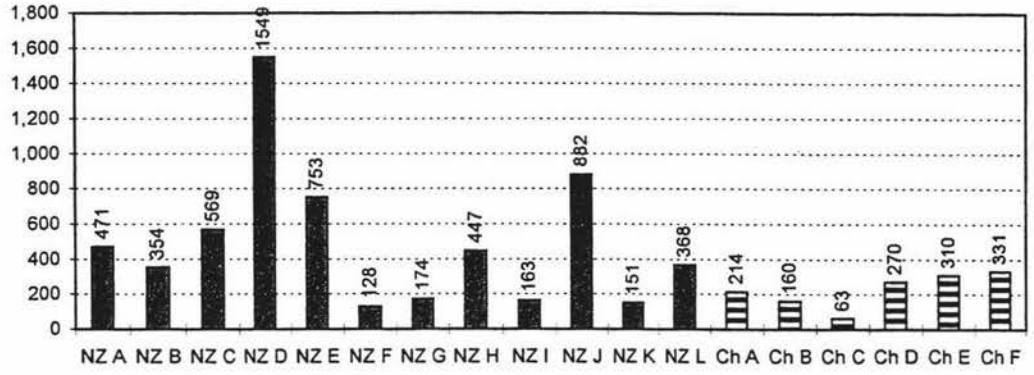
Graph 47 : Farm Overheads / per hectare



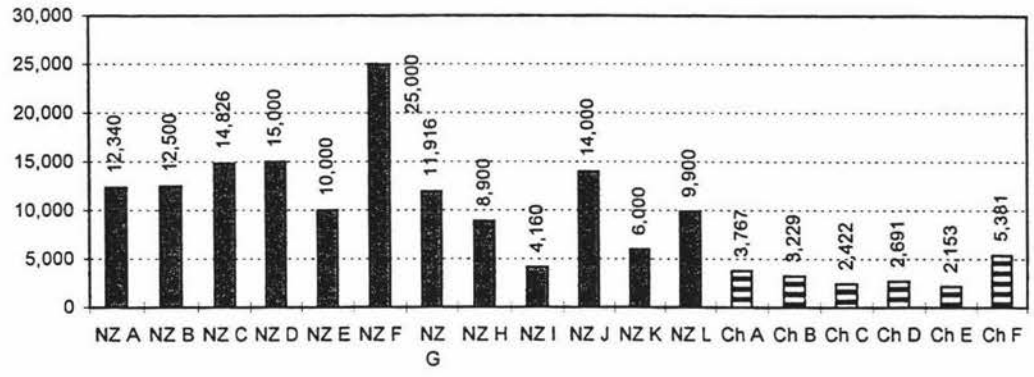
Graph 48 : Financial Costs / per hectare



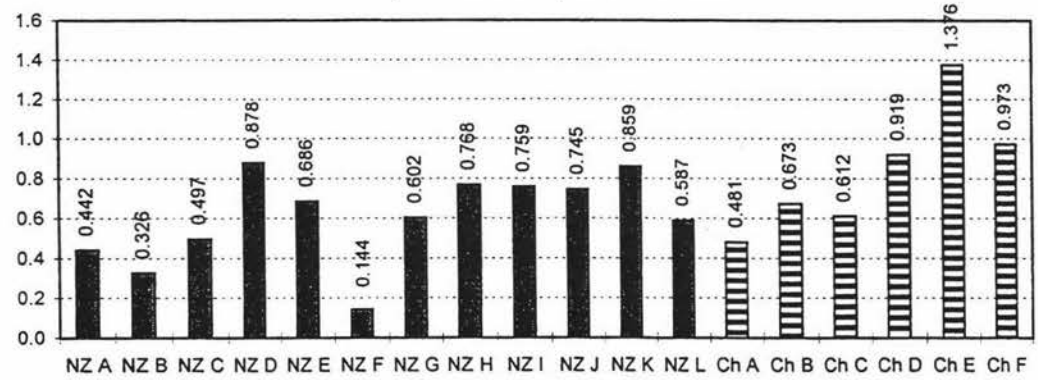
Graph 49 : Business Overheads / per hectare



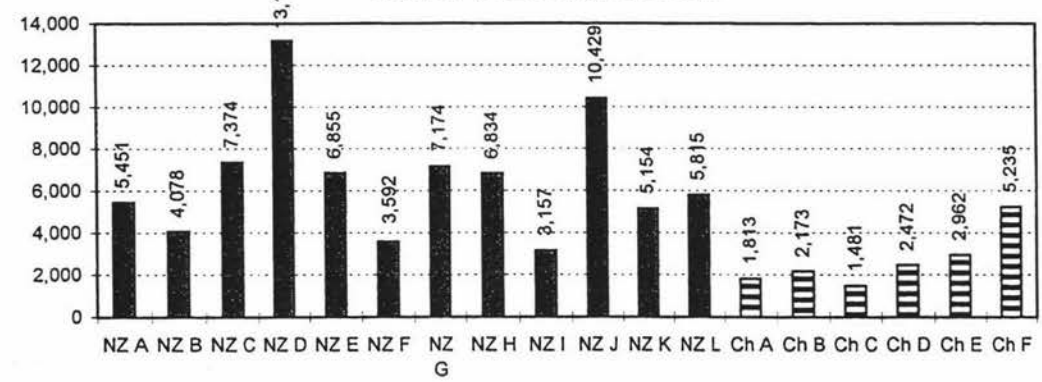
Graph 50 : Value of Land / per hectare



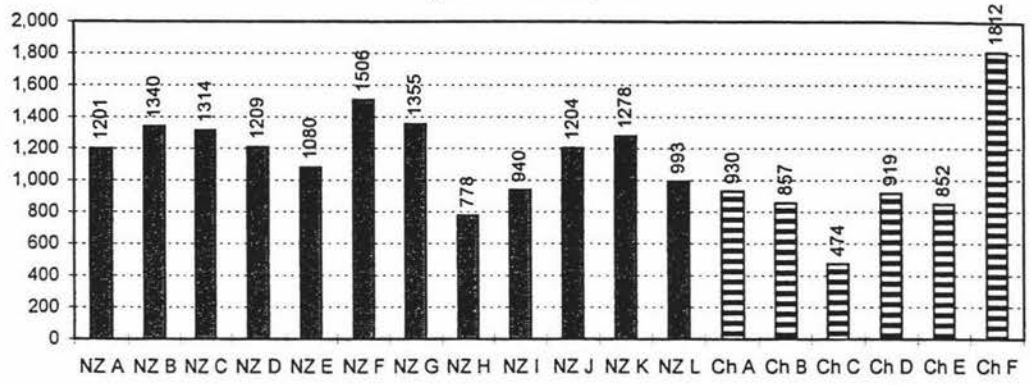
Graph 51 : Variable Capital / Value of Land



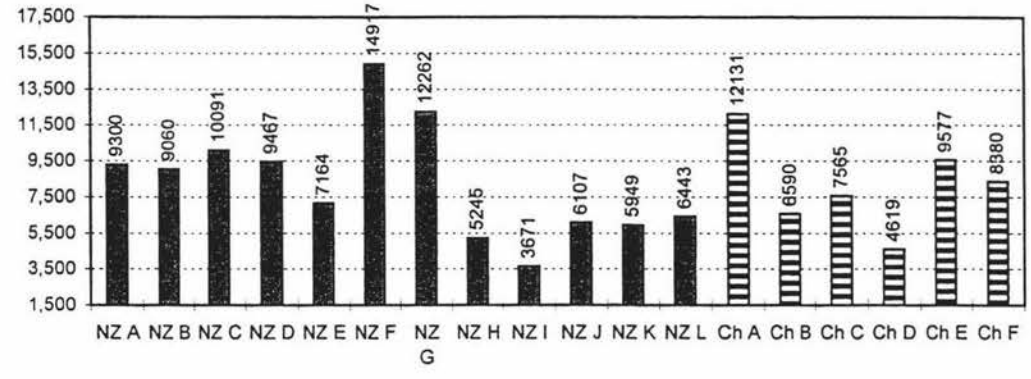
Graph 52 : Variable Capital / per hectare



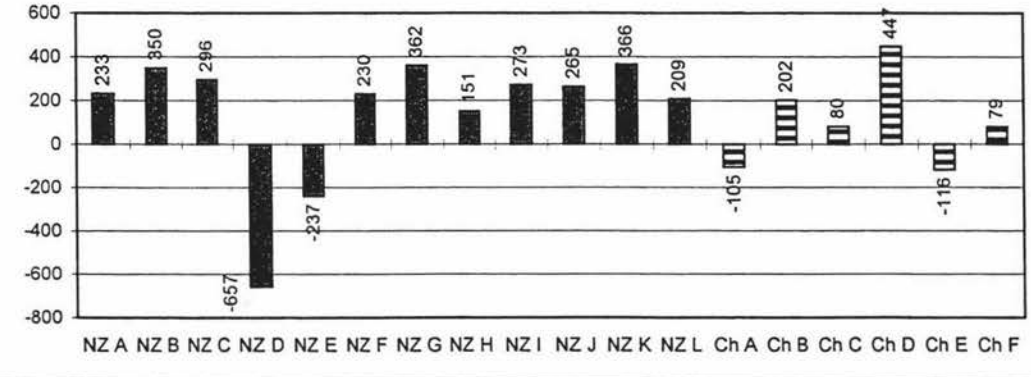
Graph 53: Milk Sales / per cow



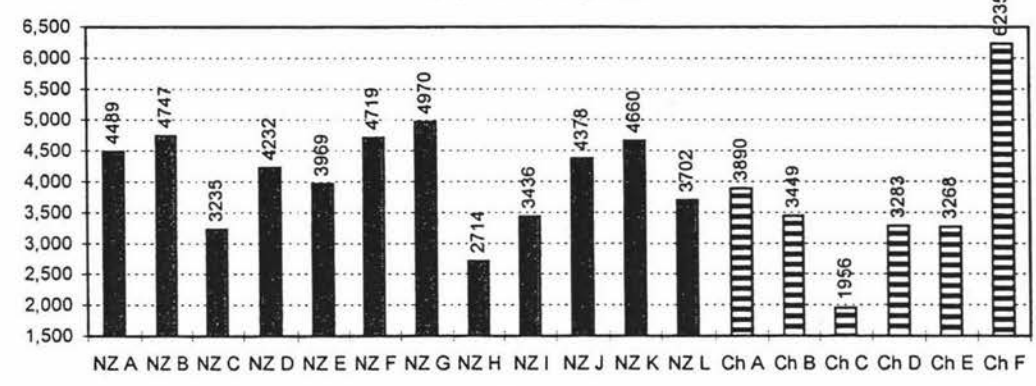
Graph 54 : Capital / per cow



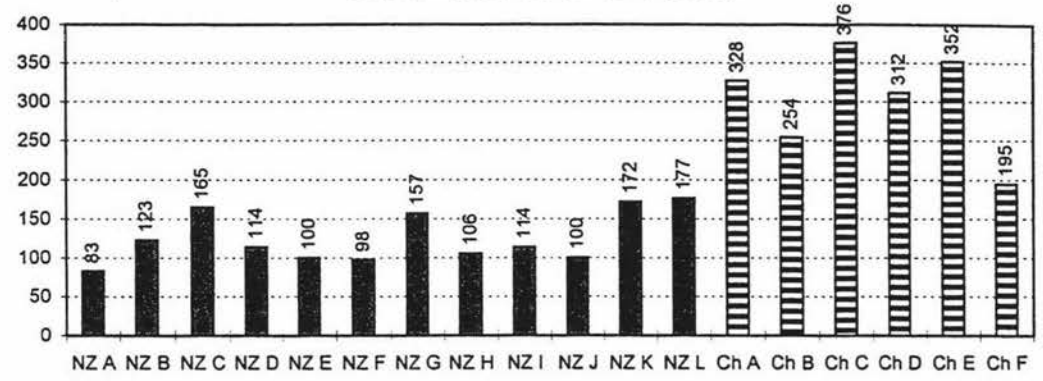
Graph 55 : GP. - Interest before taxes/ per cow



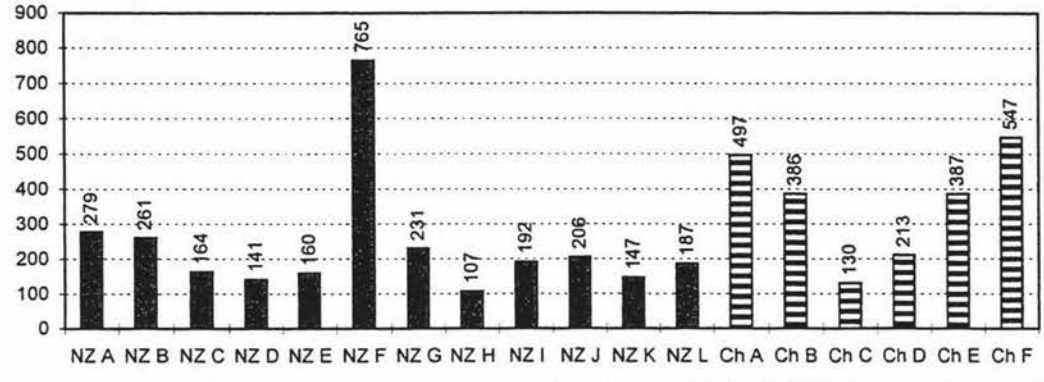
Graph 56 : Liters / per cow



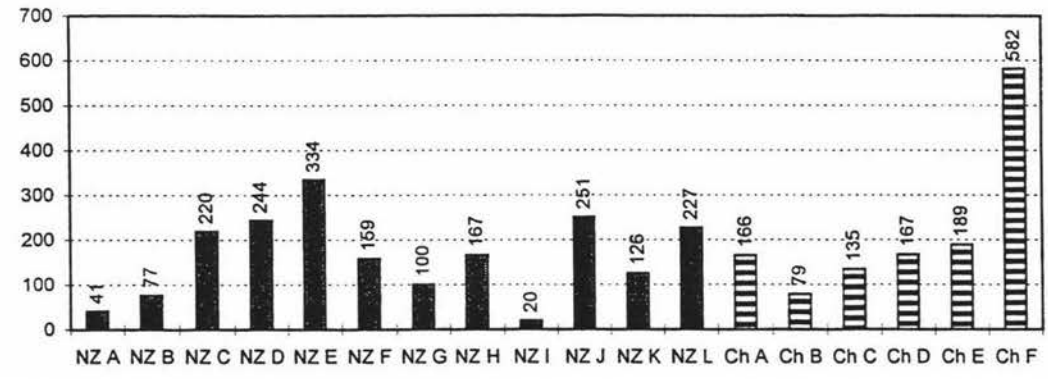
Graph 57 : Sales of Calves + Cows / per cow



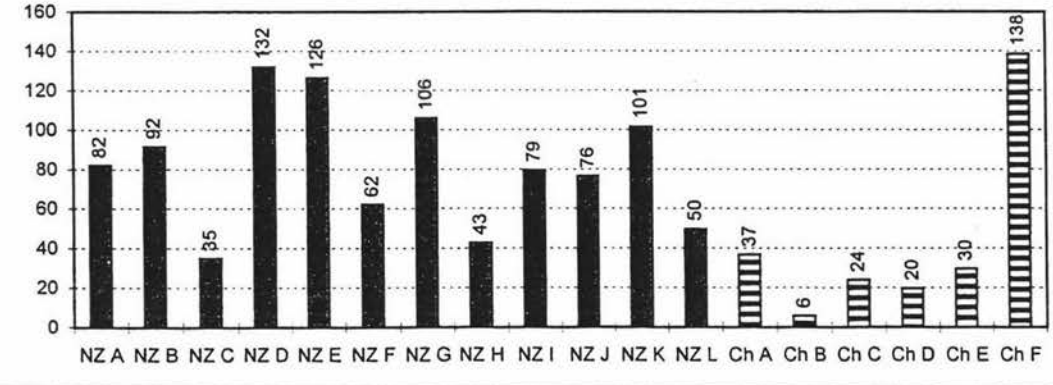
Graph 58 : Replacemet / per cow



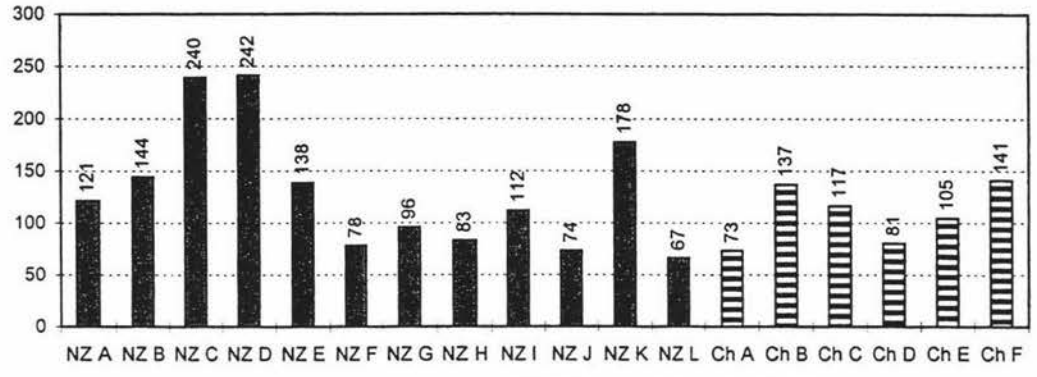
Graph 59 : Pasture & Supllements / per cow



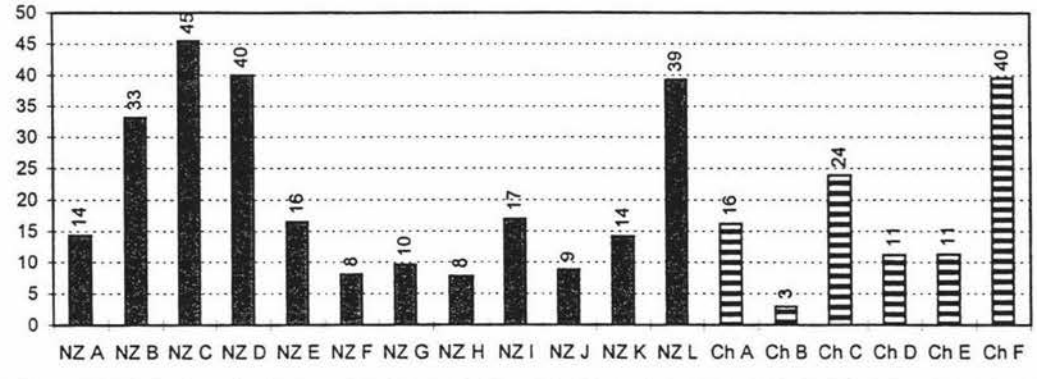
Graph 60 : Animal Health / per cow



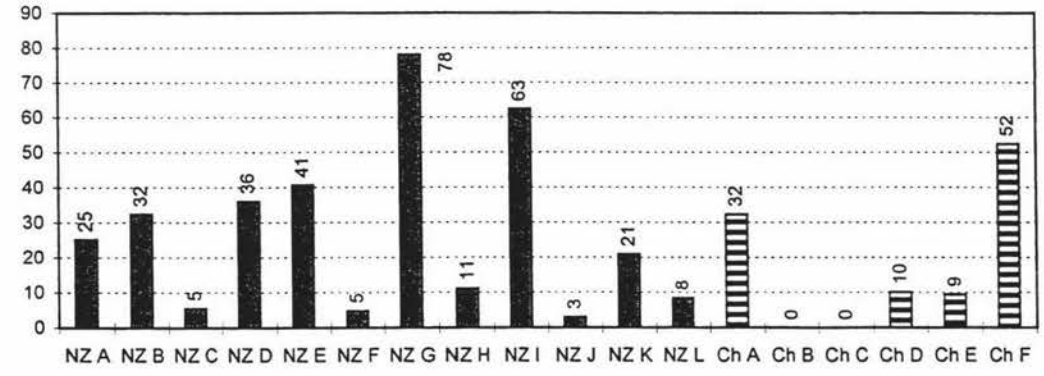
Graph 61 : Wages / per cow



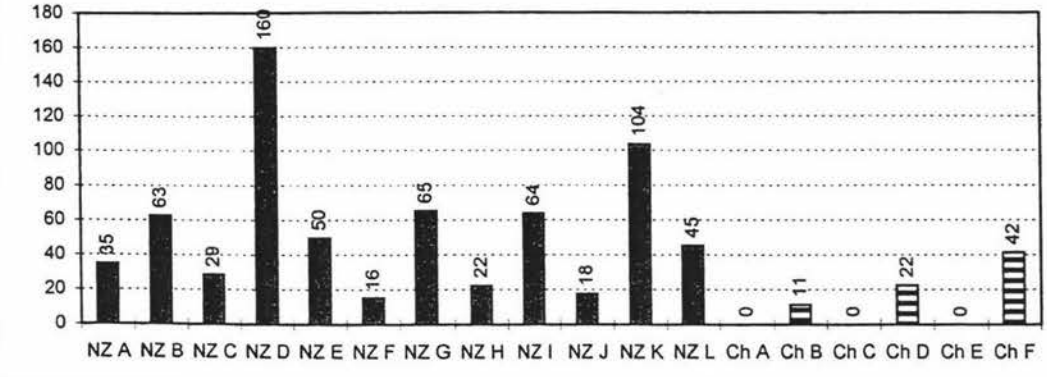
Graph 62 : Shed Expenses / per cow



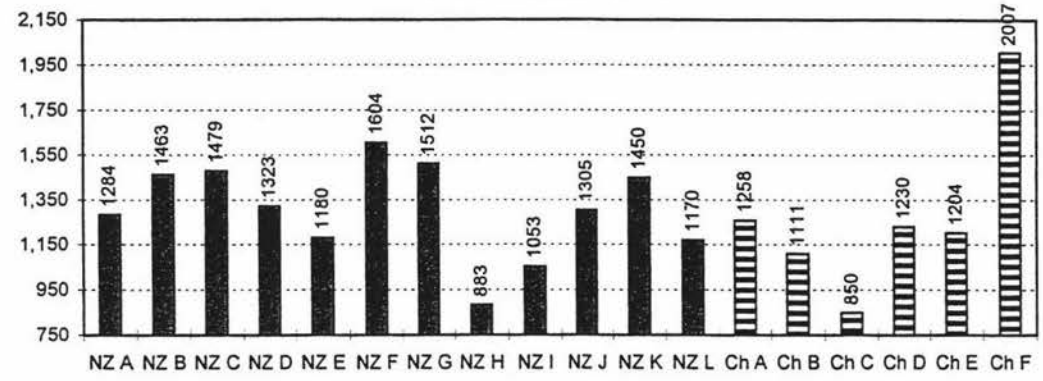
Graph 63 : Repairs and Maintainance / per cow



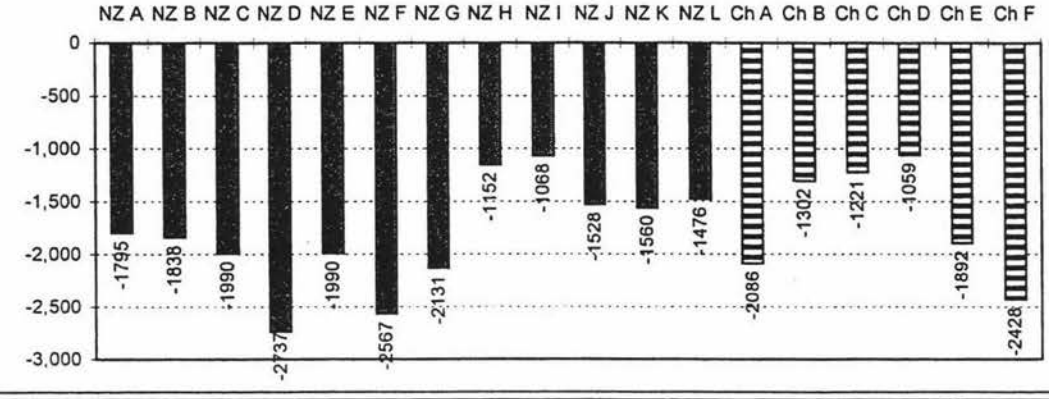
Graph 64 : Vehicle Expenses / per cow



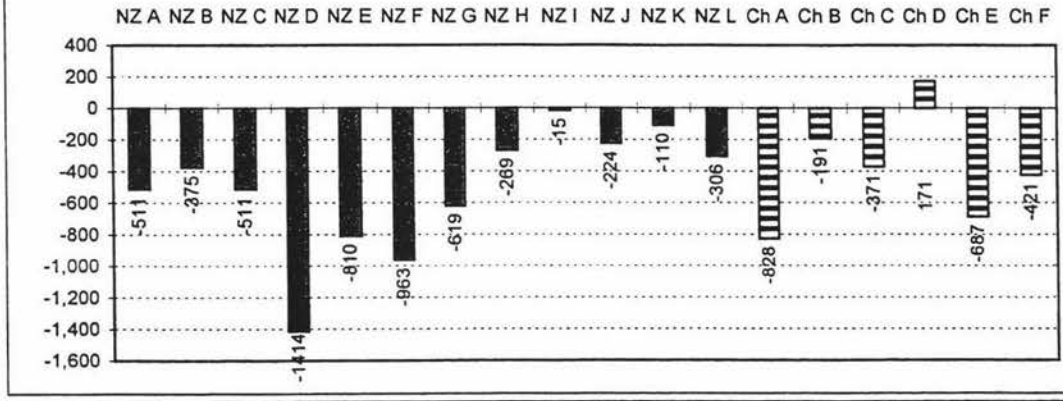
Graph 65 : Total Income / per cow



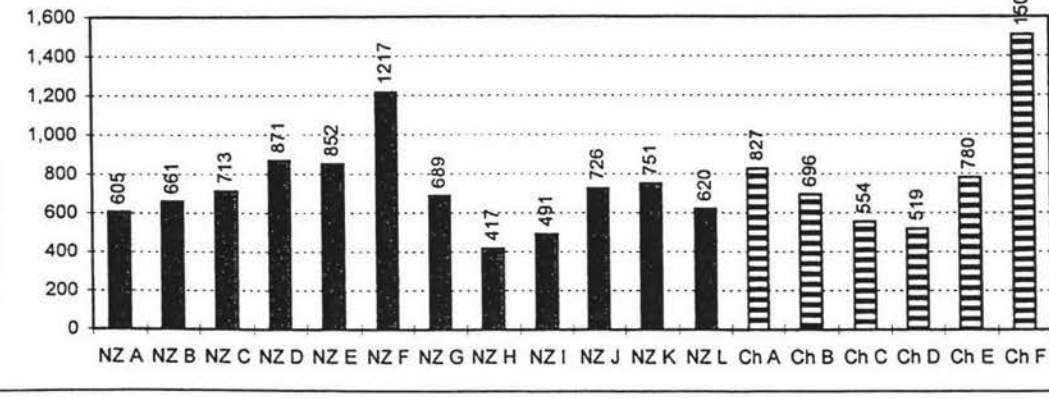
Graph 66 : Total Costs / per cow



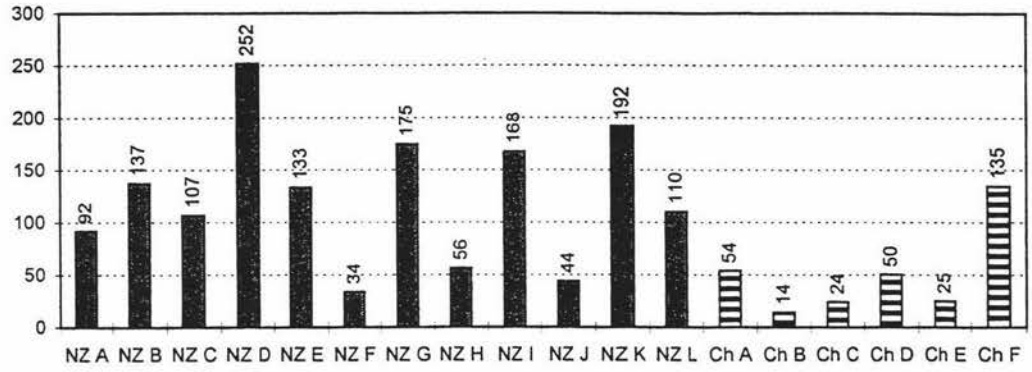
Graph 67 : Gross Profit / per cow



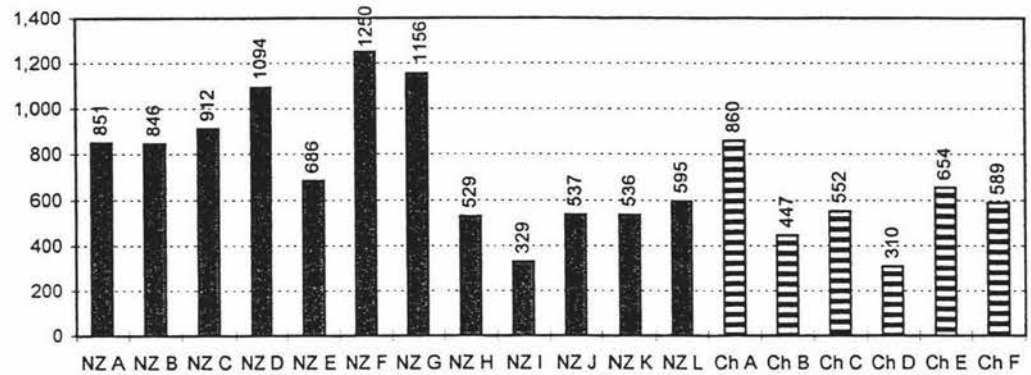
Graph 68 : Farm Cash Expenses / per cow



Graph 69 : Farm Overheads / per cow



Graph 70 : Financial Costs / per cow



Graph 71 : Business Overheads / per cow