NORTHERN IRELAND DAIRY SECTOR STRATEGY

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APPENDICES

1. INTRODUCTION

1.1 Background

Promar International has been commissioned by the Northern Ireland office of Dairy UK, in conjunction with DARD and Invest NI, to carry out a study of the future development of the Northern Ireland dairy sector. Work began on this project in May 2009.

A series of stages of work have been carried out in the intervening period as follows:

- a research phase involving interviews with senior executives in the Northen Ireland dairy farming and processing sector

- a similar exercise involving a range of interviews with other leading dairy organisations and companies in the rest of the EU and in other international markets (especially the US, New Zealand and Australia) - a summary of the key findings of these interviews both in Northern Ireland and in other leading dairy producing and processing countries is given as **Appendix I**

- ongoing desk research of key industry publications and reports throughout the lifespan of the project

- two "scenario planning" sessions carried out with senior members of the NI dairy farming and processing sectors

- a series of other meetings and presentations with the Project Steering Group

This document sets out our key findings, conclusions and recommendations. It is supported by a number of annexes which provide much more detail on all aspects of dairy farming in the NI, processing, marketing, key industry drivers, the other key countries involved in the dairy sector. It also considers the strategic options that the NI dairy sector faces over the next few years.

1.2 Acknowledgements

We would like to acknowledge the support and help given to our project team by the key members of the Project Steering Group throughout the course of this assignment.

2. SUMMARY, CONCLUSIONS & RECOMMENDATIONS

2.1 Macro Market Assumptions

There are a wide range of factors that will impact on the future development of the NI dairy sector. These are summarised as being:

- **global population growth** – this is predicted to increase to some 9 billion with significant increases in Latin America and especially Asia, along with increases in disposable income of consumers and a gradual switch of diet away from staple foods towards more added value food and drink products. The population in the EU and US will remain relatively static in comparison and as essentially mature markets, will require high levels of product innovation and differentiation

- **the patchy nature of global economic recovery** – the economies of Asia in particular appear to be coming out of the global recession faster than those in the EU and North America but the overall picture remains cautious in its outlook and the business environment is expected to remain tough

- **concern over the availability of oil and other energy sources** - there is evidence that supplies of "easy oil" are fast approaching their natural limit and that in the future the extraction of oil will be more difficult and expensive to obtain – demand for oil and other forms of energy will carry on booming especially in Asian markets and put pressure on both the supplies and the price of oil. Less intensive systems of milk production, as found in Northern Ireland, will be in a position to benefit from this

- **the impact of climate change** – both in Northern Ireland and in other parts of the world. Based on the evidence of the research carried out in this study, the extreme impacts of climate change may well be felt less in Northern Ireland than in other parts of the world, such as Africa, parts of the US, the Middle East, Australia and across many parts of Asia. We believe that in the future, Northern Ireland will remain a fundamentally good place to farm and process dairy products

- **concern over the issue of food security** – there is concern at government level, amongst key NGO's and even leading retailers, about the ongoing sustainability of food supplies in both local and international markets. This includes the dairy sector. The UK has seen levels of self sufficiency fall in recent years and, as a result, many of the leading food processors and retailers are looking to secure their supply chain and ensure that they are working with the best possible producers

- **the adoption of GM technology into the supply chain** – GM production is increasing rapidly in many parts of the world, but is still not being adopted by EU farming and food processing companies. There is still a widespread concern amongst consumers as to the advantages and disadvantages of using GM technology in the food sector, although research carried out by IGD suggest that some attitudes are beginning to change. However, there is a concern that the use of GM crops in feeding stuffs in the US and Latin America will only add to the overall competitive position of these countries and work against the interests of the EU food processing sector. In a worst case scenario, it may render large parts of the EU industry non competitive. The NI Grain Trade Association has expressed this fear about the NI food sector in particular

- **the cost of key inputs** - these soared during the commodity boom of 2007/8 and, while they have fallen back in the meantime, there is concern over the future volatility and level of costs of feedstuffs, fertiliser and, as mentioned above, the cost of energy. The nature of NI production with its emphasis on grass based production means that the industry is less dependent on the use of these inputs compared to some competitors

- **emerging low cost competitors -** Northern Ireland faces significant competition in markets within and outside the EU. The competition is often well established and has developed a number of key areas of advantage. Many EU countries have often seen the actual production of dairy products remain relatively static in the last few years, whereas Eastern European countries have been expanding their production. Although production in other parts of the world has been volatile in recent years, in the medium to long term it is expected that the main growth in milk supply will come from Latin America, Asia, and Eastern Europe, all of which have lower costs of production compared to NI

- **the role of major retailers in food distribution** – in most major international food markets, especially in the EU and North America, the leading retailers account for a high percentage of the overall market. In the UK, the top 4 retailers account for around 80% of the market. The picture is similar in most of the other leading EU markets. Dealing with retailers will mean dairy companies will have to meet their exacting technical and commercial requirements

- **the need for innovation in NPD and product marketing** - innovation and NPD are seen as a pre requisite for success in modern international food markets, especially in the more mature markets of the EU and US. NI has some examples of achieving this but the overall record is patchy. There are opportunities to add value and innovate in all areas of the dairy supply chain and this can cover both bulk and consumer ready products. Once started, it becomes

an ongoing process. In 2009, as an example, the Finnish company, Valio, which has a throughput of some 1.8 billion litres[1], invested some €29 million in NPD and various innovation projects

- **the agenda of the CAP and the WTO** - the playing out of trade negotiations in Brussels and other key international centres is ongoing. At WTO level, there is a commitment to continue to liberalise international markets and reduce areas of market intervention and distortion. From a NI point of view, this direction of change is not especially favourable. If implemented, the changes will leave the sector exposed to strong and low(er) cost competition from the Southern Hemisphere suppliers in particular and in the longer term from processors in Eastern Europe and the Former Soviet Union

All these issues are discussed in more detail in **Appendix II**.

2.2 Competitor Country Analysis

Based on OECD estimates and projections, the world market for dairy products is set for future growth of some 16% between 2008 and 2017. This growth will be seen most in markets such as India and China (which will grow by some 33%) and Africa (which is set to grow in this period by 31%). Markets in the more mature regions of the world, such as the EU and North America, will grow less quickly by 6% and 12% respectively.

Between 2003 and 2008, annual milk production in Northern Ireland increased from 1.78 billion to 1.9 billion litres, with production in 2009 showing a year on year decrease of 7% to 1.77 billion litres. However, the indications for 2010 are that there will be a recovery in total milk production for the year.

The following points summarise some of the key factors to take into account compared to the Northern Ireland dairy sector.

- **Denmark -** one major player dominates the processing sector (Arla Foods). Arla processes some 8 billion litres of milk alone and, despite a relatively low level of milk product consumption in the domestic market, has developed a series of joint ventures and strategic alliance both in the EU, as well as in the emerging markets of Latin America and Asia. Arla sells its products in more than 100 countries and has manufacturing facilities across the EU, North & Latin America, the Middle East and China. The EU is still the main market and accounts for some 90% of the overall

[1] This is roughly the same size as the entire NI dairy output and Valio is comprised of 22 dairy co-operatives across the country

business. The UK is a key market for both liquid milk and butter products. Arla has a high reputation for adding value to its products and services. Alongside Arla in the Danish market, there are another 10 small scale players with a typical milk intake of between 15 – 60 million litres each per annum.

- **Republic of Ireland** - is a relatively small scale producer of milk in an international context, with some 5 billion litres of milk produced per annum. Average herd size is smaller than the NI sector and yield levels are lower. The ROI industry is heavily export dependent with key markets being to GB, Germany and other EU markets. Powder exports are made to Africa and Asia and the US as well as to other EU markets. The sector has two major players involved – Glanbia and Kerry, as well as a long tail of other processors. Exports account for c. 70% of all dairy production.

  Following on from the work of the Dairy Industry Forum, which has seen significant investment take place in the ROI sector over the last few years, it is now being proposed in the ROI that a "Milk Ireland" initiative be adopted. This would see the marketing and processing of milk centralised. Discussions on this proposed development are still ongoing. The impact of such a development would mean that the overall pressure felt by the NI dairy sector would be increased – it would mean that on their doorstep, there would be a very large and integrated dairy processing and marketing group looking at similar markets as the NI dairy sector.

  A large, confident and aggressive player in the market would act as a strong incentive for ROI dairy farmers to increase milk production and also for ROI processors to source increasing volumes of milk from NI. Therefore, further rationalisation within the dairy supply chain, together with increased production, would increase the level of competition posed to the NI dairy industry from ROI.

  Depending on the reaction to the strategic options set out in this report, it would also mean that the ROI dairy sector would be at least one, if not two steps ahead of the NI dairy industry in terms of potential restructuring and moving its market position.

- **New Zealand -** benefits from a low cost of production based on grass systems allied to one major processing company (Fonterra) who account for some 90% of all the milk processed in NZ. Fonterra accounts for some 16 – 17 billion litres per annum. New Zealand is a significant producer of a range of dairy products including butter, cheese, WMP and SMP. Its production is highly export orientated. Fonterra has also developed a series of acquisitions and joint ventures with other dairy processing companies and food processors in key international markets. Key target markets are now moving away from the EU towards the likes of SE Asia, China and the Middle East. Fonterra produces a wide range of products and has a strong reputation for

developing a high level of innovation especially for its range of powders. The recently launched Global Dairy Trade, (NZ auction for milk powders) acts a barometer for the rest of the international dairy sector. Fonterra exerts a major influence in the international dairy products sector and supplies customers in over 140 markets through both branded products and industrial ingredients – it also has substantial interest in the Australian dairy sector, where it accounts for over 20% of milk produced.

- **The US** – has a massive production of milk often produced on large scale farms and a substantial processing sector. US production of milk is in the region of 86 million tonnes per annum and, in the last few years, has seen the development of significant international markets, especially for cheese and SMP. While benefitting from the large domestic market, exports are now an important driver in the US dairy sector and key markets are now Mexico, the Middle East and Asia. The US dairy sector is dominated by leading co-operatives such as Land O' Lakes and Dairy Farmers of America. DFA has a milk intake of some 16 billion litres per annum and LOL just under 6 billion litres per annum.

- **Argentina** – uses a range of mixed feeding systems, has an average yield of some 4,000 litres per annum and produces in the region of 10 billion litres of milk per annum. Exports account for 20% of overall production. In terms of exports, the industry has concentrated on the WMP business, where exports are now in the region of 150 – 200,000 tonnes per annum. Argentina also exports 50,000 tonnes of cheese per annum. Major international markets include the likes of Russia, other Latin American countries and the Middle East. Argentina enjoys a low cost of production at c. 50% below the world price compared to EU dairy producers and the standard of processing facilities is rapidly improving.

- **Brazil** - although the average yield in Brazil is low by international standards, overall milk production has increased from 24.2 to over 30.3 million tonnes per annum. Brazil has become a major player in international WMP markets, where it now exports some 110,000 tonnes per annum along with more modest exports of other dairy products such as cheese and butter in particular. Key target export markets for the Brazilian dairy sector are to other Latin American countries - Venezuela accounts for over 75% of all Brazilian exports of WMP as an example but other exports are made to the US and selected African countries. The standard of Brazilian processing facilities is improving all the time. The dairy processing sector can be expected to go down the same route in the future. The largest processors in Brazil such as DPA and Ltambe have a throughput of between 1.2 – 1.6 billion litres per annum.

- **The Ukraine** – production in the Ukraine has stagnated in the last few years due to a lack of investment in the dairy sector. The average farm size is still very small and

the sector, especially at farm level, lacks any real economies of scale. Exports of cheese and powders are dominated by the sale of products to the Russian market. The industry in the Ukraine only poses a real threat to the rest of the EU sector in terms of its ability to act as a weak seller and undercut established suppliers on a price basis. Factories are, however, often in poor condition and will require considerable investment in order to bring them up to the standard required for the international markets. Despite this, the largest processors in the Ukraine already have a throughput of between 300 – 500 million litres.

Profiles of the leading dairy producing and processing countries are given in **Appendix III.**

2.3 Development Of An Industry Vision

Co-operation within the NI dairy supply chain varies in its nature and extent. If existing co-operation is to be developed, the industry needs a central, agreed vision to act as a guide for future initiatives.

The following vision is proposed:

".....to be a growth industry that delivers sustainable returns for its stakeholders, and the wider NI economy....."

The following characteristics will be evident in the delivery of this vision:

- the NI dairy industry should be producing a range of dairy products that will return revenues and margins that will support a viable and sustainable supply chain
- it should be an attractive industry in which to work, at all stages of the supply chain, both farming and processing
- it should be an innovative industry, with investment in NPD, and staff training
- it should be a growth industry that is commercially focused, and less reliant on CAP
- it should be making the full use of its natural advantages
- it should be promoting itself effectively to both customers and consumers, at both industry image and brand levels
- the industry should be cost efficient throughout the supply chain, and aim to be technically and environmentally "best in class"

This "vision" is an inspirational view of where the industry sees itself being in the future. Its development acts as a starting point for all other further strategic choices that the industry faces. While some progress has been made in recent years in moving somewhere towards this "vision position", getting the rest of the way there still represents a considerable challenge for the NI dairy sector.

2.4 Dairy Farming

2.4.1 Milk Production

- In 2009, Northern Ireland accounted for approximately 14% of total milk production in UK, but just 12.5% of turnover. Within the EU, Northern Ireland accounted for around 1.5% of total milk production.

- Between 2003 and 2008, annual milk production in Northern Ireland increased from 1.78 billion to 1.9 billion litres, with production in 2009 showing a year on year decrease of 7% to 1.77 billion litres.

- FAPRI has carried out a number of studies on the impact of EU and WTO policy changes in both 2008 and 2009 but which suggests that post the removal of quota in 2015, it is possible that milk production in Northern Ireland could continue to fall by at least a further 6 – 8%.

- FAPRI has taken into account in the development of its base line a number of assumptions that include the retention of EU milk quotas until at least 2014, the fact that the EU will not continue to provide export refunds, the inclusion of relatively "new" EU countries such as Bulgaria and Romania, the fall of EU 27 economic growth and the fact that the € remains reasonably strong against the US$. Other factors taken into account in the work of FAPRI include the full implementation of CAP Health Check Reforms and WTO reforms based on agreements made in December 2008.

- Dairy cow yields in Northern Ireland have been increasing during the past decade. Average milk yield per cow in 2000 was 5,721 litres, compared with 6,350 litres in 2009 (6,270 litres in 2008[2]. Although the average yield per cow in Northern Ireland is less than some other countries such as GB (7,100 litres), Denmark (8,800 litres) and the US (8,600 litres), it is well above that achieved in Southern Hemisphere countries, such as in New Zealand (4,400 litres) and Australia (5,300 litres). The ROI achieves a typical average yield of some 4,500 litres per annum.

[2] Data based on DARD Census, 2009

2.4.2 Dairy Farm Structure

- The number of dairy farm businesses in Northern Ireland has fallen over the last 20 years, with DARD's 2009 census showing 3,800 dairy farm businesses.

- Promar estimates[3] that by 2015 the number of dairy farm businesses in Northern Ireland will have fallen to around 2,500.

- The DARD June 2009 census showed that the average dairy herd size in Northern Ireland was 75 compared with an average herd size of 54 in 2000. Although Northern Ireland's average herd size is well above the EU 15 average (42), it is below that of the rest of the UK (113[4]). Northern Ireland compares well with other EU dairy exporting countries such as Republic of Ireland (55), Netherlands (66), and Denmark (110).

- The increase in the average herd size in Northern Ireland has been the result of maintenance of cow numbers, coupled with a decrease in the number of dairy herds. In 2000, there were 284,400 dairy cows, compared with 284,700 in 2009. On the other hand, there were 5,200 dairy herds in 2000, compared with 3,800 in 2009.

2.4.3 Dairy Farm Incomes

- Since the previous CAP reform in 2003, two factors have had a significant influence on dairy farm incomes: (i) changes in EU market support measures; and (ii) an increase in volatility in returns from global markets.

- Because of its historic high dependence on EU and global commodity markets for milk powder, the annual average farmgate milk prices in Northern Ireland have been below those in GB (where over 50% of milk production is used to supply the premium priced liquid market).

- In comparison, the average prices paid by large dairy companies in the EU have also been higher than the Northern Ireland averages, due to their access to premium priced consumer markets for a greater proportion of their milk throughput as well as their higher costs of production.

[3] Promar estimates, based on Dairy Co data and extrapolated at current rates of dairy farmer exit

[4] Dairy Co/Defra

- Since 2000, the annual average farmgate milk price in Northern Ireland has varied from a low of 15.85 ppl in 2002, to a high in 2008 of 22.92 ppl, compared with a 10 year weighted average of 18.72 ppl[5].

- Dairy farmers in Northern Ireland have received considerable financial support over a long period of time, not least from the SFP, which was worth some €67 million (before modulation) in 2009. Other support to dairy farmers in Northern Ireland can amount to a further £12 million per annum. There is a risk that the current CAP review will result in a reduction of SFP to dairy farmers.

- Annual net incomes for dairy farms in NI are highly variable. Taking out the circumstances of 2007/8, over the previous 5 year period these have averaged approximately £17,500, but have dipped as low as £6, 500 per annum[6]. These figures include the SFP made to dairy farmers, which amounted to some €67 million in 2009.

- The available data from Dairy Co[7] and the EU's Farm Accountancy Data Network (FADN) shows that in general, net farm incomes in NI are below that of the rest of GB and in a wider EU context, the UK is normally in the middle of a range of other European producing countries.

Dairy Farm Income (£ per farm)	England	Wales	Scotland	Northern Ireland
2004/2005	26,400	20,000	26,400	17,100
2005/2006	27,100	21,800	21,318	20,700
2006/2007	22,900	22,300	32,662	21,623
2007/2008	46,700	41,900	52,698	52,268
2008/2009	59,200	51,700	N/A	31,583

Source: Dairy Co

[5] Source: Dairy UK NI based on DARD data

[6] Source: DARD data

[7] Some minor discrepancy exists between Dairy Co and DARD data

Net Farm Income – Milk (€ per farm)	ROI	UK	DK	Ger'ny	NL	F'land	Fra	Italy
2003	37,815	49,715	40,713	38,701	44,960	19,079	21,640	41,557
2004	25,750	32,447	33,522	26,046	33,180	15,017	17,626	43,031
2005	30,193	34,955	23,224	23,422	37,441	16,484	18,208	37,656
2006	28,573	30,754	16,785	20,157	27,695	17,365	16,406	31,990
2007	26,945	26,877	14,796	15,213	25,561	17,072	15,831	29,970

Source: FADN

2.4.4 Future Constraints

- Attempts to increase milk production in Northern Ireland in the next decade will be constrained by a number of factors: (i) environmental legislation and the limitations this will place on stocking densities; (ii) access to capital to fund farm expansion; (iii) the competitiveness of the dairy supply chain, and the resultant milk prices; and (iv) the willingness of individual farm owners to accept the risks associated with investment to grow their businesses.

- The age profile of dairy farmers in Northern Ireland is not unique, but already, 50% are over 50 years old[8]. While farmers are exiting at a rate, on average, of 175 per annum, new entrants have been averaging only 15 per annum over the last 5 years.

- The dairy sector in Northern Ireland has accounted for over 50% of DARDNI's Young Farmers' Scheme, which made available over a 4 year period a total of just under £5 million. This support might not automatically be available in the future.

2.4.5 Dairy Farming - Conclusions

- Northern Ireland has a good track record and reputation for its dairy farming. It has many advantages: although milk production has intensified over the past 15 years, it remains mainly grass based. It produces milk of high hygienic quality, dairy stock have a high genetic merit, animal welfare standards are high, dairy farm businesses are family owned, and as a consequence, there is a high level of commitment and expertise and Northern Ireland dairy farmers have a track record in investing for growth and quality of milk produced.

- Given that milk production has been increasing for most of the last decade, it is reasonable to target an annual volume of milk production in Northern Ireland by the end

[8] Defra data shows that in the UK the average of a dairy farmer is 54 while the average age for all farms is slightly higher at 58

of this decade of 2 billion litres. However, achievement of this will be dependent on a number of factors, including sustainable farmgate milk prices and access to capital.

- Although some of the best of Northern Ireland dairy farms are run as efficiently as anywhere else in the world, there is a wide variation between the top and bottom quartiles of dairy farms, therefore, there is room for improvements in overall efficiency of milk production. This is a picture which is not unique to Northern Ireland but is replicated across the rest of England, Scotland and Wales over a long period of time and based on data provided by Promar's Farm Business Accounts service.

- The level of volatility that has been reflected in farmgate milk prices since 2007 is a disincentive to future investment, not least because of the uncertainty in forward planning for growth within dairy farm businesses.

- The trends over the past decade of improvements in average dairy cow yields, and increases in average herd size, should be encouraged to continue.

Full details of the NI dairy farming sector are provided in **Appendix IV.**

2.5 Dairy Processing In Northern Ireland

2.5.1 Ownership Structure And Scale

- The NI processing sector has evolved from a mix of plc and co-operative ownerships, to predominantly a co-operative based ownership structure. This is in common with the structure in ROI, Denmark, and New Zealand. In GB, there has also been growth in co-operative ownership in the processing sector, although not to the same extent as in NI.

- The largest dairy company in NI processes approximately 500 million litres of milk per year. The 11 main dairy companies purchase and process approximately 88% of the milk produced in NI, with the balance being exported to ROI for processing. A summary of milk processing volumes of the **main players** in NI is given in the table below:

Name of Company	Number of Sites	Volume of Milk Purchased and Processed (million litres)
Dale Farm	3	500
Fane Valley	2	280
Town of Monaghan	1	200
Lakeland Dairies[9]	1	200

[9] The majority of milk purchased from NI dairy farmers by Lakeland is sent to the ROI for processing

Glanbia Cheese	1	275
Ballyrashane	1	90
Strathroy	1	80
Fivemiletown Creamery	1	75
Augher Co operative	1	35
Farm View Dairy	1	5
Draynes Farm	1	5

Source: Trade interviews, published information, Dairy UK Northern Ireland, Promar International estimates

- A total of 11 NI companies account for c. 88% of the NI milk (1.78 billion litres in 2009/10) that is processed. In the ROI, which produced 5.2 billion litres in 2009/10, the number of processors required to reach 80% is 6. In other leading dairy processing and exporting countries, such as the Netherlands, Denmark and New Zealand and where the smallest volume processed is 4.6 billion litres per annum, the figure is 1.

2.5.2 Product Mix

- The product mix of dairy processing in NI is very different from that in GB, but not dissimilar to that in ROI. This is driven by a small local market of just 1.7 million consumers and, therefore, a necessity to export. Some of these exports have been underpinned by CAP export refunds. In 2008, CAP export refund payments to NI processors totalled some £17 million. The table below indicates the differences in product utilisation in the GB, ROI and NI dairy sectors:

Volume (Million litres)	Liquid Milk	Milk Powders	Butter	Cheese	Other Products	Exports Outside NI
ROI	820	880	1,289	1,745	266	N/A
	16.4%	17.6%	25.78%	34.9%	5.32%	N/A
NI	287.05	592.6	37.02	402.52	77.91	556.82
	20.54%	42.4%	2.6%	28.8%	5.57%	39.8%
UK	6,683	933	229	3,644	1,038	N/A
	53.3%	7.4%	1.8%	29%	8.28%	N/A

Source: Promar analysis of IFCN, Defra, DARD & CSO data

- In a future environment where it is assumed that access to export refunds may no longer be available, the product mix chosen by processors in NI needs to be able to deliver sustainable milk prices for producers, and a return on investment for processors in what is likely to be an ongoing volatile market environment.

2.5.3 Infrastructure And Investment

- A good deal of the processing infrastructure in NI dates back to its initial construction in the mid 1970s. Whilst there has been ongoing investment to increase capacity and to improve processing efficiency, it has to be recognised that the bulk (but not all) of processing assets would not be considered as the best of class technology.

- Between 2004/5 – 2008/9, the amount of funding from Invest NI, including EU grants for the PMG, has reached £8 million, although total investment in the processing sector based on other Invest NI data amounts to an additional £39 million from banks, other source of finance and the companies themselves.

- In March 2010, the most significant investment for some time was made in the NI dairy sector by the biggest single company, Dale Farm of some £36 million, of which £4 million came from Invest NI.

2.5.4 Profitability

- The profitability of the processing sector in NI is low, and unless improved, will inhibit or restrict future investment. The weighted average over the last 5 years for the 8 leading processors varies from –1.83% to 2.38% per annum in terms of operating profit as a percentage of turn over.

- In other countries, such as New Zealand and Denmark, operational profitability of leading processors is much higher, as over time they have made high levels of investment to position themselves to deliver "wellness and nutrition" to consumers rather than being just "manufacturers of milk based products".

- Profitability of dairy processors in NI is adversely influenced by energy costs that are high in actual terms, and in comparison to competitors. For example, with the exception of Italy, Northern Ireland has the highest unit electricity costs in Europe, and one of the highest unit costs for gas. This places the NI dairy processors at a considerable competitive disadvantage.

2.5.5 NI Dairy Processing: Conclusions

- As ownership structure of the processing sector has evolved with greater co-operative ownership, this has resulted in rationalisation. Given the challenges facing the sector, it is likely that this process will continue, and this should be encouraged. However, any further consolidation of processing capacity or ownership cannot be imposed, but will evolve through market and stakeholder requirements.

- Given the small domestic market available to the industry, NI will continue to be heavily reliant on exports. The decisions on where to export and with what products will be decided by individual companies, and driven by the need to be able to deliver a sustainable milk price for their suppliers, whilst funding the necessary investment in both infrastructure and marketing, and generating a sustainable return on these investments.

- For the foreseeable future, volatility in market returns will be a given. Equally, it is likely that the volatility of returns for different product markets at different times in their normal cycle, will necessitate that the NI processing sector retains and develops its flexibility to service different product sectors.

- The historic low levels of processor profitability will inhibit the pace of change, and therefore the ability of processors to react to market opportunities.

- Changes in product mix will happen, driven by timely and informed identification of market opportunities. However, it would be wrong to think of changes in product mix solely in terms of adding value to consumer products. There are also significant opportunities to innovate and added value in both the food service and ingredient sectors.

- The NI processing sector is constrained by the relatively high costs of labour and energy, compared to those in other international dairy processing countries such as New Zealand, US, Russia, and China.

Fuller details of the NI dairy processing sector are provided in **Appendix V.**

2.6 Strategic Options

The following strategic options are available to the NI dairy industry:

2.6.1 Option 1 - "Do Nothing"

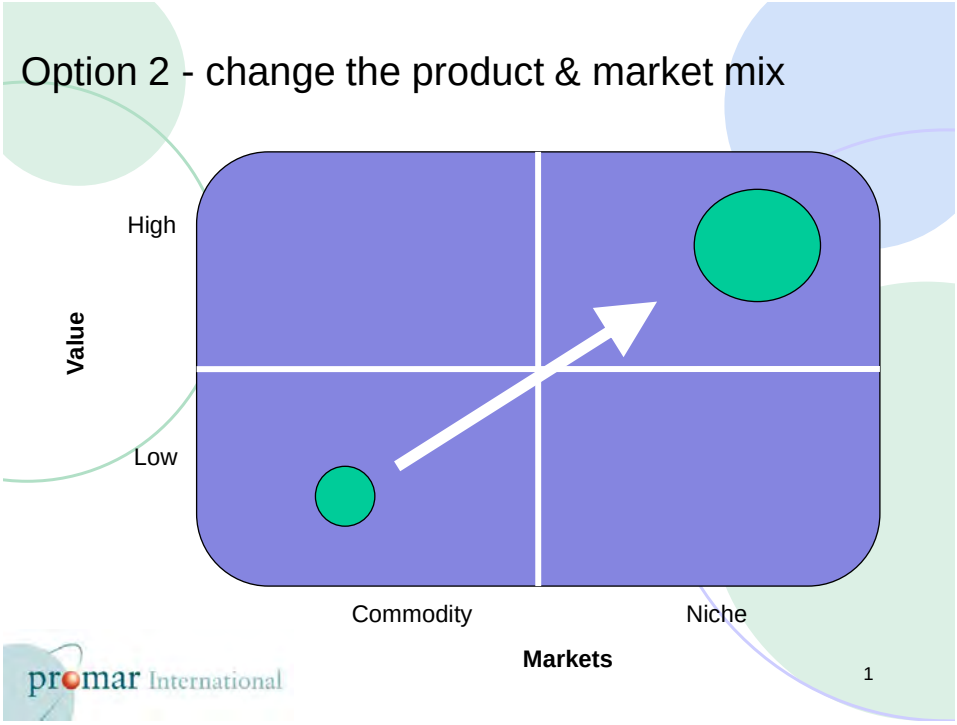
- This is always an option, but not one to be advocated, unless CAP support is retained for the NI dairy sector to at least its historical levels for both production and export subsidies. This seems highly unlikely.

- Alternatively, market returns for dairy commodities could remain high, at levels similar to 2007/2008: but, again, this seems unlikely that these levels of commodity market returns will be achievable over the longer term, and that increased volatility in commodity market prices will be the norm.

2.6.2 Option 2 - Change The Product And Market Mix

- The strategy under this option is to change the market positioning of the NI dairy sector. At the moment, the NI dairy sector is largely positioned in the bottom left hand corner of the diagram below – "mass market/commodity products". For an industry such as the NI dairy sector, this positioning is unlikely to deliver the industry vision outlined above.

- The NI dairy industry is small by the standards of most of its competitors, due to its fragmented structure, which limits its ability to achieve efficiency gains that would improve its competitiveness. The future of the NI dairy sector needs to be much more closely aligned to the top right hand corner of the diagram: in other words, it should be more "niche and differentiated" than in the past.



2.6.3 Option 3 – Reconfigure The Processing Sector

- Under this option, there would be significant consolidation of the NI dairy processing sector; although there would still be room in the market for locally based processing companies providing customers with niche products. This consolidation might involve the rationalisation of both ownership structures, and, in some cases, the eventual closure of plant facilities.

- The process of rationalisation has been on-going for many years in the NI dairy processing sector. It is likely this situation will continue, as is the case in the international food sector generally, driven by market and stakeholder needs. The real question, therefore, becomes not "when it happens" but "how it happens".

- The process of rationalisation cannot be imposed, and will result only from the influence of market and stakeholder needs.

2.6.4 Option 4 – Change Market Position And Reconfigure

- This option involves changing both the product and market mix, and reconfiguring the processing sector to where it is more in line with the international industry norm.

- Option 4 does not imply that there is no room in the market for smaller players to operate and it does not automatically follow that "big is beautiful". At the same time, the benefits of a more consolidated industry structure cannot be ignored.

The further details of the 4 key strategic options for the Northern Ireland dairy sector are given in **Appendix VI.**

2.7 Required Investment And Support

- The low margin nature of the NI dairy sector, at both farming and processing levels, makes the task of delivering the levels of investment required, one that the industry alone cannot meet and will therefore require substantial and ongoing external support.

- Investments in physical plant and equipment can be considerable. For example, a new yoghurt plant built in England has cost in the region of £60 million. While the largest processor in NI, Dale Farm, embarked on a £36 million investment across its 3 plants in 2010, in order to upgrade its cheese, whey and milk/cream facilities, the scale of this single investment is at a level where it is equal to the entire investment in the NI dairy processing sector over the previous 5 years[10].

- The level of investment in the NI dairy processing sector required for the future is, the Dale Farm investment aside, far in excess of what has been achieved in the recent past.

- An estimate of the amount of investment required in the NI dairy processing sector, if the sector moved towards Option 4, above, as its preferred strategic choice, is of the

[10] Source: Invest NI

order of £140 million, assuming that all processing facilities will need to go through a period of upgrading over the next 5 years.

2.8 The NI Dairy USP And Future Markets

2.8.1 The NI Dairy USP

- The NI dairy sector has to maximise its strengths – it is grass based, has a good level of rainfall, has a strong heritage in the dairy sector and it has an attractive provenance. However, these are not enough, not least because other parts of the international dairy sector claim similar attributes.

- Developing a selling proposition that it is genuinely unique to Northern Ireland is challenging. The future "umbrella" selling proposition needs to be based on well defended brand pillars, and should revolve around a reputation for innovative and competitive products, a strong track record of food safety, and a "safe", flexible, reliable and efficient supply chain.

2.8.2 Future Markets

- The future emphasis of the NI dairy industry will need to migrate towards markets closer to home, in other parts of the EU. The GB market, in particular, is a prime target market in the future.

- The benefits to the NI dairy industry in developing sales in GB and other EU countries are:

  - NI is a relatively low cost dairy producer in the EU. These markets have a high number of relatively affluent consumers who have a track record of buying a wide range of high quality dairy products

  - There are opportunities in these geographic markets for both large and small companies. These EU markets are predicted to grow, albeit at a slower rate than in the emerging BRIC type countries

  - The routes to market, typically via major retailers and foodservice companies, are well known and documented

- However, the task of achieving market share within these markets should not be underestimated. The key success factors for serving all of these markets will be a combination of the following:

- a strong track record of food safety and factory accreditations such as BRC and SALSA (for smaller processors)
- a differentiated product range, allied to high levels of customer service, and the development of long term customer and consumer relationships
- the ability to meet competitive price points
- a strong track record of factors such as sustainability, environmental credentials, animal welfare, and a low carbon supply chain

- As an indication of the potential size of some of the key EU markets that should be targeted by the NI dairy sector in the future, the table below indicates the overall size of some of the possible geographic markets and the volumes accounted for by imports.

- It should be recognised that it will be difficult to compete with the local dairy sector in these markets, and, therefore, NI processors should focus initially on taking market share from other international suppliers.

	Cheese		Butter		Yoghurt	
	Market Size (000 tonnes)	**Imports (000 tonnes)**	**Market Size (000 tonnes)**	**Imports (000 tonnes)**	**Market Size (000 tonnes)**	**Imports (000 tonnes)**
UK	774	414.1	128.9	76.6	220	132.8
France	1,518.2	288.7	436.9	120.8	1,784.7	51.0
Germany	1,792	578.8	500.2	88.1	1,499.9	136.9
Netherlands	324.5	182.1	52.7	57.5	345.8	106.7
Sweden	165.0	82.6	13.7	8.3	177.5	62.0
Total	**4,573.7**	**1,546.3**	**1,132.4**	**351.3**	**4,027.9**	**489.4**

N.B. Data for the Netherlands refers to 2008

Source: Promar International estimates - based on Dairy Co, Dairy UK, Datamonitor, Mintel & UNCT

- The market share required by NI companies is relatively small. It would not be impossible to gain a market share of 1% across the EU. If all exports from NI are focused on just the UK market, then the NI dairy sector needs to secure a market share of 6 – 12 %. This is more challenging and underlines that a mix of geographic markets will be needed in the future.

2.9 Product Mix, Supply Chains And Co-Operation

2.9.1 Product Mix

Any significant change of market and product mix for the NI dairy sector will take time to achieve. However, given that reliance on commodity products, such as milk powders, will continue for some time, NI processors should invest in research to develop higher added value products, such as functionally enhanced milk powders.

2.9.2 Supply Chain

The development of a more integrated supply chain will be more important if the NI dairy sector decides to adopt "Option 4" as its future direction.

2.9.3 Co-operation

Co-operation within the dairy supply chain has the potential to deliver cost benefits. Evidence of this is existing co-operation in the collection of milk from farms, which has delivered considerable savings to the supply chain. The industry should be innovative in its attitude to co-operation in areas such as international marketing agents, and joint purchasing of inputs such as energy supplies, packaging, transport and pre - competitive NPD and R&D.

2.10 Recommendations

These have been developed to address industry wide issues rather than company specific concerns. These have been developed by, and in conjunction with, the Project Steering Group for this exercise, based on the work carried out by Promar International, and are as follows:

1. The NI dairy industry should move quickly to implement the recommendations below that have industry wide implications.
2. The objectives of the NI dairy industry should be:
    (i) to develop means of co-operation throughout the supply chain that will improve competitiveness
    (ii) to improve the industry's revenue generating ability

Strategies for achieving these objectives are embodied in the remainder of the recommendations.

3. Dairy UK should establish an Implementation Group (IG), with the following composition and Terms of Reference:

   (a) Composition

   - the IG should be representative of the dairy supply chain
   - representation on IG should be by invitation from the NI Board of Dairy UK
   - the IG should be chaired by the Chairman of the Dairy UK (NI) Board

   (b) Terms of Reference

   - the IG should identify and consider those aspects of the Report that have implications at industry level
   - the IG should be responsible to the NI Board of Dairy UK
   - it should make recommendations to the NI Board of Dairy UK on how these can be progressed
   - it should make representation to appropriate Government departments for funding on industry level projects
   - the IG should be available to both DARDNI and Invest NI on relevant issues
   - the IG should communicate its work to stakeholders on a regular basis
   - the work of the IG should be reviewed on a regular basis by the NI Board of Dairy UK to ensure that its activities are beneficial to the dairy supply chain

4. The dairy supply chain should improve its economies of scale in primary production and processing to achieve lower unit costs, and contribute to improved competitiveness. A formal benchmarking exercise of NI dairy processors should be carried out.

5. Within the next decade, the industry should aim to have a NI milk pool of at least 2.0 billion litres per year.

6. Existing co-operation at processing level should be developed to enable milk to be manufactured into products that will provide the best returns from markets.

7. There should be planned, and sustained investment in R&D to add value to dairy products; to lower costs of producing milk; to improve milk quality; to improve processing efficiency; and to improve packaging.

8. The IG should evaluate models for pre - competitive research in areas such as NPD, R & D and supply chain development and recommend an appropriate approach for NI as has been carried out in places such as the US and ROI.

9. There should be increased and sustained investment throughout the supply chain in training to enable it to meet the above objectives.

10. The energy costs of the supply chain need to be reduced by 25% over the current decade to make it competitive with other regions of UK and other competitor countries.

11. The IG should evaluate the opportunities for alternative and renewable energy sources within the dairy supply chain.

12. There should be industry image campaigns in targeted markets to leverage brand sales.

13. The IG should work with CAFRE to increase the number of dairy farms that participate in benchmarking, and to investigate how the existing benchmarking programme could be developed into a management tool that will help dairy farmers in making key decisions about their businesses[11].

14. The IG should look at options for minimising the uncertainty associated with volatility in market returns, so that businesses throughout the supply chain can minimise their risks and can have greater confidence in strategic planning.

15. Although it is the responsibility of both NI processors and dairy farmers to identify and implement the changes that will be necessary to meet the objectives and Industry Vision referred to above, it cannot achieve these alone, and will require Government assistance.

16. The IG should engage with appropriate Government departments as soon as possible to detail the industry's need for support, and to discuss how Government might provide this assistance.

[11] In the Tesco Sustainable Dairy Group, 80% of the liquid milk supply is benchmarked and this involves some 800 dairy farms across the UK (as part of their contract of supply) but for which they also receive a bonus payment of 0.5 ppl