

IRISH RURAL BUSINESS SOLUTIONS

***Food Strategy 2025
Questionnaire
Annex B***

Food Harvest 2020

a personal review

written by

Stuart M. Meikle

www.IRBS.guru

CONTENTS

1. BACKGROUND	02
2. THE SUMMARY	03
3. INTRODUCTION	07
4. THE FH2020 STRATEGY PAPER	08
4a. the FH2020 vision	08
4b. the FH2020 targets	11
4c. FH2020 as a strategy	13
5. THE PRIMARY CONSTRAINTS	18
6. THE FH2020 CONFLICTS	21
6a. markets or supply driven	21
6b. consolidation or diversity	25
6c. grass : cheap or premium	27
6d. production or profits	33
7. FOCUSING ON COMMODITIES	36
7a. commodity market limits	37
7b. global competitive position	41
7c. international benchmarks	45
7d. supply-chain control	47
7e. broad-brush branding	52
7f. commodity SWOT analysis	55
8. FOCUSING ON PRODUCTS	56
8a. adding value approach	57
8b. naturally grass-fed products	58
8c. sustainable, ecological, ethical	60
8d. designating product origin	62
8e. developing the products	64
8f. re-linking to the consumer	66
8g. the role of small enterprises	68
8h. selling the complete package	72
8i. international benchmarks	73
8j. land and rural property	74
8k. people and communities	75
8l. product SWOT analysis	77
9. AN IRISH STRATEGY FOR IRELAND	78
9a. premiumisation of commodities	89
9b. high-value and renown products	91
10. ABOUT THE AUTHOR	93

1. BACKGROUND

Stuart Meikle arrived in Ireland on the 1st June 2013 at the start of a warm and long Irish summer and shortly after the end of an extended and arduous winter. The fodder crisis was to the forefront of everyone's thoughts; as was the revision of the Common Agricultural Policy. As an agriculturalist and agri-management/economist it was not long before he started reading and hearing the words *Food Harvest 2020*. It was clearly a document that was a key directional driver of Irish agriculture and the nation's food industry and, hence, well worth further investigation.

From an initial read of FH2020 stemmed some instinctive concerns. Maybe a letter to the Irish agricultural press was warranted? The author is, however, also an agricultural management academic from Wye College, University of London; a faculty that was at the time of global renown, so any comments required a researched foundation. The author was also aware that Ireland is a country where so many are still close to agriculture and the awareness of the industry is high; thus comments needed to be well grounded in fact. So the letter has become a researched review of FH2020 and this paper is the result; an independent viewpoint on the national strategy, as presented in FH2020, written by someone who has a practical farming, academic and international advisory background.

This paper is first and foremost a personal review. A major reason for writing it was for the author to bring himself *up to speed* with respect to the Irish agri-food sector. It has not been commissioned by anyone and it has not been prepared in consultation with anyone from *inside* the industry; thus it represents the independent view of the author as he sees it from an outsider's; albeit a qualified outsider's, perspective. The author has chosen to publish this review as it may provide a fresh viewpoint on a key strategic paper for the Irish farming and food industries.

The author has no doubt that the views in this paper will conflict with those of others. It would have been pleasant to have been able to agree with the envisioned strategy in every way but *pulling his punches* has never been the author's way and he is not about to start now. The reader should, however, be aware that the author has been afforded the *luxury* of being able to take *time out* to research and write this review. For many who are involved in the industry, the everyday commitments of academic teaching and research, writing press copy, advising farmers or managing a business or government department mean that the time to research and contemplate, let alone write a comprehensive review is scarce. It is also rare that one has the chance to take a step back and to overview an agri-food industry in all its many facets. In being able to so do, the author has just been luckier than others.

It is the authors hope that this review may have some worth to those concerned with the future well-being of the Irish agricultural and food sectors. If it does, he would just like to dedicate that value to those in the warm and welcoming community that he and his family have so recently been fortunate enough to join.

At this point the author would like to apologies for the bias in this report towards the dairy sector. He would like to have also reviewed the beef, sheep, tillage, horticultural... sectors, but alas those will have to wait until later.

The following few pages provide a summary of the review of Food Harvest 2020. It is concise and does not condense every point made within the main body of the review. Hence, it will not provide a substitute to reading the whole but it will hopefully provide the reader with a *flavour* of what is presented within the text of the review.

THE SMALL PRINT

The information contained within this review is for general information purposes only. The information is provided by its author Stuart Meikle and while he endeavours to ensure the accuracy of the contents, he makes no representations or warranties of any kind, express or implied, about the completeness, accuracy or reliability with respect to the information within this review. Any reliance you place on such information is therefore strictly at your own risk. In no event will Stuart Meikle (or any other party associated with the publishing of this review be liable for any loss or damage including without limitation, indirect or consequential loss or damage, or any loss or damage whatsoever arising from, or in connection with, the use of this review and the information therein. Stuart Meikle encourages the reader to investigate and verify the information within the review and to seek answers where questions are posed. His intention is solely to enhance the discussion about the future of the agricultural and food industries.

2. THE SUMMARY

The *Food Harvest 2020* vision of Ireland as a producer of green, natural and high-quality products that deliver a fair and sustainable return to the primary producers is a highly appropriate vision for Ireland's agricultural and food industries; especially so when it comes complete with an understanding of the importance of the agri-food sector in maintaining people's livelihoods within the rural, often family-farming-grounded, communities of Ireland.

There is also a parallel, maybe contradictory, vision in FH2020. It is that which sees Ireland as a major player in the global dairy market. It is a vision which sees Ireland expanding its milk production by 50% by 2020, increasing and consolidating its milk-processing sector and enhancing its marketing clout to take advantage of a growing global market. The FH2020 target to expand milk production by 50% seems to have largely gone unquestioned.

A justification for the expansion target appears to be the mixture of factors that came together around 2008-10. Food prices soared as biofuels usurped some food production and market speculation followed. An awareness of global population growth came to the fore. The Chinese economy continued to grow apace and it had a baby-milk safety-scare that undermined the integrity of its dairy industry. It was the start of a global market boom.

In 2015 the EU milk quota regime is to end so finally Ireland's dairy farmers would be unfettered; in 2015 they could join the global dairy market festivity. With a small domestic market and significant milk production, Ireland could always *punch above its weight* but now was the '*once-in-a-lifetime*' opportunity to expand and export more.

A consequence of the above and the FH2020 50% expansion target has been a shift in emphasis towards being supply-driven. The unwritten message is that from 2015 it will be fine to produce as much as possible as the global markets will soak up the milk. In this FH2020 differed from its predecessors; they had emphasised refocusing from commodities to products and to realign Irish milk production away from its notoriously seasonal pattern.

Is FH2020 too focused on market conditions pertaining to a handful of years? Meanwhile it is setting the strategy for a multi-generational, family farming industry. The 50% expansion target is historically massive; but is it being justified on short-term market information? Is it too much about helping an export-led recovery from a banking and property-created economic crisis? Is it a case of *Celtic Tiger* short-term thinking for long-term investment?

Within the context of the global markets does Ireland even have the resources to be a global player? As a milk industry it is only around 30th in the World. It may be export dependent but its exports still compete with those from the USA, Germany, France or NZ and, soon, the likes of the Ukraine and major Chinese investments.

There is also far too little concern for the investment plans and actions of others. The Ukraine has the capacity to establish large industrial, export-focused, vertically-integrated, dairy agri-businesses. China is investing to secure its food supplies. It and others are investing heavily in milk-powder capacity for China. The USA is expanding again. The global industry is rapidly reacting to the same signals read by Ireland, but without the milk quota time lag. Ireland is thinking 2008/10 for investments starting from 2015. Will it arrive after the *global party* is over?

Will Ireland's small dairy herds upon their fragmented land be able to compete with large-scale, well-financed dairy investments elsewhere? Just what is a realistic time-frame to create a large-herd, milk production structure in Ireland? Does it go way beyond 2020? It is also not just about agricultural resources; it is about access to capital.

There are major players on the global market with serious access to capital. The Chinese, the Gulf-region and the wider capital markets are all looking to invest in food production. It is unlikely that this capital will flow into Ireland, for all the talk of foreign investment, because Ireland's farming resources are just too small to support it.

Ireland has well-established routes to global markets via Kerry Group and Glanbia plc; as it does for infant-formula through the likes of Danone. Outside of those [and Glanbia Ingredients Ireland] will others be able to follow? Processing consolidation is talked about as desirable to create a globally competitive sector; but is it now too late for the smaller, farmer-owned co-operatives to consolidate given the presence of the major private sector players and the JV? Some have already invested for 2015 milk expansion and milk supplies are now a concern. Will milk procurement become competitive? If so, are we now going to see consolidation through the *survival of the fittest*?

Benchmarking is a popular pastime for some in the Irish agri-food industry. Consolidation is seen as the future as it is seen as a success in NZ and the Netherlands. The vertically-integrated, farmer-owned, co-operatives such as Fonterra and Friesland-Campina are seen as the examples to follow. But has Ireland not moved beyond a point where such could be established? Benchmarking should have shown that creating these is no longer an option; Ireland's processing and routes-to-market have already evolved so as to rule out the single co-operative model.

At the farming level there is little sense in benchmarking against Denmark and Holland, even if their industries are export-focused. They are at the extreme end of the European housed-cow, cereal-fed systems. NZ is by contrast seen as the grass-fed equivalent of Ireland. Even then their herd size and production of milk solids per farm are eight times those of Ireland. They do emphasise the use of grass and have similar yields per cow. NZ is, however, changing from the milk-from-grazed-grass model currently being promoted as the way forwards in Ireland.

One should also note that as NZ is moving away from its own traditional, seasonal-grass systems it is beginning to develop the more cereal-fed, housed systems of Europe. They are seeking greater milk volumes and to reduce the impact upon the environment from their 12-month-outdoor systems. In NZ there is concern for their *dirty-dairy* image and its negative environmental impact [and that is contradictory to the idea that grass-fed systems are, *per se*, more environmentally sustainable]. Another reason will be the relative economics of the dairy system options.

Grass-fed systems in Ireland are being developed. They are being tried on greenfield sites. They are being focused on block calving, no winter milk and milk-from-grazed-grass. But how suitable will they be for expanding farms? Will the constraints prove too great or will some find that it is better to use more *European* grass/forage/cereal based system? It may be that land or housing space proves to be the major constraint and that may mean that higher yields from cereals may be better. It appears that grass-fed is about cheap milk and low-cost per kilogram of milk solids as that is the only way Ireland can compete. Of course it may be; on the global commodity markets.

In the authors opinion, grass-fed production is about creating a higher-quality end product. It is about producing lower-value commodities when it can be operated on a significant scale and land is relatively cheap. High-cost land is moving NZ away from its historic milk-from-grazed-grass systems. At the dairy farm level, Ireland will only occasionally manage similar herd sizes to NZ. Just why then focus on a system that for most is unattainable?

Certainly the low investment costs possible with milk-from-seasonal-grazing systems are attractive but is that going to be sufficient to encourage farmers to invest in farming systems that are still being demonstrated? The 2013 fodder crisis will, however, also have farmers asking whether more grass-fed cows is the right approach.

To-date Ireland has had limited success with respect to creating and selling high-value, SME-origin food-products. In part this is due to its distance to markets and its seasonal milk production. Weak routes-to-market for small-volume products is another problem. There is also been a reluctance to get involved in producing food products.

Hence the dominance of the milk-for-commodities system. This has been widely recognised as an issue for years. Pre-FH2020 strategies highlighted the need to change the model. FH2020 itself has changed tack and re-focused [on the back of short-term 2008-10 data] back to global commodities. This will prove unfortunate for the many in Ireland who are too constrained to become low-cost commodity [even *premiumised* commodities] producers. For them to survive it has to be about moving into higher-value, higher-quality, more natural, healthy, *fine-foods* products. When faced with a limited agricultural resource base, there is simply no other long-term solution.

For some consumers grass-fed beef and lamb is a high-quality, high-value product. It is less well defined for dairy products. Maybe it should be. Ireland has a unique position in Europe as a grass-fed dairy industry and it is an opportunity that should be developed. NZ is moving away from the grass-fed model but it is also remote and external to EU markets. Should Ireland be looking to develop a part of its dairy industry as *naturally, grass-fed*?

Naturally-grass-fed milk production would certainly create a more symbiotic relationship with a premium, high-quality, grass-fed beef sector. Maybe Ireland should even be looking at creating a more closely integrated, fine-foods-focused, dairy-beef system? Its traditional low milk-per-cow yields could offer a starting point for assessing breed options [i.e. the Fleckvieh] that may provide better beef calves. It will not be an answer for all and not for those who wish to expand to supply the *premiumised* commodities route-to-market, but it may provide an option for those in remoter and/or disadvantaged areas; not least if it is fully linked to the creation of natural, fine foods.

Whatever happens, beef is the sector that is destined to have to manage a consequence of the FH2020 50% milk expansion targets; that is more low-quality calves from cows with *improved* dairy genetics. If the hybrid Friesian x Jersey is also widely adopted this will only get worse. A *waste-only* bobby-calf ethical issue may also arise.

The grass-fed model in Ireland is constrained by land in its ability to scale up and in its grazed-grass-only form it is very seasonal. The latter remains a problem as it makes the production of year-around products difficult. It has been flagged up as a major problem in previous strategy papers but, due to perceived global market opportunities and a renewed focus on the grazed-grass to cheap-milk-solids model, is it now being further embedded? Is this a step backwards? It is if one believes that Ireland's future lies with selling high-quality products to retail consumers.

Grass-fed, or mainly grass-fed, can be used as the foundation for creating premium, naturally-produced livestock products. Some can be enhanced by using artisan, traditional processing into fine foods. To work grass-fed needs to be promoted with specific branding; whereas using it within a generic, *all Ireland* brand will dilute its impact. It is just not wise to risk image loss via contagion by integrating key premium product factors into a generic brand.

At the farm level it should be about creating higher-value farm output; through the choice of farming system, variety or breed. It should be about focusing on the value achieved per kilogram or litre or tonne of product. It is about working with the constraints of farm size, fragmentation, soil, climate or location. It is about developing the farming systems to create products and not relying on scale alone to reduce costs to supply cheap commodities.

Ireland needs to develop designated origin products that, like in France, link farming practices through processing to the final retail consumer. They use specific quality-assurance systems and strong marketing stories. France maybe the best benchmark for Ireland to use; it has regions where large-scale, *premiumised* commodities is the focus and *disadvantaged* areas where dairying focuses on high-quality, designated origin products. It has the *twin-track approach* that Ireland needs if all of its widespread rural farming communities are going to be able to survive.

Interesting examples may be found with the *appellation d'origine controlees* of France, a part of the EU system to protect the origin of products. France has 208 designations, Ireland has five. There farming systems may be linked to processing [often co-operative owned] and the products sold with a protected image and a marketing story.

Ireland should go further. It should look at using a widely adoptable conservation-farming standard. Conservation Grade in the UK is an example. It needs to be able to reach 1/4 to 1/3 of the market. Organic has its place but its market limit seems to be only around 2%. A conservation-farming system can be used to connect tillage crops to the dairy, beef and sheep sectors through, for example, a Conservation Grade type of system. It should go further and link Pillar 2 CAP payments to environmental land management to farming to products to the retail consumer.

The production of natural products is suited to the SME food sector. But they need to be linked to the market. It is necessary to *consolidate the marketing and routes-to-market* for the small food producers both within Ireland and for export to higher-wealth consumers around the globe. It is conceivable but it will also take some imagination. Maybe it is possible to develop the Irish Dairy Board route-to-market to support SME-own-branded products as a way of developing export channels for small processors? For Irish sales, a consolidated marketing and retailing route may need to be *discovered* to provide a time and cost efficient means for SME's to reach their customers.

Smaller-scale fine-foods creation has the advantage that it is also suited to small, local enterprises. They can be on-farm. They can use local agricultural raw materials to create local employment; thus moving farming families and rural communities towards sustainability. They are the antithesis of the *consolidate-and-expand* approach. It seems to go unnoticed that large, automated, centralized milk-processing investments will not create local jobs in rural communities. They may link to the global market but are they what is needed to provide part-time work for farming families to supplement farming incomes or to create a diverse employment base across rural Ireland?

Whilst it should be necessary to consolidate the supply-chains to market for smaller producers, care needs to be taken with the use of generic Irish branding. It will bring with it a risk of contagion between commodities and their production systems and products and theirs. There are reasons to question the wisdom of Brand Ireland as it may not be in the interests fine-food, natural product producers to have their products branded alongside those who have chosen alternate ways of farming, processing and selling. It may also be difficult to get a general agreement on what a generic brand will represent with respect to environmental, animal welfare and ethical issues.

Ultimately, what is required is an Irish agri-food strategy for Ireland. FH2020 is too much about achieving scale so as to compete on the global markets. It is too much about developing a model that mimics the consolidated processing and marketing capabilities of Fonterra or Friesland-Campina. It is too much about replicating the more extreme grass-focused systems of NZ. With Ireland's constraints all are largely unachievable. They may provide answers for some farmers but Ireland also needs to create and market products from its marginal regions. For that France may provide some good examples but, at the end of the day, it is about finding Irish solutions.

Hence, the primary conclusion of this review is that Ireland needs to have a twin-track strategy for its dairy sector.

The first is about supplying the well-established routes-to-market provided by the two plc's, the joint venture and the major infant-formula producers. It will be about low-cost, milk solids and it will be for those farmers who can and want to scale up from 2015. It will be about careful investment, debt control and cost-control management.

The second strategy is about added-value, high-quality, natural, grass-fed, *multi-functional* products targeted at the high-wealth, mature markets in the order of Ireland, the UK, the EU, the USA, the Middle East, China and further afield. It is about making products that are derived from specific farming and processing systems and then linking them to the markets. It is about designating their origins. It is about using well-defined quality-assurance schemes. And it is about a holistic marketing approach to encapsulate everything about multi-benefit products.

Undoubtedly, having read and reviewed FH2020 and its predecessors, the Irish Government and those entities that represent the agriculture and food industry feel that it is necessary to provide strong guidance to the agri-food sector. The authors view, however, is that the FH2020 50% target [especially] was too simple a message; too easy to grasp and to adopt. It seeks to replace what should be a natural evolution in the growth of the industry.

The government's role is not to force growth; it is to do no more than guide. It is then about creating a positive *enabling environment* that encourages and supports those in the industry in their endeavours. It is about allowing the private sector, both small and large, individual, company and social enterprise, to follow their own direction. It is they who will create the investments and borrow the money. It is they that have to make the system work into the long term. In precise ways the government can intervene where to do so would benefit Irish society and its communities, but its role is not to plan and control; that is a system that has been tried and found wanting.

3. INTRODUCTION

This independent review of Ireland's agricultural strategy as set out in the Food Harvest 2020 document (referred to hereon as FH2020) has come about due to the author's desire, upon moving to Ireland, to better understand Irish agriculture. The reasons for reviewing FH2020 were, in part, the author's professional interests in agriculture and food sector strategy and, in part, the high profile that FH2020 has been given within the Irish agricultural industry. To quote Professor Alan Renwick from University College Dublin addressing the Joint Committee on Agriculture, Food and the Marine of the Houses of Oireachtas in October 2013, "Since I arrived in Ireland, barely a day has gone by without hearing about Food Harvest 2020 and the ambitious growth targets for Irish agriculture".

The author has a lengthy history in assessing farm and agri-food businesses, agri-food sectors and industry-wide strategies. From his beginnings within United Kingdom agriculture, he has travelled and worked in the agri-food industries of diverse countries from South-East Asia, the Central Asian Republics, the Levant, the Caucasus to Central and Eastern Europe. Frequently this has involved the analysis of both private businesses and industries and the identification of both short and long-term solutions for their ailments. Over the years the applications of those techniques needed for research, analysis and prognosis have become second nature to the author.

This report should be considered as a work in progress as the acquisition of knowledge and understanding how to apply it is not immediate. It also has to be tempered by, and integrated with, local knowledge. There is, however, an advantage in being an outsider; often simply because it allows one to see *the wood for the trees*, to recognize the *hoary old chestnuts* for what they are, and to spot those *riding upon their hobby horses*. Fresh perspectives can lead to the stimulation of ideas and alternative approaches and it is for this reason that this review has been written. In doing so the author hopes that it will encourage further consideration of the overall strategic direction of Irish agriculture as it pertains to achieving some of the primary targets designated within FH2020.

As an agricultural management specialist, the author has a diverse knowledge of the many diverse subjects that impinge upon a farming business. These range from animal and plant sciences, through agricultural husbandry, to economics and accounting, marketing and the food supply chains. Interestingly, much of his last decade has been focused upon a location that will eventually become, like Ireland, a major European Union grass and forage-based agricultural region producing high-quality, natural food products. As a consequence, the author has spent many years focusing on how to develop 'grass-fed' cattle, sheep and, not least, water-buffalo farming and, specifically, how to regenerate these sectors through linking them, via dedicated supply chains, to the final consumer.

The emphasis of this review focuses on the dairy sector. Dairying is, however, inexorably linked to the beef sector through the provision of calves and, as a grass-based farming sector competing for limited resources, to both beef and lamb production. Hence, reference to the other ruminant livestock sectors will, on occasions, be made.

The author would also like to emphasise that this review is a discussion document and it does not seek to provide definitive answers; not least because the setting of a strategic direction requires more detailed analysis. In fact, the review probably asks more questions than it offers answers but, in doing so, the author hopes that it may trigger thoughts for those who are making decisions relating to the future of their farming and food businesses. It does, however, include a few specific recommendations where the author feels that making them is warranted.

Please note that this is not an academic paper. Hence the author has not included an extensive list of references at the end. Each should, however, be traceable from the sourcing information provided in the main body of text.

4. THE FH2020 STRATEGY PAPER

The starting point for this review of the Food Harvest 2020 strategy was to appraise the vision that it presents and the targets that it has established for the agri-food industry. The section is then completed with a critic of FH2020 as a strategy paper and whether it has addressed the necessary issues in an appropriate fashion.

4a. THE FH2020 VISION

To ensure that this review is in-line with the vision that has been put forward by the authors of Food Harvest 2020, the following overview of the FH2020 vision is principally derived from quotations from the FH2020 document.

IRELAND AS A PRODUCER OF GREEN, NATURAL, HIGH-QUALITY PRODUCE

The FH2020 vision provides numerous statements that suggests that there is a clear and unequivocal vision for the future of Ireland's agri-food industry; that is as a producer of green, natural, high-quality produce. To quote:

- ♣ "the opportunity [exists] for the Irish agri-food industry to grow and prosper sustainably through the delivery of high-quality, safe and naturally-based produce" (FH2020, pg3)
- ♣ "the Food Harvest 2020 vision is for an Irish food and drink industry that is innovative, efficient and a global leader in environmentally-sustainable production" (FH2020, pg22)
- ♣ "Ireland can become synonymous with the production of environmentally-sustainable and [animal-] welfare-friendly products" (FH2020, pg5), and "Ireland's extensive, low-input, grass-based, production systems are the foundations of its green credentials" (FH2020, pg5)
- ♣ "It envisages a sector that can reap considerable rewards if it works and acts 'smartly' so as to make the most productive use of Ireland's rich, natural, 'green' resources in a way that is both economically viable and sustainable in the future" (FH2020, pg4)

There is also a clear understanding that to deliver upon the above vision "A sustainable agricultural sector requires that the highest possible returns are secured for the high-quality food produced" (FH2020, pg3). And that this requires that agricultural production, processing and marketing has to be clearly linked to the market place.

- ♣ The Irish agri-food industry "must also focus... on the opportunity presented by consumers who demand the highest quality in production and environmental standards, expect clear visibility on sustainability issues and, crucially, are willing to pay a premium for this" (FH2020, pg3)
- ♣ "[The] food industry [has to have] better alignment with environmentally-conscious consumers [and meet] growing consumer demand for products that are produced and branded ethically" (FH2020, pg5)
- ♣ "in the more mature EU and US markets, consumer will increasingly seek out and pay a premium for foods with clear and credible health, wellness and sustainability attributes. The opportunities for naturally produced Irish food and drink are considerable" (FH2020, pg6)
- ♣ "Ireland's historic association with the colour green is linked to our unspoilt agricultural landscape and our temperate climate... [it is] a natural marketing opportunity for Irish agri-food to build on" (FH2020, pg5)
- ♣ so "the Irish agri-food industry needs to find "new ways to assert Ireland's environmentally-friendly credentials to target the premium end of the of the market with high-value products" (FH2020, pg6).

FH2020 also shows a clear awareness that the agri-food industry has a broader role to play in terms of its position as the manager of Ireland's rural landscapes [that should enhance its green credentials]; thus

- ♣ "[Ireland's] primary producers [have an] enhanced market position [derived] from Ireland's natural resources [whilst they also have a] valuable role as guardians of the rural environment" (FH2020, pg5), and
- ♣ the green image of Ireland's agriculture and food sectors will create "wider tourism benefits" (FH2020, pg5) and "Brand Ireland" could link Ireland's role as a natural food producer with its obvious attraction as a tourist destination" (FH2020, pg6).

All the above statements show that those who prepared FH2020 had a strong grasp of the concept of Ireland as a globally-recognized producer of high-quality, natural foods that have characteristics that appeal to a significant number of modern food consumers. It is also recognised that these foods need to be premium-priced products so that they can offer a sufficient return to the producer; thus making the industry viable into the long-term.

IRELAND AS A MAJOR PLAYER IN THE GLOBAL DAIRY MARKET

As well as being an industry that produces green, natural products, FH2020 also sees Ireland as a major player in the global dairy markets and a food supplier to an expanding global population.

- ♣ "Globally... increased food production is needed to support a growing World population" (FH2020, pg12)
- ♣ "From an Irish perspective, more positive market prospects in the medium to long term are based on increased global demand for dairy products, a growing shortfall in EU beef supply, economic development and population growth in developing countries and, within the EU and the USA, the specific demands of an ageing and affluent population" (FH2020, pg13)
- ♣ "In the years to 2020, an increase in demand for food must inevitably follow surging population growth... In tandem with this rapid economic development in such countries as Brazil, Russia, India and China, is creating sophisticated new consumer audiences who demand new and diverse food solutions" (FH2020, pg6)

Further, by supplying the global market "the agri-food and fisheries sector... is widely recognised as having a key role to play in Ireland's export-led recovery... The vision of this [FH2020 strategy paper] is to increase the export value to €12 billion [from €7 billion] by 2020" (FH2020, pg11). This will, however, require certain changes:

- ♣ "[Primary] producers must look at using new and emerging systems of sustainable production, while recognising that increasing economies of scale and production efficiency are central to reducing cost. At industry level, consolidation is needed if companies are to compete with the major players that currently dominate global markets" (FH2020, pg6)
- ♣ "Sustainable growth will... depend on addressing [the] fragmentation [of primary producers], consolidation at [the] processing level, engaging in new product development, and coordinated and resourced marketing campaigns, including those under an umbrella brand for Ireland", (FH2020 pg7)
- ♣ "the vision in [FH2020] is of a dynamic, consumer-responsive sector, which can achieve sustainable growth despite the continuing challenges of volatility in input costs and World food prices, (FH2020 pg7)
- ♣ "investment... has allowed Irish companies to build up wide-ranging expertise [in ingredients, infant formula and other functional and prepared consumer foods ... [this is] a springboard for a future strategy of innovation and differentiation by Ireland's large, dynamic... food companies" (FH2020, pg11).

SHARING THE BENEFITS FROM IRELAND'S AGRI-FOOD INDUSTRY

The FH2020 document shows an awareness of the importance of agriculture and food production to rural Ireland. It is an importance that is not just limited to a few geographic zones but nationwide. To quote:

- ♣ "The geographical distribution of the agri-food and fisheries sector is highly significant in any assessment of its future wealth and employment generation potential, as it plays a particularly important role in the socio-economic fabric of rural and coastal communities" (FH2020, pg11)
- ♣ "The role of farming [is to provide] a robust platform for the future development of rural Ireland that is economically viable, socially inclusive and environmentally sustainable" (FH2020, pg11)

The quotations reiterate the importance of social inclusion which, presumably, means that the benefits derived from food production need to be disseminated throughout rural society so as to ensure that it is sustainable.

FH2020 also stresses the importance of both investing in the agri-food sectors and innovating new products to ensure that Ireland maintains a competitive edge within its markets. It also stresses the need to grow the industry to increase incomes to farmers, to supply-chain entities and to improve the national trade balance.

- ♣ "Through investment and innovation, meat and dairy, Ireland's traditional leading export sectors have been strengthened and safeguarded" (FH2020, pg11). "Research, creativity and innovation... is fundamental to growing [the] high-value exports... [that are] fundamental to ensuring [that] the industry generates increased employment opportunities in processing and production, improved income stability and secures reasonable returns for primary producers and business" (FH2020, pg6)
- ♣ Growth will "increase the value of primary output in the agricultural and fisheries sector by €1.5 billion by 2020 [and] increase value-added output by €3 billion by 2020" (FH2020, pg9)

The FH2020 strategy does not limit its vision to just agriculture and food; it also shows a clear awareness that there is a link between agri-food and the role it plays, or can play, in promotion of rural Ireland itself. Thus; "The potential for Irish agriculture... to create employment must extend beyond the strict definition of 'food production' to incorporate cultural products linked to the environment and tourism... An integrated agri-food-tourism strategy has the potential to serve a growing demographic of tourists interested in authentic, culinary experiences" (FH2020, pg12). Often one of the best 'ambassadors' for a region is its food products.

INITIAL COMMENTS UPON THE AGRI-FOOD INDUSTRY VISION

Although the author has summarised what appears to be a comprehensive vision for Ireland's agri-food industry, there is still the issue of how it is 'translated' by those within the industry. What actual signals is it sending out?

One immediate concern is that FH2020 overplays the strength of the 'robust platform for the future development'. It is in sharp contradiction to the graph illustrated on page 11. The graph shows how few family farms are considered economically viable [after direct payments] across all sectors. It is not a robust platform. It is at this point that FH2020 moves onto talk "about increasing scale, improved productivity and market orientation are essential" (FH2020 pg11). All are necessary [in theory], but is this translating to a reduction in businesses, the mechanisation of farms and a consolidated, centralised processing industry? Moves which will probably reduce rural employment opportunities and, hence, have consequences for the communities of rural Ireland.

The above is just one conflict that arises out of an analysis of FH2020 and this review of industry reaction to-date to the messages that FH2020 sends out. The wider variety of conflicts will be discussed further in a Chapter 5.

4b. THE FH2020 TARGETS

It is a simple fact that, however strongly a government may wish to influence the direction of an industry through the publication of targets, the final direction will ultimately be determined by the amalgam of decisions made by the individual decision makers; the farmers. This in itself is an important message for downstream players; the targets within FH2020 are not yet *de facto* achievements and should, as such, be treated with caution.

The latter is a point that is reinforced by a quote from the Irish Farmers' Journal of 4th January 2014, "somewhat surprisingly, given the April 2015 abolition of milk quotas, just 5.8% or one in 20 of suckler farmers surveyed by the Irish Farmers Journal are considering converting to dairy farming". Given the resource needs of the switch, not to mention the lifestyle change involved, should this be such a surprise? Maybe the 'surprise' is more due to an excessive emphasis being placed upon FH2020 and there being too much 'noise' within the industry's press about the FH2020 targets. At times it appears that achieving the 50% expansion targeted in FH2020 is inevitable. Is it?

THE FH2020 TARGETS RATIONAL

As will be seen from later chapters, the FH2020 strategy has a slightly different emphasis from earlier agri-food sector strategy documents. Whereas earlier strategies emphasised the need for the industry to move away from producing commodities and towards creating and selling differentiated products, FH2020 appears to place more emphasis on developing greater operational scale across the Irish dairy industry so as to make it more competitive on global markets. The emphasis is about moving from commodities towards 'premiumised' commodities.

A number of factors can explain this apparent change in emphasis; including the following.

♣ As a reaction to the national-indebtedness consequences of the economic crisis

As a legacy of the economic crisis, the agri-food industry has returned to being centre-stage in terms of the nation's economy. It is seen as an important earner of foreign exchange in a country that is dealing with the indebtedness resulting from its property development / financial sector created economic crisis. It appears to now be about the rapid expansion of export earnings and less about the long-term welfare of the industry.

♣ The ending of the European Union's milk quota regime after thirty years

Coupled with the above export-drive is the 'once-in-a-generation' opportunity to expand milk production due to the demise of milk quotas. True, there has not been the freedom to expand milk production nationally since the early 1980s. The system has also limited the ability of individual farmers to expand [although when looking at the growth in herd sizes in the UK and Denmark this may have been a reflection on national implementation rather than quotas *per se*]. It is also not a once-in-a-generation, must-take opportunity; it is only the start of a new era when farmers will have more flexibility over the control of their businesses.

♣ Global market growth due to population rise and the demands from China

It is probably an understatement to say that there is considerable excitement over a couple of global dairy market issues. Two factors have 'kicked in' over the last few years; the apparent inexorable rise in global population and the development of China. Although one could immediately add a couple of caveats. The global population awareness is in part due to the surge in food prices around 2008 although that was, in part, caused by biofuels policy [cereal production now looks to be responding and prices are falling back from their peak]. And China's rise has not just been due to economic development but also due to the infant-formula, melamine-contamination food scare. It appears that all potential 'global' suppliers are reacting to these stimuli so, at times, the degree of excitement caused across the industry comes across as boundless.

THE FH2020 TARGETS SUMMARISED

Although this review is predominately about the dairy sector, mention has to be made to both the beef and sheep sectors as they 'compete' for grazing and forage. Likewise pigs compete for produce from Ireland's limited tillage area. To an extent, dairy may also compete with tillage for land for new greenfield-site dairy farms. Hence, the following summarise the FH2020 targets across all sectors including the downstream processing sector.

- ♣ With respect to the dairy sector; "On the basis of available data the Committee believes that a target of a 50 per cent increase in milk production by 2020 (using the average of the years 2007 to 2009 as a baseline) would be realistic and achievable, and that this will set the foundation for further expansion in subsequent years. This 2.75 billion litre increase would enhance the primary output value of the sector by about €700 million with further downstream benefits in the form of increased dairy product values, export earnings and employment. The report recommendations are designed to support the realisation of this potential growth and to provide a sustainable return for competitive producers and processors" (FH2020, pg41).
- ♣ With respect to beef production; "On the basis of available data the Committee believes that a growth of 20% in the output value of the sector is achievable by 2020 (using the average of the years 2007 to 2009 as a baseline)" FH2020 also notes that "an important spin-off of the significant growth expected in the dairy sector will be an increased supply of calves for rearing and finishing" (all FH2020, pg38). "Opportunities to adding value in Ireland, including through young bull beef and rose veal production should be considered in more depth [as by] finishing these younger cattle at home the possibility exists to add value" (FH2020, pg37).
- ♣ For sheep production the objective is to have a growth in output value of 20% is achievable by 2020.
- ♣ For pigmeat production the Committee states that a "target of 50% growth in the value of output by 2020 (using the average of the years 2007 to 2009 as a baseline) may be achievable. This would primarily be on the basis of improved sow productivity and a significant increase in the size of national sow herd (FH2020, pg48).

One should be in no doubt that *growth* is the over-riding objective of FH2020; the word appears no less than 65 times in the document. Apart from the targets for agricultural production set above there are clear targets for the export of agri-food sector produce. To quote, "On the basis of available data the Committee believes that, working from a 2008 baseline, that growth of 40% in the added value output of the food and beverage sector is achievable by 2020" (FH2020, pg34). A major driver behind the expansion targets of FH2020 is export growth and the figure most often used is that the target is to increase exports from the agri-food sector to €12 billion by 2020.

What is less implicit within FH2020 is how the additional agricultural production is going to be achieved. For instance, is the 50% milk production going to be achieved by increasing the size of the national dairy herd or seeing an increase yield [in terms of milk solids or just milk yields *per se*] per cow? Reading anecdotal reports would suggest that a lot is expected from increased cow numbers and that is what will be required if Ireland is going to keep focused on its much promoted grass-fed systems. In such a key document one would, however, expected to see such a massive target defined according to the results of developed-for-the-purpose models. It would have been informative to know that the dairy herd and/or milk yields were expected to rise by so much.

For the reader's information, the 50% increase in milk production equates to an increase of around 2.7 billion litres per year. If the increase is to come equally from an increase in yield and increase in herd size, both will have to rise by about 22.5%. Yields will then average 6,000 litres per cow and the herd will increase by 250,000 cows. If, however, the emphasis is going to be on grass-fed systems, will increasing the national average to 6,000 litres be possible without significantly increasing the use of [imported] concentrate feeds? If the average yields rise to only 5,500 litres, the dairy herd will have to increase by about 380,000 cows or nearly 35%. Clearly that this will also have implication for the beef sector if it is to finish the additional calves, be it as veal, bulls, steers or heifers.

4c. FH2020 AS A STRATEGY

At present there appears to be a preference for an all-inclusive approach to developing national agricultural / agri-food strategies. With the recent CAP reform round the consultation process was extensive [but the conclusion left many of the consulted unhappy as national interests eventually took precedence]. Elsewhere the national strategies have been determined by committee and FH2020 is one of the committee-prepared documents.

From the outside it appears that FH2020 was finalised with the inclusion of the standpoints of all. Maybe such was required to reach a consensus but, if so, it has left a document that contains a variety of conflicting aims. As a consequence, the author considers FH2020 to be a *'we can have our cake and eat it'* strategy; although it may be more fitting to use the Chinese proverb *'to want a horse that both runs fast and consumes no feed'* or the Portuguese one, *'we want the sun to shine on the threshing floor whilst it also rains on the turnip field'*.

What appears common with the committee-of-notables approach is that their experience substitutes for options analysis. The author's approach would be for a small team to (i) outline the alternatives, (ii) obtain a consensus as to the most likely viable possibilities, (iii) undertake technical, resource, market, economic and risk analysis of the options and, (iv) present the results to a committee of the ultimate decision makers. In this way a more informed discussion can be had and 'conflicts' (as highlighted in the following chapter) can be addressed.

THE STRATEGIC TIME-FRAME

This review of the FH2020 strategy will start with a question. Does the very focus on the year 2020 place too short a time-frame upon a vision that should direct national agri-food strategy? The author would suggest that it does.

The author's rationale for the above conclusion is that primary agriculture [at least as practiced in Ireland] is a multi-generational industry that is predominately under-pinned by the family farm. It is also the industry that provides the economic foundation stones for communities across rural Ireland. Investment in agriculture, both on the farm and in the industry's research and development subdivision, is also long to very long-term in nature.

This point is clearly noted in the FH2020 document as it states, "the geographic distribution of the agri-food and fisheries sector is highly significant [and its wealth and employment generation potential]... plays a particularly important role in the socio-economic fabric of rural and coastal communities" (FH2020). In the author's opinion this should be the fundamental driver behind any vision and strategy for the Irish agricultural and food industry.

The financial sustainability of the primary producer is ***simply the single most critical issue*** for agriculture and [one would think it was logical] for any downstream food-supply-chain anchored by it. Likewise, it is the critical factor in ensuring the long-term demographic sustainability of farming-based rural communities. This is acknowledged at the earliest stage of FH2020 thus; "for farmers..., the disparity between the cost of production and the remuneration is a critical issue for ongoing viability" (FH2020), but the author would ask whether this point is made strongly enough or given sufficient weight throughout the development of the FH2020 strategy?

Further the author would add that agriculture has a very long-term role in the preservation of rural landscapes and the natural environment. This is recognized thus; "the role of farming in the stewardship of the natural landscape... provides a robust platform for the future development of [a] rural Ireland that is economically viable, socially inclusive and environmentally sustainable" (FH2020). It is also recognized that there is a "link [between] Ireland's role as a natural food producer [and] its obvious attraction as a tourist destination" (FH2020). Hence, would many argue against [in this context] family-scale farms being crucial? The time-frame should reflect this.

BUILDING UPON SOLID FOUNDATIONS?

To cite the view of Catherine Lascurettes, executive secretary of the National Dairy and Liquid Milk Committee of the Irish Farmers' Association as reported in the Farmers' Guardian in the UK (25/01/2103); "there are a lot of difficulties to overcome too [in Ireland]. Twinned with the huge investments necessary there are challenges over Ireland's notoriously seasonal supply curve, its farmer's access to credit [which is worse in Ireland than the UK], land prices and availability, farm fragmentation, business expansion skills [and] variations in efficiency levels".

It is interesting that in such a situation there is such a determination towards expansion in FH2020. Of particular note is the mention of "Ireland's notoriously seasonal supply curve" as it is an issue that has long been highlighted. It is also well recognized as being a significant inhibitor of product development. It is, *de facto*, reflected in the historic product portfolio of Ireland; butter, hard cheeses and milk powders. It is a supply-driven portfolio and one largely driven by Ireland's small domestic market and the need for low-moisture content dairy products for export. The situation where summer milk has to be 'stored' via its processing also means that the Irish dairy farmer is often not involved in a supply-chain that supplies a retail consumer with a higher-value product.

On reading FH2020 one has the impression that there is less emphasis on addressing the issue of seasonality [and its constraints on product development] than in previous strategy papers. In perusing the farming press one also sees a situation whereby the exemplars of new farming systems are actually accepting seasonality, entrenching it and focusing on increased scale. It has become about producing more milk solids off grass and ceasing production altogether in mid-winter. This effectively says that the future lies with the production of commodities derived from seasonal milk solids and building upon what in the past has been seen as a weakness.

To an extent one can understand this because of the [reported] decline in viability of all-year-around liquid milk sales due to the rising dominance of own-brand supermarket milk and [hence] lower processing margins for those who are involved in supplying the domestic liquid milk market. Nevertheless is this negative reason a positive with respect to switching emphasis to what has previously been regarded as a weakness?

Another point mentioned is "land... availability [and] farm fragmentation". From what the author can ascertain, this is not going to change anytime soon. The need for government support to help land consolidation has been highlighted in FH2020 but is it going to make a dramatic difference? It may help with encouraging leasing and the transfer of land between owners and farmers, but will it have a real impact on farm fragmentation and, especially the size of milking platforms? And is the latter not essential to compete with the benchmark New Zealanders?

Many of the above will be discussed further later, but one is left with impression that the FH2020 strategy has as its foundations the same unresolved weaknesses that have plagued Ireland's dairy industry for generations. Too often it appears that the current excitement over global population growth and China's emergence has been used as a reason to accept the argument that Ireland can become a global player on the dairy commodities market and to do so it only has to up-scale its dairy farms, consolidate its processing capacity and produce cheap milk solids from grass. And all this can be realised whilst ignoring some of the fundamental issues facing the dairy industry.

ANALYZING THE STRATEGIC OPTIONS

FH2020 has clearly set out some ambitious expansion plans for the Irish agri-food industry and especially its dairy sector. It is also sending some clear signals to the milk-processing sector that it must consolidate and it **must** expand to process whatever increased supply that the farmer chooses to offer it. The farmers are told that they need to expand, to buy, sell or lease land and also to adopt more sustainable systems. And all of this because there is a perception that the global foods markets will both demand the industry's produce and pay an attractive and rewarding price to those who invest in delivering upon the objectives of FH2020.

With such demanding targets being set by the FH2020 Committee, would one be justified in asking for supporting evidence to validate the targets set and that there is sound rational behind them? Markets have been identified and recommended to the industry, but will supplying them be profitable? Later in this review the author mentions four different possible routes to market. They are supply-chains that link the Irish farmer to the consumer. There are almost certainly more than four, but has even one of these been dissected and analysed? Can anyone clearly state that using a particular route-to-market will deliver an ex-farm price of 'x' or 'y'? Can anyone provide evidence of the likely price variance that may be expected so the downside risks can be analysed?

It is been interesting to investigate the ownership of the milk processing sector; particularly in light of the calls for the sector to consolidate. A major justification for the consolidation call is that Ireland's three 'export-focused' benchmarks (New Zealand, the Netherlands and Denmark) have highly consolidated processing and marketing sectors [as represented by Fonterra, Friesland-Campina and Arla Foods respectively].

All three of the above are farmer-owned co-operatives {Fonterra also has outside investors} and they all have clear remits to deliver rewards to their dairy farming members. Ireland has several co-operative milk processors and also farmer-controlled co-operatives that own shares within the two major public limited companies that are also very significant players in the milk-processing sector. The picture is now further complicated by the presence of new joint-venture between a co-operative [that is *returning to milk processing*] and one of the two plc's. It is a subject that will be returned to later, but the author does question whether the actual ownership of Irish milk-processing will actually allow consolidation to happen; at least within a farmer-orientated, co-operative structure.

If there had been a thorough analysis of the routes to market it is likely that the consolidate-the-milk-processing objective would have been tempered by the recognition that the turning the clock back to re-establish direct farmer control within a co-operative structure was going to be difficult to nigh on impossible. Although FH2020 is not explicit in saying that a co-operative structure is desirable, it is certainly still the aim of some in the industry.

What percentage of Irish milk was, at the time when FH2020 was being prepared, was processed by Glanbia plc? Although the plc was more than 50% owned by the Glanbia Co-operative Society, subsequent events have shown that it was not willing to directly sign up to processing all of the Society's post-quota expansion milk. The result was the formation of a joint venture that is 60% owned by the Co-op, but it still has strong ownership and operational ties with the plc. Given the success [judging by its share price] of the plc in recent years, is it likely that it or the JV will be too enthusiastic to become involved in a pan-Irish, consolidated milk-processing initiative?

Hence if the Glanbia plc and JV milk is unavailable for consolidation within a wide-ranging, milk-controlling, co-operative structure a significant proportion of Irish milk is lost to any such future entity. It should be noted that some such national structure [a Central Processing Co-ordinator] was proposed in *The Irish Dairy Industry - Decision time is now* strategy paper prepared for the IFA in 2009. Even back then, with the rise of the plc's was it a feasible concept? Thus, if there is little possibility of a co-operative controlled consolidation in anyway akin to those operating in the three benchmark countries, where does that leave the routes-to-market for FH2020-inspired expansion milk? They remain disjointed and awaiting 'natural' free-market evolution; something that may well accelerate with the end of quotas. Hence, is this a stable environment for dairy farmers to expand into?

A significant advantage for the three benchmarks listed above is that they have vertically-integrated structures that effectively link farm to processor to sales. As such they are well placed to analyse markets, the processing needs to supply those markets, and the likely financial implications for their farmers. Essentially, it provides an informed environment in which markets can be targeted and in which processing and on-farm investments can be made. It is a situation in which Ireland does not find itself. Instead there appears to be supposition about markets, FH2020 and others providing 'directives' about what the processing sector must do, and farmers being told that they have to invest to expand to provide the milk to allow Ireland to be competitive on a global stage. These are very significant strategic issues for all concerned, but just where is the necessary supporting analysis?

On the one side there are the routes to market and their supply chains. On the other side there is the farming. The author is aware of some of the significant amount of work undertaken by Teagasc on farming systems and identifying what are the most profitable approaches. There appears to be a broad consensus that grass-fed is the most cost-effective and profitable way to farm livestock in Ireland. There is also a widespread belief [shared by the author] that grass-fed is a very important market differentiator for Irish produce. What, however, is not clear is the extent to which being grass-fed will constrain overall production potential for both milk and beef. Cereal-fed is used around the world to increase milk-yields and growth rates beyond what can be achieved with grass alone and if there use is to be excluded [or limited to a percentage of a 'grass-fed diet'], there must ultimately be a point whereby being grass-fed will limit the potential to expand Irish livestock production. But where is the limit?

Ideally the overall milk expansion targets should be based upon farm-systems models that link soil-type, rainfall and location to potential production. This should then be tempered by a risk assessment and, hence, how much of that potential can be realistically utilized. The analysis of different farming systems should then identify those systems that are most likely to be the rational choices [based not only on economic outcomes but also an analysis of the capital required and farmers' objectives and perceptions of risk]. Only then would there be a clear picture of what the likely production will be and to what extent expansion is possible. This should then form the basis for a strategy; although even then one has to realise that in an industry with diverse ownership and control, there will be entities that choose to follow their own ways of doing business, regardless of any national policy.

The above would provide guidance with respect to what are realistic expansion targets. It would also provide guidance to processors with respect to likely milk supplies if farmers were offered different milk prices. The processors could then analyse their market options and to decide whether to supply a market with a particular product and at what price. They can also decide what to invest in processing capacity, marketing activities and securing milk supplies [in a free-market processors will need a budget to secure new supply contracts; something that will be seen in Ireland as the end of milk-quota approaches in 2015].. As said the structure of, for instance, Fonterra allows analysis and planning to take place in a vertically-integrated and more controlled environment. It is not a luxury that Ireland enjoys and, thus, the process is far more complicated. However, the strategic planning process still needs to be rigorously prepared if a national 'directive' as per FH2020 is going to ask an industry's participants to invest [without grant aid] heavily to deliver on the government's vision for the industry's future.

WHERE ARE THE RISK ASSESSMENTS?

An important component that seems to be missing from FH2020 is a thorough assessment of the risks associated with adopting different strategies. It is evident that the expansion message from FH2020 is being heard loud and clear in Ireland and that some will be listening and considering the FH2020 clarion call to invest and expand. It is, however, a message that is emanating from a desire to create an export-led recovery from an economic crisis created by the property developers and banks. It is almost an appeal to the nationalistic spirit of the agri-food industry to invest to support the nation's economic recovery. That is well and good, but if the government deems that it is its role to make such a call, it is likewise accepting an obligation to fully inform the agri-food industry of the possible consequences of responding. There are risks involved and these should also be communicated.

Assessing the potential risks associated with adopting a particular strategic route is a fundamental part of the development of a strategy as it provides information concerning where to best place the business or industry to meet the an adversity that may befall the business or industry. Minimizing risk [i.e. with respect to food security] has been a core part of agricultural strategy for centuries; even it has not been expressed in such terms. Potential adversity can come from different directions and the strategic planning needs to account for the consequences of the adversity should it happen and the likelihood of the adversity actually happening. To name a few of the risks:

- ♣ The **fodder crisis of 2012/13** illustrates what one hopes will be an extreme example of a weather-related risk. To an extent the consequences can be managed if the finance and alternatives sources of forages and feeds are available. But what would the implications be if 2012/13 was repeated with farms carrying another 250-375,000 cows and their young stock as per the needs of meeting the FH2020 expansion targets?
- ♣ **Food-safety scares** are not uncommon and the effects of, for example, the BSE crisis have been long felt. The contamination of infant formula is having a major impact on dairy markets and many market suppliers are reacting. China is also reacting by diversifying its supplies after another scare in New Zealand. Ireland should not consider itself immune from being directly or collaterally involved in another food scare. Hence, should strategy ensure a diversity of products and markets to mitigate the consequences of such happening?
- ♣ **Regional and national policies** can impact upon markets. Farmers have become well aware of the Common Agricultural Policy and its framework. Likewise the Irish and EU regulatory frameworks. But what impact will Chinese government regulations or investment initiatives have on Chinese-market opportunities? The Gulf region is seen as a market and Ireland is a significant player in the infant formula market. Therefore what will be the consequences of UAE legislation that makes it a baby's legal right to be naturally fed by its mother have on any exports of infant formula into the UEA? A market's 'political' risks can come in many guises.
- ♣ **Multi-national business decisions** can have a major impact upon those who supply them. Those running multi-nationals have a foot in several camps and a commitment to their shareholders. National needs are of less concern when locating activities or sourcing raw materials. Over-committing to a single route-to-market that includes a multi-national leaves suppliers exposed to the risk of the supply-chain 'partner' relocating.
- ♣ **An unstable milk processing environment** still exists within Ireland. At the time of writing it is still evolving and it is likely to continue to do so as milk quotas cease. The co-operative milk processors are being asked to expand to take more milk [both by their members and, indirectly, by FH2020] and this often means having to invest. The scale of investment being undertaken [so as to compete globally] obviously means that some are concerned over securing sufficient milk supplies to justify the investment. This will inevitably mean that there will be competition for milk suppliers and especially for those with scale. It already appears as if the informal 'Gentleman's agreement' over co-operative milk-catchment boundaries will be an early victim. This may benefit larger, expanding milk-producers but it will threaten smaller processors and, potentially, leave smaller-scale farmers [who may consider themselves viable] without a route to market for their milk.
- ♣ **Adopting a forced rather than natural evolution** has an inherent risk in itself as it means that an industry's participants are less able to watch and respond to how their market evolves. On creating a strongly expansion-focused vision for Ireland's agri-food industry, FH2020 has sought to influence [citing the national interest] the direction that the industry takes. FH2020 has sent out strong signals to the industry that, to the extent that it can, the Government will support those who wish to expand. These signals are, however, only an expectation of those that will over-time come out of the market place. They are, *de facto*, an attempt to *force the evolution* of the industry. Let us hope that the FH2020 market assumptions are correct.
- ♣ **Encouraging expansion by increasing debt** has an inherent risk. Whereas a debt-free, smaller business may not generate the same returns to capital, it may still deliver safer, long-term income streams. In the end borrowing-to-expand will be an individual business decision and the willingness of those in the industry to do so is the great unknown with regard to attaining the FH2020 expansionary targets.
- ♣ **Expanding when faced with environmental regulation** has its risks. GHG emissions are seen as a significant issue for the Irish livestock industry as emissions targets will have to be met. Will there be further regulation of farming activities as the industry expands? The need to find farming technologies and systems to limit emissions is highlighted in FH2020, but will they be delivered in a time-frame that allows the consequences of environmental regulation to be mitigated? Again, this provides for an uncertain investment environment.

5. THE PRIMARY CONSTRAINTS

As part of this review, the author decided it was necessary to look at what will be the major constraints acting upon agriculture [and hence food sector] when it comes to expanding production to meet the FH2020 targets.

♣ The national livestock 'platform'

Although there is work being done on increasing grass production, grazing management, grass quality and improving digestibility of grazing and forages and, hence, dietary intake [metabolizable energy] derived from grass; there has to be a finite limit on how much livestock production (in terms of milk and meat) can be produced from grass. There also has to be an economic limitation upon the same. Production can, of course, be increased by the use of non-grass-based concentrate feeds but at some point this will compromise any market-driven promotions of Irish agriculture being grass-fed. It will create the issue of 'imported' nutrients and, consequential, pollution risks. None of these limitations appear to have been fully defined in FH2020.

It should be noted that the total realistically-possible metabolizable energy from grass is an issue that goes beyond milk production as, to an extent [land quality and fragmentation allowing] beef cattle and sheep will be competing directly with dairy cattle for a limited resource; and especially so if the marketing approach [as highlighted] for Irish beef and lamb is that it is reared on a grass-fed only or predominantly grass-fed diet.

♣ Fragmentation of the milking platform

The issue of unchanging land ownership and limited access to expansion land [or new entrant land] is clearly a major one in Irish agriculture. It is topic that warrants frequent mention in FH2020 as illustrated on page 41; [it is necessary to] "Facilitate land exchange and [identify] alternative farm structures". Access to land for dairy farming around the milking parlour is also, at least in the context of a grazing-based system, a major constraint on production expansion. Many Irish farms are small in land area in comparison to other grass-fed dairy-farming like New Zealand. Worse they are also fragmented so as to reduce the actual area that can be effectively used by the milking herd. There is already anecdotal evidence that some expansion-minded dairy farmers are actively seeking out-lying land to graze the young-stock herd. It should also be noted that a policy of tight block-calving means that there is no dry-cow group; the herd is either all milking or all dry.

On reviewing FH2020 one does soon arrive at the question; was the issue of land fragmentation and its impact on limiting the size of a milking platform fully analysed before the 50% expansion target was set?

♣ Winter fodder and feed supplies

Although there is a risk of one being accused of being 'wise in hindsight'; just what is the livestock carrying capacity in terms of the industry's ability to preserve forage for winter? What is a realistic figure in terms of the land available, the vagaries of the climate, the resources available for forage preservation and the capital available for increasing capital investment and working capital tied up? And these figures need to be based on a realistic risk assessment of the situation. Given the seriousness of the fodder crisis over the winter of 2012/13 this should be an issue that is now to the fore-front. As it is such a recent experience, it will be being considered by the individual farmer and it is almost certainly 'colouring' their vision of the future.

Would it be surprising if farmers are not now reviewing their expansion plans in the light of that happened in the winter of 2012/13? What is surprising is that there does not appear to be a call to revise the targets in FH2020 based upon the fodder crisis experience. If it impacts upon the decision-making at the farm level, it will, in-turn, impact upon the volumes of milk [and meat] available for processing post 2015. Just how many milk processors who are planning to expand capacity based upon earlier indicated milk volumes from their members/suppliers have actually gone back to see if the fodder crisis has influenced their suppliers' plans?

♣ Seasonality of milk production

Many reports have highlighted the very seasonal production of milk in Ireland. It has also been given as a major reason for the emphasis that Ireland has had on the low-moisture content, storable dairy products; butter, hard cheese and milk powder. In moving towards an expansion-orientated strategy focused on the supply of 'premiumised' [commodity] products onto the global markets, it appears that FH2020 has shifted away from concerns over seasonality by deducing that producing milk solids is a more important objective than having a seasonally-balanced milk supply suited to producing a wider diversity of dairy products. By so doing it will have minimized the impact of seasonality whilst also allowing the utilisation of compact-spring-only calving to maximise production from grazed grass; albeit with zero milk production in mid-winter.

As a result of seasonality, milk-processing capacity is only being 60% but that seemed to be an accepted consequence of pursuing a highly-seasonal, milk-production model. It is interesting to note that FH2020 says that the milk-processing industry needs to "investigate efficient solutions to the processing of milk during the period of peak seasonal milk supply" (FH2020, pg42); thus it appears to be effectively accepting that the highly seasonal supply is embedded and the industry has to move forward with such an approach.

As stated, the seasonality of milk production limits the product options for the industry but it may be that the seasonal model is the best for expanding milk production itself by 50% [and thereon post 2020]. Will, however, the farming model constrain the milk-processing industry to the production of lower-value [even if they are 'premiumised'] commodities? Hence, will the grass-fed and highly-seasonal model also constrain the industry's ability to develop new and higher-value dairy products? If so, will it, therefore, also inhibit the industry's ability to add-value and, hence, to pay better prices to the primary milk producer?

♣ Greenhouse gas (GHG) emission targets

There is clearly concern over meeting national obligations with respect to GHG emissions and sustainability, in terms of energy and emissions, features in FH2020. It is also recognized that GHG emissions are of greater concern in Ireland relative to other countries because agriculture, given its economic importance, makes a disproportionate contribution to GHG's in comparison to other countries. Whereas the development and use of technologies and farming systems to limit emissions is mentioned in FH2020, less is said about whether meeting GHG emission targets is going to be an actual limiting factor in terms of agricultural production.

To quote directly from FH2020, "Research must continue into strategies to reduce GHG emissions in the sector... This research should include efforts to identify new technology-based mitigation strategies, efforts to improve all GHG-related herd management parameters (breeding, fertility, nutrition, etc.) and efforts to improve quantification of all emissions and mitigation efforts (FH2020, pg43).

♣ Access to capital for expansion

Post the economic crash, a major constraint in Ireland is access to investment capital. Just how great will this constraint be when it comes to expanding milk production by 50%? One has read comments stating that the banks have to lend to agriculture but, ultimately, they will on the basis of how they see the industry and how they see the merits of each individual client's business [ultimately the 50% expansion has to come from probably 10,000 or more individual farm businesses both wanting to, and being able to, finance expansion]. To cite, Catherine Lascurettes of the IFA (as reported in the Farmers Guardian in January 2013), "farmers would have to invest £1.5billion [€1.75billion] on their farms to deliver that 50% increase [and that] farmer's access to credit is worse in Ireland than the UK". It is not a promising starting point from which to expand.

Further, to quote directly from FH2020; [to fund the necessary expansion in milk processing the] "indicative costings are believed to be in the region of €400m [and] the industry at all levels must engage on alternative options for financing the expansion (FH2020, pg42). At all levels capital is required, although, as one would expect, the real burden will fall on the individual farmer and not the processing industry. It will also be a double burden where farmers are also expected to finance their co-operatives processing investments.

♣ Investing into an unknown and changing environment

Whilst accepting that there is a depth of technical support available to the farming community through the national advisory service, one would not be totally surprised if the farming community was still a little unsure of what systems to employ when it comes to expanding their enterprises. The following is an extract from Brendan Horan and Pdraig French of Teagasc writing in 2012 on the Update on the Greenfield Dairy Programme. In a way it is quite clear in telling dairy farmers what they must do. "The mind set and approach to milk production on Irish dairy farms must change after milk quotas are removed.... Every dairy farm business must use the intervening years to quota abolition [in 2015] to develop their farming operations in a manner consistent with the requirements of a vibrant and expanding industry for the future".

Just how realistic is it to expect farmers to make the *decreed necessary* major changes? The fact that the Greenfield project has been established to demonstrate new systems would in itself suggest that caution is to be expected with the adoption of the systems simply because they are still *demonstrations*. One also gets the impression that there is still some farming systems experimentation occurring [especially with respect to working within the environmental regulatory framework] and that will also create further uncertainty.

♣ The conservative nature of farmers

One should not under-estimate the cautious nature of farmers. For them farming is first about ensuring a continuance of income for themselves and, ideally, successive generations. Expansion itself will be perceived differently by different farmers; especially where it means taking on more capital investment, more labour and, particularly, more borrowing. In some ways it is very easy to make a statement like "If the necessary [expansion] steps, at individual and State level, are not taken to improve scale and to increase profitability, the future of the sector will be jeopardised" (FH2020, pg18). In contrast, the individual farmer, on analysing the options for the farm business may, quite rationally, actually come up with the opposite conclusion.

It may also be worth considering the impacts of the, still recent, property boom and bust on the attitude of the farming community when it comes to investment and, especially, borrowing to invest. Broad-brush, *you must invest-to-expand-to-survive* messages from 'on high' may just be met with a degree of scepticism. This, in turn, might be a greater constraint on investment and expansion than might otherwise be imagined.

♣ Farming may be a part-time activity

FH2020 states that "The need for restructuring at farm level is self-evident from the data from the National Farm Survey which identifies a lack of profitability as a major issue for the majority of Irish farms" (FH2020, pg18). There appears to be an assumption that many beef farmers will convert to dairy production after milk quotas are removed in 2015. But does this assumption fully consider the lifestyle change involved in the transition? Beef or sheep enterprises may well be a part-time activity fitted in around off-farm employment and the importance of the alternative income source may be such that switching to a more labour-intensive, dairying enterprise may be illogical. Given the 'survival' of so many apparently non-profitable beef and sheep farms in Ireland, are there inherent constraints that will stop them switching to what may be perceived as more profitable dairying? It may be that beef and sheep farming is actually most sustainable when integrated with other income sources; whereas switching to a 'consolidated', specialist, sole income-earning activity might be negative and/or perceived as riskier. Also, is a farmer with years of low-profit beef farming going to even have access to the capital required to invest in what is usually a higher-cost farming activity?

The survival of beef and sheep farms may actually be more about ensuring that there is a diversity of rural employment to provide additional off-farm income than "restructuring" [which appears to mean expanding]. In this situation there is, therefore, a concern created by the non-stop focus on consolidating the processing sector. As will be discussed elsewhere, large-scale, consolidated processing usually means centralisation and automation. The rational is large-scale, low cost and minimal labour. Hence, consolidated processing means taking more raw materials from the agricultural sector and using less people to process it in only a handful of locations. In essence, the *global model* is in contradiction to the wider rural community objectives of FH2020.

6. THE FH2020 CONFLICTS

It is the author's considered opinion that there are a number of contradictory objectives set within the FH2020 strategy. This was alluded to earlier with the mention of the Chinese proverb 'to want a horse that both runs fast and consumes no feed'. Upon review, it is evident that the contradictions are not all incorporated within FH2020 directly; they are the result of how the wider industry [and its commentators] has chosen to interpret the FH2020 objectives [and FH2020 is repeatedly used as evidence that a viewpoint is the appropriate one]. One should also note that the numerous factors that influence the industry change [for example the climate or the markets] and these changes will have had an influence that may not have been predictable when FH2020 was formulated. The industry would have reacted [or still be reacting] to these factors whilst also listening to the FH2020 message.

6a. MARKET OR SUPPLY DRIVEN

The following quotes are extracted from the three ruminant-livestock farming sector FH2020 recommendations:

- ♣ "In order to remain competitive, the Industry should ensure that processing capacity in the beef sector matches producer output. This should be a guiding objective both for any State intervention in the sector and for industry participants", (from the beef sector recommendation, FH2020, pg40)
- ♣ "The processing sector must ensure that processing capacity meets the expected increased milk supply post quotas", (from the dairy sector recommendations, FH2020, pg42)
- ♣ "In order to remain competitive, the Industry should ensure that processing capacity in the sheepmeat sector matches producer output. This should be a guiding objective both for any State intervention in the sector and for industry participants", (from the sheep sector recommendation, FH2020, pg44)

On reading the above, one could be forgiven for concluding that the FH2020 is, for all its use of market-responsive terminology, a supply-driven strategy. A fundamental recommendation is that downstream supply-chain partners must ensure that they invest to process **whatever** the upstream primary producer produces.

The above does contradict many statements and other recommendations within FH2020; for example, [acquiring an] "in-depth knowledge and understanding of consumer preferences and trends will help agri-food and fisheries businesses better predict and prepare for their future opportunities (FH2020, pg29).

It is possible that the initial three statements were as a result of a compromise position reached when agreeing the FH2020 strategy. It is not difficult to envisage a situation where the farmer representatives involved were adamant [rightfully so] that if the strategy was to **demand** that farmers were to expand, that a similar demand should be made of those downstream. It is interesting to note how it has played out in reality in the dairy sector.

A characteristic of the milk-processing sector is that a significant proportion is made up of farmer-owned co-operatives. The consequences of this are that "in keeping with its co-operative ethos', Dairygold added, it has committed to accepting all the milk its members will produce" (Dairygold cited in the Southern Star). The quote was made within the context of Dairygold investing to expand to accept the milk that its suppliers have indicated that they will be supplying post milk quotas and up to [coincidentally] the year 2020.

A similar situation has occurred with respect to the creation of the Glanbia Ingredients Ireland (GII) joint venture between the Glanbia plc and the Glanbia Co-operative Society. The JV was established to create the processing capacity to process the expected 60% [coincidentally also by 2020] increase in milk production from the Society's members. It is interesting to note that the Glanbia plc [the original downstream partner] chose to focus its own resources on its highly successful international growth strategy rather than investing in milk-processing capacity.

It is not entirely surprising to see such a supply-driven situation. A characteristic of Irish agriculture is that it is largely geographically remote from its markets. It has also evolved a highly seasonal milk supply based upon the production of milk from grass. In recent years the latter appears to have evolved from a problem into a virtue and, to an extent it is [assuming that the industry can deliver **high-value**, grass-fed products to customers]. The history is, however, one where milk is produced in spring and summer for processing into low-moisture content, storable and easily shippable commodities (butter, cheese and milk powders). The milk-processing industry has developed to add significant value to these base commodities [via the ingredients and nutritional markets] but, at the farm level, it still seems to remain largely about the production of basic milk solids from [mainly grazed] grass.

A concern with FH2020 is that by emphasising so clearly a 50% increase in milk production by 2020 target, it has actually led to a further embedding of the very problems that were highlighted in previous strategy papers as major concerns; i.e. the industry's reliance on selling commodities derived from highly seasonal milk. It appears now to have become acceptable, even preferable, to expand specifically to supply seasonal milk. The Irish dairy industry's fascination with all things New Zealand is certainly taking the industry yet further down this route.

A further quote from FH2020, reiterates this situation thus, "the industry at all levels must engage on alternative options for financing the expansion in capacity to process anticipated volume growth, including investigating efficient solutions to the processing of milk during the period of peak seasonal milk supply", (FH2020, pg42).

Hence, does one conclude that the Irish dairy industry has actually moved further in the direction of being supply-driven? To what extent FH2020 is responsible for this is, of course, a question that is open to debate.

COMMODITIES OR PRODUCTS

To return to the comments made in Section 3a on the FH2020 vision. There appears to be two distinct themes within the one agri-food vision. One is very focused on the vision of Ireland as becoming a green producer of natural, high-quality products. The other is a vision of Ireland as a producer of commodity, albeit 'premiumised', dairy commodities. To what extent are these two themes compatible or are they two conflicting perceptions?

At the farm level there are clear system differentials that influence the carcass quality. If a farmer is to produce for a specific market it is then essential that the right choices are made on farm. Grass-fed beef is being talked about as a premium product and one that should be marketed as such. Even so there can be differentials between how grass-fed beef is produced. To achieve high-end market prices do grass-fed carcasses have to come from specific breeds that impart particular eating-quality characteristics to the meat; for example, have more intra-muscular fat? Is it necessary for a high-end market, premium product to originate from a highly-defined farming system? And does a premium-product also have to be first and foremost based upon the eating quality of the product?

Although one may be excused for thinking otherwise when reading the Irish agricultural press, does being of Irish origin impart any specific quality characteristics to a product? It may to a customer who is has affiliations to the country and it may to a customer who has a trust in Irish farming products [hence the quality assurance schemes] but does it impart, for example, any positive eating-quality characteristics to the product? The answer is, probably not. Therefore if Ireland is to truly develop a range of top-quality food products, it has to start on the farm. One of the author's favourite adages with respect to food processing is; rubbish in, rubbish out. In other words, it is not possible to produce quality products from raw materials. *You cannot make a silk purse from a sow's ear.*

With respect to the dairy sector, there remains a clear focus on seasonally-producing milk solids. One could argue that the expansion emphasis on FH2020 has actually further embedded this focus on the base commodity despite FH2020's fore-runners stressing the need for Ireland to move away from commodities and towards products.

In many people's eyes it is actually difficult to clearly differentiate milk by quality [hygiene excepting] but there are dairy products made around the World where the marketed characters of the product are defined all the way back to the quality of the milk produced on farm. These products will be discussed in more detail later in this review but the product's official designation does incorporate specifics on how the milk is produced on farm. For example, location, breed, grazing intensity and winter forage sources may all be specified so as to ensure that the exact quality of milk is produced for processing into a natural, high-quality, market-recognised product.

Hence, there are arguments for saying that if Ireland wants to move further into the production of high-quality food products that will be widely recognised in the premium markets of the EU, North America and further afield, there needs to be an acceptance that, at the farm level there has to be a determination to produce milk suited to a supply chain that is focused on producing for a specific product. In saying such there has to be a recognition that there is a conflict between producing for a consumer product market and a commodity market. It is not by chance that many new, high-quality food products [with or without a natural provenance] evolve from small beginnings in the farm kitchen or through the development of small-scale on-farm processing facilities. It is because many quality foods producers recognise that they first have to have control over a consistent supply of raw materials.

In theory there is no conflict at the national level between producing both commodities and products. Typically both evolve as, over-time, farmers and processors choose which markets offer their businesses the best potential returns. This is the case for Ireland. Many farmers will be happy to remain supplying large-scale processors who, in turn supply the global commodity markets. Others may see their future as expansionary and in supplying, directly or otherwise, those processors creating food ingredients and/or nutritional products. Others may see their future in supplying milk to processors who sell branded dairy products into the EU markets. And others may see a future in on-farm or small-scale co-operative processing into highly-differentiated, fine-foods products.

Where a conflict may lie is when a region or, in Ireland's case, a country seeks to generically promote its produce. It is difficult and potentially risky to promote an entire region's produce through a single marketing campaign. Is it possible to make generic claims about the quality of the produce if some is destined for lower-quality commodity markets whilst other produce is targeted at premium, differentiated markets? Is there a risk that using such will mean that the lowest common denominator will ultimately provide the market's over-riding quality perception?

There is a major emphasis on FH2020 on the development of 'Brand Ireland' as an umbrella brand for Ireland. This is exactly the kind of generic label that the author alludes to above. Can one brand truly help the development of natural, high-quality food brands when the same is being used to promote globally-targeted commodities or 'premiumised' commodities? As will be discussed later, a single brand will also bring conflicting issues [i.e. animal welfare issues like bobby calves and live exports] under the same umbrella and this will be a major problem with respect to how premium-market, issues-aware consumers perceive high-quality, Irish food products. Surely it would be better to develop specific brands that suit the characteristics of each product or commodity?

QUALITY OR QUANTITY?

Throughout FH2020 there is little mention of differentiating ex-farm dairy produce according to quality. In other words milk is milk or, to be more exact, milk solids are milk solids. There are, however, some quality issues:

- ♣ To quote Donal Dennehy, operations director for [Danone in] Ireland (as cited in the Irish Examiner of 25/10/2012), "Why Irish milk? 'You get better milk from grass-fed cows'". And to quote from Danone's Aptamil website in the UK "Most of the cows' milk we use to make our powdered formula comes from dairy farms in Ireland... They use mainly a grass-feeding system which allows their cows to spend most of their time in open fields and enjoy a natural diet. We're granted full access to these farms so that we can carry out audits and monitor the quality of the milk produced.". Clearly there is a segment of the milk-processing industry that recognises that there is a positive quality differential with grass-fed, quality-audited, Irish milk.

There is, however, the question of whether the above grass-fed quality differential will or can be translated into a premium price for the primary producer. According to the same source Danone acquires 80% of its base powders for its European infant formulas from Ireland and with its expansion at Macroom it will be taking raw materials from the equivalent of nearly 700 million litres of milk. Danone's Baby Nutrition division appears to have made a significant commitment to Ireland but will it ever translate into a premium price for the farmer? Danone is not sourcing milk direct but base powders from intermediaries [the largest of which is Dairygold] so there is a further step between the dairy farmer and the purchaser of Danone's branded infant formula sales. Will Danone ever wish to 'take' the Irish grass-fed origins of its milk through to all of its formula products; or even a brand line? In the days of food scares will it ever wish to tie its fortunes to one supplier country? It is unlikely that supplying Danone with milk [albeit indirectly] will be a premium outlet for milk but being at the bottom of the supply-chain, given the scale of Danone's Irish operations, *may* provide some sales volume security for those wishing to expand.

- ♣ Beyond being grass-fed, can milk quality be differentiated beyond its basic constituent parts and hygiene measurements? Are there, for example, breed differentials? One could ask if Jersey milk produces the finest ice-cream. Does the Guernsey cow produce the tastiest butter? Some would say that the Ayrshire produces a higher-quality 'breakfast milk'. Do some cheese-makers prefer breed-specific milk? Some certainly prefer milk from cows that do not feed upon silage in winter. Clearly there are species differentials with goat, sheep and water buffalo milk; all of which can differentiate the marketable end product.

Producing all the above of course does mean selling the milk into a different, quality-orientated supply chain that may deliver a price premium. There is much made in FH2020 of developing high-quality, consumer-focused products [see Section 3.1 about the FH2020 Vision - Ireland as a producer of green, natural, high-quality produce] but it appears that very little of this message is being disseminated through to the primary producer in terms of producing alternative milks specifically for premium products. It appears that there is still a sizable leap needed before Ireland can move towards being a major producer of natural, high-quality produce. The industry is still very much locked into the production of 'commodity' milk, albeit produced to a high standard and quality assured. This may well have to change if Ireland is going to produce many more premium, high-quality, natural products.

- ♣ Given the way the beef sector works there are clear indicators of carcass quality and price. With the 50% expansion plans for milk there may be quality consequences to consider for the beef sector. Ultimately it will depend on the balance between grass and concentrate feeding, but there is likely to be a rise in milk yields. Even so, achieving a 50% increase in milk production will mean increasing the national dairy herd by 250,000 and maybe a lot more. Hence there will be more calves to finish. If the expansion is also going to be coupled with an 'improvement' in the dairy genetics what will be the implications for calf and, thereafter, the carcass quality be? Will the beef-quality characteristics be maintained in the black and white herds? Will more farms switch to the NZ hybrid Friesian x Jersey with its inevitable calf quality reduction? FH2020 talks about adding value to these extra animals by developing rose veal and bull beef production but is this really that realistic?

There are quality issues to consider with the dairy expansion. The expansion may deliver, to quote, an important spin-off of the significant growth expected in the dairy sector will be an increased supply of calves for rearing and finishing (FH2020, pg38) but will this actually be a *positive* spin-off? To quote Ann Fitzgerald in her column in the Irish Independent's Farming Supplement of 28th January 2014, "One of the more unsavoury issues for New Zealand has been the bobby calves produced in the dairy herd. These very young bulls, which are effectively treated as a waste product, are collected from the farm when they are a few days old and slaughtered. In 2012, there were more than 1.5m bobbies born on New Zealand dairy farms". It is an issue for NZ but NZ is not adjacent to its major, very issues-aware market. It is not that it is not also an issue in the UK, but is it an issue that Ireland wants to take on if it is seeking to distinguish itself in the World's markets via its high animal welfare standards?

6b. CONSOLIDATION OR DIVERSITY

Consolidation of the processing sector is a keystone of recent Irish agri-food industry strategy. The belief is that without amalgamation the dairy industry will not be competitive with the major exporters on the global markets. To quote; "Key players should develop a plan to consolidate and rationalise capacity in the primary processing sector by the end of 2010 and cooperate in measures to achieve its implementation by 2015" (FH2020, pg21). A driver behind the consolidation argument is the structure of the processing industry in what is considered to be Ireland's major competitors, New Zealand, Denmark and the Netherlands. It is an argument that takes as *de facto* that Ireland's future as a dairy producer lies with the country being primarily a supplier of commodities.

This, however, contrasts significantly with a second statement from FH2020; "The continued development of value-added foods on the home and international markets is key to delivering a sustainable agri-food economy. Sales of these products are less likely to be impacted by fluctuations in commodity process while processing Ireland's raw material supply domestically fundamentally supports wealth and employment creation in the rural economy" (FH2020, pg33). Further, "Accelerating the growth of an optimal number of SMEs to large company size and a greater focus by SMEs and artisan producers on niche markets such as functional foods and organics will be highly significant in delivering regional growth and employment creation" (FH2020, pg33).

Are these contradictory objectives? That largely depends on what the ultimate objective is. If it is to create a dairy processing system that may be able to compete with the major suppliers onto the World Market of milk and whey powders, there is justification for saying that the processors have to be consolidated. This is an argument has underpinned strategy for a while. It should be noted that FAO trade figures for 2011 put Irish milk powder exports as 1/8th of those of the global leader, New Zealand. Dutch exports are about double and Denmark's similar to Ireland's. With whey powder Irish exports were only about 1/6th of the two main European exporters [who are themselves behind the leading exporter, the USA], Germany and France and a third of the Netherlands. If one considers the actual scale of magnitude of Ireland's exports, should one question a strategy that focuses on taking the global heavyweights, not least when Ireland's primary dairy production sector is significantly smaller?

There is a clear emphasis within the national strategy on research and development so as to enhance the value of what have largely been commodities and this makes sense in light of Ireland's structural and scale disadvantages. One could imagine a scenario where Ireland's future within the commodity markets is reliant on the ability of the processors to innovate and to create products out of commodities. In this case a degree of consolidation may make sense so as to pool resources. With a focus on consolidation, volumes and cost reduction will this same structure be dynamic when it comes to creating a diversity of retail consumer products and, especially, those of higher value? Is it even realistic to ask the same processors to produce both products and commodities?

Within this there is also an 'all-the-eggs-in-one-basket' concern. One hears frequently that Ireland produces one percent of the World's milk but 15% of the World's infant formulas. It is a sector where there is a claim to specific national expertise [and the author cannot question that]. Around the World there is extensive interest in the opportunity to supply China with infant formula and the ingredients for infant formula as a result of the 2008 melamine-tainting scandal. A further food safety concern more recently hit New Zealand; the primary supplier of the Chinese market. The combination of the issue in NZ and dependence on NZ has led to the Chinese seeking a more diversified supplier base and this is seen as being positive for Ireland. However, from a strategic perspective it is important to avoid the assumption that a food safety issue could not hit Ireland. To an extent NZ was 'too big to fail' when it came to it being a supplier of milk powders to China. Could the same be said for Ireland?

The establishment of strategy is about being aware of potential risks, accounting for them and preparing for the possible consequences. Is the FH2020 strategy doing so sufficiently when it highlights a desirability for processing sector consolidation? Or is it leading to a situation whereby too many 'eggs' are in too few commodity markets?

A further consideration is whether too much consolidation will inhibit the development of new products and the value-added foods that are targeted in FH2020. Whilst accepting that a consolidated industry may be best placed to invest in the R+D required for more 'technical' products, will it have a negative impact on the development of other high-value, more labour-intensive, 'traditional' or 'artisan', highly retail-consumer-focused products?

The rationale in this relates to available milk supplies. The FH2020 strategy recommends consolidation of the milk processing sector and a 50% expansion by milk supplies by primary producers. In this situation it can be expected that the processors will seek significant contractual obligations [as long as 15 years has been seen reported] from their milk suppliers. From a commercial perspective this is an acceptable response given that they, the processors, are being asked to accept and process significantly more milk [from 2015 when milk quotas end] and this has investment consequences for them. In cases where the processors are co-operative owned they have even cited that they are obliged to accept any expansion milk produced by their members and to act accordingly [is this in itself not the absolute epitome of being supply and not market driven?].

A consequence of the FH2020 expansion plans may, therefore, be to 'lock' a great deal of milk into a few [possibly regionally the only] milk processors. That may be desirable to secure milk processing investments but will it leave the primary processor [and their investments] vulnerable to being totally committed to the one downstream supply-chain partner? This in itself may inhibit milk production investment.

In terms of the evolution of the milk-processing SME sector and its development of value-added food products, will the consolidation of milk-processing, extra processing investment to handle 'FH2020' milk expansion, and consequential, greater supplier contractual obligations inhibit development? Processing investments will need milk supply and that will probably mean that the processors are highly defensive of their milk supply base. In such a situation will they welcome the rise of smaller, competitive processors? It will probably mean that new SME milk processors will have to develop off a vertically integrated milk supply and not be able to buy-in raw materials.

This is no great problem in itself as many high quality food products are produced from home-sourced milk. It may, nevertheless, be an issue when it comes to expanding an SME into something larger as per the FH2020 strategy, "Accelerating the growth of an optimal number of SMEs to large company size... will be highly significant in delivering regional growth and employment creation". If the SME seeks to grow by buying in milk from others it is likely to be unwelcome. It may also find it difficult when too many farmers have been tied into long-term supply contracts. Timing expansion with suppliers exiting other milk contracts will be a difficult issue.

Finally there is also a further contradiction. The SME sector is not only seen as a deliverer of new, diverse, high-value food products, it is also potentially a generator of geographically-spread, rural employment. By its nature, the SME sector is likely to be more focused on labour-intensive products and employ labour as opposed to making major, labour-saving investments. This is in line with the FH2020 objective of "delivering employment creation". By contrast, to compete with their global competitors, the major milk processors are expected to consolidate and invest. The latter are likely to be large and 'efficient' from a labour perspective. It is realistic to expect that in terms of jobs created per Euro of investment, their investments will result in much lower employment. It will also be centralised in a few large-scale processing plants and not distributed throughout the rural communities.

From several perspectives, processor consolidation is a contradictory target to have included within the FH2020 strategy. It may leave the industry exposed to too few markets. It may inhibit milk production investment because it leaves no selling options to the primary producer. It may inhibit the development of the SME businesses that may be the drivers behind the development of new, diverse, value-added products. The scale of investment that will inevitably follow will also be centralised and limited in terms of job creation. And, finally, it may mean that the industry as a whole will be far less attractive to new entrants interested in food processing and/or farming.

6c. GRASS : CHEAP OR PREMIUM

The author has been pondering the question of what is meant by the term grass-fed? Although it seems obvious, is it possible that it can actually mean different things to different people? Below are two interpretations:

- ♣ Grass is a low-cost source of metabolizable energy for ruminant livestock. Hence, farming systems should be designed to maximise the use of this low-cost feed; preferably tending towards the exclusion of all others.
- ♣ The use of grass-fed livestock farming systems can provide the raw material, be it milk or meat, for natural, healthy, high-quality, differentiated products that command a premium price in the World's food markets.

It is very clear with beef and lamb that grass fed is recognised as a premium product. It is seen by some as a more natural product and by others as a healthier one. In the United States where growth hormones are used in beef production there are consumers who clearly wish to differentiate between grass and cereal-fed beef. There will also be those who have ethical and animal welfare questions about the use of vast beef-lot systems.

The presence of a grass-fed, premium milk market is more debatable. There are, however, occasions where, for example, cheese-makers will specify that no fermented forages are to be used in their milk supplies. The question is, can a case be made for products to be differentiated on the basis of, a) being entirely from grazed grass [maybe possible with some grazing only beef and lamb], b) being derived from grazing and hay and/or silage, or, c) being derived from grazing and hay and/or silage plus a limited use of cereals [possibly derived from a conservation-grade type farming scheme and/or a quality-assured scheme]. All may have appeal to certain consumer groups.

Selling beef and lamb from any of the above systems is, location and breed permitting, feasible. It becomes more difficult when considering dairy products as those customers seeking 'healthy', grass-fed or predominantly grass-fed, products will be seeking a diverse range of products that includes both fresh and longer-life products. Given the current emphasis on developing highly-seasonal, no-winter-milk production systems in Ireland at present, the farming systems themselves are actually moving further away from providing milk for *grass-fed-milk* products. A key point here is that the farming systems have to be organised from the ground up to create the product.

What is evident to someone looking at Irish agriculture from the outside is how different its dairy sector is from others in Europe. It is very highly focused on grass utilisation and the use of supplementary concentrate feeds is very limited. It is also different from others that focus on grass-fed as it appears that Ireland is seeking to move to a system where minimal grass forages are harvested for use in a very short winter feeding where the cows are dry and no milk is produced. The objective being that all milk [or as much as feasibly possible] is produced off grazed grass. The ideal is to very closely match energy-from-grass requirements to seasonally available grass. To achieve this the focus is on tight calving at the start of the growing season to maximise the use of available grass. It is a system that appears to have its origins in the System 1 (below) grass-based dairy-systems of New Zealand.

At this point it is interesting to have a look at what has been and is happening in New Zealand. There has been interesting work in NZ on classifying their different grazing systems (see below). In essence they have devised a 1 to 5 system that describes the relative contributions of grazed grass and other feed. In system 1 the main source of feed is grazed grasses from the milking platform. For successive systems the amount of grazed grass declines.

Bruce Greig from Lincoln University in New Zealand presented a paper a couple of years ago on *Changing NZ dairy farming systems* that showed to what degree each systems was in use in the NZ dairy industry. The time frame approximated to the first decade of the 21st Century (2000-02 to 2009/10). System 1 declined from 41% to 10%, system 2 was fairly constant (31% to 32%), system 3 rose from 17% to 36%, system 4 from 11% to 18% and system 5 from 1% to 4%. Overall there has been a clear trend away from grass-only systems to using systems that included a far greater proportion of brought in feeds, cereals and proteins.

The 5 production systems

source: www.dairynz.co.nz

The Five Production Systems are a way to group farm production systems by their usage of imported feed. As New Zealand pastoral farming is about profitably balancing feed supply and demand, five production systems have been described by DairyNZ primarily on the basis of when imported feed is fed to dry or lactating cows during the season and secondly by the amount of imported feed and/or off farm grazing. The definitions do not include grazing or feed for young stock.

System 1 - All grass self-contained, all stock on the dairy platform. No feed is imported. No supplement fed to the herd except supplement harvested off the effective milking area and dry cows are not grazed off the effective milking area.

System 2 - Feed imported, either supplement or grazing off, fed to dry cows. Approx. 4 - 14% of total feed is imported. Large variation in % as in high rainfall areas and cold climates such as Southland, most of the cows are wintered off.

System 3 - Feed imported to extend lactation (typically autumn feed) and for dry cows. Approximately 10-20% of total feed is imported. Westland - feed to extend lactation may be imported in spring rather than autumn.

System 4 - Feed imported and used at both ends of lactation and for dry cows. Approximately 20 - 30% of total feed is imported onto the farm.

System 5 - Imported feed used all year, throughout lactation and for dry cows. Approximately 25 - 40% (but can be up to 55%) of total feed is imported.

*Note: Farms feeding 1-2kg of meal or grain per cow per day for most of the season will best fit in System 3

Clearly there has been a significant change in New Zealand since the turn of the Millennium. Previously the system choice was heavily towards home-produced grass only (system 1) or home-produced grass with low feed 'imports' (2). The first two, low-input, grass-based systems accounted for 72% of production. Since then system 1 usage has fallen by three-quarters. System 2 usage has remained static but that is to be expected as many producers probably make progressive changes of systems rather than going direct from system 1 to system 5. The figures do, however, show a major shift in emphasis within New Zealand away from System 1.

One has read recently in the Irish press that average milk production costs per litre in NZ have been rising. This is not to be entirely unexpected as classical economic theory would expect that if milk production is profitable more resources will be dedicated to milk production. It is unlikely that the additional resources will be as cheap as those already employed. Yes, there are economy of scale options for individual units [NZ has seen continuing herd size expansion] but for an industry resource unit costs will inevitably rise with expansion. The obvious one is land and these are rising and a part of the reason for NZ milk cost rises. Simply, as land prices rise, will extensive grass-based, land-using systems remain the most economic option; especially if lower-land-cost-per-unit sources of metabolizable energy are available and substitutable [imported grains and palm kernel cake in NZ's case]? How will this issue pan out in Ireland with current [and future] prices for buying and/or otherwise accessing?

A second rather relevant opinion was published on February 2nd 2014 by Keith Woodford, the Professor of Farm Management and Agribusiness from Lincoln University. It was entitled *Reworking our Dairy Systems*. To quote: "The New Zealand dairy industry has always prided itself as being different. Whereas most other countries developed their dairy industries based on the housing of cows for much or all of the year, the New Zealand industry has always been pasture-based. The cows harvest the grass themselves, the cost of production has been low, and the image was of "clean and green". Prof. Woodford is arguing that, due to managing the environmental issues associated with autumn and winter grazing, cows need to be off-pasture for a significant period be it on "stand-off (non-roofed) pads or partly enclosed sheds". And "stand-off pads bring their own problems. There needs to be collection of all effluent and, without a roof over the pad, the effluent pond needs to be at least double the normal size. So in most cases, it means that there have to be roofed sheds"... "there are now several hundred farms in New Zealand that already house the cows in winter"... [including] "the 2013 winner of the New Zealand Dairy Business of the Year". Hence, times in New Zealand appear to be changing.

(The link is: <http://keithwoodford.wordpress.com/2014/02/08/reworking-new-zealands-dairy-systems/>)

The above environmental / housing issue could also provide one reason why farmers are switching systems. It is economic logic that if the total capital costs associated with keeping a single cow increase, the farmer will look at increasing milk yields per cow to reduce the cost of milk relative to total capital costs [one could also add that higher yields will reduce the average cost of milk production relative to the cow's maintenance energy needs]. In this situation, given the economic response of using additional concentrate feeds [although that in itself will be dependent on the relative prices of milk and feed] it is likely that more concentrates will be fed and the dairy system adapted accordingly. As an aside it is interesting to note the importation of palm kernel cake from South East Asia into NZ in recent years; it increased from about 25,000 tonnes in 2001 to a million tonnes in 2011 (FAO).

Another interesting point to note and that is to ask to what degree does New Zealand's vertically-integrated, co-operative, Fonterra supply-chain influence on-farm decision making? How much of the overall farm income relates to supply-chain returns [in this case Fonterra dividends] as opposed to the direct price paid for milk? If dairy farmers know that they are going to be rewarded with a proportion of supply-chain margins, the returns on expansion production are likely to be greater; thus influencing on-farm, expansion investment decisions. In this case, higher on-farm production costs may be slightly misleading as the milk price does not fully reflect the rewards from farming. Although this in itself now be yet further complicated by Fonterra now having non-farming investors within its ownership. To what degree would co-operative dividends influence Irish dairy farmers?

Bruce Greg in his aforementioned paper has stressed the need to have a farm management / economic approach to dairy farm systems analysis. From this research, the author [who is himself a former Wye College, University of London farm management / farm economics academic] would suggest that the NZ dairy farming industry is well attuned to fully appraising all the factors influencing on-farm decision-making; not that should be surprising. It is most likely that it is this holistic assessment of all the factors affecting investment decision-making [be they input or output markets, prices and costs or 'close-to-home' technical farming issues] that is driving change in NZ. It is also likely to be based upon a thorough awareness of what are all the constraints on the farming business [i.e. financial, resource, environmental] and how to remove them, lessen them or accept them as absolute constraints.

In a nutshell, the author does wonder to what degree such a holistic approach was taken to establishing the milk production expansion targets in FH2020. Where they established after doing a thorough economic and technical model-based assessment of the expansion options available to Ireland's dairy farmers? And if not, why not?

The above appears to be somewhat in contradiction to what is happening in Ireland. The emphasis appears to be heavily towards expanding milk production, at least on greenfield sites, through the adoption of the NZ Systems 1 / 2. In other words, *is the emphasis is on adopting the very systems that NZ is now and has been leaving behind?*

A further question that has to be asked is; will following the NZ system 1 / 2 approaches going to deliver on all the sustainable/environmental targets as referred to in FH2020? NZ actually appears to be, albeit it reluctantly, switching away from these systems, and especially system 1, because of [at least partly] environmental issues.

The author, of course has not had the time or the resources to do a detailed assessment of all the factors relating to which system to choose in an Irish situation and it may be that the constraints on investment capital are such that these are actually the right choices for those willing to expand and/or develop new dairy farms in Ireland. There appears to be no shortage of technical support for those wishing to make the decision. So the advice would be to make sure that when considering dairy investment to take full advantage of it in conjunction with doing a very thorough, holistic assessment of all of the many market, technical and resources issues involved. And one would add, any 'must' expand messages from FH2020 or elsewhere should be *taken with a pinch of salt*.

The author would, however, voice a concern about the Irish dairy expansion subject. To quote Brendan Horan of Teagasc (cited from AGRILAND on 20/01/2014), "we must develop simplified financial management and farm investment appraisal methods that allow us to investigate dairy farm expansion opportunities". To what degree are these extremely necessary 'holistic' business analysis and investment appraisal tools available to Irish farmers contemplating expansion? They should be readily available as they are not particularly recent inventions.

How did Ireland arrive at a situation of divergence from NZ, so frequently seen as its dairy industry's number one benchmark? Why is Ireland now appearing to be moving towards the systems that NZ farmers started to leave a dozen years ago? Ireland is touting cheap-grass systems whilst NZ is moving towards variations of the systems being used elsewhere in the World. To quote Professor Woodford again (ibid) "we are also starting to see farms where cows are housed throughout the year" and "the appropriate technologies are well understood in Europe... we now have to adopt and adapt these same systems to work in the New Zealand environment... when everything is done correctly, housed cow systems are still compatible with a low cost of production per unit of output and a high return on capital". So why is Ireland focusing on the NZ System 1/2 type when a NZ Professor of Farm Management and Agribusiness concludes an 'opinion article' with "In the long run, getting cows off the paddocks in the autumn and winter is the only way for New Zealand to go. It is the only way we can maintain both an image and a reality of 'clean and green'. But it is going to be an interesting and very controversial journey. It goes against much that we have believed in for a long time"? The following is an attempt to rationalise why.

- ♣ **It is the historical Irish dairying system.** Ireland has long since had a tradition of using very grass-focused dairy systems. It is why comparison is so frequently made with NZ. It is why milk yields in Ireland compare with NZ but are low when likened to those of many other NW European countries.
- ♣ **Distance to market and the commodity focus.** Ireland's small domestic market and reliance on exports has made it easier to focus on butter, hard cheeses and milk powders [a similar situation to NZ].
- ♣ **Success with premiumisation of commodities.** There has clearly been success in developing value-added products from basic commodity raw materials. This is still seen as a direction to follow. It is a route-to-market that can utilise very seasonal milk [although it may not deliver viable returns for small-scale farmers].
- ♣ **The food price hike of 2008.** This has had a significant impact on thinking. Was, however, the spike caused by biofuels policies and market speculation? If a very long-term view was taken [as opposed to trying to track every movement in the global dairy commodity and cereal and protein markets] would one come to the same conclusions with respect to the economics of milk production and dairy farm investment?
- ♣ **Global population rises and economic developments.** Were these really going to arise overnight?
- ♣ **The emergence of China.** China is seen as an opportunity by all the major exporters [including the cereal-fed dairy-farming systems]. The fact is that transport logistics [internationally and within China] favours low-moisture content commodities and encourages the continuance of Ireland's seasonal, grass-fed systems.
- ♣ **Low capital-cost systems in times of capital scarcity.** The NZ system 1 allows limited finance to be put into cows, grasslands and milking parlours; in other words what are seen as the immediately productive assets.
- ♣ **Minimises forage conservation and bought-in feeds.** The systems minimise the working capital feed costs. As a note; in light of the 2012/13 fodder crisis are these higher risk? In wet, difficult years will it be possible to source sufficient forage within Ireland or will it be necessary to import [expensive] forages and/or grains?
- ♣ **Processors willing to operate below capacity.** Ireland's season milk production has meant that its first-stage milk processors operate below capacity for much of the year. The author has read that reaching 60% of capacity is good going. Who are these processors? Are they all farmer-owned co-operatives? Would a plc invest in such a situation? Or are the downstream processors of the base commodities [into branded products] happier to allow the co-operative processors to undertake the lower-margin, seasonal processing?
- ♣ **The expansion clarion call from FH2020.** To what degree has the very vocal establishment and promotion of FH2020 targets influenced decision-making within industry? Although the messages from FH2020 are actually relatively complicated and diverse, the over-whelming one that has come across is the 'we must expand milk production by 50% to supply global markets; it is the only way we can survive' message.

When faced with capital shortages and its history, is it inevitable that the mainly grazed-grass, low-capital-cost, milk production model will be further pursued? There also appears to be few dissenters to the mantra that 'Ireland has a major advantage, it can produce milk more cheaply from grass than anyone else [except NZ]'. But if the grass-fed milk message cannot be transmitted through to consumers, is there any great market advantage from being grass-fed over cereal-fed? If not, milk is milk and one producer is pretty much like the next and grass-fed production has to compete head-to-head [from an economic standpoint] with cereal-fed production.

It is, however, reassuring to read the comments from the Greenfield dairy programme 2012 open-day in Kilkenny made by Brendan Horan and Pdraig French of Teagasc in their paper 'Basic principles informing profitable expanding milk production systems'; "High profit dairy farming occurs where low capital investment costs are combined with grazing systems which achieve high levels of milk solids productivity from grazed grass". Given the available grass supply in Ireland, it is probably difficult to question this under-lying principle and it is a principle that also operates elsewhere; even when the growing season is more limited. Many would probably also argue that energy from grass is a key indicator of profit; be it from grazed or conserved grass (or other forages). The use of cereals would probably be third in line, although that could be influenced by supply availability and costs.

A question to ask is whether the evaluation is being limited by the capital constraint at too early a stage of the process? Also, just what are the key performance indicators being used? If, for example, it is necessary to house the stock in winter and construction is required, will the profit per cow-housing space be a critical issue [and, hence, profit per cow is a more important]? If planning has to start on the basis of a constrained milking platform, and, hence, metabolizable energy from grass is limited [to a realistic climate-risk-aware level] just what do the economics of additional concentrate feeding look like? Will there be regulatory environmental constraints to consider? The author well remembers the days when the Dutch pig industry was discovering that the margin over each unit of pig slurry became a major planning issue. The point is that there are very many ways to evaluate the expansion of a dairy farm and the primary evaluation criteria will differ between farms [and their constraints].

It is, therefore, not possible to 'blanket' evaluate the dairy farms of Ireland [or elsewhere]. It appears to the author that this has not been given sufficient consideration in the establishment of the FH2020 'expand milk production by 50% target'. For some expansion might not be the right approach. For others it might be but it might be on the basis of increasing yields per cow [and hence milk yield per housing space, milk yield per 'environmental-waste' unit or per hectare of a limited milking platform]. The author would hope that all these have been and are being assessed by farmers and their advisors, although the broad-brush statements about the only way forward is a concern. At the national level, the author is certainly concerned about the message being circulated that all dairy farmers have to expand by adopting the grass-from-grazing model or else they will themselves become extinct.

At times it also appears that expanding milk production by 50% is the over-riding objective and that the survival of those who cannot expand within this context is a secondary issue. FH2020 clearly has a rural community survival objective, so should the objectives be more clearly specified; farmer survival first, milk expansion second?

COMPETING FOR IRISH GRASS

It was nearly 25 years ago the author, as a young Wye College academic, appeared as an expert witness in a test case in England concerning what level of milk quota was attributable to the land [to the landlord] and what was attributable to the management skills of the tenant. The landlord's chosen methodology related to utilizable metabolizable energy from grass. Hence, the author had to acquire a certain depth of knowledge in the subject.

One of the first things that the author noticed when reading FH2020 was that the *Main Factors Affecting Growth and Competitiveness* table (FH2020, pg16) did not include metabolizable energy as an input cost. Yes, energy was mentioned but in the context of fuel [which indirectly impacts upon forage and feed costs] but the availability, costs and utilization of metabolizable energy, and especially that derived from grass, was not flagged up.

The author actually first arrived in Ireland during the fodder crisis of 2012/13; hence there was an immediate focus on what is the ruminant livestock carrying capacity of Ireland. It was certainly being highlighted to a greater extent than at the time FH2012 was being prepared but it did really emphasize the need to consider the downside consequences of any expansionist agricultural policy. What has been a little surprising is how little the press has raised the fodder issue since; just what will happen if a repeat happens with higher stocking levels in 2020?

There almost looks to be a *de facto* acceptance that the Irish farming industry will achieve major steps forward with respect to grassland management, forage conservation and the quantity of dry matter produced from each acre of grassland. To use a modern term; have these assumptions been thoroughly *stress-tested*? How will the livestock industry cope with short and long-term drought scenarios, poor conservation seasons and varying winter lengths? Will recommended farm expansion models incorporate fall-back, cereal-feeding capabilities? Has their robustness been judged in scenarios where large quantities of forages have to be bought and/or imported?

Whilst FH2020 has established a very clear target for the dairy sector [and lesser ones for the beef and sheep sectors] it has not spelled out what this means in terms of livestock numbers and energy from grass needs.

It is fair to say that a 50% increase in milk will not mean a 50% increase in dairy cows. In theory the 50% increase could be achieved with the same numbers but this would mean adopting cereal-based systems. If the sector is going to focus on NZ system 1 milk yield increases will not be great. They may be a little more yield with NZ system 2. As an example, if milk yields rise to 5,500 litres, cow numbers will have to rise by 35% or just under 400,000. In addition to these will be 150,000 plus replacements and an expanded number of ex-dairy-herd beef cattle. It is a considerable number to feed using very grass-biased systems and especially so in light of the fact that only too recently the Irish agricultural industry was struggling to feed its pre-expansion numbers.

Hence the question; is it really realistic to expand in such a way and assume that it can be done off cheap grass?

The production of livestock products from grass is being continuously highlighted as an advantage and, often, as a major cost advantage. It is, however, a fact that relates to the cost of concentrate feeds at any specific time and it is widely recognised that if the price of grains is lower, grass is relatively more expensive and *vice versa*. The cost advantage therefore moves back and forth between cereal-fed and grass-fed systems. In light of such, and also what was mentioned about NZ system changes earlier, should more flexibility be promoted in the design of new and expansionary dairy investments? Does the bias towards mainly grass-fed systems mean taking undue risks?

Another point to consider is the impact that the expansion of milk production off grass will have on the beef and lamb sectors. It is probably fair to say that both beef and lamb can be more clearly differentiated within the retail market by being grass-fed. Hence, should these sectors actually be considered a priority user of grass?

If 'competing-for-grass' beef and lamb can achieve a clear grass-fed differentiated market premium would it make more economic sense to use grass for beef cattle rather than for dairy cows? At first glance it may appear that the obvious answer is to produce milk; but then again in a mainly grass-fed, low-yield per cow system a significant proportion of the energy from grass is actually being used for the cows' maintenance rather than for producing milk. It may make more economic sense to have less cows and to focus on higher yields per cow where the cereals contribute to milk production; thus proportionally reducing the amount of grass needed per litre of milk produced. This may well be little more than a technical point in practice but it is an example of the kind of 'outside-the-envelope' thinking that should occur where strategy is concerned. Agriculture is an industry where many subjects meet and interact and it is often necessary to take a step back and to look at the broader issues. In this case one of the issues may be to consider where best to utilize Ireland's limited grassland resources.

The important point to make here is that it is important to make all of Ireland's limited farming resources count. Likewise, from a value-added angle, maybe it is also essential to make every litre or kilo of farm output count.

6d. PRODUCTION OR PROFITS

The first statement at the start of the section on *Growth and Competitiveness* is: "Over the coming decade, smart growth will depend on improved productivity, increased scale, targeted research, and enhanced skills and organisational capabilities". It then goes on to say that "Growth will also emerge through green principles that include a better alignment with the preferences of the environmentally conscious consumer" (FH2020, pg15).

The above rather reflects the overall direction of FH2020. The importance of markets and, especially, the markets with issues-conscious consumers [who are often likely to be able support their desires with the income required] is highlighted but then the focus drifts back to growth. It may or may not have started with FH2020, but there is a recurrent theme being repeated throughout the industry at present. It is that growth driven by expansion is the only way for Ireland to compete in the global markets against its favourite benchmark, New Zealand.

The notion appears to be that Ireland has a massive, post-milk-quota opportunity to rapidly expand primary milk production so that its cost per litre of milk production will be lower and, hence, competitive with New Zealand or Denmark or the Netherlands. This in turn can be processed and marketed through a re-structured, consolidated processing and marketing system that will also be competitive because it is able to handle greater volumes.

To take this one step further, "If the necessary steps, at individual and State level, are not taken to improve scale and to increase profitability, the future of the sector will be jeopardised" (FH2020, pg18). Again the link between scale and profitability. Should one not ask whether increasing scale is the only way to raise profitability?

An objective of FH2020 is to improve profitability and, hence, the sustainability of the primary farming sector. It appears to emphasis increasing scale as the solution. Economies of scale mean lower production costs per unit and it therefore follows that larger will mean more profitable. Farms therefore need growth so as to get bigger.

There is frequent mention of the development of food ingredients and nutritional products and the development thereof as examples of how to add value to basic commodities. The question is, who is undertaking the processing and marketing and, hence, gaining the value added? As an example in the infant formula market, Danone has a presence in Ireland and is supplied with ingredients by a number of Irish co-operatives including Dairygold, Kerry, Lakeland and Tipperary. Presumably the lion's share of the value-added is then earned by Danone as the final processor and the supply-chain partner who controls the retail consumer brand?

Given that there are also the two plc's involved in value-added product research and development, processing and marketing of value-added products, just how much of the value-added business is left to the entirely dairy farmer controlled processing co-operatives. Yes there are dairy farmers who own shares in the plc's but they are not now obtaining rewards directly linked to their sales of milk. And it is possible that other new suppliers of the plc's may not even enjoy the benefits of also being plc shareholders. In very many situations the direct link between those who add value and those who produce the milk has been lost and, to be realistic, it is probably not going to return.

If one assumes, therefore, that the link between the value-adding supply-chain entity and the farmer has been broken to the extent that many farmers will see little or no share of the supply-chain margins, where does that leave the farmer? Presumably with one option, expand to reduce costs or leave the industry. In this environment one wonders if there is not a conflict between two goals set out on page 7 of FH2020; that is to see "increased returns" to the primary producer and "higher profitability" for the food industry. If the links between farmer and supply chain partners have been broken, are these two FH2002 goals mutually exclusive?

As an example one could add that retailing has become very consolidated with the consequence that the returns to the primary producer have shrunk; an impact that is not just limited to retail consolidation in the supply chains.

It is a bleak scenario but it is one that has been played out in the United Kingdom where there is very little supply-chain involvement for the milk producer [First Milk is UK's only 100% British farmer-owned dairy company]. Dairy farms have been rapidly expanding in the UK but simultaneously dairy farmers have been leaving the industry in droves. That may not be of such a great concern in the UK where so many rural areas have become highly urbanised dormitories whereby there is little link between the land, farming and the rural communities. That is, however, a scenario that goes against the fundamental objectives as set out in the FH2020 paper.

The author would, however, suggest that there is a need to look well beyond increasing scale as the only means of delivering enhanced profitability at the farm level. A question that should be asked is whether the objective is to maximise the number of dairy farmers that can survive, or is it just about those who can expand to reduce costs so as to be competitive selling to global-market-supplying processors? And it should be noted that expansion may not always be feasible due to land or capital access. Should those who cannot expand be left by the wayside?

It was interesting to see the following recommendation in FH2020; "In the light of the fact that the great majority of beef farm enterprises are currently loss making, DAFF, Teagasc and the farm organisations should consider the best route to viability for the largest possible number of beef farmers" (FH2020, Pg39). Does this mean that a beef farmer warrants special attention whilst a dairy farmer who cannot expand- to-compete does not?

The author would suggest that a change in emphasis is required. It should be more about sustainable farm incomes and profit margins and less about production volumes and expansion thereof. Curiously, as should have been ascertained from the discussion about commodities vs product and quality vs quantity, such an approach will also mean emphasising the development of green, natural, value-added, market-linked products. Thus, it should encourage farmers and processors to look more at the wider visions set out at the start of FH2020.

Whilst acknowledging that a proportion of farms may find greater viability by expanding to meet the demands of consolidating processors supplying the 'premiumised commodity', ingredient and nutritional markets, the author would suggest that much greater consideration [than appears the case in the industry] should be about how to ***maximise the returns to farmers from each litre of milk or kilogram or meat produced***. Although it is not an approach for all, it may focus attention on how those who cannot expand, for whatever reason, can continue.

It is likely that as the processing industry consolidates [as it inevitably will by one means or other] some farmers will 'fall outside the system'. For example, it may be that they are simply not a large enough producer in volume terms to warrant a milk collection. In all other ways they may be an economically viable unit but they may be geographically isolated to the extent that for the processor their milk is uneconomic. The author has seen this happen elsewhere in Europe. As milk processing consolidates, milk producers are left without a buyer because they cannot supply the volume to justify collection. Is it conceivable that for some farmers, their location will isolate them from any processor *per se* or any processor who is unable to pay a price that makes the farm viable?

In those locations that may be marginalised for whatever reason, should the government's strategic emphasis be on expansion? Or should it be on supporting the development of green, natural, consumer-orientated, value-added products and their supply chains [routes to market] so as to enable a proportion of farmers to successfully evolve outside the current mainstream, less differentiated, milk processing and marketing systems?

There is not an insignificant proportion of Europe that is not well suited to high-volume milk production. Ireland is often seen as an ideal location because of its near-year-around climate and abundant rainfall and this is in great contrast to mountain regions with long winters. The mountain regions may also be topographically unsuitable to large-scale dairy production. This, however, does not rule them out from producing milk. The farming model is, however, usually a little different and often highly focused on the production of high-quality, highly-differentiated products. It is very much about value as opposed to volume. This will be discussed further later but there are clear examples elsewhere that could provide templates that would enable 'marginal' Irish dairy farmers to continue.

There are a number of commentators in the Irish farming press who are now questioning the merits of expanding milk production, at least as it pertains to each farm. They are generally not questioning the overall expansion direction as presented in FH2020 but they are rightfully highlighting the need to evaluate the costs and rewards of expansion in accordance with an individual farm's situation. The sum of each farm business decision with regard to the merits of expansion will, however, amalgamate up, with consequences, to the macro-industry level.

The following are a list of quotations that are illustrative of what some are currently saying in the press:

- ♣ "In predicting what is coming down the tracks for Irish dairying, nobody seems to look at any country except New Zealand, as if it were some kind of Utopia... But, dig a little and you may find that everything is not quite so rosy... Higher and higher production does not equate to more and more profit. While gross farm income has been increasing, family income has remained relatively constant" (Ann Fitzgerald writing an article entitled *Be cautious about jumping on the golden dairying bandwagon* in the Irish Independent Farming Supplement, 28th January 2014).
- ♣ "Dairy expansion post 2015 has the potential to deliver huge economic benefit to rural Ireland. Thousands of farmers are revving up for growth. However, farmers need to be cautious as expansion can be a shortcut to going bust" (Pat O'Keeffe in the Irish Farmers' Journal, 28th November 2013).
- ♣ In an article by Joe Dermody entitled *Dairy farmers warned about the risks of post-quota expansion* in the Irish Examiner of July 15th, 2013, risk assessor John Crawley was quoted as saying "Dairy farmers need to learn from the mistakes of the property boom and not leap into post-quota expansion just because everyone else is doing it... [Beware] of the danger of following the lemmings... With dairy expansion, people cannot abdicate responsibility for what is a totally personal decision... Farmers must ask themselves what their models are? What assumptions can they make about [the] price for the milk they supply? And, if the banks offer them money for new sheds, increased herds, land or equipment, how long will they be paying that back? When you've done all your numbers, ask yourself if you can live with being 10% wrong on some or all of your calculations... Ask yourself, can I handle those higher costs [and] can I live with the risks?"
- ♣ Lisa Deeney wrote an article in AGRILAND (January 20th 2014) entitled 'Expansion for the sake of expansion is high risk' in which she quoted Brendan Horan, of Teagasc, Moorepark as saying: "Expansion must be based on opportunity rather than just for expansions' sake – we must develop simple methods to evaluate expansion opportunities. We must develop simplified financial management and farm investment appraisal methods [from the author's perspective of having taught such at Wye College, the University of London it is worrying to hear of their absence] that allow us investigate dairy farm expansion opportunities that provide a reasonable return on our efforts and resources... expansion using borrowed money and without knowing what you are doing based on a well-conceived plan and budgets is very high risk. We must plan expansion carefully, budget and deliver on the budget, review regularly, adjust and improve as necessary".
- ♣ Eddie Downey, newly elected President of the IFA was quoted in the IFJ of 21st December 2013 as saying that 'he sees sense in the step-up expansion on [dairy] farms but he urged caution on greenfield dairy units: "There needs to be a robust financial plan in place for a decade".
- ♣ And finally, to quote Joe Gill in the Irish Examiner of November 20th 2013, "if I was a dairy farmer planning to participate in this growth process, it would be undertaken only with controlled debt levels that can absorb the inevitable price shocks. We need to exploit all opportunities to grow the Irish economy... However, we need to be clever too and engineering a [dairy] expansion strategy that keeps borrowings under tight control ought to be the key objective. Anything less risks severe disappointment down the road.

Ultimately, at the farm level, it is not about production, it is not about expansion, it is about profits and identifying the farming system and level of investment [and borrowing] that is best suited to delivering the income streams that provide for a long-term, sustainable lifestyle for the farm business' owners, be it a family farm or otherwise.

7. FOCUSING ON COMMODITIES

To quote from the 2009 IFA commissioned report *The Irish Dairy Industry - Decision time is now*; “Ireland is too reliant on producing commodity products”, “Ireland cannot rely on the same product mixes to build a sustainable [and] efficient industry” and the “focus of current product development processes remains too concentrated on commodities”. These were all fairly succinct and to the point conclusions.

The above also somewhat reiterated what had been said a few years before in the *Dairy Prospectus Report* of 2003; “the longer term options for the Irish dairy seem to be limited – either stay largely in commodities or base products as a proportion of overall product mix (and be eventually beaten at this game by leaner and hungrier competitors with more rationalised and cheaper production bases), or opt to produce a far greater proportion of higher value-added and consumer oriented products and industry ingredients.

The above do differ from a FH2020 strategy that, whilst stating the need to add-value, leans towards a strategy that emphasises competing on the global markets by merging milk processing and scaling up dairy farm size.

A simple question to ask is; have the strategists in writing FH2020 decided that bigger is so much better and that a sustainable and efficient Irish dairy industry can now be created by the consolidation of processing [to reduce costs and increase market ‘clout’] and marketing [including the generic branding of Ireland’s agri-food commodities] and rapidly expanding farm scale [whilst improving the level of technology utilised on-farm]?

The following sections within this chapter are, nonetheless, going to question various aspects of a strategy that seems to assume that expansion will deliver a sustainable and efficient dairy industry. They will question whether:

- ♣ The market assumptions being made with respect to the global commodity markets and whether Ireland is realistically going to be able to compete with the World’s other major dairy industries in these markets.
- ♣ A strategy of competing in the commodity end of the dairy market is appropriate or even deliverable?
- ♣ Sufficient consideration has been given to the investment plans of others involved in supplying the markets.
- ♣ Focusing on commodities through the existing processing structure will deliver viability for the majority of Ireland’s dairy farmers or will it sacrifice the majority to allow the survival of the few?
- ♣ The ‘benchmarking’ of Ireland’s dairy industry against NZ, the Netherlands and/or Denmark is appropriate.
- ♣ Scaling-up Ireland’s primary production sector to competitive-on-cost levels is actually achievable given the existing small-herd starting point and the constraints caused by land and capital availability.
- ♣ The *leaner and hungrier competitors with more rationalised and cheaper production base* as identified back in 2003 are simply still going to be leaner, hungrier and more competitive; not least because they themselves are still consolidating their milk production bases. Will Ireland actually be able to gain ground over time?
- ♣ Those major market players who are already near-totally consolidated are actually already too far ahead and too well entrenched whilst a still fragmented Irish industry is not even structured competitively.
- ♣ The time-frame for consolidation of Ireland’s processing and expansion of its dairy herd is just not realistic when looked at in the context of where other global market suppliers are now and how fast they are moving.

As will be seen, the author has some doubts about whether a commodity-focused, consolidate-the-processing, expand-the-farming strategy is really going to lead to the development of a sustainable Irish dairy industry. Is the competition already too far ahead or is it simply too big and Ireland’s realistic size potential just too small? Saying that you can *punch above your weight* is not the most convincing approach to planning an industry’s future.

7a. COMMODITY MARKET LIMITS

In conducting this review the author has become concerned about the faith being placed in an expanding global dairy market to absorb additional, post-2015, Irish milk. One of the more interesting phrases that the author has read concerning the expected evolution of the global dairy market is that *there is definitely scope for the extra milk to be soaked up*. This was in reference to the expectation that EU milk production will expand when the milk quota regime finishes in 2015. Although to hear French concerns over the need for some sort of dairy regime post-2015, one would suggest that not everyone is signed up to the idea that whatever is produced will find a market [that presumably also provides a viable return to the primary producer]. Hence, the author has explored a few issues further [NB. this is more to question the *accepted* wisdom as to offer definitive market information].

GLOBAL POPULATION GROWTH

"In the years to 2020, an increase in demand for food must inevitably follow surging population growth... In tandem with this rapid economic development in such countries as Brazil, Russia, India and China, is creating sophisticated new consumer audiences who demand new and diverse food solutions" (FH2020, pg6). It is difficult to dispute the logic of this statement; but will it truly translate into profitable market opportunities for Ireland?

On the demand side the issue is far broader than just the basic numbers. At present population numbers there are already vast numbers of under-nourished people on the planet; but has this translated into higher food prices. Yes there has been a recent spike in food prices, but how much of that was caused by market speculation and how much by misguided biofuels-from-food-production-farmland policies? The author would be confident that after decades of food commodity prices falling by a couple of percent per annum in real terms that the downward trend has halted. In the long-term [and ignoring the spikes], will the upward trend most likely now mirror the decline?

One should also ask whether supplying products to developing countries with relatively lower incomes [that may yet be diluted by population growth outstripping economic growth] from countries that also have to maintain the highest standards of animal welfare and accept higher degrees of environmental responsibility, be viable. There is clearly much greater interest in investing in agriculture than there was 10 to 15 years ago and there are locations where this capital can be more easily utilized than in Ireland. The capital is likely to come from the international finance markets, China and the Middle East and, in the main, one can expect this capital to migrate towards locations where large-scale, commodity-producing investments can be made. Will Ireland with its fragmented, smaller-scale farming systems realistically be able to compete with these, large-scale, *industrial* investments?

The author will go as far as saying that the "surging population growth" is something of a *red herring* as far as the long-term future of Ireland's agriculture is concerned. Of far more relevance to Ireland is the mention of the non-EU "sophisticated new consumer audiences who demand new and diverse food solutions". These are [marginally] more likely to provide profitable opportunities for Irish products but these markets still need to be understood in the context of their size and also the competition that Ireland will face in supplying them. It only takes a glance at export trade data to see that Ireland is already behind others when supplying the mentioned developing, higher-quality markets in Russia and China. The trade data also illustrates that these countries are mainly importing commodities [especially China from New Zealand] or, with Brazil and India, not a great deal from the EU at all.

Ireland is still predominately focused on exporting to the EU and only minor amounts go to the likes of China; although one can accept that there is some scope to expand its dairy commodity sales to China, at least in the short-term. As far as the author is concerned, the jury is still out regarding whether it can compete in the long-term in a Chinese market that is attracting serious investment attention both domestically [major dairy farming investments are being made in China] and abroad by the Chinese and indigenous dairy producers. Meanwhile the global and Chinese focus is taking the Irish industry's attention away from its core European Union markets.

CHINESE MARKET GROWTH

The discussions about the global market appear to be dominated by China. It is interesting to note that China has dominated the dairy market headlines in a way that did not happen with the economic growth of the South East Asian Tiger economies a few years back. The reason is probably the magnitude of the Chinese population.

One should not forget that China remains a country governed by the Chinese Communist party and that the Party still retains a strong influence over the country's policy direction. The strong hand of government is evident in, for example, its one-child policy that, at least in part, is limiting population growth and influencing demographics. With population growth at around 0.5% per annum, there is likely to be limited market growth related to population alone; not least because the expansion in population is due to an increasing life expectancy rather than higher birth rates. There are even suggestions that economic growth will be inhibited in the medium-term by the demographics of increasing age and a declining labour pool. Growth in China's food markets is being driven by increasing affluence rather than population growth and, as such, there are clearly going to be opportunities for those who can supply the products demanded by a growing 'nouveau middle class' [although one could ask if the polarity of wealth distribution will limit the size of the customer base for the premium foods market].

When considering the Chinese foods market an appropriate analogy may be the automotive industry. Who are demanding imported cars and what are they demanding. At least with respect to European sales, is the demand for the premium brands like Mercedes and BMW? If so, is it reasonable to assume that the demand for food products from the same demographic segment will be along the same lines? Will the new, affluent Chinese be demanding high-quality, premium, food products? To follow the analogy; at lower market points, EU producers will be competing with the likes of Toyota, Nissan and Hyundai [in dairy market terms, substitute the likes of New Zealand or the Netherlands of the USA]. Does the Irish dairy farmer have the resources to compete with such? The lower end markets will be dominated by local producers and 'industrial-agriculture' derived commodities.

China's free-market viewpoint

The interpretation of globalization seems to implicitly assume that all the participants will follow the rules of the 'free-market' as is understood in the western Anglo-Saxon economies. Given the success of China with respect to its export-focused industrial development and, hence, its ownership of the debt of others, it will be well positioned to invest in the food production sector. If it maintains its strong social emphasis within its approach to governance and investment, can we expect to see China invest heavily in projects that target ensuring the food security of the Chinese people? Is it naïve to assume that the Chinese will be happy to place their food security within the highly volatile commodity food markets?

There seems to be an assumption that the Chinese will play by our rules; that they will follow the classic rules of economic comparative advantage and buy their food from others whilst they in their turn sell consumer goods in exchange. The author's personal expectation is that they will seek to take control of their food supply chains [and the profit margins of other participants] via strategic investments and that many of these will be off-shore. They will seek to invest to reduce their reliance on others and over a two-to-three decade time frame, we will find that they will either seek to buy their suppliers or, when they cannot, create alternatives in regions where they can control the productive assets.

China's available wealth to invest dwarfs that available to Ireland's agri-food sector. As an example of China's investment capability, look no further than China's recent acquisition USD 4.7 billion of Smithfield Foods, the World's largest pigmeat producer. Other major agricultural investments are also being directed at, for example, the Ukraine, Argentina and Africa. Ireland is gearing up for expansion from 2015 but where will China be by then? Just consider how it has transformed its industrial sector in the last 20 years and then ask how far it will have transformed its dairy farming sector by 2020.

More directly, there is Chinese interest in the NZ dairy sector (which has a scale more suited to major agri-food investment). Synutra International (China's third-largest infant formula producer) also recently signed a €100 million investment deal to build two milk-drying plants in Brittany. At home, the author has read in the Chinese English-language press that, even though China is introducing stricter 'medical-grade' standards for the production of infant formula that will inhibit local production in the short-term, the government has also ear-marked nearly five billion US dollars to upgrade and restructure the sector. Domestic milk production is also industrialising with some major milk producing investments being established with, for say, 3,000 cow industrial farms being the model. One could suggest that these milk producers will be the ones who can also operate the traceability systems that more stringent infant formula production controls will demand.

It is interesting to note a comment made in the *Dairy Industry Prospectus Report 2003* [the commentary on the markets within the overall report has the hallmark of one of the report's two authors, the leading food sector consultancy group Promar International]. It states; "While the gross market opportunities in China are large, the ability of Ireland to capture large portions of this is questionable. Geographically, other lower cost producers are better placed to supply base dairy powders to this market, and the competition for market share will be price... In addition to this, others, including New Zealand, have established relationships with distribution partners within the market. There is likely to be demand within the Chinese market, but in the foreseeable future it is expected to be a more opportunistic rather than long-term user of Irish dairy products". Although the baby milk powder scare has distorted the market, this author would tend towards agreeing with the above comment; albeit having been made in 2003. If anything it may be even more valid given the global supply reaction to a single food crisis.

One wonders about the derivation of some of the statistics given for the Chinese market and its potential growth. To go back to first principles, the FAO had Chinese milk consumption per capita in 2009 of about 32-33kg of milk and milk consumed as butter. How much will this grow as incomes rise? In neighbouring South Korea, GDP per capita is 3.5 times that of China (based on purchasing power) and South Korean dairy consumption (on the same basis) is around 50kg per capita. In Japan consumption is higher but still only a third of that in western European countries. Simply, dairy is not a traditional part of the diet and some projections may be expecting that the Chinese will follow western diets to too higher a degree. To put this in another context, the average Chinese baby probably consumes about 1/10th of its lifetime dairy consumption in its first year. If Chinese consumption closes with South Korea over the **coming decades** this may fall to 1/13th. By contrast the north-western European may continue to consume the same level of dairy products in every year of his/her life; numbers that may also be a reflection of the differing tolerances to lactose that exist between the dissimilar populations.

The author is also left with the impression that too little consideration is given to the reaction of the Chinese to their own food supply situation [discussed above]. This should not be given too little credence when considering the long-term evolution of the Chinese markets and the opportunities therein. Another issue that appears to gain little mention in articles concerning the Chinese dairy market is the one of lactose intolerance. Just how serious an issue is it in the Chinese population and is it going to be a limiting factor on the growth of the Chinese market? And to add a further comment; dairy market development is based upon the assumption that more Chinese will switch away from their traditional non-dairy diet, but actually just how far will this dietary 'evolution' go?

The Chinese infant-formula markets

Just where was the Chinese infant-formula market a decade ago? Just how much of the local demand was fulfilled by China's numerous infant-formula producers. Although the author does not have the answer, the answer is probably that, pre the melamine-scare, most was produced locally. One cannot question that the tainted baby-milk scare in China has created a major demand shift towards imported, perceived-safer, infant milk products and that at the top end of the market, where affordability is less of an issue, the Chinese market is now dominated by high-end, internationally-recognized brands.

Hence, is it reasonable to state that the major change in the Chinese infant-formula market has been due to a food scare? Research suggests that demographics in China show a low birth rate and baby numbers of around 16 million. There is a relaxation of the one-child policy and this may mean an increase in the number born. There is, however, a limit on the total market size dictated by the prevalence of using infant formula and the amount which a baby can consume [given some of the market projections around one wonders about the latter]. There are also the natural ways to feed the infant, and as highlighted in the Financial Times recently, alternatives that cash-poor Chinese mothers can turn to. The FAO is also not predicting a population rise in China to 2050 and it is also possible that the switch to an urban lifestyle is slowing.

Lastly, there is the issue alluded to earlier. It is very unlikely that the Chinese government is not moving mountains to resolve the problems in its domestic infant-formula market. It, along with state and privately owned enterprises, will be seeking ways to restore confidence in its own, domestic infant-formula producers. There appears to be a graduated market at present; the top end supplied by branded western-produced products (from the likes of Danone and Nestle), the middle supplied by China-based producers using internationally-sourced ingredients and the lower end supplied locally. Will this continue or will the top end be squeezed by a resurgence in local production [supported by government funding] and Chinese investments elsewhere. Is it possible that China will find a Chinese solution for its own Chinese food crisis?

Just to what extent has the 'rise' of the Chinese market [in the eyes of the EU dairy producers] been influenced by the food scare in the Chinese baby milk market? One could ask whether this influence is disproportionate. In part to play Devil's advocate, the author will ask whether too much emphasis is being placed around the World by dairy producers on what have been the consequences of a contaminated food scare.

In the context of the Chinese infant-formula market, just how great is the opportunity for Irish processors and, hence, the farmers who supply them? Is there an opportunity for an Irish-branded infant-formula range to be sold directly to the Chinese consumer? If not, is the opportunity only via the sale of ingredients to the likes of Danone and Nestle and/or the sale of ingredients to those who create the for-the-shelf product in China? If it is the latter, will the consumer (well the consumer's parents) be able to recognise that the primary ingredients are indeed Irish.

There appears to be a recognition that Irish, grass-fed milk is a premium raw material for producing infant formula but will that premium recognition go beyond the processor and through to the final purchaser? Certainly Aptamil Powdered Formula in the UK is clearly flagged as being predominately based upon Irish grass-fed milk, but will that same promotional message be transmitted to the Chinese buyer and, to be honest, if it was would it be that significant? Certainly 'educating' the Chinese consumer to the extent that their purchase decisions are based upon choosing Irish-produced, grass-fed-milk-based infant formula may be just *a bridge too far*.

In that case, what role is there for Irish producers beyond being a link in a supply chain; albeit a producer of quality raw materials? Essentially, Irish producers are supplying others with the ingredients for their own brand products. Hence is there the partner relationship surety to justify any major investments needed to supply the market? In the short-term there probably is but in the long term will wider supplier reactions to increase supply [both China-controlled or not] undermine the long-term profitability of some who supply the Chinese infant-formula market?

THE MIDDLE EAST MARKETS

It is not the intention of the author to comment upon all the possible markets opportunities; not least because it is reputed that the Irish food and drink industry already exports to at least 160 countries. However, recent press comment, the author's previous consideration of the Gulf region and an awareness of the existence of consumers with strong purchasing power, gives reason for a brief assessment of the markets of the Gulf markets.

The author first looked into the potential for supplying the Gulf region from Central and Eastern Europe some 15 years ago as there should be a logical connection between some agricultural resource rich regions in CEE and the agricultural-resource poor, petro-wealth-rich countries in the Gulf. Interestingly, it was a view reiterated by Pat O'Keefe in the IFJ's *Trade Winds* publication in December 2013; to quote, "For Ireland, this [the Gulf Cooperation Council region] is a food market of immense promise. We are a natural fit. We export 85-90% of our food while they import 80-90% of their food". ***It is an import-dependent situation that has not gone unnoticed by others.***

It is a market where there are likely opportunities and higher-quality, diversity-creating dairy and meat products may make inroads. It is, however, a region with historic trade links. It should also not be assumed that the entire populations are wealthy and that means for many consumers and trade customers price is an important factor. The *Trade Winds* publication did make some valid observations. To quote, with reference to the dominance of Australia and Brazil as major beef suppliers, "how to position Irish beef [in the market]... "pure and natural" could be the brand for Irish beef". Also due to stringent price controls on some everyday dairy products in the UAE, the publication highlights the fact that value-added products are not controlled. Overall it appears that there are the opportunities in the Gulf region but that they exist either where Irish prices can at least match those of the major exporting nations or where products can be targeted at the wealthy locals and the thriving tourism sector.

The author's previous experience with regard to the Middle East highlighted the 'natural' interest the region's inhabitants have for those regions that are naturally green. It would be expected that natural grass-fed dairy and beef products would attract interest and that interest could be transformed into premium-recognition for Irish products. There also appears to be Irish experience with Halal slaughter for beef, although the author would be curious to see if the cultural preference for *lamb-on-the-hoof* could, at least partially, be overcome.

The author will also add a similar caveat to that of China for the food markets in the Gulf. Over the longer term one could expect the desire to invest petro-wealth in alternative, long-term, sustainable food-sector investments to resolve some of the food supply issues. Hence, it is the author's expectation that over the next decade or so vast amounts of oil-generated wealth will be invested in agriculture and food production. One target region is likely to be the CEE region and, especially, in those areas where large-scale agricultural projects can be developed.

Further, the author has noticed a distinct absence of any mention of the countries of CEE in the Irish agricultural press discussion of global markets and he considers that worrying. It is a region with vast agricultural potential and it is a potential that might just become unlocked by Gulf States' capital. If so, those who are building their export to the Gulf States strategy on commodities might just find that they are only highlighting to Gulf-based investors those activities which they themselves should be investing in. One should also add that the potential of the countries to the north and west of the Black Sea dwarfs the agricultural potential of Ireland and, worse, that does include regions well suited to the production of high-quality, mainly-grass/forage-fed, livestock products.

7b. GLOBAL COMPETITIVE POSITION

Ireland is clearly an important major player when it comes to the international trade in dairy products. At present there is a great deal of discussion about it being a major player on the global markets. Almost every publication one reads has some article or another that mentions Ireland's need to develop global markets and that its farmers and processors need to be competitive with the other major exporting nations. As an example the Irish Farmers Journal published in December 2013 *Agriculture 2014: Trade winds – Understanding your market* which offered interesting coverage of various markets and suppliers around the World. It is interesting that the agricultural press seems to consider it necessary that the average Irish farmer needs to be *up to speed* on such global issues.

To play Devil's Advocate; is the underlying reason behind the promotion of the need for Ireland to become 'global' about persuading farmers to 'sign up' to the expansion targets in FH2020? Is it an appeal to farmers to invest to help Ireland's export-lead economic recovery? Is it about persuading farmers to invest to help extract Ireland from an economic mire created by property developers and bankers; an issue that should play no part in deciding about long-term, on-farm investment decisions? If so, this author considers that it is playing a dangerous game. The consequences for agriculture could just be a repeat of the build-it-on-debt, property-sector failure.

Another recent IFJ article (28/11/13) used the evocative title *How Ireland can build a dairy empire* and went on to conclude that "Dairy expansion post 2015 has the potential to deliver huge economic benefit to rural Ireland... If farmers can maximise efficiency and processors and the IDB successfully deliver higher value markets, we can achieve the targeted 50% volume growth [as per FH2020], probably by 2021 or 2022. With annual exports of over €4bn, Ireland can then be one of top five dairy trading nations in the world". In some ways one should not criticise ambitious plans and the article does also state that "farmers need to be cautious as expansion can be a shortcut to going bust" but is it wise to place such emphasis on Ireland seeing itself as a global market player?

A key phrase in the above paragraph is *successfully deliver higher value markets*. Is this target itself (as questioned much earlier) not almost contradictory to the global player objective? The fact remains that Ireland's exports are heavily weighted towards the United Kingdom and the European Union; both mature higher-value markets. Is the

objective to become 'global' going to divert attention away from these established markets? Is there a risk that the global objective [and its associated emphasis on achieving economies of scale to compete in the new global markets] will actually set Ireland off and chasing an impossible dream? Fundamentally, will Ireland's farming operations ever be able to compete 'head-to-head' with those of other much larger dairy producers?

Ultimately, once Ireland's dairy farmers have achieved their 50% volume growth (by 2020 or by 2021 or 2022) just where will they go from there? Will Food Harvest 2025 then be demanding another 50% and Food Harvest 2030 yet another 50%? Just where does it stop; dairy quotas will not be a constraint so is the sky the limit? The fact is that Ireland has finite agricultural resources and these will constrain its total production potential. In theory it could eventually throw away its grass-fed approach and seek to be a major importer of feeds and become another 'feed-lot' producer but that will have major investment needs and consequences for its environment and the sustainability ideals and targets laid out in FH2020. As stated earlier, is 2020 also too short a strategic time frame?

The following sections discuss a couple of competitive issues further. The first illustrates how dynamic the supply side of the global markets is and especially with regard to the Chinese infant-formula market. A much read statistic is that Ireland produces 1% of the World's milk but feeds 15% of the World's babies [that are fed on infant formula]; hence it is a major global player in that market. Sadly what could have been a 'comfortable', niche market for Ireland has become, courtesy of China, a big issue and everyone wants a piece of the action. Secondly, is a brief discussion on the importance of access to finance and whether limited access to capital in Ireland is going to be a major inhibitor to its ability to expand. The comments are also placed in the context of the kind of major agro-business investment that the financial markets are tending towards and whether the investments that this finance is nurturing are actually creating competitors that Ireland's farming cannot compete with.

COMPETITIVE MILK POWDER INVESTMENTS

With so much talk about the Chinese market for infant formula and milk powder, the author's reaction was to investigate what its various suppliers are doing. In the past he has seen perfectly rational decision-makers all working with similar information all reaching the same decisions without fully reflecting upon the consequences of what may happen if they all make the same decision at the same time. The consequences can be dire.

Clearly New Zealand is the leading supplier into China and it has a free trade agreement in place. In 2011 NZ accounted for 75% of China's milk powder imports. Since then the market has continued to expand and China has diversified its sources but what has the reaction been? Well in NZ Fonterra has just opened (December 2013) a new 2.2 million litres of milk a day, 85,000 tonne per annum milk-powder facility. It has also announced the development of another, new, marginally larger facility. All will, of course, be target at their export markets.

It appears that the Chinese themselves are directly investing in France and entering into joint ventures elsewhere in Europe. One press article states that one-third of Chinese milk powder imports in 2012 derived from production facilities that were by then directly controlled or had agreements with Chinese businesses that have a track record supplying their own domestic market. The USDA reports that Friesland Campina is investing in three new infant-formula facilities and Arla Foods is planning to expand its milk powder sales to China. It also reports that in France nine milk-drying facilities are being built or expanded. Hence, the supply side is currently very dynamic.

Although nobody appears to be predicting that the demand for *imported* infant formula or infant-formula based upon *imported raw materials* is going to change anytime soon, there remains the question of just how long will this market boom last? Will Chinese government efforts to restore confidence in home-produced infant formula succeed? When will new Chinese, industrial milk production investments *kick-in* and impact upon the market? Will the Chinese companies investing overseas develop a supply-base that is sufficient to fulfil domestic demand and will the supply-base even include Ireland? How will foreign-owned brands fare into the long term? There are a lot of questions that a milk producer at the bottom of a supply-chain-to-China should be asking if the supplier that they supply [and maybe investing to supply more] milk to is specifically investing to supply the Chinese market.

IS THE CAPITAL AVAILABLE TO COMPETE?

Does anybody not appreciate that *going global* means that the Irish farmer is going to be going head-to-head with capital investment flows into agriculture from China, the Middle East and the wider financial world? If not, they should do as the desire to become a *global player* off a finite Irish production base is a questionable strategy.

In this extremely unequal contest the author would only predict one winner and it is not the Irish farmer. In the short-term there may be opportunities to plug the current gaps in the market but capital will flow into locations where agriculture is under-performing; thus snuffing out those opportunities to supply agricultural commodities from higher-cost, fragmented, small-scale, small-volume-producing farms located in western Europe or Ireland. It is also a situation, given the starting point, that any amount of land, farm or business consolidation will not rectify.

To cite the Farmers' Guardian in January 2013 quoting Catherine Lascurettes, executive secretary of the National Dairy and Liquid Milk Committee of the Irish Farmers' Association, "farmers would have to invest £1.5bn on their farms to deliver that 50 percent increase [in milk production], and that needs to be matched by a significant investment from other co-ops. Along with the huge investments necessary there are challenges over... farmer's access to credit (which is worse in Ireland than the UK)". In terms of credit provision, does Ireland after the banking crisis have banks willing to lend to agriculture, or even have the capability to fully appraise the expansion plans of agriculture? The author also doubts that Ireland has an up and coming Rabobank to service its farmers.

To place this into context one only has to scan the international agricultural and agri-food linked journals to see the magnitude of investments being made around the World into agriculture and food. As mentioned earlier, the Chinese appear to have ear-market five billion US dollars to address the issues with its infant-formula supply. In terms of magnitude, the Smithfield Foods takeover was similar. One has also heard of a three billion US dollar investment by the Chinese into the Ukraine and also their intentions towards large-scale investments in Australia and New Zealand. And that is not to mention smaller milk-powder related investments within the EU.

With regard to the Ukraine, an interesting article appeared in the Irish Farmers' Journal dated 11th January 2013. It was a piece about a 300,000 (yes, three hundred thousand) hectare crop production operation that is just building its first [note "its first"] 10,000 cow dairy unit. Below is a quotation from the article.

The relevance to Irish farmers of Mriya's Ukrainian operations

Irish Farmers Journal (11/01/14)

"Even a simple analysis of Mriya's operations poses some serious questions for Irish farmers, co-ops, farm organisations, food processors and agricultural policy makers so". Hence the author, Brendan Dunleavy asks:

"How many Irish farmers and agri-businesses can compete with large, completely integrated, well-financed, highly efficient, agro-industrial groups like Mriya? Are our much-vaunted low-cost, grass-based, livestock production systems enough? What extra resources do Irish farmers and agri-businesses need to compete on the international stage which is tilted so steeply against them? Is it time for our dairy co-ops/PLCs and meat processors to get actively involved inside the farm gate to help ensure that their farmer suppliers achieve critical economies of scale? Is there any other way to compete with such modern, large-scale, highly efficient, international agro-industry groups like Mriya?"

In the context of this section of the review, the key words are 'well-financed'. As to the various questions posed, one would tend towards a simple answer; 'no' to each one. And the last is literally *the billion dollar question*.

In the context of finance, the author would expect those involved in finance provision to be wary of funding what would in effect be a credit line to the farmer-suppliers of the downstream supply-chain entities. In this situation the financiers themselves would need to be very convinced that the business model of the processors showed that

they could then compete in their chosen markets. There would also be the question of ultimately who carries the credit risk, the processor or the farmer? Such credit lines are made [formally] available but they tend to be in the developing world and are financed by the World Bank and its ilk. It is a very unlikely solution for Ireland.

The author himself has worked in the past with major agro-industrial investments [in particular those that now supply vast quantities of palm kernel cake to the New Zealand dairy industry] so the report in the IFJ comes as no great surprise. He has also worked in Eastern Europe so is well aware of the potential of the likes of the Ukraine. The Ukraine is not a major milk producer (relative to its population) and its volume is a little more than double Ireland's, but that does not mean that major agro-investments will be targeted at the domestic market. If major investments are, for example, Chinese or Gulf-financed, the produce may be destined for export from the start.

Ireland may be a major player in terms of its share of the global dairy trade but in the context of its resources it is an agricultural lightweight. If one considers dairy products [regardless of whether they are grass or cereal-fed] the Ukraine has about thirty times the arable land area of Ireland. Romania, another CEE with serious agri-food potential is currently reputed to have three times the arable area of Ireland lying derelict. In addition to a physical resource shortfall, Ireland (as mentioned earlier) has serious access-to-finance constraints. Its fragmented, small-scale farming base and slow-moving land market will also make it unattractive to major agri-business investors.

IS THE USA A MAJOR PLAYER ON THE GLOBAL EXPORT MARKETS?

It has been interesting to note how little mention is made of the USA when it comes to dairy exports onto the global market. Is it because it is not considered a relevant benchmark, being neither grass-focused or, due to its large internal market, export dependent? The USA does have one of the World's largest dairy industries. In 2011 its production of milk [from cattle] put it second behind India's production of cattle and water buffalo milk.

The structure of milk production is different to that of Ireland by 180 degrees. The following is mainly derived from a blog posting in October by Professor Keith Woodford who is Professor of Farm Management and Agribusiness at Lincoln University, New Zealand. Within his posting he is flagging up the *Industrialisation of American dairying and the implications for New Zealand*. If it is relevant to New Zealand it is certainly relevant for Ireland.

In 2011, milk production was close to 90 billion litres (FAO). As of 2013, Prof. Woodford was reporting that 30% of this was produced by 800 farms with at least 2000 cows and 70% came from farms with over 500 cows. Whilst the American dairy industry has been struggling with high grain prices in the last five years, expansion has again commenced with the recent fall in grain prices. The following are a few specific points gleaned from his blog.

The farming systems provide some competitive advantages. Prof. Woodford describes them as making "very efficient use of capital (milking cows each produces about twice the milk of a typical cow in the NZ system). The system has "high feed efficiency with most of the feed being used to produce milk rather than just maintain the cow" [an important point when one considers that each cow first needs a not insignificant maintenance ration]. "The breakeven point is probably about \$NZ7 per kg MS [c.€4.2] based on 2012/13 grain prices. However, with corn and other grain prices now dropping rapidly the breakeven point will be lower than this; hence the current and expected expansion. The bottom line is that the mega farms can be internationally competitive and they are going to expand. Productivity improvements are on-going" (Keith Woodward, personal blog, October 2013).

Professor Woodford believes that there is room for both the USA and New Zealand in the global markets so long as NZ continues to focus on productivity improvements. His expectation is, however, that "within 5 years the USA will overtake New Zealand as the largest global exporter of dairy products". Given the relative scale differences between NZ and Ireland, let alone the USA, is Ireland in a position to compete on a cost base with the USA? And whilst NZ may not need to be overly worried by the changes in the USA can the same be said for Ireland?

7c. INTERNATIONAL BENCHMARKS

"Specific benchmarks should be established and reported upon in terms of progress and comparisons with key competitors" (FH2020, pg19). As a follow on the preceding section on Ireland's global competitive position, the author is going to ask just who are they? Who should Ireland be benchmarking its performance against?

The author has a long history with the development of benchmarking systems and the associated identification of key performance indicators (KPI's). It is critical to get the latter right and to then compare them against well-chosen benchmarks. Get either wrong and the consequential decisions can be poor or even diametrically wrong.

I doubt if many readers of this review will question the inclusion of New Zealand as a benchmark. Along with the importance of 'thinking globally', New Zealand is an ever-present in the Irish agricultural press. To go further, the author will refer to a strategic paper prepared for the Irish Farmers Association in September 2009; *The Irish Dairy Industry - the decision time is now*. That particular paper focused on New Zealand, the Netherlands and Denmark as Ireland's international competitors. Hence, this review of FH2020 will start with those benchmarks.

New Zealand's grass-fed dairy industry

It almost appears that every Irish agricultural publication has to include one or more references to New Zealand. It is not surprising in that NZ is often cited as a World leader in milk production. But are the similarities with Ireland great enough to justify its position as Ireland's paramount benchmark? In terms of similarities, both countries are maritime, island nations with small domestic markets and, hence, a need to export 85-90% of their production. Their dairy industries are grass-based, seasonal and operate with lower-yields per cow in comparison to the cereal-fed industries of, say, north-west Europe. NZ also has a similar product range (due to its location and seasonality) of butter, milk powder and cheese.

However, NZ is not part of a trading block. It is also not part of the EU's CAP with its various mechanisms and quotas. NZ does not have a local market in the context of the EU free-trade zone. NZ has a highly consolidated processing and marketing capability and it sells globally whereas Ireland is historically focused on the UK and the EU. NZ is already a major partner with China with whom it has a trade agreement. At the farm level, NZ has a very different structure with an average farm size of around 400 (nearly 8x that of Ireland). Its average herd size in five years has grown by the equivalent of an average Irish herd. In 2009 the average NZ herd produced 120 tonnes of milk solids (by 2011 it was over 140 tonnes); the Irish herd just 17 tonnes. In part, due to the herd breed composition, the average fat and protein content of NZ milk is about 8.5% and nearly 20% higher. Ireland's dairy industry is also linked to a more important beef industry than that in NZ.

Given the massive difference in operational scale that exists between the average Irish and New Zealand dairy farms one does question the continuous emphasis placed upon benchmarking Ireland against NZ. This is reflected in (according to figures from the International Farm Comparison Network and quoted in the IFJ on the 4th January 2014) an average sized farm in Ireland having costs of around USD47/100kg (or €0.34/litre) in 2012 as compared to USD33/100kg in NZ; that is a cost in Ireland that is just over 40% higher. But just how valuable are these figures?

At the international level these comparisons have value for those preparing national strategies and who wish to indicate where resources should be placed [if it is deemed desirable] to support those selling into specific markets against particular competitors. Hence, benchmarking against NZ should provide an indicator as to whether it is a realistic option for Ireland to compete with NZ in certain markets. With the scale differences in the industries, in marketing and processing and with the size and production cost variance at farm level between NZ and Ireland, one does wonder where the strategic logic is for Ireland to attempt to produce and sell commodities in direct competition with NZ? And, realistically, in what time frame could the changes be made to be competitive?

Should the benchmarking of Ireland's dairy industry against NZ **not have already clearly indicated** that Ireland needs to think of alternatives to trying to emulate NZ? Does Ireland not need to find its own Irish solutions?

There is undoubted value in assessing the way others manage and develop their industries as doing so should provide ideas on how to improve performance. However, once the strategic (i.e. products and target markets) and farming systems (i.e. the choice of cattle breeds as per Jersey, Jersey x Friesian or Friesian) issues have been resolved **it should be about monitoring and managing the home business**. It is then about benchmarking against similar, preferably, local farm businesses. International comparisons are then interesting but of limited relevance.

The primary issues for those in dairy farming should be whether by supplying their milk into a particular product supply-chain they will be satisfied with the return. If they are part of a supply-chain that produces a differentiated and desirable consumer product they may be rewarded with a higher 'farm-gate' price. Their rewards may also come by being more involved in the downstream supply-chain. If they are producing a commodity and have little or no interest in the supply-chain they will basically be a price-taker and, hence, have to be far more cost-focused. The more basic the commodity and the more globalised the market, the more vulnerable the farm business is to the vagaries of the market and the decisions of the major players within the market and or their supply-chain.

For information, the following text box provides details about two other favoured benchmark nations, Denmark and the Netherlands [to quote; "Irish dairy farmers are smaller, less productive and more seasonal in their production than the dairy farmers in Ireland's major EU competitor countries - Denmark and the Netherlands (*Dairy Industry Prospectus Report 2003*)"]. Even more so than with NZ, when one looks beyond their export-as-a-proportion-of-production indicator of similarity they have not that much in common with Ireland's dairy industry.

Denmark and the Netherlands

Denmark and Holland appear to be considered comparative because their industries are export focused. Is that sufficient to warrant using them as benchmarks? To start with, unlike Ireland, both countries have a highly consolidated processing sector. As to markets, it depends on what one considers a 'home' market. For Denmark its major cheese and butter exports are mainly (80-85%) sent to the EU with Scandinavia, Germany and UK being particularly important. By contrast, its milk and whey powders tend (30-50%) to be exported further afield. The Netherlands exports the majority of its butter and cheeses to other EU states but is a major global exporter of its milk and whey powders. With Irish exports, all apart from its milk powders have been very highly EU focused and especially towards the UK and, for butter, Germany.

As to the dairy industries of Denmark, the Netherlands and Ireland they are all very different. The first two are high-yielding and cereal-fed focused, the latter grass-fed focused. The average herd size in Denmark is now about three times that of Ireland. In the Netherlands, it is a little more than 1½ times the size. Both have been consolidating faster. Yield differences mean that the production of milk solids per herd is very different. In 2009, Ireland was at about 17 tonnes whilst that in Denmark was about 87 tonnes and in the Netherlands 49 tonnes [the 2012 figures were 100 and 54 respectively]. The average production per cow in 2009 was about 4600kg in Ireland, 8300-8400kg in the Netherlands and Denmark (data derived from the International Committee for Animal Recording's website and author's calculations).

Other interesting points to note are the proportion of Denmark's agricultural land (93%) and that it has 2.5 million hectares of arable compared to about 1.05 million hectares in Ireland and the Netherlands. In contrast, the permanent pasture areas in Denmark, the Netherlands and Ireland are 187,000, 816,000 and 3,492,000 (all FAO) hectares respectively. It should also be noted that the Netherlands is at the confluence of a massive international feeds and food trading industry.

What has been interesting to note is the absence of the United Kingdom from the international benchmarks used within various publications. This is a surprising omission given the importance to Ireland of the UK market for its cheeses, butter, skimmed milk powder and beef. Within this market the UK dairy industry itself is the main competitor so what the UK dairy industry does should be at least as relevant to the Irish dairy industry as what happens in New Zealand, Denmark or the Netherlands. Should one ask whether a small loss in market share in the UK would have a far greater impact on the Irish dairy sector than any small gains it might make in, say, China?

Given the dominance of the UK as a market there is logic in diversifying into other markets and especially those high-wealth, consumer-aware, markets of the EU and the USA. Will, however, there not be some commonality in the nature [i.e. high-quality] of the products needed to succeed in these markets as well the UK? Hence, is it not rational to focus on maintaining UK markets whilst further developing the mature markets with similar products?

The United Kingdom

The Irish Farmers Journal published in December 2013 a supplement entitled *Trade Winds – understanding your market*. The most extraordinary aspect of the publication was that it did not include the United Kingdom. It is, and will probably remain, Ireland's primary export market for dairy products into the foreseeable future. As such, it is also interesting to note its absence from most, if not all, of the chosen benchmark countries. It is incredible; hence one should ask whether the greatest threat facing the Irish dairy industry is posed by it choosing to neglect its primary export market in favour of going global?

And one should emphasise the point by quoting from the recent UK National Farmers Union strategy paper *Compete to Grow*. To quote, "Based on predictions and analysis of domestic growth in demand for dairy products in the UK and by maintaining/achieving 100% self-sufficiency (balanced trade), between four and five billion litres of extra milk at farm gate would be required by 2020... The NFU believe that ... the combination of efficiency gains, farm expansion and new entrants could allow output growth to equal the demand growth required to achieve national self-sufficiency (trade balance)".

Although the NFU paper post-dates FH2020, should such a UK post milk-quota strategy not been anticipated and factored into the targets established within FH2020? Given that the paper targets self-sufficiency in a UK market upon which Ireland is highly dependent (according to FAO trade data for 2011 about 60% of cheese and milk powder and 35% of butter exports went to the UK) does not the objective set out by the NFU not **pose a massive threat to the future of the Irish dairy industry**? If so, far from focusing on milk production expansion, should not the Irish industry first seek to ensure that it has a viable market for its current production levels? Also, given the UK target, how wise would it be to debt finance expansion when a [probably] high-value EU market has to be traded for a new, [maybe] lower-value 'global' market?

The above text box provides less detail about the UK dairy farming structure but focuses on the strategic direction that the UK industry is mapping out. It was [finally] picked up in an article in the Irish Examiner on January 4th 2014 in an article entitled *UK trade plan threatens Irish dairy exporters*. It was an interesting contrast to a UK Farmers Guardian article where a spokesperson for the Irish industry was 'defending' the FH2020 expansion targets and saying that they would not impact upon UK dairy producers. By contrast, a UK strategy determined to substitute for [totally in actual value terms] imports can do little other than impact upon the Irish dairy industry. And one could also mention the recent opening of a major new UK butter plant by Muller. It is to say the least bewildering that the establishment of FH2020 expansion targets appear to have been set without there having been due consideration to the possible post-quota actions of others in the EU and especially the actions of the one industry that is Ireland's primary competitor. If the UK plans are considered feasible, should FH2020 be now reviewed?

7d. SUPPLY-CHAIN CONTROL

The issue of consolidating the milk processing sector in Ireland has been around for a while. It was certainly an issue that was raised back in the *Dairy Industry Prospectus Report 2003*. That report stated "a number of processors are producing relatively small volumes of base products, and are not in a position to enjoy the economies of scale being enjoyed by larger operators (both in Ireland and in competing countries)".

The subject was again followed up in 2009 in *The Irish Dairy Industry - Decision time is now* report. That referred back to the earlier report thus; "The "Prospectus Report" of 2003 recommended that radical action was required by the Irish dairy milk processing sector to ensure its long term survival. However, little progress has been made during the interim period to advance the sector". That report, published in 2009, went on to state that "The current processing model cannot provide the basis for the future development of the Irish Dairy Industry".

And then we reach the publication of FH2020 and, to quote FH2020, "The processing industry must move towards a small number of scaled operators who have the scale and culture to drive efficiency and value added in line with key international competitors who have already achieved consolidation" (FH2020, pg42).

Clearly by 2014, little has changed as the editorial of the IFJ (25/01/2014) said; "The need for consolidation within the Irish dairy sector has to be put on the agenda. It should be discussed within the context as to whether or not the current processing structure will be capable of maximising returns to farmers in a global market place".

One of the strong drivers behind this processing-consolidation desire is the benchmarking against New Zealand, the Netherlands and Denmark. In Fonterra, Friesland-Campina and Arla Foods, each have evolved a dominant farmer-owned, farmer-controlled, co-operative processing and marketing structure that has been successful in enabling them to become major players on the global, dairy markets. Ireland, whilst having a lot of co-operative ownership in its primary milk processing sector, has not seen significant sector consolidation in the last decade.

The supply-chain co-operative benchmarks

Fonterra processed nearly 90% of New Zealand's milk [17 billion litres of milk] in 2012. The milk was sourced from its near 10,600 farmer-shareholders. Fonterra is the world's largest dairy processor and the largest operator in the global dairy market. As it stated in its 2012 annual report, "We're playing to our strengths - our seamless supply chain, years of dairy knowledge and great people working as one to take dairy to the world" (Fonterra Annual Report, 2012).

Friesland-Campina is one of the world's largest dairy co-operatives. As of year-end 2012, it had 14,132 member dairy farms (with 19,487 member dairy farmers) in the Netherlands, Germany and Belgium, and more than 140 years of experience of co-operative entrepreneurship. Also in several countries it collaborates with local farmers who are not co-owners in the business but are nevertheless in 'a long-term partnership with us' (source own website).

Arla Foods of Denmark is a global dairy company and a co-operative owned by [12,256 as January 2013] dairy farmers. It has production facilities in 12 countries and more than 18,000 employees. Its core markets are Denmark, Sweden, the United Kingdom, Finland, Germany and the Netherlands. It is the World's largest organic dairy company (source own website).

It appears that whilst consolidation has been high on the agenda for more than a decade [it has it been a key recommendation of every strategy paper written since 2003], evidently it is not what the industry wants to hear.

For an outsider, Ireland's milk processing sectors is quite convoluted and difficult to work out. It is also not quite as stuck in its fragmented ownership ways as one might believe from reading the various strategy papers. It has just not fallen into the nice-and-neat, consolidated format that the likes of Fonterra or Friesland-Campina has.

What is interesting, for someone who has spent a lot of the last 25 years in the former communist countries of the Soviet Union and Central and Eastern Europe, is to read the various papers about the need to consolidate the Irish milk-processing sector. It is almost as if a 'five-year plan' can be drafted and imposed from upon high; that it is possible to design and reformat the industry. It is virtually saying; *this is the new model, we **must** implement it.*

A rationale for the failure to consolidate may well be found in the success of Kerry Group plc and Glanbia plc. They both evolved out of the co-operative system and have enjoyed immense success operating as stock-exchange-listed public limited companies. They have both developed into globally-operating food businesses. What is of note is that the public limited companies were established with farmer-owned, 'parent' co-operative ownership. As the plc's have grown from small beginnings into major international players, the 'parent' shareholdings have been diminished and the benefits distributed to the members of the owning co-operatives [this has happened far faster with Kerry Group than Glanbia plc where the 'controlling' interest has only recently gone below 50%]. With such a financially successful 'plc' model in their midst, others have probably been reluctant to go down what they may consider a [potentially] less lucrative route and to consolidate within a co-operative framework.

Could one, therefore, say that Ireland actually has four, downstream, processing-marketing routes operating.

1. The public limited companies operating with freely tradable, stock-exchange-listed shares. Farmer-control is limited within the context that plc's have to consider the interests of all of their shareholders regardless of whether the 'parent' co-operative has a greater than 50% share [which neither now does]. In this structure the plc is unable to put the interests of the primary milk producer first. Through the placement of shares by the parent co-operatives, the co-operative's members have benefited from 'windfalls' but they have been at the cost of seeing their ability to control the processing-marketing entity that they supply diminish.

What is of note is the fact that a significant number of the Irish brand names within the Irish domestic market are in the hands of the plc's. It was evident in the recent creation of the Glanbia Ingredients Ireland (GII) that the Consumer Foods division of Glanbia plc retained the near-to-retail-market business and brand names.

2. The second downstream, processing-marketing route is the one that includes the Irish Dairy Board (IDB) co-operative. The IDB clearly plays a very active role in organizing the procurement, branding, marketing and distribution of consumer products and dairy food ingredients. The IDB owns the iconic Kerrygold brand as well as the United Kingdom's number two cheese brand, Pilgrim's Choice. To quote from the IDB's website; "As a co-operative, owned by Ireland's dairy processors, and in turn by Ireland's dairy farmers, IDB's core aim is to deliver a sustainable, high return for the Irish dairy farmer". Hence, its role is unequivocal.

With respect to the creation of GII, it was interesting to note that Glanbia plc was also willing to divest itself of the shareholding it held in the IDB, suggesting that it did not see it as being of strategic importance with respect to the sale and promotion of its Consumer Foods' division's products [which are otherwise branded].

3. The third route is less defined. It involves the number of the processing co-operatives 'going-it-alone' with respect to the processing and selling of milk powders and dairy food ingredients. All or some of these will also be supplying products to IDB for onward sale and distribution but they also have a significant part of their activity committed to their own sales of powders and ingredients. Is it this aspect of their business that is of major concern of those who wish to see consolidation in the sector? Not least because it is this sale of powders and ingredients that is seen as the major 'opportunity' for expanding global sales and, hence, the activity that will absorb the milk that is predicted to come from post-quota milk production expansion.
4. The fourth route is less documented and, hence, the scale of its presence is fairly speculative. It is the route to market that involves those who process, sell and distribute their own products. The author suspects that most of these are privately-owned [as opposed to co-operatively owned] farmer-processors.

As mentioned above, the concept of expanding Irish dairy production is focused on the opportunities for greater sales to the global markets. And it is there that Irish sales will be going head-to-head with the likes of Fonterra; thus the concern for the scale of Irish milk processing and its marketing 'weight'. Various issues arise with this:

- ♣ What scale can this third route reach if one assumes that a consolidated processing/marketing co-operative owned route-to-market is not going to include the plc's? Given their control of major Irish dairy foods brands will they be leaving the Irish market anytime soon [even given the current difficult retail market conditions]? They will, therefore, utilise a percentage of Irish milk. They are also likely to develop their businesses and milk requirements as illustrated by Glanbia plc's announcement of a new UHT facility for exporting what will probably be Avonmore-branded [thus using the heritage of Ireland's leading dairy brand] products.
- ♣ Will milk supplies destined for route-to-market two be transferred to 'bulk-up' the route-to-market three to give that route greater economies of scale and/or market weight? Given that route two includes the sales of Kerrygold and Pilgrim's Choice into mature markets where there is a strong, historic presence it is unlikely that there will be much enthusiasm or financial merit in prioritising route three over route two. Thus, the available milk for route three development will be constrained to existing milk and new, 2015 onwards milk. If this indeed the case, is there much merit in pursuing a consolidate-to-compete globally strategy?

- ♣ The word that is now appearing is 'premiumisation'. It is used to illustrate the idea of adding value to what have been basic commodities. Given its small-scale in comparison to Fonterra, one would suggest that for route three, premiumisation is a priority. FH2020 clearly alludes to this. The author's concern is, nonetheless, how much of the dynamism and knowledge required is actually to be found in the plc's as opposed to the co-operative owned entities in route three? The success of Kerry Group plc and Glanbia plc has been based on their ability to 'premiumise' commodities and to develop highly consumer-orientated products but how accessible will this knowledge be to others given that a plc's over-riding responsibility is to its shareholders.

Although one will add a caveat by quoting from the Glanbia Co-operative Society Limited, *A new model for post-quota growth* member proposals information brochure, "There will be agreements in place with the [Glanbia] plc that will cover market access, technology transfer, commercial contracts, innovation and research support". Thus there will be a tie-up between the two Glanbia entities. Will this, therefore, further limit the potential for any 'desired' consolidation of the co-operative controlled milk-processing sector?

Having the knowledge in Ireland to premiumise commodities is a plus [to quote "investment... has allowed Irish companies to build up wide-ranging expertise...[that] is a springboard for a future strategy of innovation and differentiation by Ireland's large, dynamic...food companies.[This] World-leading expertise [is] in ingredients, infant formula and other functional and prepared consumer foods" (FH2020, pg11)] according to FH2020 but has the ownership of this knowledge been over-looked? Just how much of the needed know-how is owned by those in route one (the plc's) and how much by those co-operatives likely to handle much of the 50% expansion in milk?

Hence, with respect to competing in the global market place, what quantity of milk is an 'all-Ireland' co-operative [that is in reality going to be rather far from an all-Ireland co-operative] going to be able to *put into play*? If it is the residual from routes one, two and four will it be sufficient for Ireland to become a major player in a [consolidated] third route directed at the new, expanding global markets? And even it is, will the third route have the capital or access to knowledge to 'premiumise' commodities and thus create the margin to provide a return to its milk suppliers commensurate with the financial risks that their co-operatives will have to take?

To put it simply, is consolidating route three going to make the difference that some seem to think? Research into recent events with respect to the creation of GII has also thrown up some other interesting questions.

- ♣ Has the creation of GII in fact transferred a major proportion [circa 30% or 1.6 billion litres] of Ireland's milk to route three? The joint-venture has certainly been lauded as having returned a significant proportion of Ireland's milk processing capacity back into the control of co-operative ownership?
- ♣ How flexible will the broader Glanbia plc / GII milk supply be with respect to suppliers moving between the two entities? How much will go to route one for existing and future activities? To quote again the above information brochure, "The relationship with liquid milk suppliers will be preserved by establishing dual contracts covering liquid milk supplied to Consumer Products, a business unit of the plc, and manufacturing milk supplied to the Joint Venture". So in other words the 30% is not tied to 'route-three' manufacturing.
- ♣ How much of route three milk will actually be processed into raw materials for route one value-adding? How much of this will happen within the Glanbia joint-venture structure?
- ♣ How much of route three's milk will be destined for use by other downstream entities who will add value and create, higher-value, own-branded products? Will, for example, route three have the capacity to develop and market an 'Irish' infant formula brand or will the downstream value-added go to others?
- ♣ Is the development of route three genuinely market-driven or is global-market 'talk' just dressing up what is, for all intents and purposes, a supply-driven situation? How much of route three development is being driven by the co-operatives obligations to take the milk that their members *intend* to produce post-quota?

On reviewing recent events within the processing sector, changes have been happening. And one does question whether consolidating milk processing into any sort of major processing entity is a realistic option. Major success has been achieved outside the co-operative structures and rewards from this have filtered back to co-operative members. These have not been as direct rewards for milk production but due to the creation and success of the plc's. In light of this there may be more than a few who are averse to consolidating the co-operative approach?

Within the context of who is going to process the post-quota expansion milk, the author has concern for the scale of the risks and who will carry the risk. Within the negotiation of the Glanbia Ingredients Ireland joint-venture, the plc made it very clear that its focus had to be on the interests of all of its shareholders [from the information brochure, "As a public company, Glanbia plc's activities must be managed in the interests of all stakeholders and specifically to create value and deliver substantial returns to shareholders"]. Hence [from the same source], "The Joint Venture's business model will facilitate the expansion of processing capacity, without unduly impacting Glanbia plc's highly successful international growth strategy. And to add a [self-answered] question posed within the same document, "Is the plc simply walking away from a low margin business that it has little interest in?"

The above question, as included within the Brochure's question and answers section, clearly suggests that some of the Glanbia Co-operative Society members were asking a very to-the-point question. Was the joint-venture a way for the plc to side-step the issue of the expansion milk and any obligations that the Co-operative Society had towards 'finding a processing home' for that milk? The plc's clear preference was for focusing its resources on its more profitable lines [as per the above expression of its mandate as a plc]. It is difficult to question its strategy.

The joint venture is now the *de facto* solution and it is one that has been funded out of the sale of a part Glanbia Co-operative Society plc shareholding. As a 60% owner the major part of the risk does now fall back upon the Society and that has been a 'price' that has had to be borne to create the additional capacity that the Society felt was necessary to meet the expansion plans of its Members. If the expansion does not fully materialise or the margins from processing and marketing are insufficient, the majority of the burden will then also fall back onto the Society. At least, the Glanbia Co-operative Society [unlike, as far as the author is aware, the other milk-processing co-operatives] has the fall-back position of the value it has in its 41% shareholding in the plc.

One of the author's conclusions is that there is a significant risk for the Irish dairy sector in over-investment in the intermediary, down-stream, commodity-focused processing sector [route three] on the assumption that farmers will expand production post 2015. There is just far too much emphasis on the ending of quota and expansion at a time when others in the EU [especially the UK] will be pondering the same end-of-quota response. Further, the global milk production sector is also at the same time eyeing up the potential changes in the global market and, judging by what is said about expansion in milk-drying, coming up with the same investment ideas. *Following the herd* is not always the safest approach and one that certainly did not serve Ireland well with respect to property investment. And over-investment and over-borrowing now in agri-food may have the same ruinous conclusions.

As mentioned above, for one or two entities, there may be the wealth to absorb any adverse trading situations resulting from milk production and processing investment being out of kilter. For others there may not be. Where investment is made and especially if it means borrowed money, the downside could well be business failure. Certainly there are co-operatives who consider that they are obliged to expand to meet the [envisioned] extra milk processing capacity needs of their members but there are risks involved and, hence, there are diverse views within memberships. Some clearly have different perceptions of the risks involved with expansion.

There is a scenario that may well yet play out. The post-quota expansion 'drive' will have consequences and one of those may be that milk-processing consolidation may happen by 'accident' as some over-extended co-operatives find that amalgamation becomes *necessary*. Ultimately, the author could envisage a situation where route-to-market three is consolidated through co-operatives combining [voluntarily or otherwise] as trading conditions go against some and a *survival of the fittest* situation descends upon the co-operative milk-processing sector.

7e. BROAD-BRUSH BRANDING

In compiling this review the author came to the conclusion that branding itself should be considered as having various *personalities* according to the intention of how the brand's name is to be utilized.

- ♣ Nationalistic branding appears to be becoming increasingly common whereby suppliers from a country, with or without the tacit support of their government, are seeking to differentiate their produce on the basis of its country of origin. Although the EU is meant to be a *common market* it has not stopped the rise of schemes targeted at consumers with the specific objective of encouraging them to adopt nationalistic buying.
- ♣ Industry-wide, generic-branding is being used in accordance with the adoption of a variety of food safety and quality assurance schemes. A number of the *food-safety* schemes are now fairly widely used internationally whilst food-quality assurance schemes are more nationally-focused in character; although one could argue that 'organic' is a *food-quality* assurance scheme that has obtained widespread acceptance.
- ♣ Product branding is well known within the private sector; it is about how a company [or co-operative entity] chooses to present and develop the characteristics and image of its own product within the market place. The importance of creation and maintenance of its brand is a major factor in how the company spends its advertising and marketing budget. That in itself should be determined by the returns the company believes it can achieve through growing or protecting its market share and pricing according to its brand identity [which might include a nationalistic characteristic]. It is about doing cost-benefit analysis on its A&M spend.

It should be noted that when considering branding, a knowledge of the actions of competitors within key markets is as important as one's own actions. Whichever of the three levels of branding is being pursued [*pursuit* is chosen over the use of *adopt* as the success of a brand is dependent on the perception of a third party (typically the customer or consumer) and, hence, it is not possible to *adopt* a brand; one can only seek to impart and embed the image] success will, in part, be determined by the reaction of those competitors operating in the same market.

At the nationalistic level it is relatively easy to see. 'Buy Irish' is in widespread use. 'Buy British' is likewise seen across the Irish Sea; a market where one can also find 'Buy Welsh' and 'Buy Scottish' and regional campaigns, many of which include the promotion of 'buy local' as informal food-safety and quality-assurance schemes. For an exporter, a marketing war on nationalistic grounds is as often as not what one wants to see. If there is not a strong relationship between two countries and, hence, a foreign consumer sympathetic to the brand message of the third country, branding and marketing spend may be less effective. Where there are nationalistic campaigns on place [as with the 'Buy British' campaigns currently in action at the consumer and business-to-business customer level] nationalistic branding of exports may even have negative impact as they highlight non-indigenous origins.

To an extent, the use of industry-wide, generic food-safety and quality-assurance schemes is to play a game of 'catch-up'. The wider their adoption becomes the faster one has to run to stay ahead of the field as others will always be looking to catch-up with what competitors are doing. To what extent can branding rely on the use of such schemes when all other suppliers have implemented, or will implement, the same of similar schemes? At what point does it become about saying that the rigour with which one's schemes are adopted is better than that adopted by competitors [i.e. it almost becomes nationalistically competitive in nature]?

In an era where the food markets have evolved as a result of several major food safety related scares, it has become almost imperative that international food suppliers have adopted a number of internationally-recognized operations-auditing schemes. Ratcheting up the schemes to a higher level and/or adopting one's own, new in-country schemes is only about staying ahead. It is also only going to be for the short-term whilst others follow suit [if they consider it is a rational spend]. And, yes, it is about doing a cost-benefit on the adoption of schemes. Will the market-linked benefits in terms of sales volumes and/or prices outweigh the *entire* costs of the scheme?

One should not forget that being the first to adopt a new style of scheme means that the developer/adoptee has to incur the upfront costs associated with promoting that scheme to customers and consumers. That is a cost that those that follow will not incur to the same degree. It may not always pay to be the innovator as in some ways the innovator pays the cost of promoting the scheme in the market place. A successful scheme may actually become a 'brand' in its own right but it is likely that it will be a 'brand' that is difficult to claim ownership of as others seek to copy or mimic it. Again it is about doing thorough cost-benefit analysis before creating and adopting a scheme.

It is interesting to note in FH2020 the objective of achieving, "the highest standards of food safety and traceability implemented in all participating products [within a 'Brand Ireland' *umbrella* generic brand for food and drink]. An objective that is, *de facto*, committing Irish farmers and food processors to a life committed to the *treadmill* of quality-assurance schemes. Inevitably others will rise to meet the same standards thus negating the positive impacts of the scheme. Inevitably others will then *raise the bar* and Ireland will be committed to follow. Hence, the author will ask, has anyone done a cost-benefit analysis of such a generic brand proposal or is it already a case that FH2020 is proposing such an objective because it is deemed necessary to 'catch-up' with others?

IRELAND'S NATIONALISTIC BRANDING

A national brand is encapsulated within the section relating to the development of Brand Ireland within FH2020.

"The green and natural reputation of Ireland, and of its food and drink production, has evolved naturally and, in many cases, spontaneously, over many decades. The international success of Irish brands such as Kerrygold, Bailey's and Jameson demonstrate that powerful global brands can be centred on Irish food and drink outputs and, also, the huge market advantages that can be gained by clear and sustained product differentiation. For the food and drink industry, there is now a clear need to copper-fasten this reputation and take ownership of its potential. To harness the powerful environmental messages that Irish food and drink products can convey, the creation of an umbrella brand for Irish food and drink is recommended" (FH2020, pg31).

An immediate comment is that the above does not fully appreciate the difference between generic branding and product branding. FH2020 does, however, acknowledge that "the complexity involved in delivering on such an umbrella brand or concept is undoubtedly high, with a considerable realignment of State, industry and producer required. It is accepted that a three-to-five year timeframe would be required to fully implement this plan. However, if the environmental credentials of Irish food and drink are to be recognised on the world stage, a coherent, unified message encompassing all sectors of the industry is essential". Is it essential? Achieving such a generic branding of Irish food and drink sounds like an attempt to *herd cats*.

The adoption of a generic Brand Ireland will require all participants to sign up to the parameters set for such a scheme. Who will define the parameters and what will they include? Will they include 'sustainable' issues, ethical issues, environmental issues and animal welfare issues? FH2020 indeed mentions several issues; "a sustainability audit of Irish agri-food with particular reference to grass-based rain-fed livestock production", "scientific research which underpins Ireland's sustainability claims", "health and wellness", "to protect and enhance the current high standards of food safety in Ireland" and "continuous improvement and operation of the highest standards of animal health and welfare by livestock producers". All are considered to be "key steps necessary to progress the development of a Brand Ireland" (FH2020, pg31). Brand Ireland should also "integrate current marketing activities ('Ireland, the Food Island', 'Love Irish Food', etc.)" into it. It is indeed an extremely ambitious project.

The author's reaction to Brand Ireland is not just to again ask about a cost-benefit analysis [the pan-industry costs will be high] but also to ask where Brand Ireland is going to stand in terms of, for example, GMOs, fracking, live animal exports, the disposal of 'bobby calves' or farmers who wish to intensify production by switching to cereal-based livestock systems. All are difficult issues and all have the potential to fully *derail* Brand Ireland.

Whereas there may be merits in seeing all produce leaving Ireland with a single, generic 'Brand Ireland' stamp upon them, is it really going to provide significant gains in the market place? In the UK for instance, both retail consumers and B2B customers seem to be signing up to the 'Buy British' concept. Hence, is Brand Ireland actually going to be a plus in a historically key export market? On global commodity markets will Brand Ireland provide assurances over and above the food-safety, quality-assurance schemes already in place? In the B2B world of food ingredients and commodities where there may be little or no opportunity for the end-user to create further added value, will there be any sort of price premium through being stamped 'Brand Ireland'. Maybe it will tilt the balance in an otherwise price-dictated decision-making process but will it create a premium price to pass up the chain?

The costs of Brand Ireland are unquestionably going to be high. Will the benefits accruing be greater? And will all the industry's participants sign up to such a Brand scheme? Many may choose not to if it impinges upon their freedom to implement their own business decisions. They may also not agree with some of the parameters. And, ultimately, there lies the problem, a few, or several, or many, industry participants may choose to undertake activities that may be [perfectly legal] but contradictory to the standards set out within Brand Ireland. In that case when does Brand Ireland not become representative of Ireland? Will consumers buy into a generic, national branding that 'ignores' the presence of contradictory activities happening within the Irish agri-food industries? And, given the emphasis on sustainability and environmental within the idea of a 'green' Ireland where will Brand Ireland stand on non-agri-food issues like fracking for shale gas? The author's concern is that there is likely to be contagion across issues by using a generic, national brand and all may end up *being tarred with the same brush*.

The author has concerns over the merits of such a broad, generic approach to marketing. From a strategic perspective it can be looked upon in the context of the tactical approaches used in the First and Second World Wars. In the First War it was all about advancing on a broad front [to borrow a description from Blackadder of Earl Haig's attempts at an advance; "another gargantuan effort to move his drinks cabinet six inches closer to Berlin"] in the Second it was about applying significant military might on a very narrow front [the blitzkrieg approach].

Hence, should not branding be more focused? Should a brand not be developed around a series of characteristics and consumer ideals and demands that can be effectively *ring-fenced*? A brand's characteristics need to be those to which one or more producers can sign up to without undue compromise to their objectives or ethics. They need to sign-up to a scheme that is not going to leave their image vulnerable to the actions of others. They also need to see where the costs are and what the derived benefits will be. They will also want to be a part of a branding activity that that is clearly focused upon their customers. Will a generic, national brand deliver on any of these?

Is Brand Ireland actually going to be a step backwards? Maybe the original ideas of presenting a 'softer' *Ireland, the Food Island* or *Love Irish Food* image that can play a marketing-support role to more specific brand developments be a sounder approach? The brands themselves can be developed by those in the private sector or those operating within a social enterprise who wish to develop specific schemes; be they relating to, for example, the use of farming and/or processing systems, environmental concerns or a holistic approach to multiple issues.

An overall comment with respect to Brand Ireland is that it reflects a rather top-down approach [a not dissimilar approach seems to be occurring with respect to the insistence from above concerning the need to consolidate the milk-processing sector]. It reads as an attempt to organize and co-ordinate the activities of the agri-food sector.

The author has an issue with the above in that it polarises decision-making. It also limits the dynamic influence that may originate from those with entrepreneurial spirit; be they operating in the private sector or within social enterprises. Maybe Brand Ireland also reflects a wider migration towards producing, processing and marketing commodities [or premiumised] commodities onto 'new' global markets rather than seeking to sell differentiated, higher-value and higher quality products into more defined, targeted, mature, higher-wealth markets?

7f. COMMODITY SWOT ANALYSIS

The following is a SWOT analysis of a commodity-focused strategy.

COMMODITY-FOCUS STRENGTHS

- ♣ Technical know-how with respect to processing dairy commodities
- ♣ A well-established market reputation as a supplier of food ingredients
- ♣ Strong reputation with some commodity-buying supply-chain partners
- ♣ Can use 'grass-fed' to distinguish Irish within some commodity markets
- ♣ Ireland's widespread positive image and natural 'green' starting point

COMMODITY-FOCUS WEAKNESSES

- ♣ Too little emphasis on defending existing primary and mature markets
- ♣ Attempting to compete with those with production economies of scale
- ♣ Being a significant dairy exporter but with a fairly small production base
- ♣ Grass-fed dairy platform limited at the national and individual farm level
- ♣ Individual herd size is only 1/8th of New Zealand's and change will be slow
- ♣ Fragmented farms, limited dairy platforms and little land market fluidity
- ♣ Benchmarking dairy farming's future against poorly chosen competitors
- ♣ On-farm milk yield increases may dilute the proportion of grass-fed milk
- ♣ Relatively small feeds producer and importer with higher per unit costs
- ♣ Capital constraints to convert to being a concentrate-fed milk producer
- ♣ Genetic focus on high milk yields will lower the quality of calves for beef
- ♣ Further veal-only-quality calves for sale into a slow-moving veal market
- ♣ Few drystock farmers willing to make lifestyle change to dairy farming

COMMODITY-FOCUS OPPORTUNITIES

- ♣ Short-term commodity market opportunities to *absorb* milk supplies
- ♣ A window of opportunity whilst China restructures its dairy industry
- ♣ Available specialist expertise to seek to '*premiumise*' commodities
- ♣ Offering customers more tailored and differentiated 'commodities'
- ♣ No quotas allowing a proportion of dairy farmers freedom to expand

COMMODITY-FOCUS THREATS

- ♣ Post-quota 'supply-driven' thinking justified by population growth
- ♣ Little consideration being given to the milk-supply actions of others
- ♣ Too much emphasis on Ireland developing new and 'global' markets
- ♣ Excessive enthusiasm for the potential of the Chinese dairy markets
- ♣ Processing cost-reduction more important than dairy-farmer returns
- ♣ Less dynamism and farmer sales options due to downstream mergers
- ♣ Vulnerable to the actions of major downstream supply-chain partners
- ♣ Compromising green and sustainable credentials by chasing expansion
- ♣ A repeat 2013 fodder crisis with much higher national livestock numbers

8. FOCUSING ON PRODUCTS

It is interesting to note that for all of the talk in the agricultural press about selling commodities to China and 'globally', the primary export destinations for Irish produce are the United Kingdom and the wider EU. This is likely to remain so; a fact that the FH2020 Committee concurs with. To quote, "The UK will continue to be a major export destination for Irish food and drink products [but] there will be a significant shift in focus from the UK to the Eurozone markets over the coming decade [and combined they will continue to account for about three quarters of Irish agri-food exports]... As a mature market, this [UK/EU] market will require a significant focus on product differentiation" (FH2020, pg29). Hence, should not the primary focus be on the UK and the EU markets?

Further should not the emphasis be on products rather than commodities? Again to quote FH2020; "For Irish food and drink exporters, the challenge is to develop the market knowledge necessary... to maintain a strong focus on meeting emerging ...consumer needs. [Their] future success... relies... on their ability to be part of a market-led food retail sector (FH2020, pg30). The mention of 'food retail sector' clearly indicates a desire to be producing for the final consumer and that to successfully achieve that means creating differentiated products.

"In the EU in particular customers are likely to seek a greater connection with the food they buy, while products that deliver on health and wellness will also continue to grow in importance... An important strategic theme emerging is environmental sustainability. This primarily incorporates environmental concerns but also reflects growing interest in issues of simplicity, authenticity, heritage and animal welfare" (FH2020, pg29).

Again FH2020 clearly recognises the importance of developing and selling differentiated *products* that meet the specific needs of the consumer and that the consumer is likely to be living within the borders of the European Union. FH2020 also recognises that the consumer is sophisticated and increasingly demanding. Beyond the EU, a similar situation will occur in other mature markets like the United States; sophisticated consumers will demand sophisticated, *multi-functional* products from producers who are able to offer high quality and traceability.

One should add that, so long as the production and selling of both commodities and products does not send out contradictory market signals, there is no reason why a dual commodity-product focus should not be maintained. And given the probable continuance of Ireland's seasonality of milk production, it is likely that there will have to be a processing of Ireland's seasonally-produced milk into the longer term. This, nevertheless, does not preclude the differentiation of what may now be considered commodities. Indeed, given the strong global competition for dairy commodities from producers with a much larger production base [albeit not as export reliant as Ireland], it is likely that Ireland will also have to differentiate, or as they now say *premiumise*, its 'commodities'.

It is widely acknowledged that opportunities will lie around the World as a result of increasing affluence in some rapidly developing countries. These will, however, not be mass markets. More likely they will contain consumers who are interested in buying into the *kudos* associated with products that are now recognised and branded within the mature markets of the EU and USA. Hence, to an extent, producing high-quality, differentiated products for the existing mature markets will also mean producing the very same products that will be in demand elsewhere.

To again use an automobile analogy; it is the well-known, leading marques of the mature markets that are in demand in the newly wealthy consumers in emerging economies. The question is where does Ireland position itself? Simply, the country does not have the agricultural resources to be a Toyota or a Nissan (that is the realm of NZ, the USA, Australia or Argentina). Does it have the resources to compete in the VW segment [maybe into the longer term with *premiumised* commodities] or should it be focusing on producing products for the Mercedes, BMW, Audi market segment; a segment that demands high quality but also still has relatively high volumes? At present, it is probably best to ignore the Rolls-Royce, Bentley, and Ferrari segment and to leave that to others.

8a. ADDING VALUE APPROACH

In the opinion of the author, the following statement is one of the most important within FH2020 “The continued development of value-added foods on the home and international markets is key to delivering a sustainable agri-food economy. Sales of these products are less likely to be impacted by fluctuations in commodity process while processing Ireland’s raw material supply domestically fundamentally supports wealth and employment creation in the rural economy” (FH2020, pg33). It puts in a nutshell where Ireland’s agricultural and food sectors need to be going. And even more so if supporting *wealth and employment creation in the rural economy* is also **emphasised**.

There should however be a caveat added relating to the issue stressed of the seasonality of milk production. For the foreseeable future, the bias towards spring and summer production will limit the opportunities for adding value to milk that has historically taken Ireland down the commodity path. Hence it is necessary to also emphasis within any strategy the processing of commodity-destined milk into value-added, *premiumised* ‘commodities’.

It does not take long when researching past reviews of the Irish dairy sector to appreciate that Ireland is and has been too reliant on producing commodity products. As stated in *The Irish Dairy Industry - Decision time is now* [prepared for the IFA in September 2009] “Ireland cannot rely on the same product mixes to build a sustainable / efficient industry” and “There is insufficient product innovation in the Irish Dairy Industry and diversification in terms of use of milk output. This is the case despite robust data to illustrate changing consumer trends and preferences both in Ireland and on an international basis”. The organisational structure of the milk-processing sector is specifically highlighted in the report as a significant problem [and restates what has been said before].

One could also add from the even earlier report, *Dairy Industry Prospectus Report 2003* the following; “The Irish dairy processing sector faced with this increasingly challenging market environment, have a number of strategic options available to it, which, at their basic level [include to] seek to extract greater value from the processed milk by producing products that are growing in demand, return a higher margin and reduces the dependency on commodity type products – **increasing the volume of value-added products option** [and/or to] become much more market focused and driven in developing and positioning dairy products that leverage the positive image of Ireland as a producer of quality dairy products and respond and anticipate changes in buyer/consumer needs and demand - **the strategic marketing option**. Hence, little appears to have changed over the last decade.

What seems to have altered the dynamics in terms of orientation is the combination of an increased awareness of global population growth coinciding with the rise in economic purchasing power of the Chinese. To look deeper into this though; how much of the increase in global population rise awareness is due to the food price spike that occurred around 2008? And how much of that spike was as a result of biofuels policies removing land from food production and speculators assuming that, as a result, there would be a significant long-term surge in food prices? If the above premise is accepted, the Irish dairy expansion policy is *a policy based upon a policy* and, as we have seen, a biofuels-orientated policy can change. Meanwhile populations are predicted to rise at less than 1% a year.

As to the growth in China, there is definitely economic growth occurring but has the enthusiasm for China been fuelled more by the country’s baby milk scare than strong evidence that there is going to be a demand for a range of dairy products that Ireland can realistically expect to profitably supply? Not least in the face of competition from already well-consolidated dairy industries? The *Dairy Industry Prospectus Report 2003* report suggested that the opportunities for Ireland in China were likely to *ad hoc* and transitory in nature; to quote, “while the gross market opportunities in China are large, the ability of Ireland to capture large portions of this is questionable... There is likely to be demand within the Chinese market, but in the foreseeable future it is expected to be a more opportunistic rather than long-term user of Irish dairy products”. The author has noted that the market research in the 2003 paper was far more comprehensive than that supporting later strategies and it was prepared by an organization, Promar International with a strong reputation. Although dating back to 2003, it is worth re-reading.

So have the market fundamentals changed that significantly to warrant a much greater policy emphasis towards supplying the global markets? Although 'dated' as the figures are from 2011, the FAO trade data put Irish exports to China of butter at 88 tonnes, cheese at 72 tonnes and milk powders at zero [although it is possible that some infant formula may have arrived in China through third party countries]. By contrast, NZ exported to China in 2011 more than 36,000 tonnes of butter, greater than 12,000 tonnes of cheese and nearly a-quarter-of-a-million tonnes of milk powders. One accepts that the 2012 and 2013 may look a little different, but it is easier to agree with the observation made in 2003 about China than with those predicting massive, sustained demand. With China there may be a demand 'window' at present but that will only last as long as it takes others to gear up and supply it.

The following sections of this report, therefore, comment upon alternative 'product-market' opportunities. They are highly diverse and will need a far stronger product-focused mind-set to turn opportunity into reality.

8b. NATURALLY GRASS-FED PRODUCTS

Ireland's grass-based livestock production systems are continually being highlighted as a major advantage. Of that this author has no doubt. What then usually follows is a comment about how it provides a cost advantage that it allows Irish producers to compete with other EU-focused exporters [like Denmark and the Netherlands who are cereal-fed-systems focused] on the basis of production cost. There are also references to the quality of Irish milk for the production of infant-formula and that grass-fed produces higher-quality beef and lamb, but by-and-large it still comes back to grass is seen firstly as providing a cheap feeding system for ruminant livestock.

Is not, however, Ireland's primary advantage that it has farming systems that allow livestock to be *naturally* grass-fed? That is not to say that it is not something that is understood; it is more of a case of the emphasis that is place upon *natural*. It is about being *naturally grass-fed* as opposed to having an approach which says 'we keep our stock on grass because it is more cost effective' [meaning cheaper]. It is a subtle difference and it is one that is very important because if the strategy is about being cost-effective, at some point in the future some producers will be debating the option of switching to a more cereal-fed system because [due to relatively low grain prices] it may be more cost-effective. Those systems may also include zero-grazing cows and using high-yield genetics; in other words it will be about following the systems used in the Netherlands and Denmark and elsewhere in the EU.

The critical issue is whether being grass-fed is about taking a long-term, strategic position in the market place or whether it is about being grass-fed so long as it is the cheapest option. It is about whether Ireland can convert the raw materials from its grass-fed systems into *differentiated products* [based upon their grass-fed derivation] and that this difference can be transmitted through to the market places of the European Union, the USA, the Middle East and the Far East. It is about highlighting the fact that Ireland's products are different from others produced in the European Union [and worth more to the consumer] because they are more *naturally grass-fed*.

Defining the fundamental direction of its ruminant-based farming systems is about taking the most central of strategic decisions. It is the one that should have been highlighted at the very start of FH2020. It is the one that should have been made after deciding whether the market wants *naturally grass-fed* products or whether it wants commodities that may be grass-fed. And if it is the former, it is then about ensuring that the production and sale of naturally grass-fed products is actually the most profitable [not the cheapest] option for Ireland's farmers.

Being *naturally grass-fed* is only the baseline for Irish livestock products. It is a characteristic that can be further built upon to create yet more differentiated products. They are also products that can be defined through the use of specific farming and processing systems and created in a fashion that various parts of the foods markets should want and understand. The objective should be to develop products that the market will pay premium prices for; thus allowing an artisan and/or smaller-scale, dynamic, close-to-the-consumer, food-processing sector to thrive and, which in turn, can pay premium prices to sustain the viability of their famer-suppliers.

The following text boxes develop a few specific thoughts on what can be achieved by being *naturally grass-fed*.

Grass-fed means a greater choice of livestock breeds

An advantage of focusing on milk and meat from grass is that it should allow the consideration of more genetic options than if using high-capital cost, indoor, zero-grazing systems. This is clearly visible when comparing the grass-fed milk yields of Ireland (about 4500 litres) with those of the Netherlands and Denmark (over 8000 litres). One assumes that there is a clear reason for the dominance of the Friesian in Ireland because, in theory, similar yields can be achieved with many different cattle breeds. A number of these are also able to produce a higher-quality, 'less dairy' calf for the beef industry.

If the industry is going to focus on increased milk yields, will this lead to more concentrate usage and a move to 'higher-genetic' value dairy cows? Will the latter produce more calves that are destined for the problematic dairy bull beef sector? Or will the calves be destined for the veal sector; a sector that seems to have its own market over-supply issues? If the industry reaches the point where calves are slaughtered soon after birth, will there then be consumer ethical concerns to consider? From a perspective of supplying premium products to an educated, animal-welfare informed consumer base, will going down the 'pure' dairy route undermine the Irish livestock industry's ethical credentials?

Hence, given the preference of many for a livestock industry that is based on maximising metabolizable energy from grass, should alternative breeds and systems be evaluated. Should a more integrated dairy-beef approach be considered, say with the Simmental breed as in Bavaria? Also would an integrated dairy-beef systems suit a situation where a farm holding is fragmented and where out-lying grazing land cannot be easily incorporated within the farm's milking platform?

It is interesting to note that the NZ approach of using the Jersey x Friesian hybrid is being considered and evaluated. As far as the author is aware NZ is less focused than Ireland on quality beef so the calves are less of a concern. Will the Irish beef industry really benefit from many more dairy-type calves being produced and even lower-value calves at that? It also appears that the rationale for using the Jersey is more about producing more milk solids at a lower cost than Jersey milk.

For various reasons the author has looked at the merits of the Jersey and concluded that it does have a place, but where there is a premium market outlet for the milk. Even then there is still the downside of the quality of the male calves. Some would argue that Jersey milk produces the best ice cream. Channel Islands milk also, in the opinion of the author, produces the best butter available [with the Guernsey being marginally better than the Jersey]. If this is actually the view of a significant number of potential customers, is it short-sighted to be focusing on using the Jersey as a cheap milk solids producer rather than as a producer of high-quality milk that can be transformed into high-quality dairy products? Given that the Jersey can still produce 'average' Irish milk yields, is there not a more important role for the breed in the industry?

Essentially the above comments about breed choice are saying that there are greater opportunities with grass-fed systems to produce higher-quality products. There is certainly a consumer who believes that grass-fed combined with the right breed is the recipe for producing the highest-quality meat. It has also been read that grass-fed milk is the best raw material for creating infant formula [this was not linked to breed though]. The question the author has though is at what level of concentrate feed within the diet would the quality of the milk for the production of infant formula deteriorate? And one could also ask whether grass-fed milk can actually command a premium?

Grass-fed products - the healthier option

There is definitely a school of thought that believes that grass-fed milk and meat products are a healthier choice, although the author is not able to state to what degree this can be scientifically proven. One can also argue that the same situation exists for organic food products. The crucial point is, however, that there are consumers who believe that there is a differential with respect to healthy eating between grass-fed and cereal-fed products. This also appears to be the case over in the USA and one can speculate that the attraction of grass-fed is that it is more likely to be hormone-free. It may also be that others believe that grass-fed means avoiding eating animal products where the animal has been fed GM-soya.

Whatever the reason, Ireland's historic focus on grass-fed systems should be seen as a major advantage in a number of premium markets; be they health and/or fine-foods-quality related. It is an issue that needs addressing at the strategic level as the chosen strategic direction will influence where marketing resources are focused. If the country is to look to fully exploit the grass-fed route and to create premium products based upon the country's reputation for grass-fed livestock products, there also has to be an awareness of the damage that can be done to that reputation if a major portion of the industry decides to develop farming systems that are contradictory in nature to the grass-fed systems.

Grass-fed products - the slower-food choice

Slow Food is a movement that originated in Italy back in the Eighties. It is about encouraging people to gain a greater understanding of where their food comes from. Inevitably it tends to favour foods from organic, welfare-friendly and traditional farming systems that utilise local and/or historic breeds. It also favours artisan, local and traditional means of processing foods and ethical supply chains. Needless to say promoting foods with flavour and taste is also important.

The choice of the term 'slow food' is an interesting one in that many would suggest that 'rapid' farming systems cannot produce well-flavoured, high-quality foods. Does poultry, pigmeat, lamb and beef taste better if the animal is older and has been allowed to grow at a slower rate? Does it, therefore, follow that raising animals more slowly on a grass-fed diet realize a higher-quality end-product [at least for those who believe that flavour and other eating qualities are more important than carcass conformation]? Again, as with the possible health positives surrounding grass-fed, it is not the absolutes that count. It is a question of whether the demand is there and whether the potential buyer is willing to pay a premium price to encourage the farmer and others downstream to take on any extra costs associated with producing grass-fed products.

As said, one is frequently reading about grass-fed being a major advantage for the Irish dairy sector, but it is most often said in the context of it being able to deliver cheaper milk; at least with respect to other EU producers. In contrast the country's beef and lamb producers are more likely to see grass-fed as being an impartor of quality to their meat products. In this case being able to promote *naturally grass-fed* is a key plus for the industry. If it is, however, used in too generic a way [as within a pan-Ireland brand that is using *grass-fed* to promote itself] there will inevitably be the risk of conflict as and when some segments to the livestock industry want to move away from grass-fed systems to more cereal-based, intensive systems. This can be summarised by quoting from the IFJ (25/01/14) within the context of a rumoured south Tipperary super dairy farm.

To quote, "a prominent Tipperary dairy farmer said that there are concerns among the farming community over the impact that such an intensive unit [believed to be 2-3,000 cows kept indoors on a feed in, slurry out basis] could have on the current green image of Irish dairy farming". If this happens and the milk is destined for a milk pool that is producing for global premium markets where a differential has been created within the market place by [or partly by] the claims that Irish milk is produced from grass-fed, 'more natural' systems, will the claims stand up to scrutiny. It is one reason why Irish agricultural strategy needs to clearly specify what it considers grass-fed to mean and to what extent the phrase (with a definition) is to be embedded into the promotion of Irish agriculture.

8c. SUSTAINABLE, ECOLOGICAL, ETHICAL

A well highlighted aspect of the Food Harvest 2020 strategy is the placement of Ireland's agriculture and food production as a global leader with respect to sustainable issues. To quote; "The Food Harvest 2020 vision is for an Irish food and drink industry that is innovative, efficient and a global leader in environmentally-sustainable production" (FH2020, pg22) and "The role of farming [is to provide] a robust platform for the future development of rural Ireland that is economically viable, socially inclusive and environmentally sustainable" (FH2020, pg11).

As highlighted elsewhere in this review there are potential areas for contradiction within the strategy. Another such can be highlighted within the following FH2020 statement, "Continued investments in research should be made to develop technologies and approaches required to make Ireland a world leader in science based sustainable agricultural and food production" (FH2020, pg28). There is clearly an emphasis within the statement on 'science based' that suggests that issues that are not *science based* will be discounted. Sadly, however, that is not how the consumer looks upon what is or what is not acceptable within the context of employing science within agriculture and food production. Recent history should have made it very clear that whatever scientists or farmers may think, the consumer has a funny, some may say perverse, way of making up their own minds about what the issues are. And in a market-led environment the consumer, ultimately, calls the tune.

Fully connecting with the issues-aware consumer

If Ireland is to determine that its future lies in the sale of premium food products to an ecologically, ethically and sustainably customer, a number of serious issues have to be addresses. Essentially it will be difficult to pick and choose which issues to be involved with as consumers tend to be aware of multitude of issues. Hence it is possible to compromise one specific set of 'positive' credentials by concurrently being involved with what are perceived by the target consumer as negative activities. The author's review of FH2020 and the viewpoints of industry players suggests that there is a risk of '*shooting oneself in the foot*' over the agri-food industry deciding that it can choose what issues should concern its target consumers.

The use of GMO is a concern for many to the extent that the development of GMO has pretty well been halted in the EU. There may or may not be a scientific base for people's concerns but it is an issue and so long as it is it is difficult to envisage any region that is specifically focused on an environmentally-aware consumer being anything other than GMO-free.

The promotion of infant-formula within the markets of the World is another subject that is not without controversy. In China there have already been foreign-supplier controversies with respect to price-fixing and the use of unacceptable sales practices. Although this may not be the direct responsibility of upstream suppliers there may be potential consequences.

Another issue is that of live exports. Although it appears to be of lesser concern in Ireland than the UK, it is a potential issue for those supplying the UK, one of the Ireland's most important export markets. Although Irish farmers may employ very high, on-farm animal welfare standards [something which should be promoted when marketing Irish beef and lamb] there is potential for this consumer-focused message to be undermined by too much emphasis being placed upon live exports. This is an issue amongst the UK's more urbanized population and it is interesting to read complaints in the Irish agricultural press about ferry companies not carrying live cattle consignments to the UK [and that is assuming that the port authorities will agree to handle live trades]. These comments show a worrying lack of awareness of an important issue in the beef trade and that the ferry companies will simply decide not to carry live cattle if it is against the wishes of their main clientèle.

The above are just three issues that should be of concern if Ireland is to promote itself as a sustainable, ethical producer.

There is clearly awareness amongst those who prepared the FH2020 document that there is also market value in being sustainable. To quote; "Biodiversity conservation... may offer opportunities in the future for food producers who could utilise biodiversity conservation initiatives... to add value to food products. Organic, as well as so-called 'conservation-grade' food is an attractive ethical concept for many consumers and a potential source of commercial opportunities" (FH2020, pg25). In fact, biodiversity conservation, organic and conservation grade are only a few subjects to mention. Others include animal welfare in many contexts, maintaining genetic diversity within farming, fair trade [ensuring that all in a supply chain benefit] and low-environmental-impact farming.

What is truly sustainable?

When discussing the environment and agriculture, the author usually refers to the need for farming systems to be ecologically/environmentally, financially and demographically sustainable. The latter being particularly important where the issue of landscape preservation is concerned. If the desired landscapes are a result of human's farming, it is unlikely that they will survive into the long-term if their connected farming communities are not actually renewing themselves (i.e. demographically sustainable). For this they and their farming systems need to be financially sustainable and, preferably, not [entirely] dependent on indirect farming support payments or direct landscape management payments. Ideally the farming systems should be sustained to a great degree from the sale of [natural] products derived from the land. This, in turn, may be supported by ensuring that there is a 'fair trade' element within the supply chain that ensures that the primary producers receive an equitable reward for both the time and resources that they commit to producing the products. Likewise they should be equitably rewarded for those landscape management activities that they undertake at the request of the country or region's broader society and which are in addition to those required for producing farming products from the land.

Sustainable as a concept also goes beyond land management and farming's impact on its immediate environment. As mentioned in FH2020, the carbon footprint is an increasing issue, as is emissions from farming. It should, however, be noted that agriculture as practiced will always have a footprint so long as it has to provide food to those who live outside its immediate community. By definition, urban-dwelling mankind is not sustainable and it is unrealistic to expect those who feed the urban populations to be 'sustainable'. For an export-orientated Irish farming there are always going to be 'food miles' involved and these will always limit the 'sustainable' claims that can be made. A balance therefore has to be struck with respect to pursuing environmental claims even if Irish agriculture is not responsible for urban population growth.

Two systems of eco-friendly agriculture are mentioned in the FH2020, organic farming and conservation grade farming. The former needs no introduction whereas a visit to www.conservationgrade.org might enlighten the reader about the merits of the latter. Conservation Grade is more about adopting specific on-farm activities to enhance the wildlife and biodiversity on farm whereas organic is more about limiting the use of pesticides and artificial fertilisers. A major difference between the two is that Conservation Grade products (especially Jordan's Cereals) are to be found in the more *mainstream* food markets whereas organic remains a niche market.

Into the long-term the UK will remain an important market for Ireland so it was interesting to read DEFRA's 2013 Food Statistics Pocketbook about the development of the broader 'ethical' markets in the UK; a market grouping that brings together vegetarian, Fair Trade, Rainforest Alliance, Organic and free-range. For the segment as a whole it has been a positive story with a six-fold increase in sales in the dozen years to 2011. Until 2007, however, the primary driver behind the segment's growth was organic food sales. It was no surprise that the growth in organic slowed with the financial crisis in 2008; indeed the growth in the whole market segment slowed in 2008 and 2009 before returning to strong growth in 2010 and 2011. Recent growth was not, however, driven by organic. The data suggests that consumer have an ethical purchases budget and that this is finite and allocated between the ethical segment options and organic is now losing ethical-products market share to new ethical products.

Going forwards this illustrates an important issue with respect to targeting the ethically-aware consumer; they are looking at a more diverse range of issues and more 'ethically-badged' products are being brought to the foods market under a variety of schemes. It is well known that organic production requires a significant price premium over non-organic but otherwise equivalent food products so the question now arises [given the increasing ethical market segment competition]; just what is the realistic market size for organic? Organic foods have been around for quite a while now so how many consumers who can afford to buy 'organic' are not already aware of 'organic'? Hence is 2%ish of the total foods market the limit for organic produce and, if so, what are the implications?

Organic is only one system of environmentally-friendly farming and is it now time to look at and designate other possible systems? This is especially so when systems can be devised to be less constraining on production and, hence, able to offer produce with a lower price premium and to a wider consumer base? Should the objective be to see environment-friendly farming and land management systems producing food products that are affordable to say a quarter to one-third of the population; not 2%? And should those systems also include a broader range of 'ethical' attributes so as to ensure that they meet a wider range of the consumer's ethical-purchase criteria?

8d. DESIGNATING PRODUCT ORIGIN

For a country that prides itself on being a producer of very high-quality food [to quote the new President, Eddie Downey, of the IFA (as reported in the IFJ of 21st December 2013) "our produce, which is the best in the World"], there is a surprising shortfall of official, internationally-recognized, protected-product-origin designations.

The European Union operates three specific quality schemes that are designed to protect the identity of specific food products. The system is also aimed at promoting diverse food products. The EU designations are the:

- ♣ Protected Designation of Origin (PDO) which covers agricultural products and foods which are produced, processed and prepared within a given geographical area using recognised skills and techniques.
- ♣ Protected Geographical Indication (PGI) covers agricultural products/foods with close links to a geographical area and with at least one of the production, processing or preparation stages taking place in the area.
- ♣ Traditional Speciality Guaranteed (TSG) is a designation that an agricultural or food product has a particular traditional character; either within its composition [i.e. recipe] or by the means of its production.

Given that the above are EU-wide quality-food designations, it is interesting to see the number of designations different countries have applied and received approval for. According to the EU's "Database of Origin and Registration" the following protected origin registrations have been approved for certain older EU-12 countries.

- ♣ France - 208 of which 16 were in 2013. A further 34 applications are currently being processed
- ♣ Italy - 261 of which 13 were in 2013. A further 37 applications are currently being processed
- ♣ Germany - 73 of which 8 were in 2013. A further 22 applications are currently being processed
- ♣ UK - 57 of which 16 were in 2013/14. A further 9 applications are currently being processed
- ♣ Greece - 101 of which 4 were in 2013. A further 5 applications are currently being processed
- ♣ Spain - 173 of which 12 were in 2013. A further 32 applications are currently being processed
- ♣ Portugal - 123 of which 5 were in 2013. A further 16 applications are currently being processed
- ♣ Ireland - 5 of which 1 was in 2013. A further single application is currently being processed

Of the five Irish registrations, four are PGIs and one a PDO. The latter, Imokilly Regato, is Ireland's only PDO cheese and is actually a hard *Italian-style* cheese. Of the total of six Irish registrations and current applications, two are for salmon. The text box below provides more information on one that is strongly farming-connected.

Comeragh Mountain Lamb - an Irish Protected Geographical Indication product

Comeragh Mountain Lamb is a well-kept culinary secret derived from sheep grazed in the Comeragh Mountains. The animals roam free range over extensive areas of mountain... On the mountains, they eat grasses, herbs, wild flowers, heathers and drink natural spring water, all free from chemicals and pesticides. The lamb is prepared locally by an artisan butcher and is dry aged for ten days. These combined gives Comeragh Mountain Lamb it's unique and delicate flavour. Farming, therefore, barely intrudes on this meat which gives you, the customer, a superior, unique, natural, healthy product from the heart of the Comeragh Mountains. Derived from the www.comeraghmountainlamb.ie website.

Interestingly, the Dutch and Danes have ten and five registered respectively. If one uses a country's number of EU registered origin indicators as a benchmark, Ireland compares favourably with respect to the two countries most often mentioned as Ireland's EU benchmarks. It compares very poorly in comparison to many other EU nations. Of the 12 countries that joined the EU before 1990, only Luxembourg with four has less registrations than Ireland. Is this a fair reflection of Ireland's emphasis on the production of commodities rather than food products?

In addition there are also a large number of public and private certification schemes across the EU. When it comes to quality food assurance schemes and designations the *original* was the appellation d'origine controlée (AOC) system from France. The AOC is probably most recognizable from its appearance on French wine labels as there are over 300 AOC designated wines in France. Of the food products, cheese is the most represented with nearly 50 cheeses; although that is still probably only about one in eight of France's cheeses. The oldest AOC for cheese is Roquefort which dates back to 1925. Meat product AOC are scarce although Poulet de Bresse (chicken) was awarded AOC status back in 1957. In 2006 it was joined by salt marsh lamb from the Bay of the Somme.

The AOC system is a regulatory framework that covers the branding of the product, how it is processed and the on-farm production of the primary inputs. Typically, the products have a heritage [preferably], are of a high-quality, are 'artisan' in nature, and have clear links to the environment in which they are produced. A good, examples of functioning appellations are to be found in Franche-Comte in France; a mountain region in eastern France that has no less than five AOC cheese designations; the largest by production being the Comte cheese.

The Comte cheese from the French Jura Mountains

Comte is an interesting example of a French AOC cheese (designated in 1958) and not only because of its production magnitude (around 50,000 tonnes). It has a farm production base of over 3000 family farms that can use only the Montbeliarde or French Simmental breeds. The AOC regulations also specify stocking densities and that the cows have to be hay-fed in winter [it is not uncommon for cheese-makers to exclude the use of silage]. The milk is supplied to some 170 cheese makers who are either co-operatively or privately owned and processed according to specific rules [including using copper vats instead of stainless steel]. The cheeses are then ripened for four to 18 months in one of 16 ripening cellars.

Interesting points about the Comte are that it is an artisan cheese that has a wide reputation. It also illustrates that broad market access can be gained [it is available in Irish supermarkets] without having consolidated the processing. A recent research report compared the Comte AOC with the Cantal cheese AOC [where the processing in the Cantal is largely controlled by two major processors] and the results showed that the farmer / co-operative-controlled Comte cheese-making system [with its vast number of processors] returned a far better return to the individual primary milk producers.

The Comte cheese AOC probably accounts for about a quarter of French AOC-designated cheese which in turn account for about 10% of all French Cheese production. That sounds fairly insignificant but that is actually more than a quarter of Irish cheese production. Notably, a quick survey of Waitrose [a leading quality-end supermarket] showed that three different variants of Comte cheese were available. If one excludes the IDB cheeses, Ireland's offering was well represented by Cashel Blue, St Killian and Wexford cheddar, but it shows a limited diversity.

Although one could question the relevance of a designated zone that produces a cheese in a French mountain region, it is an example of what can be achieved using a co-operative [or social enterprise] structure where there is a complete and attractive 'marketing' story that links the region's natural environment and landscapes with how the milk is produced [and regulated on-farm] through to the processing methods and ripening of the cheese. In addition, it shows what can be achieved in those regions that may otherwise be considered to be 'disadvantaged' and otherwise unsuitable for modern, large-scale, 'commercial', globally-competitive agriculture.

The emphasis here is on developing the product and the complete story to go with it. New product development [or the 're-launching' of something traditional] needs to be undertaken with an eye on far more than the physical product alone. It needs to be based upon creating a product that has an entire *supply-chain* story that can link the final retail consumer with the farmer who produces the raw material and the landscapes that the farmer lives within. The continuing, dynamic origin-registration activity that is occurring with a number of countries, including those that already have a long list of registered products, illustrates that the system is being taken seriously. The number of EU registrations is dominated by France, Italy and the Iberian countries but the United Kingdom is far more active than it used to be. This is probably reflecting an increasing interest in the origins of food in the UK and, if so, it is a factor that Irish producers need to consider, not least because the UK is Ireland's primary market.

8e. DEVELOPING THE PRODUCTS

The author once found himself promoting the merits of a probiotic, blueberry yogurt made from the milk of the water buffalo and described it as possibly the most multi-functional dairy product available. It is, however, very scarce and almost unavailable in the Europe Union. Why is it multi-functional? Well first, being made with water buffalo milk gives it a luxuriant texture. Buffalo milk also has less cholesterol than cow milk. It is higher in calcium. It is more suitable for those with lactose intolerance and various allergies. And by adding blueberries, the product acquires the antioxidant benefits that are attributable to berries. If it was produced organically or using natural or conservation-friendly farming systems it would tick yet more boxes. It could also be produced on a hand-made, artisan scale and within a socially-owned enterprise framework. Simply, such a probiotic, blueberry yogurt shows how a product can be developed that targets various market segments. In this case it would be [all of] the luxury foods, ethnic foods, ethical, natural, environmental and health-food market segments.

HEALTH-FOCUSED PRODUCTS

Given the quality of its natural environment and with its focus on grass-fed products, Ireland's agriculture lends itself to the production of healthier foods. Ireland is at the fore-front when it comes to infant-formula and having grass-fed milk is cited as one reason for this. Ireland's lower milk yields would also suggest that following natural farming systems is, economically, a more viable proposition than for locations with limited grass availability.

A consequence of Ireland's historical dairy-commodity focus [resulting from dealing with its notorious seasonality of milk production] is that it has developed an expertise with respect to nutritional products and food ingredients relating to adding-value to dried-milk products. One would expect that this industry segment is already focused on the development of further health and nutritionally-related products. It is highlighted within FH2020.

It should be noted that not all consumers are interested in health products 'derived from science'. For many it is about products that have been derived from natural farming systems where Nature has been allowed to take its course. They want simplicity with the minimum of modern technological input and less processing may be better.

There are a number of health-related issues that may provide market opportunities for targeted products derived from raw materials produced from within Ireland's natural environment. These include producing foods targeted to meet the dietary requirements of those with food intolerances; the most well-known of these is probably gluten intolerance. Although Ireland has a cow-milk-focused dairy industry, another is lactose intolerance. Also there are possible products for those dealing with very widespread health problems like obesity and diabetes.

ECOLOGICALLY-FOCUSED PRODUCTS

In the author's opinion there is too much focus placed upon organic farming systems. This, nevertheless, conflicts with the FH2020 Committee which "endorses the targets set out in the Programme for Government. An increase in organic land use to 5% from the current level of just over 1% is ambitious". As mentioned earlier, organic has been losing ground in the UK ethical-purchases market segment to other ethical labels and this needs to be given serious consideration when pursuing an organic approach to encouraging ecologically-focused farming systems.

In contrast the author would prefer to see a broader, conservation-friendly farming designation that could have a realistic target market of 25-30% of the whole foods market. Access [due to affordability] to ecologically-friendly food products should not be limited to a few; not least because it limits the potential land areas and regions that could benefit from the deployment of ecologically/conservation-friendly farming systems.

A strategy that incorporates the development of a 'wider-tier' conservation friendly farming designation [and its underpinning farming systems] should be of major benefit to a country that wishes to market its products on the basis of their *green* credentials. This would not, of course, preclude the use of *organic* as another level.

As was mentioned earlier, Conservation Grade with its conservation-friendly farming approach could provide a few ideas. A further advantage of using this potentially wider conservation-farming system/designation is that it would be easier to connect feeds production from tillage farming with the needs of *in-scheme* livestock farming.

Ireland like all EU countries operates, under the Common Agricultural Policy, environmental schemes. To-date, what is a mystery to the author is why nobody has attempted to link these environmental schemes through to the products produced from the environmental land areas. The presence of organic as the dominant eco-friendly farming scheme may partly explain this. Given that there are many within the EU who question the use of public funds to 'support' agriculture; not to mention others who believe that payments should be made for public goods delivered, it is surprising that there have not been attempts to link environmental schemes to localised products.

It would therefore be a suggestion of the author's that new product development includes a focus on developing products that are specifically derived from a region where environmental schemes operate. This would clearly link environmental land management payments to consumer products and also [probably] make the actual payments themselves more sustainable from a tax-payer-paying-them perspective. The products could be further enhanced in the eyes of the consumer as the farming would most likely be traditional in terms of, say, using local livestock breeds and producing forages from hay meadows. All of this could then be neatly encapsulated within an *appellation d'origine controlee* to provide a complete, linked-to-the-market environmental scheme. ***In so doing, Ireland would emerge as one of the most innovative nations in the EU with respect to land conservation.***

Whilst not being fully aware of the product potential from the region, the Burren could be an interesting place to investigate with respect to the development of geographic-origin linked products. It is a region that contains significant areas of Special Areas of Conservation and high-nature-value grasslands. As is so often the case, the grasslands and their species diversity are the result of farming activity and it is acknowledged that their future preservation required the continuance of farming and traditional farming practices. Again, as happens frequently, the emphasis is on "developing new support mechanisms for the sustainable management of the Burren habitats" (Burrenbeotrúst, 2014). This in itself is almost a contradiction in terms; can 'support mechanisms' be truly equated with 'sustainable' management? Whilst accepting that landscape preservation is a public service and, hence, a payment system can be justified, surely long-term sustainability can be enhanced by deriving products [even if only a part of the product can be thereby derived] from the landscapes? Apart from seeking higher rewards for the primary producers who manage the landscapes, placing a Burren geographic-origin, high-quality product in the market place would raise the region's profile and create benefits for other local, non-farming activities.

HERITAGE-FOCUSED PRODUCTS

A great way to differentiate a product is to base it upon local, traditional farming practices, processing techniques and/or old, passed-down, recipes. These can then be promoted on the basis of their origin [possibly with an officially-recognised designation]. Some products thus described may actually be relatively new but it is surprising how a heritage can be found that traces all or a part of the product's characteristics to an earlier time.

Whilst one would encourage the development of traditionally-linked, geographic-origin designated products, it is important to be aware of the tastes of the market. Some products are found only in obscure locations and eaten by small populations because they are just not that palatable to others. Visitors may try them out of curiosity but will making them more widely available lead to repeat-buying and, hence, a market-led opportunity for those who produce them? Consumers will base their purchase decisions on taste and 'traditional' is not something that can be tasted. In that case it is better to develop a product that the market wants, even if it is not so traditional.

8f. RE-LINKING TO THE CONSUMER

A common trait to be found in many 'modern' countries nowadays is the rise to predominance of the supermarket system of chain retailing food. In many places it is not only their rise, *per se*, it is about the polarization of the near entire food market into the hands of a few major players. It is of course a 'chicken-and-egg' history; which came first, the supermarkets as a one-stop-convenient-shop option or the social and lifestyle changes that demanded that a one-stop-convenient-shop was available. Either way, the result of the change in food shopping habits over the last 20-40 years has placed significant market power in the hands of a few at the retail end of the food supply chains. And it is not a situation that is going to change any time soon. For most foods the system is here to stay.

An issue for farmers and small-scale processors is that supplying into the supermarkets' supply-chains is not that easy. It requires suitable volumes, a particular quality, traceability and auditing systems and an ability to sell at the right price. As supermarkets have become more pan-European Union, it is also possible that local producers will be in direct competition with producers from elsewhere in the EU. If they cannot provide supply volumes at the right price and with the right product qualities they will be substituted by suppliers elsewhere who can.

The author has certainly seen the impact of cross-border competition in action elsewhere within the EU and to the extent whereby local producers have disappeared from the local market because they cannot meet the supply requirements of the [foreign-owned] supermarket chains that have come to dominate their home foods markets. To an extent this is being counter-acted in some countries by consumer demand for local products and, as a consequence, home-nation-identity-badging of products. Further, supermarkets are also reacting to consumer demands for local products by stocking local-origin products. These may also be from smaller producers.

What cannot be over-looked nowadays is that food retailing and food supply-chains have become inaccessible for most small-scale food producers. If one accepts that having locally-produced foods and/or a diverse product offer is important to a significant body of consumers, one also has to recognize that one of the biggest challenges facing small-scale food producers is how are they going to be able to re-connect with their potential customers.

This is not an unknown problem and it has been addressed by a number of solutions in recent years. They include farmers' markets, farm shops and on-line retailing. They, nevertheless, all have their draw backs.

With farmers markets it is about the distance to the market, their regularity and size and, probably, the wealth of the customer base. They can be labour intensive to staff, provide inconsistent sales volumes and be vulnerable to inclement weather. Hence, there is an issue with regard to their ability to deliver the regular income streams that are necessary for those who may wish to develop a small-scale, possibly small-holding-originated, product into something greater. They may also not provide the best marketing route for those wishing to invest.

A farm shop, or access to one or more farm shops, provides another direct sales route. As with farmers' markets, the farm shop is location dependent, but with respect to customer access as well as customer number and wealth. Again they may be ideal for those who need only low volume and irregular sales but, unless they are very well located, of less value to those wishing to grow their business. Online retail can provide a useful sales route, so long as it can be supported with a very cost-effective delivery system. Remote area charges and international shipping costs are likely to limit online food retail sales to the producer's domestic market only.

Where a particular emphasis has been placed upon the development of artisan and SME production of higher-quality foods [as in FH2020], having a small domestic market is in some ways a disadvantage. In theory, it should be easier to supply the kind of volumes required by the supermarkets, but that is dependent on sourcing policies. A geographically widely spaced population will also not help the development of small food producers. For Irish producers, a small local consumer base is a major difficulty that will inhibit the growth of the artisan food sector.

For the small and artisan food producer, as with any other business, there is a need for consistent sales volumes and incoming cash flow. More so if they are to grow. The conundrum is just how to deliver this? And it also needs to be delivered within the context of charging realistic, affordable prices that do not totally constrain sales volumes. Producers also need to be able to use a supply-chain that facilitates a fair proportion of the final retail price being passed upwards to the food product producer [and farmer]. This price needs to be sufficient to enable them to have a viable business and, maybe, to grow their small business into something larger.

Strategic thinking in Ireland's dairy industry views consolidation of the milk-processing sector as an imperative so as to allow the industry to compete with the likes of New Zealand on global markets. This is not an appropriate route for the small-scale, artisan food producers who, by definition, will remain relatively small-scale.

Supply-chain consolidation is still required for the SME producer, albeit further downstream. This may be by:

- ♣ Retailing consolidation through organized, regular markets or permanent retail outlets that are staffed [to reduce the costs and time associated with attending numerous and disperse events] by those employed by an organization that is a social enterprise or co-operative. The farmer and/or processor can then focus on the business of production rather than sales [which probably dissuades many from becoming *food* producers].
- ♣ Creating a social enterprise that is responsible for developing supply-chains to serve the needs of a diverse number of small producers. This may include sales, marketing and distribution. For exports, this may include the development of overseas supply-chain partnerships to facilitate the connection to the end consumer. The Irish Dairy board could/may provide a part of the sales, marketing and distribution solution.
- ♣ Focusing some national marketing and quality-assurance schemes on specific, *fine-quality* food products as opposed to the 'broad-brush' promotion of *Irish* as a generic label. For the small-scale producer of high-quality foods there is only a limited advantage to being associated with a label that, *de facto*, promotes all of the produce from the island, regardless of the farming or processing system used to create the product. The generic also increases the risk of contagion across sectors should anything untoward happen.

A key to the long-term success of small producers will be how much of the downstream, supply-chain margins the producer can have ownership of. This is why direct marketing approaches are often favoured. It is the reason why it is suggested that initiatives should look at consolidating the supply-chain activities much further downstream than the milk processing sector. Artisan and small-scale producers are likely to have much higher costs so they need to receive a [justifiably] higher price. They will not survive or develop if too great a percentage of the margin between the farm-gate/processor's door are taken by intermediaries. If it is deemed advantageous that the SME and artisan sectors are to develop, it is therefore justifiable for intervention to occur and for support to be given to create links within the food supply-chains that will facilitate smaller-scale producers gaining wider market access.

For Ireland, doing so will not only support the creation of the necessary market access for more producers, it will also go some way to creating for Ireland a wider and greater recognition as producer of high-quality, fine foods...

It is not beyond the capacity of humankind to develop supply-chains that can connect smaller producers with major retailers and/or export markets. It will need a proactive approach as it is less likely that such will develop if the creation [and possibly management] of such is left entirely to the free market. As mentioned earlier, the farmers of the Jura Mountains in France supply milk into about 170 local cheese-making operations. They in-turn, supply cheese-ripeners who then connect with the next links within the supply-chain. Some components of these supply-chains are socially-owned and it is probable that there is a strong awareness of the importance of all those who are links within the supply chain; not least because the AOC for the Comte cheese is based upon regulations that determine how several farming activities are conducted. Given that Comte cheese, derived from the milk from 3000 farms and produced by many artisan producers can be sold in Dunnes and Tesco in Ireland and Waitrose, Sainsbury and Tesco in the UK, there are examples of what can be achieved. It is just a question of how.

8g. THE ROLE OF SMALL ENTERPRISES

The Food Harvest 2020 strategy paper clearly acknowledges the importance of small-scale food producers within Ireland's agricultural and food sectors. To quote, "The emergence of a significant artisan food sector, responding to consumer demands for locally produced, hand-crafted food products, has brought a new stream of entrepreneurs into the sector with many rapidly developing from micro entities into small and medium-sized food companies which have been highly effective ambassadors for [the] Irish food culture abroad" (FH2020, pg12).

The question is whether the above observations are being supported with action or is the emphasis on production expansion to provide sales into [route three] global markets taking precedence? Given the ultimate limits in Ireland on total production and the fact that at some point these will limit the country's ability to scale production up yet further [beyond the 2020 targets], the quality foods sector needs to be taken seriously. In time it will be needed, not least when there is a broader acceptance that quality and not volume or cost will have to drive Irish exports into all markets, be they in the mature markets of the UK, the EU and the USA or new 'global' markets.

Whilst accepting that into the medium-term value-added will have to come from the development of more *premiumised* products derived from milk and whey powders, in the long-term it will be high-quality products dedicated towards the top of the food markets [and sold through supply-chains in which the producer has a greater interest] that will have to increasingly provide a mainstay of the industry. The development of exportable, high-quality food products needs to start sooner rather than later and that should be the primary focus.

A critical issue with respect to the industry's development will be financing it within the restrictions of fragmented land ownership in the primary sector. The owners will largely be the people who have to make the investments, often borrowing the funds, needed to maintain and expand production levels. They will also have seen the recent history of polarization in food retailing and the consequences of having such a power imbalance in the food chains [not least in Ireland with liquid milk sector]. Given that a major emphasis on recent national strategies has been on consolidating the processing sector [albeit that there is some primary-producer ownership] one should expect a degree of reluctance to invest in a scenario where the primary producer has no say, or very little say, in what happens outside of the farm-gate. If the supply-chain margins between the farm-gate and the final consumer also largely go elsewhere [despite the major investment burden lying within the farm gate], just what incentives are there for existing primary producers to invest or new entrants to choose farming as a business career?

The importance of family farms and near-to-farm food businesses

An interesting question to ask is, 'are family farms more important in Ireland than say in the United Kingdom'? Given that the author has read somewhere the statistic that *land in Ireland changes hands once every 400 years*, one would say so. Land fragmentation is very frequently cited as a major problem for the development of Irish agriculture and it is an issue that needs government support to address. Although there is talk of expanding farmers needing to acquire 'off milk platform' land to carry replacement heifers, there is little *out of the envelope* thinking on addressing the issue. The point is, however, that there is a very strong cultural link to the land and a reluctance to see it leave family ownership.

One should also add that, unlike in much of its neighbour, agriculture plays a far more significant role in rural communities. Just how many people are linked to agriculture through farming, serving the industry, family relations or having a tourism business that has at its foundation the landscapes that Irish agriculture has both created and continues to manage? At the heart of all this is the family farm. Replace them with 'agri-industrial' units and what would happen? It is less likely to happen simply because the investment world is unable to acquire the large blocks of land that it needs to place the monetary scale of investment that it requires to justify its own fees and management costs. Hence, family farming and small, viable, family-owned rural business has to remain at the core of Irish agriculture and rural life; not least because the latter would not be demographically sustainable without it. It, therefore, follows that an imperative has to be the support of small farming-linked food businesses that will enable the farming communities to move downstream into the food supply chains. At present, are these the untapped dynamic in the industry? Are they the ones that the new generation would prefer to be a part of? As farmers still control the land, surely it is about supporting them to create the fine-foods suited to their scale?

As a result of the research undertaken for this review, the author would now ask the question; should we continue to focus on the concept of consolidating the processing sector? Given what was said about the various existing routes to market, is it even realistic to think that it could actually happen? It has been on the agenda for more than a decade and it appears not to be happening [however often it is highlighted as the model to follow based upon the consolidated co-operative approach used in Ireland's export-orientated, benchmark countries of NZ, the Netherlands and Denmark]. Maybe it is now time to look for alternative-to-processing-consolidation solutions and at how the right enabling environment can be created to allow alternative solutions to evolve.

Is it also time to ask whether the emphasis on co-operative processing is even the solution? Should one also ask whether the near-constant calling for consolidating the co-operative milk-processing sector is because of the relative performances of the plc's and the co-operatives? Clearly there is concern that the disjointed co-operative sector is not going to be able to deliver either the level or stability of milk prices that their dairy-farmer members are going to require. And is this a larger issue for those members who wish to expand with borrowed capital?

It is an understandably difficult position for the co-operatives. They are tied to their obligations to process their members milk, however skewed the seasonality of their milk production. Along with processor consolidation, the other recurring topic that appears within the strategy papers is Ireland's focus on commodities and the reliance on lower-value commodity markets. Has the relationship between the co-operative and milk producer actually embedded the seasonality and commodity-focus into the system? Is it one reason why re-focusing on products and away from commodities been so slow? Has the success of the plc's been partly due to having an arm's length separation from the highly-seasonal milk production? Is the current emphasis on global markets, route-to-market three and mimicking the larger-scale, highly-seasonal New Zealand milk-production systems actually going to make the whole situation worse? Just what merit is there in expanding milk production into a situation where the downstream processing sector is mainly reliant on expanding what appears to be a less than successful model?

Is the conclusion to the above series of questions that there should be far greater focus placed on the enlargement of what the author has listed as route-to-market four? Does the future lie within the development of the SME milk processing sector and especially those food-processing businesses where there is a close link between processor and farmer, often to the extent that they are one and the same entity? Co-operatives may continue to play a role [as has been highlighted by the Comte cheese example from the French Jura region] but it may well be within a different framework than at present. It will be about producing very high-quality, Irish fine-foods and that means a 180-degree shift away from processing seasonally-produced milk into commodities, *premiumised* or otherwise.

FH2020 certainly places a degree of importance on the SME sector and its potential. To quote; "SMEs with a potential to upscale will be the driving force behind increased employment levels in the [value-added agri-food] sector. Accelerating the growth of an optimal number of SMEs to large company size and a greater focus by SMEs and artisan producers on niche markets such as functional foods and organics will be highly significant in delivering regional growth and employment creation" (FH2020, pg.33).

Is there far too much focus on expansion?

The author would add a rider to the above quotation from FH2020. So much of FH2020 is about expansion and the above is no exception. Even when FH2020 mentions SMEs it still talks about the importance of ***growing their scale fast***. Surely the objective should be to enable small, value-adding food enterprises to access wider markets; thus enabling them to grow and/or others to start. For many potential entrepreneurs size may not be everything. It may be about a value-added, on-farm business that processes home-produced raw materials. The objective may be to have a very sustainable family business and one that is solidly-founded with little or no recourse to external funding. There is absolutely no reason for placing the emphasis on *growing their scale fast* as that should solely be a decision that relates to how the business owners evaluate their own position. Encouraging a forced *evolution* may be highly detrimental in the long run [a message that appears to be becoming common place with respect to those advising expansion-thinking dairy farmers] and it is a message that, if followed, runs the risk of having agriculturists follow property developers in terms of over-investing, over-borrowing and, consequentially, going bankrupt. FH2020 should be about long-term, sustainable agri-food sector strategy and that is not something that should be compromised by placing too much emphasis on rectifying the current economic problems.

An advantage with focusing more on developing the SME sector is that it will have one opposite effect from the consolidation approach towards processing. By definition, having many SME's will create a wider, probably more dynamic, managerial and decision-making base. It will avoid the risks associated with a polarised decision-making structure and all of the industries eggs being placed in one basket as a consequence; be it a particular commodity-type or one specific market. A prevalence of SMEs will create diversification and that will reduce risk exposure.

Yet another advantage of developing the SME sector is that it also avoids the centralising of the value-added operations whereby employment opportunities are focused in a few locations. That in itself limits the diversity of the created rural employment. It is a problem that is often over-looked when new, large-scale, milk-processing investments are announced. Large-scale investments are invariably based upon labour-saving technology with the result that a large volume of primary agricultural produce is processed by a few people. The efficient use of labour [and low processing costs per unit] is paramount. In a value-added, more-artisan business, labour cost is inevitable and the focus should be more on generating higher sales values so as to provide a margin over a higher labour cost. Another consequence of large-scale, rural investment is that the centralization means that the local community can be over-reliant on a single employer with devastating consequences should a single business fail.

Expanding the SME, agri-food processing sector is far from straight-forward. Too-date, most farmers appear to prefer to focus on the farming rather than diversifying their business downstream and so long as the downstream entity is able to provide them with a price that meets their overall income objectives, why should they change. An interesting paper on the issue was published in June 2013 by the National Rural Network. It was on '*Facilitating and Encouraging Short Food Supply Chains*'. The text box below quotes a highly relevant extract from the paper:

Farmer involvement in downstream, value-added processing

"Despite a growing local food sector, the great majority of Irish farmers have not engaged with this dynamic and remain price-takers in commodity markets rather than price-setters in short food supply chains (Macken-Walsh, 2009, *Barriers to Change: a Sociological Study of Rural Development in Ireland*, Athenry: Teagasc Rural Economy Research Centre). Recent figures (Meredith, 2011, *Farm Diversification in Ireland*, Research Volume 6: Number 1, Spring 2011, Teagasc) suggest that just 4.1% of Irish farmers have diversified and out of these markets, only 0.4% have gone into adding value to food. National Farm Survey data from 2008 demonstrates clearly the very limited extent to which the notion of direct selling has penetrated the consciousness or behaviour of the Irish farming population. Of (849) farmers surveyed, only 5% said they would even consider producing a product or selling existing products in a farmers' market or farm shop".

A variety of reasons have been put forward for this apparent estrangement of conventional indigenous farmers from the value-added or differentiated foods sector. The dominance and (qualified) success of the commodity-based and export-oriented model of agriculture is perhaps also one of the strongest; though most under-appreciated barriers to the development of a more vibrant and inclusive local foods sector. Quite simply, the great majority of what is produced in Ireland does not readily nor easily lend itself to direct selling, demanding as it does some level of processing, refrigeration, etc. (Macken-Walsh, 2009, *Ibid*). Further, substantial financial and other investments have been made in existing farm systems, sometimes over generations of farm operators, investments which cannot easily or blithely be overturned (Hennessy and Thorne, 2005, *How Decoupled are Decoupled Payments? The Evidence from Ireland*, Teagasc Rural Economy Research Centre, Athenry)". Overall extract source: National Rural Network, 2009.

The extract provides several reasons why farmers are reluctant to diversify into food processing. One would also suggest that a major reason for farmer reluctance is the weakness of the marketing channels available to small-scale and on-farm processors. Another reason is likely to be that farmers prefer to farm and do not wish to become food processors; although one suspects that this may change as a new generation joins the industry. One should also mention that a diversified small-scale, food-processing industry does not have to come from the farming community alone, it may come from an outsider who wishes to develop a food business. Nevertheless, even then, they still have to identify farmer-suppliers who are willing to provide them with their raw materials according to the specification-needs of their food processing-venture. Some may attempt to process 'generic' raw materials but there is a good adage when it comes to food processing; *rubbish in, rubbish out*. In that case it may be necessary, if the processor [be it on-farm or otherwise] wishes to create high-quality, fine-foods products, that the farming systems that supply it have to be tweaked, adapted or transformed to meet the processor's needs.

A number of the issues raised are small in scale and they can be addressed at the individual business level. The route-to-market is, however, an issue that probably needs addressing at a much higher and broader level. This particular issue will be discussed further later in section 8 of this review of FH2020.

8h. SELLING THE COMPLETE PACKAGE

The idea of 'selling the complete package' is nothing new. Indeed at an early point this is referred to in FH2020; "consideration should be given to the merits of promoting a more holistic marketing image" (FH2020, pg6)

The author believes that this should start with the product. It should be either a newly created product that relies on local raw materials produced using a farming system that itself can be promoted on the basis of one of more or all of, for example, *conservation-orientated*, *environmentally-responsible* or *animal-welfare friendly* or a product that is produced using local raw materials in the aforementioned ways and has a local heritage.

In an ideal world the product would also result from traditional, artisan processing. It should also be noted that focusing exclusively on only traditional products can be detrimental in that they may not actually exist or, when they do, they may have only a limited market appeal. It may be that having an artisan, 'traditional-type' product linked to farming systems used for specific conservation practices in a locality may actually be more important than insisting on only using traditional products. The final consumer may recognise and understand this.

Having identified or created the products, the aim should then be to create farmer-processor-retailer-customer supply-chains that are fully transparent and highly traceable. The to-the-consumer marketing information that accompanies the product should strongly link the product to its origins. To the fore will be the environmental, animal welfare and social credentials of the product as these should be important in terms of adding value.

Adding value is important, not least in the context of the suggestion that the products and their farming systems should be linked to CAP Pillar 2 [REPS type] environmental land management programs and payments that are badged/schemed all the way through to the final consumer; thus creating a clear link between the on-farm environmental schemes and the final retail product. Environmental land management schemes often have the objective to 'sustainably' manage landscapes for visual, environmental, ecological and/or biodiversity reasons. But can they be sustainable if the core activity within the systems [usually some form of traditional farming system] is not actually financially viable and, therefore, sustainable for the farmer [i.e. it has to be 'subsidised'].

By linking the production of high-value, high-quality, designated-origin products to the land management schemes, there could be a greater chance of the necessary farming systems then being *genuinely* sustainable.

When considering products, it is too easy to focus on the farming systems and issues like ensuring that the raw materials are naturally produced or, as often mentioned in Ireland, grass-fed. As with many of the French AOC cheeses there is often a story to tell concerning the actual cheese-making. Further, the use of *ethical* supply chains [possibly co-operative or otherwise social-enterprise owned] may well be of concern. A reason for the slow-down in the organic foods market in the UK has been the growth of the *Fair Trade* system products that compete in the same ethical-purchases market segment as organics. Having an ethical supply chain can be important in the eyes of some. It should also be a consideration for those who might be providing any necessary grant aid.

The above has emphasised developing products with environmental credentials that are transmitted through to the consumer. As indicated to earlier, there are also health-related characteristics that could be 'built-into' a product. Hence, it is useful to keep the term *multi-functional-product* in mind when assessing product options.

Clearly, there is massive scope to develop products that provide a multitude of benefits to the consumer. They can also be created in a fashion that makes them very well suited to a holistic marketing approach. The inclusion of numerous consumer-desired characteristics means that they should be able to attract a market premium that can be transferred upstream to local processors, the primary producer and, ultimately, the local community.

NB. REPS is the Rural Environment Protection Scheme

8i. INTERNATIONAL BENCHMARKS

Having made comment earlier upon the favoured benchmarks of New Zealand, Denmark and the Netherlands, the author will suggest that France may provide some interesting indicators of alternative strategic options for Ireland. In selecting France, it is not so much about looking for a match for Ireland, it is about benchmarking against a country that has attributes that may fit better with a strategic, long-term vision for an Irish dairy industry (and also Irish agriculture) that is more product focused and less commodity orientated.

1. In terms of production France is the World's 7th largest dairy producer. In 2011 (FAO) France produced about ten times as much cheese as Ireland and exported nearly four times as much with an overall unit value just over 20% more [a measure in which Italy does exceptionally well]. France produced nearly three times as much butter as Ireland although, due to the size of its domestic market it only exported just under 50% of the volumes exported by Ireland, albeit at about 20% higher values. In 2011 France exported about the same quantity of whole milk powders but very much more skimmed milk and whey powders.
2. France has a 'two-tier' dairy system in that it has a mixture of large-scale, high-yielding, maritime dairy regions and smaller, lower-yielding, mountain regions. Within the latter remain milk producers although their regions may be classified as 'disadvantaged'. As such they may provide informative 'benchmarks' for parts of Ireland.
3. The country has a diversity in products. They often have specifically-defined and natural farming systems. This is reflected in the wide array of demarcated and recognized cheeses (about 10% of total production). French sheep and goat cheese volumes in France in 2011 were 85% of the total cow-milk cheese volumes produced in Ireland. France also has a diversity of food supply-chains and supply-chain ownership.
4. Apart from the aforementioned milk-producing species diversity, France also maintains a much greater breed diversity within its cow-milk farming systems. Apart from black and whites, the Montbeliarde and Normande are mainstream. In the mountain regions there are local breeds like the Abondance and Voges still producing milk for local cheeses; as is the Salers breed in the Massif Central region [as an aside, southern Germany also uses the Simmental/Fleckvieh which may be an interesting option for a more integrated dairy/beef system]. In contrast, Ireland is nearly entirely black and white, albeit with some move towards using Jersey-cross hybrids.
5. A number of the farming and processing systems found within the geographic/product-designated zones in France are defined within specific regulatory frameworks. These define the products produced and create a marketing framework that can be and is used for marketing. They also offer protection for the product and its producers within the market. Interestingly, these systems may not only specify species and breed, they may also specify far more detail about the exact farming system that has to be used. For example, the system may specify what winter forages can be fed as this is considered to influence the milk quality for processing.

France is more about products and less about commodities. The absolute costs of production per kilogram of milk solids (or meat) is less of a concern as it is about the price a product can achieve in the market place and if it is sufficient to support the whole supply-chain. It is also about establishing a route to market whereby the primary producer receives an equitable and profitable share of the margins from within that product supply-chain.

The author's conclusion is that France is a far better benchmark to use when it comes to defining a long-term agri-food strategy for Ireland than any of New Zealand, the Netherlands or Denmark. This is because one can detect two broad market supply-chains; that for high-value food products and that for more generic, mainstream market products. Although the latter may be equated with 'commodities', much of the segment will still be about selling retail products that are recognizable-by-the-consumer as French. To an extent, it appears that commodities sold onto global markets are by-products of the production of higher-value, consumer-orientated products as opposed to resulting from production and processing systems that are deliberately targeted at the commodity markets.

8j. LAND AND RURAL PROPERTY

What is becoming evident to the author through conducting this review is that there needs to be, for several reasons and into the longer-term, a shift in the direction of the national agricultural and food strategy. Simply, too many of the constraints existing within the industry are inhibiting the adoption of the economy-of-scale farming models that would be necessary if the industry is to compete with its chosen benchmarks. Whilst including frequent mention of value-added alternative routes and the need for sustainable production, the primary focus keeps returning to the need to consolidate and expand both the primary and processing facets of the agricultural and food industries so as to compete on the global stage with, particularly, New Zealand.

Without doubt a major inhibitor to the adoption of the expand-to-reduce-the-unit-cost approach is the structure of the land holdings in Ireland. Not only are they small but they are also fragmented. Time and again one reads the term 'milking platform' as that is, rightfully, seen as the primary constraint on a dairy farming business. Even though quota access will have played its part, access to land for grazing dairy cows will have been a major reason for the pace of Ireland's dairy herd consolidation being slower than that in its chosen benchmarks of Denmark, the Netherlands and New Zealand. Likewise in the United Kingdom. There are calls for government incentives to encourage land consolidation but is it realistic to expect this to make a difference in consolidating Irish dairy herds to a point where they are actually going to be *globally competitive*? Will it inside a time frame of decades?

Hence, the author would suggest that the strategic emphasis is shifted away from reducing cost per litre of milk or kilogram of meat produced to one that focuses first on the value of output achieved per hectare. This essentially means a major change in the key performance indicator (KPI) used in the industry. It also means shifting the KPI to one that measures performance in terms of what is probably the primary underlying constraint in the industry.

In theory, such a shift would suggest moving to a 'Dutch' model whereby production per hectare is recognised as key due to a long history of limited land availability and consequential very high land values. Would, however, this be the right model given the sustainable and environmental constraints now being placed upon the Irish farming industry? Also such a model would mean forsaking the much vaunted grass-fed farming approach that is seen as a defining marketing characteristic for Irish food products. It would also mean discarding the milk-and-meat from-grass approach that many, most likely rightfully, believe is the most cost-effective model for Ireland.

This therefore means adopting a focus on maximising the **value of output achieved per hectare**. And to do so that means achieving premium values for the product produced [whilst not ignoring yield]. Again achieving premium prices for Irish farm produce is frequently mentioned in the national strategies but it is simply not written in such a way that drives home the point that product choice and quality and value are the critical points at the farm level and that these factors have to be clearly translatable all the way through to a consumer in a distinctive fashion. To put it precisely, the perception of quality is one that is transmittable to the immediate downstream buyer within the food supply chain. As to the message that arrive to the final consumer; it either does not exist or is too generic and focused upon '*this is a quality product because it is Irish and traceable*'. Is that message really strong enough?

SEEING FRAGMENTED LAND AS AN ADVANTAGE

Essentially focusing on smaller-scale and higher-value would reduce the impact that small and/or fragmented land holdings would have on the development of the agri-food sector. It would of course mean a shift in emphasis into the long-term on how and what the farming and [a closely associated] food industry produces, the supply-chains it needs and the marketing required. These are issues which are discussed elsewhere in this review.

One is frequently reading about the need to address the issue of *land mobility* and that is likely to be the case regardless of the direction chosen. The difference being that some may see it as necessary to obtain economies of

scale so as to compete with large-scale producers elsewhere in the World, whilst others may see mobility as being of greater importance in terms of allowing new entrants into the agri-food industry. The latter may just be a prerequisite to creating a more dynamic, market-linked, product-creating and employment generating industry. It is a fine balancing act as too easy access to land may enable the well-financed to dominate in terms of land acquisition to the extent that smaller entities are excluded along with the fresh ideas that they may bring. Their loss may also limit the renewal of rural communities to the extent that, when too rural, they die out completely.

One should also note that land access is not the only issue. In theory, a labour-intensive, land-intensive, rural food business may only need access to a few hectares and the cost of accessing, by lease or purchase, that land may not be prohibitive in relation to the total business plan. The cost of suitably adjacent housing may, nevertheless, be an issue that makes an otherwise viable proposition impossible. Although planning laws may allow derogation it is often the case that they are too difficult. The net result is that a potentially valuable farming/food proposition never sees the light of day. This is an especial problem in the United Kingdom where the agricultural housing stock has long since been sold off. It is now less of an issue in rural Ireland as house prices have fallen post-boom.

THE IMPORTANCE OF AFFORDABLE RURAL HOUSING

An easy-to-overlook factor in the development of a diverse, small-business food sector is the likelihood that the farming and food processing methods chosen will be more labour intensive than those producing commodities. This will be especially so when *artisan* is the objective as it is, by definition, more labour intensive. The direction goes against the flow of the last decades of agricultural development. It is, however, one that is required if well-spread and diverse rural employment is again to be created by the agriculture and food industries.

The author recently reviewed the agri-food strategy of an English county [that was historically agricultural] and it was clear that neither farming nor food processing were considered as sectors that needed consideration in terms of their ability to create employment. Certainly there was no consideration for any rural housing needs that were linked to the needs of agriculture or its downstream sectors. Presumably it is assumed that migrant labour would be sufficient into the future to meet any peak labour needs. This approach is going to limit the ability of farmers in the UK to develop artisan, labour-intensive, food products and certainly those that require a higher skill level.

Whereas the very high cost and scarcity of rural housing in the UK is going to inhibit development of artisan-type agri-food products, the recent realignment of rural property prices in Ireland should offer opportunities to develop the same sector in Ireland. The lower house prices that now exist should again make it feasible for people to live on incomes derived from employment in the agricultural and food sectors. That, in turn, should create the employment stability that will allow artisan and quality-focused businesses to invest in training in the expectation that they will be able to retain the staff. Hence, they will also be less reliant on less skilled, migratory staff.

8k. PEOPLE AND COMMUNITIES

To quote FH2020; "A key determinant of the future success of the Irish agri-food industry will be the people that work in the sector. There is an on-going need to attract the best people to the sector" (FH2020, pg17).

To take a step further back, it is important to first retain and attract people into the agricultural sector [as that underpins the agri-food industry] and also to maintain the farming communities in which they live

A concern the author has is that an agricultural strategy that focuses on expanding the size of dairy farms [and yet further reducing their numbers] will reduce employment within agriculture. Likewise, consolidation of the milk-processing sector will lead to mechanisation and centralisation as it will inevitably focus on cost reduction and labour efficiency. Will this situation provide a positive environment for new entrants to the industry?

One understands that it was not so long ago that agriculture in Ireland was considered the 'sunset' industry. It was being eclipsed by the likes of IT, financial services, pharmaceuticals and property development. In many ways it has been a remarkable turnaround. As other sectors have collapsed agri-food has returned to centre stage. A transformation that was probably helped by a global food price surge that coincided with the Crash; although as mentioned the surge was as likely linked to biofuels policy as a significant increase in the demand for food.

The crash, a spike in food prices [that is probably a part of the start of a long-term, gradually upward trend in food prices that will mirror the decade's long downward trend in real food prices that occurred hitherto] and the 'new' awareness in global population trends, has definitely created far greater investor interest in agriculture and food. So Ireland is not alone in recognising that agri-food is far from a sunset industry; it is probably a *sunrise* industry.

As a consequence, there is a rising interest amongst the young in careers in the agricultural and food industries and many more are now applying for places on educational courses that will equip them with the skills that the industry will need. A new generation of students are embarking on a career in agriculture and they will be careers that go well beyond 2020. For some they will, in all likelihood, be in the industry in 2070. It is therefore beholden on those who are planning the strategy for the industry to consider what will constitute an attractive industry for its new entrants. And that means a strategic planning horizon well beyond 2020. If they get it wrong, what will the consequences be for those who are now in training? It could well be *get an education in Ireland and emigrate*.

Should one be asking the question of potential new entrants, be they from farming families, students or those from outside the industry who wish to make a career change? One would expect a survey to show that, in an ideal world, most would prefer to farm in their own right and to have their own small agricultural or agri-food business. And just how many of these would like to be involved in a business whereby their farming activities are linked to the production of food products and, thereon, retailing to the final consumer. Is it possible that there may be new entrants to the industry who want to embrace the idea of producing high-quality, artisan foods? How many would wish to take this route as opposed to having a highly-gearred, large-scale farm business that supplies a local monopolistic buyer who in turn supplies the global commodity markets?

The present strategic emphasis on farm expansion and processing consolidation could, potentially, deliver an agri-food industry that, in character, does not meet the expectations of new entrants and new generations.

For many it may be more about a quality of rural life that comes from being a part of a rural, farming community rather than just being a link in an agri-industrial, global supply chain and a link that can only find work for a major agri-food corporations. The FH2020 strategy is essentially making policy choices that will, if followed, lead to major structural changes in the agricultural and food industries and they may well be changes that are not the ones that many existing and new participants in the industries want. Hence, is more consultation required?

It should be noted that new entrants also do not have to be 'young' [i.e. under 40]. It is something of a misnomer to focus on young entrants given the very high capital costs involved in farming. Ireland's small-farm structure does make it easier for genuine new entrants [as opposed to those whose families already farm] to the industry to get started. If farm holdings are consolidated together the chances to start afresh will be limited. The focus on just supporting the *young* is short-sighted in that the categorisation ignores those who are over 40 and who may well have gained significant non-agricultural experience that could be of substantial value to the agri-food industry.

One should also take note of what has happened in large parts of the UK where there has already been far greater farm consolidation. Agriculture is a very capital intensive business *per se* but it is even more so when there is very little access to smaller-scale *starter* farms. There is no shortage of people willing to join the industry; there are just very few opportunities to do so. Farming has become increasingly exclusive to the extent that whole parishes may have only a single farmer or even none at all and an absentee farm business managing all the village's land. Is this the model that many in rural Ireland wish to follow; or would they prefer to see Ireland create its own rural model?

8I. PRODUCT SWOT ANALYSIS

The following is a SWOT analysis of a commodity-focused strategy.

PRODUCT-FOCUS STRENGTHS

- ♣ The positive, widespread international image of Ireland and a *green* Ireland
- ♣ Ireland is well suited to the production of natural, high-quality food products
- ♣ An agricultural resource base and climate that is suited to grass-fed farming
- ♣ Value-added products will not require such a production-expansion approach
- ♣ Higher-value with lower output should be environmentally more sustainable
- ♣ Lower climatic-linked risks with fewer livestock focused on producing value
- ♣ Compact Irish agricultural industry suited to higher supply-chain traceability
- ♣ Producing high-value-added products should mean wider-spread job creation
- ♣ Potential for less capital investment and the usage of more 'artisanal' labour
- ♣ May bring more of the supply-chain margin to the farmer and local processor

PRODUCT-FOCUS WEAKNESSES

- ♣ Small domestic markets to provide customer base for product development
- ♣ Dominance of a few food retailers make new-product market-access difficult
- ♣ Historically the industry is dominated by agricultural commodity production
- ♣ Current processing investments still too focused on producing commodities
- ♣ National policy emphasis too much towards volume and economics of scale
- ♣ Conservative resistance to change at the both processing and the farm level
- ♣ Very little current involvement of farmers with value-added food products
- ♣ Learning and training needs will be high to develop new processing skills
- ♣ Might need to reconfigure the IDB route-to-markets to also include SME's
- ♣ Creating new SME food products and their markets will be a slow process
- ♣ Smaller-scale manufacturing will not provide a quick fix for the economy

PRODUCT-FOCUS OPPORTUNITIES

- ♣ Rising consumer perception of the health benefits of grass-fed products
- ♣ Increasing consumer awareness in mature markets of multifunctional foods
- ♣ Consumer demand for diversity of product that reflects their food awareness
- ♣ Opportunities to add value and to make each unit of farm production 'count'
- ♣ A part of the population that want public goods in exchange for EU payments
- ♣ Fragmented land makes it easier for new, small-scale, value-added entrants
- ♣ Lower rural housing prices suited to artisan and/or food-sector labour force
- ♣ Increasing interest in agriculture and agri-food as a feasible career choice

PRODUCT-FOCUS THREATS

- ♣ Too little support for the sector from short-term-focused policy-makers
- ♣ A farming industry that is too reluctant to change to become near-market
- ♣ Processing cost-reduction is seen as more important than farmer returns
- ♣ Less dynamism due to downstream consolidation to compete globally
- ♣ Ethical / ecological credentials impaired by commodity-sales activities

9. AN IRISH STRATEGY FOR IRELAND

Is it possible to overlook the fact that food is produced by the farmer and that the farmer is the key player within the food-supply chain? It should not be possible given that all those involved in the deliverance of food from farm though to the final consumer are reliant on the raw materials produced by the primary producer on the farm.

Hence, a strategy that does not offer the prospect of a sustainable economic future within which the farmer can invest and farming communities can thrive, generation after generation, can be regarded as no strategy at all.

An agricultural strategy that does not emphasis farming sustainability and does not first look at the resources available to farmers and assesses how they can be deployed to ensure the farmer's long-term future is doomed to failure. If a strategy has at its core an anticipation that farmers will invest, can there be a realistic expectation of success if the strategy does not prioritise the welfare of the farmers, their families and their communities?

On reading FH2020 and numerous other papers and press reports, one is left with a strong impression that the main strategic focus for the industry is towards supplying global markets via a very few supply-chain players. These will be supplied with milk from a rapidly consolidating milk production base. It appears that the strategy is heavily focused towards those that can increase the intensity of production from within their existing units and/or take on additional land to up-scale. Just what proportion of farmers will have the access to capital to invest and the desire to expand within a framework of milk buyer polarization? Will they even have an alternative?

The alternative may be to become artisan, SME or micro-food businesses. This route is highlighted within FH2020 but how realistic is it for the many. There is evidence that farmers are reluctant to move down this route, and that is not surprising given that in much of rural Ireland there is a significant geographic distance between farmer and consumer. Although there is talk about encouraging the development of high-quality, artisan foods, does the strategy actually really begin to address key issues like product development and how to create effective routes-to-market for the small-scale, possibly remote, maybe traditional, perhaps artisan, quality-foods producer?

Can one, therefore, conclude that the global-or-artisan strategy does not provide a vision and an accompanying strategy for the majority of Ireland's farmers? With regionally polarized milk buying what will happen if the seller does not wish to supply the sole regional milk buyer (whether they be a farmer-owned cooperative or not)? What if the global market supply route does not, or cannot, provide a price that is sufficient to ensure the viability of the milk producer? If producers cannot invest to expand to drive down costs, are they left without any option other than to leave the industry. Is the farm-level consolidation strategy then, *de facto*, enforced because some farmers are unable to drive-down their production costs? Is this market forces and *survival of the fittest* at work? Can one fairly say that it is 'market forces' when the seller is essentially faced with a regionally monopolistic milk market?

Ultimately it comes back to asking for whom is the agricultural strategy established. At present one reads about a degree of dissatisfaction amongst IFA members about how well they are represented. It appears to be a NW / SE issue. One also reads that some farmer cooperative members are concerned about being 'locked into' a post-2015 expansion-consolidation strategy simply because they are in the minority within their cooperative organisation. Just how much dissatisfaction is around in the industry at present and just how much of this dissatisfaction can be attributed to the adoption and promotion of a strategy that is perceived by some to offer little for the traditional-sized Irish farmer who does not wish to expand to compete or to develop into a small food producer to survive?

It is possible that many do not see how they and their farm businesses fit into the FH2020 vision of the world or how the strategy is going to deliver for them and their families a long-term, sustainable future in the industry.

BUILDING A STRATEGY FROM THE GROUND UP

The author's approach when developing a strategy for a business or an agro-industry sector is to first identify the constraints impinging upon the business or sector and then to identify those which have an over-riding influence on the business or sector. The constraints are not necessarily physical, they can also be imposed by the regulatory framework established by governance or *immoveable* personal objectives set by those in ownership. There is also often a time-frame in which the constraints have to be considered in relation to the strategy's planned duration.

There are numerous constraints to consider and a number will be binding in the short term. Others will be so into the longer term. A number will be absolutes. The question is which are which, which are relevant where, and which can be mitigated through investment or legislative change. An illustrative list is given below.

- ♣ Environmental factors that limit [realistic not theoretical] potential grass/crop production
- ♣ Implemented risk strategies that minimise potential scale; i.e. ensuring winter feed supply
- ♣ Available agricultural genetics to improve competitiveness or to create new food products
- ♣ Fragmented land areas and/or available total land areas that limit the scale of farm activity
- ♣ Environmental issues like minimising emissions, farm wastes, nitrate levels and biodiversity
- ♣ Market constraints perceived by farmers; i.e. a single buyer or downstream player's strategy
- ♣ Product quality characteristics and price-points imposed by the customer or final consumer
- ♣ Supply-chain and logistical limitations that constrain product choice and/or market access
- ♣ Limited capital availability at the farm, processing, distribution, marketing or retailing level
- ♣ Farmer preference for less labour intensive farming and/or having diversified income sources
- ♣ Human resource availability determined by education, feasible salaries and housing access

Typically the constraints will vary with geographic regions. They may also vary with the characteristics of a local population. Certainly it is difficult and probably inappropriate to have a national strategy unless the national scale is small and the available resources homogenous. Hence, is it fitting to have an 'All Ireland' agri-food strategy?

Following on from the question of constraints is the issue of establishing the objectives that eventually dictate the strategic direction. A key issue when establishing a national strategy has to be what is of paramount importance and, in part, this will be linked to political philosophy; is the strategy to be dictated by a free-market, profit-will-allocate resources approach or is it to be focused upon achieving more socially-inclusive goals. Ultimately, is the strategy to be first and foremost about preserving and developing agri-food-reliant rural communities?

If one assumes that it has to be the latter, the agri-food strategy has to first consider the members of the rural and, particularly, the farming communities. At times it appears that the objectives of the farmers, the actual milk producers, are being ignored. Do they wish to significantly increase their production? Do they wish to buy or sell or otherwise trade their land to consolidate? Do they wish to borrow more to expand? Do they wish to take the risk of having a more highly geared business? Do they wish to increase the livestock loading on what may be a limited grass-producing platform [especially now in light of the 2012/13 fodder crisis]? It is a long list of questions.

Far too often it appears that the national strategy is first about telling farmers that they will no longer be in business in five years' time if they do not follow the expansion plans and all they entail. It is almost as if they have a national duty to help extract the country from its property-developer / banking created economic crisis. It is likely that most farming families will be looking beyond the crisis and saying that they will not take risks that may have short-term benefits but that do not sit comfortably with their own longer-term vision. Many would probably prefer to evolve their business over time and not join in the post-milk-quota stampede, should it even happen. For most family-farming businesses, their own personal strategies are most likely to be very much multi-generational in their focus; it will not be about 2015 or 2020, it will be about passing the farm to succeeding generations.

TOO EXPANSION-CONSOLIDATION FOCUSED

When you have a situation whereby the farmers also have significant control of the downstream processing, they will also heavily influence the direction that that sector. Hence, is it possible that their conservatism is holding back the consolidation of the milk collection and first-stage processing sector? They probably have an inherent fear of fewer buyers and dealing with larger operators over which they have a little or no influence. Given the endless complaints one hears about the power of the supermarkets within the food chain, they may well have some justification in their fears. The situation may limit the processing arm in its ability to compete with other major players around the World but it is a position that results from extensive farmer ownership. If the ownership is reluctant to change it is a constraint that has to be worked around. Is it then wise to base a national strategy on the hope that such a primary constraint will simply go away just by constantly saying that it should?

It appears that the Food Harvest 2020 strategy is actually one of a series of such documents going back over a decade to the *Dairy Industry Prospectus 2003* report (and reviewed in December 2009). Another report was published in September 2009 and commissioned by the IFA; *The Irish dairy industry - the decision time is now*.

As one would expect, there is a degree of consistency between the reports. At the farm level they all highlight the need to consolidate the primary processing sector and raise the issue of seasonality; although FH2020 places less emphasis on the issue; probably on the assumption that the industry can continue to sell commodities to the Chinese infinitum. On the market side, they accept the need to continue producing commodities, although back in 2003 there was a clearer determination to switch from commodities to products. By FH2020 it seems that there was greater confidence in the potential for the global markets to 'soak up' Irish milk commodities. The most consistent subject was the necessity to consolidate the milk processing sector to enable the Irish dairy sector to compete with other export-orientated dairy producers; namely, Denmark, the Netherlands and New Zealand.

Although primary milk-producer consolidation has been highlighted it is interesting to note that the first report mentioned that dairy farmer numbers had fallen from about 68,000 in 1984 to around 28,000 in 2001. Another 10 years on and this had fallen to under 19,000; or less than 30% of the number nearly 30 years earlier. Hence, the milk production sector has long since been undergoing consolidation; albeit not as fast as it appears many would wish [namely those who have a vision of Ireland competing head-to-head with New Zealand]. One could ask whether it would have happened faster without milk quotas. It is likely that milk production per farm would have been higher without the constraints of milk quotas, although given the emphasis on milk-from-grass, just how much higher would milk yields per cow or milk per hectare have been without quota the author cannot say?

There has clearly been a natural evolution going on within the sector, regardless of quotas. So is it correct to now assume that the removal of quotas will create an instant change in philosophy on farm to the extent that farmers will willingly change scale, systems and risk perceptions purely on the basis of the ending of the milk quota regime. A regime which, after all, was an imposed, *artificial* EU policy rather than the kind of free-market signal that they are now being told to respond to? This author expects that farmers are likely to take a more cautious approach to dealing with their new found freedoms and one that will be based on how they perceive their business and their own future. For them it may be more about sustaining the next generations on their land; a characteristic that this author has been led to believe is a trait that runs deep through Ireland's rural and farming communities.

What appears to be driving the national strategy, be they the one from 2003, 2009 or FH2020, is the preservation of the primary processing sector. It is almost an absolute; if Irish milk producers do not scale up so the primary processors can scale up so as to compete with global players from New Zealand, Denmark or the Netherlands, the Irish processors will fail. Worse, a similar fate will befall them if they do not consolidate so as to mimic the scale of production of those in the aforementioned countries. These are messages, and especially the latter, that have been repeated frequently. Have they, however, had that much impact on the sector? If not, is it not now time to ask whether it is actually the strategic and directional message itself that is the issue? Is the national strategy as outlined, not what the primary decision-makers [the farmers] in the industry actually want to hear?

THE BENCHMARKS BEHIND THE STRATEGY

As has been said earlier, the author of this review does question the on-going bench-marking of Ireland against New Zealand and, to a lesser extent, the Netherlands and Denmark. They have been chosen for rational reasons and much emphasis was placed upon them in the 2003 and 2009 documents but their differences are as great as their similarities. The underlying rationale is that they are all export focused due to home markets that are small in comparison to their milk production. With New Zealand, this characteristic is reinforced with regard to a number of milk production related characteristics (especially those of grass usage and yield per cow). In other ways relating to their farming scale, farming systems (especially with respect to the Netherlands and Denmark), market access (ditto) and milk-processing structure they are greatly different and this should be given more credence.

The five red herrings influencing Irish agri-food strategy

In preparing this review it has become apparent that a number of key issues are driving strategic thinking. However, the author, to a greater or lesser degree, has come to question the importance that has been placed upon them. They are:

1. *The belief that global population growth will provide near endless opportunities to sell food.* Affordability seems to be of less concern. Over the four decades up to 2050 the global population is expected to grow by just under ¾% per annum (FAO). When looked in that context rather than the absolute figure of 9 million the demand for food looks rather more manageable. The population growth (85%) is also going to come in Africa and southern and western Asia so one wonders to what extent will growth in the dairy markets be driven by rising population. Also will economic wealth across the many rise in the face of increasing population or will it (and high-value food demand) be polarised amongst a few? In addition will the EU dairy cost-base allow the EU to compete for any but the wealthiest of these new consumers?
2. *The excessive reaction to the Chinese melamine-tainting of infant-formula crisis.* The Chinese infant-formula situation has been created by a single food scare. It is a scare that has switched demand from domestically-produced formula to imported products. There may also be some market expansion to come due to a relaxing of China's one-child policy but will it be that great in terms of absolute market size. It is a crisis that has already led to supplier reactions around the World [as they are all working with the same market information]. The Chinese are also reacting to their own crisis both at home and abroad and are well-capitalised to resolve the issue. Ireland may be a significant player in terms of baby nutrition but it is best placed to fulfil the demand from China or will it be a case of being able to do too little too late?
3. *The over-emphasis on bench-marking Ireland with the New Zealand dairy industry.* Ireland and NZ are both island nations with small domestic markets and with grass-fed dairy sectors with similar yields per cow. There ends the similarities. NZ is the global dairy marketeer whereas Ireland is not. NZ has significantly greater scale in terms of its industry, processing and dairy herds. None of which Ireland is going to be able to align with in a realistic timeframe. NZ offers interesting examples with respect to technical agriculture but strategically Ireland needs to develop its own agri-food strategy.
4. *Significantly over-playing the 'opportunities' created by the ending of milk quotas.* The ending of milk quota is the closing of an EU agricultural policy chapter. It is not unique to Ireland. Has it actually had a greater suppressing effect in Ireland than elsewhere? Dairy farm consolidation has happened in the meantime, although not as rapidly as elsewhere. Their ending, in conjunction with 1. above is also being heralded as an opportunity to expand elsewhere in the EU. Hence, is there a danger that too much immediate expansion will 'over-run' the market? If this happens will there be pressure from some within the EU to re-establish some market controls? The ending of quotas is an opportunity but should it be one that should be assessed by each farmer independently with those downstream reacting as expansion evolves?
5. *Wanting the agri-food industry to help Ireland's export led recovery from the financial crisis.* Ireland's economic crisis came about due to the actions of those in property development and banking [and the willingness (voluntarily or otherwise) of the wider population to buy into the property bubble]. It is not a crisis that resulted from poor decision-making in the food and farming sectors or any collapse in the agri-food markets. Although one can understand a desire to support the nation's recovery from the economic crisis; it should not be a major driver behind strategic thinking for the agri-food sector. Agriculture and food has to play the lead role in the long-term sustainability of Ireland's rural communities. This objective should not be compromised by short-term targets aimed at resolving an unrelated economic crisis. It is already a concern of the author's that excessive investment [and over-borrowing] in agriculture within an artificially-created horizon may compromise the future of the agricultural industry by repeating some of the mistakes of the Celtic-Tiger years. The question is whether the farming community will be stampeded into unwise, debt-laden expansion?

It is the case that benchmarking can only go so far and Ireland needs a strategy suited to Ireland. The country's resources and constraints are different and its national agricultural strategy needs to reflect those. It is just not an option to design a national agricultural strategy based upon wishing you were somewhere or someone else.

THE DEATH KNELL FOR COOPERATIVE PROCESSING?

FH2020 has some pretty clear recommendations to make concerning the structure of the milk-processing sector. To quote; [a] "co-ordinated national approach achieving new configuration at [the] processing level" [is required], FH2020 (pg41) and "The processing industry must move towards a small number of scaled operators who have the scale and culture to drive efficiency and value added in line with key international competitors who have already achieved consolidation", FH2020 (pg42). It also goes on to add, "The processing sector must ensure that processing capacity meets the expected increased milk supply post quotas", FH2020 (pg42).

Although the author does enjoy an element of hindsight as this review is written a while after FH2020, there does not appear to be any recent alteration to the supply-driven approach advocated in FH2020 towards investing in and consolidating the milk-processing sector. Typically, calls have been for the co-operatives to engage in a process of re-configuration so as to move "into line with key international competitors who have already achieved consolidation". One conclusion of the authors is that this is highly unlikely; the structure of the industry has moved beyond a point where a co-operative consolidation can occur. Simply, too much control of the Irish downstream milk processing sector is in the hands of parties who have little to gain from a co-operative owned, primary processing sector. The author expects consolidation to occur but it will not be based upon co-operation.

It was interesting to note the proposal within *The Irish Dairy Industry - decision time is now* paper written in September 2009 for the creation of a "Central Processing Coordinator". So back in 2009 there was also the belief that some sort of central coordination of milk supplies could be achieved. In its way it was a rational proposal based upon a series of observations that included: "existing structures [that] are now inefficient and out-dated... in comparison with our international peers", [the processing model] "is disjointed and lacks the necessary system integration of functions", "the Irish Dairy Board [is a] capacity/capability [that] is not being maximised", [the] "overall connection between key stakeholders and the market... is weak by international standards", [the] "focus of current product development processes remains too concentrated on commodities [and] has achieved limited efficiencies and economies of scale for commodities" [whilst] "Ireland continues to follow product innovations to a limited extent as opposed to leading them". Many of these points still remain valid five years later in 2014.

Question that the author would pose to the dairy sector are; 'what proportion of Ireland's milk follows routes-to-market that are ultimately controlled by supply-chain partners who are outside the control of the co-operatives? And, although the co-operative processors handle much of Ireland's milk, how much of this milk is actually sold into a consumer retail market environment directly by themselves or, at least, by the Irish Dairy Board?

The author suspects that the answers will show that the co-operative processors are only a link in the chain and that they obtain very little or none of the supply chain margins from sales that fall outside the IDB system.

With the recent changes at Glanbia plc re. the creation of the GII joint-venture between the plc and the Glanbia Co-operative Society, has this restored any route-to-market control back to the co-operative sector? In theory it has and it has been lauded for doing so. Given, however, that the creation of the JV has shown that the Society had limited control over the plc, despite owning more than 50% of the shares, has the establishment of the JV actually yet further weakened the control the Society [and hence the co-operative movement] has over the plc? It is now very clear that the plc is run [rightly in accordance with it being a plc] for the benefit of all its shareholders. It is not run for the benefit of its milk suppliers; although those who are shareholders will still continue to gain an indirect benefit [not linked to their milk supplies] and it is said that there will be various benefits accruing from their Society's 60% ownership of the JV and, hence, continuing close ties with the Glanbia plc.

Excluding the JV, a not dissimilar situation exists between the Kerry Group and the Kerry Co-operative Society, although the Society now only retains 14% of the plc shares as opposed to a little over 40% still being retained by the Glanbia Co-operative. It is clear, therefore, that the control of the two major plc's [that evolved from farmer co-operative beginnings] has long moved outside of the control of the Irish farmer co-operative movement.

With respect to the GII joint venture, just what degree of freedom will the JV have if it is asked to consolidate its milk processing capacity with the other processing co-operatives? Just where would the Glanbia Co-operative Society members consider their future to be; with their JV partner or with the other co-operatives, assuming that having close links with both is mutually exclusive? Given the success of the plc [if one looks at its historic share price] would it be unreasonable to assume that their loyalties will lie with the JV, not least in a situation where they have funded [via their sale of plc shares] the major new milk-processing facility at Belview?

There are will probably other major influences at play when it comes to the idea of amalgamating the primary, co-operative owned processing sector. Danone is a very significant customer of the Dairygold co-operative. It will probably have a viewpoint on its major supplier entering into an upstream consolidation process?

Hence, the question; has the evolution of the routes-to-market for Irish milk reached a point whereby any farmer co-operative consolidation is no longer a realistic expectation? Has too much farmer control already been lost?

One could assume that the FH2020 strategy and its predecessors have actually had, or will have, little influence in evolution of the processing sector; despite their frequent calls for its consolidation. The author, however, suspects that FH2020 has had an influence on the sector, albeit probably not the one that was envisaged.

FH2020 has sent out very clear expansionist targets to the dairy industry. It is one that has been oft mentioned. It is difficult to quantify exactly the degree of influence FH2020 has had but it is a significant part of the 'campaign' to promote post-quota expansion. At times it comes across a nationalistic *call to arms* to Ireland's dairy farmers.

As a consequence of the expansionary vision abounding in the dairy sector, those charged with managing the co-operatives have seen it necessary to question their membership about planned on-farm milk expansion and to react accordingly with respect to increasing co-operative controlled milk-processing. Hence, FH2020 would have been a factor in the investment decisions made by the co-operatives. The co-operatives have seen potential milk supplies arriving in 2015 and, given their obligations to process their member's milk, have started to invest. Although some would claim that the FH2020 targets were entirely market-driven, the reaction that establishing the targets has triggered should more realistically be considered supply-driven as expansion is occurring into the unknown in terms of new markets [scale] and potential market returns [prices]. It is also about entering global markets with known price volatility and where there is no supply-chain control for the upstream partners.

Should one be asking whether the forced evolution of the milk sector [if that is what setting the FH2020 targets is considered to be] is not creating a high-risk investment environment for the co-operative milk processors?

Just what will be the consequences for the co-operatives if their investment plans go wrong or, particularly, if they over-invest in milk processing capacity? Is it possible that investing within the current over-enthusiastic, post-quota, *artificially-forced* expansionary environment will lead to their demise? Could the creation of this current environment actually be the factor that finally forces the consolidation of the processing sector?

New milk processing investments will be based upon a supposition that a quantity of milk will be delivered. What will happen when [or if] a processor[s] discovers that it will not see the volumes needed by their new investment. At the time of writing there are also signs of volatility and competition appearing in the milk-supply market. Is it significant that processors who were recently asking for a 'new milk' levy from suppliers and other contributions to over processing investment costs are not now doing so. Is this the first signs of a competition for milk?

In a situation where over investment occurs will the 'guilty' party sit back and accept any operational losses that may accrue? Or will they actively pursue new milk sources? Press coverage suggests that there is a Gentleman's Agreement over milk supply catchment areas? For how long will this be last when some processors have idle or slack processing capacity? Is it fair to conclude that open competition for milk will lead to the demise of some co-operative processors and, if so, which ones will go? Will it be those who cannot hold onto their milk suppliers and/or will it be those that are tied into the selling of low-margin, commodities into volatile 'global' markets?

If a milk-supply procurement war emerges who will be the likely winners? Will they be the co-operative societies that have significant resources, albeit if they are held in the form of plc shares? Or will they be those that have taken a cautious, wait-and-see approach before investing in new capacity? Or will they be those that have kept a diversity to their processing activities and not over-committed to global markets and/or base commodities. Or will it be those who have a product portfolio that reaches retail consumers through co-operative owned IDB channels?

It is interesting to note that most of the new, ready-for-expansion-milk processing capacity appears to result from investments by the co-operatives; at least as far as milk powders are concerned. One is aware that Glanbia plc is investing in a UHT facility; but is that intended for branded-product sales? Danone has invested to expand its infant-formula capacity; but are others investing to produce the base powders for onward supply to Danone? Just how many downstream players have invested in processing of milk into basic commodities; or is it being left to the farmers via their co-ops [with or without new milk or investment levies]. It is certainly a situation to ponder.

There are frequent suggestions that the co-operatives need to consolidate, amalgamate or just co-operate and one of the reasons given is that by so doing they will be able to access and compete within the global markets. Will a group of co-operatives using only a proportion of Irish milk ever be able to gain the scale required to develop higher-value trading positions in the global markets? To quote Matt Dempsey (IFJ, 8th June 2013), "it still seems fundamentally wrong that Irish farmers do not have a real Kerrygold brand of baby food for the Far Eastern market"... [Ireland supplies] "the basic material to make about 15% of the world total of baby food [probably should state infant formula], but all of the premium [is] being captured by great food multinationals".

Matt Dempsey makes a very valid point but it would not be easy to make inroads into a market that is dominated by some very major players. And one should not forget that the Chinese government and Chinese companies are also likely to have a say in the future of the Chinese infant-formula market. Research also suggests that a number of the smaller NZ infant formula manufacturers who came into being to supply China are already struggling. The author would suggest that rather than try to take on the Chinese market, as big an opportunity as it seems, it may be interesting to see if there are opportunities to develop a high-quality, naturally-grass-fed infant-formula for the mature markets of the EU and the USA [where Kerrygold is already known}. It would still be tough to access retail shelf space but the likes of Hipp Organic has achieved it [albeit differentiated by being organic].

The question to ask is whether the co-operative will really be able to make a major impact on markets for, for example, infant formula or will they just continue to compete against each other with what are relatively small quantities? At some point will the economics turn against them to the extent that they cannot compete for their own milk supplies and, henceforth, they will disappear, have to merge or be taken over?

The Kerrygold point was, in the author's view, well made. Is it the established IDB routes-to-market that offer the co-operatives the best chance of a long-term, sustainable future? Could the IDB route offer the smaller entities market access through which to develop and sell their products onto a wider market? Maybe it is a route that should be developed to support the co-operatives [and non-co-operative SMEs (even if that requires some IDB re-configuration)] to develop and market high-quality, *Mercedes-standard* products. Could the IDB be configured so as to enable the selling and distributing of both producer's own brand labels and the IDB brands? Could the IDB be the route for a wider diversity of co-operatives and SME's to access value-added, premium export markets?

THE IMPACT ON RURAL IRELAND

It should not be necessary to state that the primary objective of an agri-food strategy is to ensure that the rural farming communities that provide the primary producers within any agri-food system are both economically and demographically sustainable. In Ireland, and elsewhere, many recognise that the continuance of the family farm is central to such an objective. Within FH2020 this is acknowledged thus, "The achievement of a significant increase in milk output requires in the first instance a milk price level and farm cost structure that will provide viable farm incomes and sustain the family farm model (FH2020, pg41). Is it, however, the absolute first priority in practice?

What is not explicit within FH2020 is what numbers of family farms are required to sustain the rural communities? Is there going to be sufficient alternative employment to maintain the rural communities if family farms become fewer in number as they consolidate to become *globally-competitive*. To quote FH2020 again, "it is evident that increasing scale, improved productivity and market orientation are essential to sustain future growth in the sector", (FH2020, pg18). The author fully agrees that "market orientation is essential" and, likewise, "improved productivity" as it pertains to ensuring that farm household incomes [as opposed to just using the term business profit] are sustained or improved. The author, nonetheless, strongly questions the continual use of "increasing scale" as it appears to be considered the sole solution for achieving sustainable farm household incomes.

Although it is probably not meant to be explicitly interpreted in such a fashion, but does the following statement within FH2020 suggest that a reduction in family farms of 50% is going to be necessary if the dairy industry is going to be internationally competitive? "Teagasc should set a target of ensuring that 9,000 progressive milk suppliers are participating in vibrant discussion groups [and] implementing advanced production techniques" (FH2020, pg42). It is difficult not to conclude from the continual emphasis upon the importance of consolidation that 50% of existing dairy farming families are expected [or is that actually required] to leave the industry so that the others can grow and, thus, become competitive. It will be interesting to read in a few years' time when Food Harvest 2030 is published whether it will be talking about 3,000, or 4,000 or 5,000 "progressive farmers"?

Given that one is frequently hearing and reading about the World entering an era of sustained food price rises [due to rising populations and wider economic development], should one not be having a vision of the future whereby this translates to a global food system that is able to sustain a greater number of primary producers. Or is there just a general acceptance that rising food prices will mean higher profits for those within the food supply chains and downstream of the farm gate whilst the farmer continues to receive a pittance for contributing what is often the greatest part of the system's capital, a good proportion of the system's labour and all whilst also taking a disproportionate part of the risks associated with food production? Hence, should the main focus not be on how to improve the rewards to the farmer to the extent that consolidation and the reduction of the number of family farms is not considered an absolute necessity so as to allow the survival of the few that remain?

The author has reviewed FH2020 and he has also considered the way the industry is interpreting the *consolidate and expand* messages emanating from it. The author's conclusion is that the 50% expansion of milk production is the absolute objective and that by meeting the 50% growth target the industry will, *de facto*, be sustainable and globally competitive. As when one reads about the grass-fed dairy farming model needed, it appears that there is only one solution and that **must** be followed even if that means that as many as a half of those farming families that are making a living today from milk production have to leave the industry. At times it almost appears callous.

Can one, therefore, conclude that a sustainable model of Ireland's rural communities means a significant decline in the number of family farms? Further, will the consolidation and expansion of dairy farms also mean the use of larger-scale, labour-saving equipment and technology, thus reducing the overall employment within the sector?

If one moves onto the milk-processing side of the industry, is the prognosis for the rural employment any better?

As with the dairy farming sector, the FH2020 message is pretty unequivocal. [The] “key players should develop a plan to consolidate and rationalise capacity in the primary processing sector by the end of 2010 and cooperate in measures to achieve its implementation by 2015. Future State support for the primary processing industry must prioritise innovation and projects addressing current structural weakness [and] Relevant State agencies such as Enterprise Ireland should focus on increased employment in a targeted cohort of food and beverage companies”. Thankfully, mention was also made of others who may be outside the ‘cohort’, thus “Relevant State agencies such as Enterprise Ireland should support SMEs with a comparative advantage in niche markets and which offer job creation potential” (all FH202 pg21). Despite the inclusion of the latter, the over-whelming message of FH2020 to the milk-processing sector is one of *consolidate and expand*. Just what is the rational conclusion of such?

If one is a decision-maker in the milk-processing sector faced with the message that milk supplies are going to shortly increase by 50% and that there is a ready-and-willing global market for your product [so long as it cheap enough to compete with all other competing suppliers] is the logical approach is to invest in high-throughput, automated technology? Is this indeed not what is happening in the run-up to milk quota abolition in 2015?

One is reading in the press about some on-going and planned capital-intensive, large-scale investments. They are being applauded for the scale of the investment and the number of jobs created. If, however, one looks at them from a different perspective; just how great is the capital invested per job created? Are they not, in fact, using a vast amount of the production of rural Ireland and creating relatively few jobs? Given the scale of these plants these jobs will also be centralised to a few locations. Are they really beneficial to the rural communities?

At times it has been difficult to *square-the-circle* with respect to the FH2020 national agricultural strategy. It appears that it is solely about a *pile-it-high-and-sell-it-cheap philosophy*; however, much one reads about viable farm incomes and creating employment and sustaining rural communities. Maybe this is not a fair interpretation of FH2020 vision but it appears to be the one that many in the industry have chosen to understand.

The author is far from convinced that this philosophy will provide a sustainable future for Ireland’s rural farming communities. It may well offer benefits to others within the food supply chains and certainly some of those will contribute to the overall Irish economy but will it sustain those that provide the agri-food industry with its primary raw materials? If not, in the end where are the foundations to what otherwise will be only a *house of cards*.

MOVING ONTO A VALUE-ADDED STRATEGY

Whereas one is often reading about the critical necessity to consolidate the milk-processing sector, one reads less about other strategic options highlighted back in the *Dairy Industry Prospectus Report 2003* report. Namely; *increasing the volume of value-added products option* and *the strategic marketing option*. To an extent these seem to have been given a secondary rating in comparison to the *we must expand so as to compete with New Zealand and others in supplying the commodity-orientated global markets* strategy.

Although FH2020 does highlight value-added opportunities and the need to create a diversity of products, many other commentators appear to be focused upon global commodity markets and the need to consolidate both the processing and farming in an attempt to compete with nations who have far a greater scale of production and processing than Ireland. And in this, it is about those nations with scale, be they *export-orientated* or otherwise.

Ireland is around 30th in the World in terms of total milk production and it may rise a few places after milk quota is abolished. Like New Zealand it is very heavily focused on export (85-90%) but this fact does not mean it is not in direct competition with all other producers who trade on the global markets. As has been said earlier France and Germany are major exporters but due to the size of their home markets, they export proportionally less. This does not mean that they are any less competitive on the global dairy commodities markets.

One could also take a country like the Ukraine where the dairy industry (double Irelands) is relatively small in comparison to its population (ten times the size). Is it relevant to Ireland? The Ukraine has the scope to put in place major 10,000 cow agro-industrial dairy units which may be 100% focused on specific export markets. The country is not export reliant, indeed it is not a grass-fed industry but does that mean that its dairy investments are any less relevant to the possible outcome of an Irish dairy sector strategy that is based upon the exportation of commodities into the global markets? They are of course highly relevant and are an example of how rapidly other producers can gear up to expand their production to meet changes in global demand. Ignoring them, as appears to be the case at present, is a very dangerous approach and one that may have dire, long-term consequences.

When one also reads that New Zealand may increase its milk production by a billion litres (near 20% of Ireland's current production) in 2014 alone and that increase will feed into recently opened, or planned for 2015, processing facilities one wonders whether Ireland's expansion, if it happens, may arrive a little too late on the scene.

With its fragmented farm structure and low milk solids output per farm, Ireland is already playing catch-up and one should be quizzical about a national strategy that seems to be embedding playing 'catch-up' into the long-term. When looked at in a broad context and when one considers players beyond the *traditional* benchmarks, one has to ask if Ireland does not need to refocus its strategy away from commodities and more towards products.

Does the industry actually have a choice in this? Probably not if it wishes to deliver upon any broad objectives with respect to sustaining a wider, all-Ireland farming base and maintaining, let alone creating, rural employment that is derived from and linked to agriculture. An expansion-consolidation strategy that is focused on global markets will most likely lead to a [further] fall-out from farming and less farming-related employment opportunities as *efficiency* in terms of labour use kicks in to drive down costs. It has happened elsewhere. Hence, just what is the priority, is it about saving the few or is it about developing an agricultural and, hence, a rural strategy that can deliver wider benefits to the many. If it is the latter, rather more imagination is required to develop the strategy.

MAKING THE TRANSITION FROM COMMODITIES TO PRODUCTS

Without doubt, a heavily promoted target of FH2020 is to increase milk production and, consequentially, the sale of commodity dairy products. Two underlying market factors are often cited as justifying this expansion; the rise in demand from China [in part deriving from the melamine infant-formula scandal] and the increasing global population. At times one wonders whether the market analysis goes to any depth beyond the superficial.

An interesting point was expressed by Piet Boer [the Chairman of the Friesland Campina board]. He was cited in a report in the IFJ (25/01/2014) as saying that "China will regulate companies selling product into the country within five years and then only big, established players will survive in the market". Given the level of Ireland's exports to China and its processing structure; will it be in a position to be part of the China 'bonanza' in five years' time?

To quote from the IFJ editorial from 25th January 2014 again; "Being in a position to move product out of the commodity market into global premium markets will be essential... [but] premiumisation in a global market will not be easy. The demands on capital will be intense and scale will be a necessity. Can the fragmented nature of our processing base deliver?". A major concern has to be whether it can deliver in the face of the already well consolidated triumvirate of Fonterra, Friesland-Campina and Arla Foods; especially given Ireland's starting point.

And to return to Piet Boer's comments again; "You need to distinguish your product from the conventional, which you can really do in Ireland so there is huge potential", IFJ (25/01/2014). The author of this review would, however, go on to suggest that this is not about "premiumisation in a global market"; it is much more about *productisation* within the UK, EU, North American, Middle Eastern and East Asian markets. In fact, any market where there is a significant high-wealth community interested in, and able to afford 'Mercedes-quality' dairy products. And when put into this context, one can then look afresh at what structure is needed in the Irish milk-processing sector. It may well then be that *productisation* is something that its fragmented processors can deliver upon, especially if given the right support to develop new products, their supply chains and the right marketing campaigns.

Ultimately, the strategy in the dairy sector is too short-term and too focused on what is happening now. In an industry with a primary raw material supply base that is very long-term and multi-generational in nature, strategy has to be far longer term than 2020 and there is a serious danger of a current short-term, over-excited focus on a few current issues will undermine the integrity of the industry into the long-term. Ultimately, the structure of the Irish industry will preclude it from being a major, global commodity player and this needs to be clearly appreciated when defining a long-term strategy. Due to its farming structure and its production constraints, Ireland was and is a commodity producer. In the short and medium-term a continuance of this situation is unavoidable and it will provide a sales outlet for many a farmer [and some will choose to invest in being so]. In the long-term the Irish industry needs to position itself to be, what is often, identified in FH2020, a producers of naturally-produced, sustainable, high-quality food products. In the end it is about *productisation* although *premiumisation of global commodities* will have to play a role, as difficult as that will be, at least through an interim transitional period.

A strategy that focuses on a transition from commodity to product production is required. It will mean focusing on 2030 and even later. This may be too long-term for many but it is not when it is viewed in the context of one investing in milk production; it is about looking decades ahead. The young who are choosing again agriculture as a career are doing exactly that; it is for the industry to follow suit and to create a strategy that will create an industry into which following generations can invest within. If this does not happen, one has to ask whether the word *sustainable* is really truly understood, however, frequently it is used.

DEVELOPING A TWIN-TRACK STRATEGIC FOCUS

A clear conclusion for the author derived from researching and writing this review is that the Irish dairy industry's focus on New Zealand and, to a lesser degree, the Netherlands and Denmark as its preferred benchmarks has been detrimental to establishing a long-term strategic direction for the industry. One would also be wary about the excessive emphasis being placed upon New Zealand when it comes to defining dairy farming systems suited to the constraints facing the Irish dairy industry and also the farming technology and genetics adopted therein.

It is also the considered opinion of the author that France would offer a better benchmark for Ireland when it comes to defining a genuinely long-term, multi-generationally-focused strategy for the Irish agri-food industry. In saying this, the author is acknowledging that Ireland, as a small producer by global agricultural standards with limited resources when it comes to competing long-term on the global commodity markets, needs to undergo a transition from being a supply-driven manufacturer of commodities to a market-led producer of high-value, high-quality food products and mainstream-market, still-clearly-recognizable-to-the-final-consumer *commodities*.

Given the issue of milk-production seasonality and milk-processing facilities that have historically been created to handle milk supplies [often under the obligations of the co-operative processor] and a further embedding of this situation by the encouragement of a post-quota-expansion-strategy to supply global markets, it is inevitable that for the foreseeable future Ireland will have to maintain a focus on selling commodities into 'global' markets. If anything, the reaction to the ending of milk quotas in 2015 will have delayed the necessary transition away from supplying commodities towards creating and selling recognizable-to-the-final-consumer 'commodities' and the progressing of the development of high-value, high-quality, internationally-recognized-as-Irish, food products.

9a. PREMIUMISATION OF COMMODITIES

Given the Ireland's historical seasonality of milk production and decades of processing summer milk, it is simply not possible to make any radical, short-term changes to the way milk is produced, processed and sold. If anything, this situation has been reinforced by the recent emphasis on global markets, post-quota expansion and the *need* to consolidate the processing sector to enable it to compete with major market players. Where downstream investment has already occurred, it is unlikely that the strategy to sell commodities will change anytime soon.

There is, though, not anything inherently wrong with being a milk producer who has decided to focus his or her business on being a supplier of a processor who has decided to compete on the international stage. So long as they are confident that such a direction is best suited to their own business and that the route to market is also the best in terms of guaranteeing their own financial future, it is then the choice of the individual. There is greater concern for those who are being given no choice due to the loss of all other sales options; albeit that it may have come about because the voting membership of the cooperative processor that they supply chose another route. In essence, the concern is that farmers will have little or no influence on how or where they sell their produce.

Various reports highlight the presence of a highly-rated technical competence within Ireland's milk-processing industry and it will be interesting to see how this is deployed over time. Will it be focused on:

- ♣ Minimising processing costs through investing to reduce labour usage and, hence, employment?
- ♣ Developing ingredients for products that are produced, branded and sold by downstream entities?
- ♣ Adding value to commodities by providing enhanced products for business-to-business customers?
- ♣ Developing specific [and Irish] products that can be marketed directly to the final retail consumer?
- ♣ Exporting expertise based in Ireland independent of any Irish-origin commodity or product sales?

The need to move away from basic commodities towards value-added, differentiated products was, rightfully, highlighted in FH2020 thus; "The processing sector, supported by Enterprise Ireland, Teagasc and third level institutions, must develop an investment strategy that will facilitate more commercially focussed R&D. [The] R&D should be targeted to new product and process development with a greater focus on product areas with added-value potential, such as nutraceuticals and functional foods" (FH2020, pg43).

This a suitable summary of the strategic direction needed so no further comment will be added here except to ask the question, how much of the extra product value will find its way to the primary milk producer? The answer will simply depend on the ownership of the processor. If the processor is a farmer-owned cooperative there may be a dividend benefit to the farmer. In addition, there is the scenario whereby a plc is adding value and there is farmer ownership of shares in the plc; either directly or via the farmer's co-operative owning plc shares.

Alternatively the farmer-owned entity within the supply-chain may only be a base ingredient supplier to a multinational who adds value, brands and markets the product. In that case the milk producer will be a price-taker looking at a future that will depend on the farm [and the supply chain] remaining globally competitive. And that will be difficult given the structural differences between Irish dairy herds and others; grass-fed or otherwise.

There is clearly a high degree of technical competence within Ireland in terms of the premiumisation and/or adding value to basic dairy commodities. Is, however, this capability very orientated towards the plc's and the Glanbia joint-venture? And even if this competence is also to be found amongst the co-operatives are they just too small to utilise the capabilities within a combative global market? Virtually every comment read [supporting the consolidation of processing argument] suggests they are. Also, would they have the critical mass to invest in the continuous R&D needed, the technology and the skills so as to compete on an ever-evolving market?

Just what will the *premiumised* commodities sector look like by 2020? It is of course only supposition but will the burden of expanding to handle the post-quota expansion milk be too great for the smaller co-operatives? If they have had to incur debt burden to expand will this place too great a stress on their business models? Will a shortfall in expansion milk relative to processing expansion lead to a competitive milk-procurement situation that also leads to the break-down of the reputed Gentleman's Agreement between the co-operatives? If so will the co-operatives be able to withstand the pressure on their supplies; especially in situations whereby they have to ask for farmer contributions to their processing investment costs? Is there the risk of a downward spiral occurring when a co-operative's traditional supply-base is under pressure at the same time as they need to invest to create value for their existing member-suppliers? If they cannot invest to hold existing members or attract new ones in an increasingly competitive procurement market, it will rapidly become a difficult trading environment.

The author has lived through the evolution of a dairy industry in CEE. It was an industry that, post-communism, first saw World Bank support for small and local milk processing. It then saw pre-EU accession grant support for modernising dairy processing to EU standards. It also saw the entry of major names to the local dairy-processing sector. In the end no amount of grant aid for smaller processors could help them compete when it came to the larger, expanding, well-financed operations needing milk. The small, local processors were the inevitable victims as the sector consolidated. They were rapidly followed by many of the very small farmers who did not have the volumes to justify collection by the major processors. And of course their milk was too fragmented and expensive for the smaller processors to handle and, themselves, survive upon. It is simple the way free markets work.

The author learnt the lessons very early on. To invest in such a competitive environment you either had to be very big or very vertically integrated. The focus on Fonterra and Friesland-Campina as benchmarks in Ireland shows that many understand the value of being vertically-integrated and where farmer-ownership goes through the supply-chain to relatively near to the retail market. Unfortunately, from an outsider's perspective it appears that having a consolidated, co-operative structure is now out of reach in Ireland. There are too many other interests in play and they will be too powerful to allow a new co-operative entity to emerge to compete with them in terms of procuring milk supplies. It has been proposed frequently in the past but it is now a case of too little too late.

That is not to say that the end of all co-operatives is imminent. Many will still be continue doing what they are doing now, producing some products for sale through the IDB system and some commodities for sale to downstream supply chain partners who will then add-value. Whether they will be able to continue to sell *premiumised* commodities themselves directly is a moot point. Simply will they be competitive enough to be able to do so. Or maybe there will be room for partial dairy sector co-operation to enable them to do so; assuming that they can raise the investment capital required. Maybe they should take a fresh look at their business models and ask themselves whether they need to re-think their product mix and route-to-market? Maybe they should stop thinking global and start to focus on value-added sales into mature markets? Maybe they should stop thinking about expansion milk and start to think in terms of adding value to their existing supplies so that they can provide an attractive return to their members and thus securing a stronger vertical-integrated supply-chain partnership.

What is evident is that the plc's will be major players. As will the new joint venture in the south-east, not least because the JV includes the Glanbia Co-operative Society and that still has a strong capital base, albeit held as shares in the plc [although the members will decide as to what degree it can be invested]. An interesting move has also been made by the Glanbia plc 'out-of-region' with its planned new UHT plant (to probably export branded UHT products). Just why has it been located outside of the JV catchment area? Maybe it considers that the *writing is on the wall* for the smaller co-operatives or that milk procurement is going to become competitive within the locality or that there will be 'expansion' milk available for processing in the coming years. The next few years will certainly be interesting times for the co-operative milk-processing sector in Ireland.

9b. HIGH-VALUE AND RENOWN PRODUCTS

The development of a twin-focus strategy is necessary because, to quote FH2020, “The continued development of value-added foods on the home and international markets is key to delivering a sustainable agri-food economy. Sales of these products are less likely to be impacted by fluctuations in commodity prices while processing Ireland’s raw material supply domestically fundamentally supports wealth and employment creation in the rural economy” (FH2020, pg.33). The strategy does make valid points concerning supporting the development of the value-added sector but, overall, it does appear to fall short in providing a coordinated, deliverable strategy

Various inhibitory issues have been highlighted earlier including the conservative nature of farming communities, be they Irish or otherwise. This may change as new entrants and a younger generation enter the industry. The other major issue will be the one of milk availability in the face of an increasingly polarized milk market. It may also be highly competitive if projected post-2015 milk expansion falls short of processors’ expectations. Seeking to develop or expand an SME processor in the face of a well-capitalized milk buyer is not a positive trading environment for the smaller entity to thrive within and such conditions may limit the development of the SME to the capital available to create a vertically-integrated milk production, processing and marketing business.

A critical issue for the SME seeking to develop new, higher-value products is the availability of a route to market. Given Ireland’s small domestic market, this will be a major issue. The fact that the domestic market is also highly consolidated and controlled by a few will not make the task of selling the produce from a small-volume operation any easier. How to re-connect the farmer and small processor with the final retailer consumer is a major issue facing rural development and not just in Ireland. The dramatic change in food retailing has occurred in many countries over the last 20-30 years and it has left many smaller-producers isolated from the market. Reversing this trend is going to be extremely difficult and require the creation and adoption of some imaginative solutions.

It may appear a strange question to ask in the light of the FH2020 quote in the first paragraph, but a starting point from which to develop the SME value-added foods sector is to ask; ‘is the Government serious about it being a significant part of the agri-food industry?’ Although FH2020 says many of the right things and, admitting that its overall message may have been over-taken by a wider expansionary/globalist lobby, the question does need a clear and affirmative answer. Moving towards a value-added [probably natural] products-orientated agri-food industry has long been advocated in various strategy papers but progress has not been great. If one takes Ireland’s propensity to register designate origin products as an indicator of success, it has been woefully poor. The FH2020 50% expansion target has defiantly played a role in distracting attention away developing value-added products.

HIGH-VALUE, INTERNATIONALLY-RENOWN FOODS

As stated in FH2020, Ireland’s positive international reputation provides a solid basis for developing high-quality food products. The author would also add that the focus should be on multi-functional products that include other characteristics such as natural, healthy, animal-welfare-friendly and ethical. Grass-fed as it pertains to increasing product quality and premium [as opposed to a cheap way to produce milk] should also be a significant positive.

It is, however, not straight-forward to develop and market high-value products. It will also take time to create an international reputation for quality. There is a strong perception amongst Ireland’s agri-food community that its products are high-quality but this does have to be translated into identifiable products that can be acknowledged as such in international markets. It will almost certainly require a considerable effort to achieve such renown.

If the high-value products route is to develop into something significant [in terms of farmer incomes and rural employment] it will need proactive support right through the supply-chain from farmer to the retail customer. If the sector is left to its own devices and with only nominal, solely vocal, support its development will be slow.

Although there will be some existing products and producers that may provide opportunities for faster growth, it is likely that many will have to be developed from the ground up. There appears to be a number of small, artisan producers who are producing food products from generic, bought-in ingredients but it likely that greater success will be achieved if there is a significant degree of vertical integration between the primary producer of the raw materials and the processor. These may take the form of on-farm processors or smaller, arms-length processors [who may be co-operatively owned]. Certainly there is a stronger marketing story if there is a close linkage.

An advantage of ground-up development is that the upstream farming system can be developed to produce to the specification required of the processor. This may mean supporting a greater diversity of farming systems. It may also allow the development of premium and/or naturally-focused farming systems that are well suited to Irish conditions and the natural [possibly grass-fed focused] advantages that Ireland has. In an ideal world, farming and processing system can eventually be registered under the EU's Protected Designation of Origin scheme. A small task force charged with identifying product possibilities and farming systems may be a way to move forwards.

SUPPLY CHAIN CONSOLIDATION

A major issue, as debated earlier, is how to connect the small foods producer with the premium-paying consumer. The question is could the existing IDB system be adapted to develop routes to market for all small producers, be they co-operatives or not? It would save re-inventing the wheel if an existing capability could be built upon. The author has read that the IDB is a reason why consolidation has not occurred in the co-operative sector as it has allowed smaller entities to reach markets that they would otherwise not have been able to access. In that context it was considered a negative. Maybe, however, it should be considered in a positive light; maybe it is the basis for a route to market that will allow many of high-quality, natural products to access international markets.

To-date the focus has been on consolidating the primary milk-processing sector so it can be more internationally competitive in scale. As stated the author considers that this may now happen; but it will be due to market forces. The author would, however, suggest that consolidation is still needed within the route-to-markets. The difference being that the consolidation should occur at the level of marketing and distribution. It should be about having a consolidated entity that can support small foods producer to access the international markets [initially the mature markets of the EU and the USA, then the Middle East and then further afield]; hence the idea that the IDB may be the relevant entity to develop for the role. A consolidated vehicle may also be considered for the domestic markets with the objective of allowing the processors to focus their efforts more in the direction of product creation and development, the processing and the farming as opposed to sporadic selling activities.

LINK PILLAR 2 PAYMENTS TO THE CONSUMER

A second suggestion is to develop natural products that are derived from farming systems that are also integrated into conservation farming and land management schemes that themselves are supported by Pillar 2 payments; thus creating a linkage between the final consumer and the farmer-recipient of CAP environmental payments.

The above would create a very holistic approach to conservation and give a clear indicator to the final consumer / taxpayer that EU funds distributed through the CAP are providing public goods and not just 'subsidising' farmers. An added advantage could be that through the linkage of farming system to consumer via a premium, high-value, natural product, the conservation of some landscapes can be market linked and less reliant on support payments.

Ideally the whole could then be linked into a broad conservation grade-type farming standard and a selection of protected designated origin, appellation d'origine controlee schemes. Thus this would provide a very holistic, quality-assured way to market high-quality natural, fine foods products to consumers in the EU, North America, the Middle East and the new, high-wealth consumers in countries like, for example, Russia and China.

9. ABOUT THE AUTHOR

Stuart Meikle was born into agriculture and he spent his formative years on the family farm. After leaving school he spent what was a five year 'apprenticeship' in farm management before returning to education at Wye College, University of London. He studied a degree course that combined business management and agricultural science, a BSc developed under the supervision of the farm business management guru, Professor John Nix. Stuart Meikle was the first student studying the degree to be awarded a prestigious First Class Honours degree.

Wye College was of World-renown with respect to agriculture, farm management, agricultural policy and rural development. Stuart Meikle's capabilities were recognised by the faculty when he was recruited to the academic staff whilst still an undergraduate. He was then involved in teaching and the provision of consultancy services to private and governmental clients in the United Kingdom and overseas. Stuart Meikle enjoyed several years on the academic staff at Wye where he was privileged to work alongside colleagues who are World authorities in the agricultural and food industries. Apart from his focus on agricultural management, Stuart Meikle maintained [and continues to do so] his interests in the science and practice of agriculture and horticulture and frequently chose to work alongside his academic colleagues who specialized in agriculture and horticultural technology.

As he was employed by a World-leading academic faculty, Stuart Meikle was involved in demanding projects from a young age. Thus from his mid-twenties he was working in an advisory capacity to international institutions, government departments and private clients. An important long-term spin-off from being a young academic at Wye was that teaching highly-capable, frequently international postgraduate, students demanded that one had to develop a far greater and more in-depth subject knowledge than one might otherwise have had to.

His career then took him to South-East Asia where he worked with both plantations and smallholder projects. He was also to play a significant role in providing agricultural management and economics educational expertise to the countries of the Former Soviet Union. This included writing a comprehensive agricultural and farm business management manual for those teaching in the agricultural universities and colleges. He also spent time in the Caucasus advising on food security policy and he worked on strategic agri-food sector development issues there and for the extremely arid and sometimes very hot Jordanian Jordan Valley. He developed a specialist capability in identifying and integrating together the credit [banking], training and technological needs for agriculture.

In 1997, Stuart Meikle arrived in Romania to work on a European Commission project. He became a frequent visitor thereafter and, after approaching 15 years, he is now probably as well qualified an observer of Romanian agriculture as there is. He has maintained a focus on developing the Romanian agriculture, horticulture and food industries and, specifically, those in the upland and mountain regions of Transylvania and the Carpathians. Particularly, he has observed the relationship between the government and the private sector and he continues to identify what has to be done to create the right business and investment environments to facilitate investment into the agri-food industries and to allow them to re-develop and to become a driver of Romania's economy.

Until 2004, Stuart Meikle continued to work on international projects and investment and development projects in Romania. During this time he worked on European Commission, World Bank, International Finance Corporation and Global Environment Facility projects. Since 2000 he has developed an especial emphasis on the production and marketing of natural, higher-value, high-quality food products derived from conservation-orientated farming suited to Transylvania and the Carpathians. The farming systems are mainly pasture and forage-based and are needed to preserve the landscapes that contain Europe's most ecologically-valuable hay meadows and pastures.

In 2004, Stuart Meikle took on the hands-on management of a vertically-integrated farming and milk-processing project in Transylvania. For five years this exposed him to all of the numerous vagaries associated with developing a farming and food processing business in a region where dereliction was the norm. The development of the

project required the rebuilding of formerly state-owned assets and also the return of large areas of derelict land to production. The operational team had to be built from scratch and developed with people with little work experience or formal agricultural training. The societies from which many of the staff came were amongst the poorest in the EU. At this time Stuart Meikle was also appointed as the first British Honorary Consul to the region.

During his time in Transylvania, one of Europe's most naturally-beautiful regions, Stuart Meikle focused on how to preserve a major part of Europe's environmental heritage. The solution was and remains to focus on developing natural products and their necessary supply chains to enable value to be added to the produce derived from conservation-orientated farming. By increasing the viability of the local farming, the objective is that preservation of the region's very high-nature-value landscapes will come through increasing the economic viability of local farming and, hence, create economic [and demographic] sustainability for the communities that manage the landscapes. It is Stuart Meikle's belief that producing higher-value, designated-origin, natural products is a solution for farmers, communities, the ecology and the landscapes of many 'marginal' regions of rural Europe.

Stuart Meikle and his family now live in the south-east of Ireland where he is now focusing on the issues that face rural Ireland and the Irish farming and food industries. In a country that is transiting a well-documented economic crisis, the 'sunset' industries of agriculture and food, along with rural tourism, have returned to being national priorities. After 20 years of traveling and seeking solutions for the problems facing agricultural and food industries and rural communities in diverse parts of the World, he is now focusing his knowledge and experience upon a rural Ireland that now exists within a much-changed economic environment. This review paper is a starting point.

GENERAL INFORMATION AND DISCLAIMER

The information contained in the www.agrifoodsolutions.net website (and its linked pdf downloads of which this report is one) is for general information purposes only. The information is provided by www.agrifoodsolutions.net and its author Stuart Meikle and while we endeavour to ensure the accuracy of the contents, we make no representations or warranties of any kind, express or implied, about the completeness, accuracy or reliability with respect to the information within this website. Any reliance you place on such information is therefore strictly at your own risk. In no event will Stuart Meikle (or any other party associated with the publishing of this website (and its linked pdf downloads)) be liable for any loss or damage including without limitation, indirect or consequential loss or damage, or any loss or damage whatsoever arising from, or in connection with, the use of this website and the information therein. www.agrifoodsolutions.net and its author, Stuart Meikle, encourage the reader to investigate and verify the information within the website and to seek answers where questions are posed. Our intention is solely to enhance the discussion about the future of the agricultural, horticultural and food industries.