The European Dairy Industry Towards 2020
Report Extracts
Challenges, Strategies and Change
This document contains extracts of the Promar research report titled ‘The European Dairy Industry Towards 2020’. This report is in two sections and focuses on developments at the farm level across 14 of the top European dairy producing countries.

The two sections are: ‘European Producer Summary’ & ‘Country Profiles’

A second report covering the European dairy processing sector will be released by Promar in June 2015.

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Disclaimer

The information contained in this report is based on a range of sources, including industry, government and commercial publications, as well as opinions from a range of experienced dairy industry professionals in nine European countries. It also builds on the past knowledge and experience of Promar International from working in the international dairy sector over an extended period of time and the inherent build up of knowledge on this, and related, subjects. The opinions expressed in this report are those of the authors and do not necessarily represent those of the individuals or organisations interviewed.
TABLE OF CONTENTS

1. INTRODUCTION ..................................................................................................................11
2. EU DAIRY OVERVIEW .........................................................................................................1
   2.1 European Milk Quotas ....................................................................................................1
3. MILK PRODUCTION TO 2020 ..........................................................................................3
   3.1 Today ............................................................................................................................3
   3.2 By 2020 ........................................................................................................................4
   3.3 Drivers & Constraints ....................................................................................................7
   3.4 Production Response ...................................................................................................9
4. FARM SIZE & STRUCTURE DEVELOPMENTS .................................................................11
   4.1 National Herd Size .......................................................................................................11
   4.2 Farm Numbers ...............................................................................................................12
   4.3 Average Herd Size ........................................................................................................14
   4.4 Herd Size Structure ......................................................................................................15
5. REGIONAL PRODUCTION CHANGES .............................................................................16
   5.1 Intra Country Production Changes .............................................................................16
6. FARM LEVEL CHANGES ....................................................................................................18
   6.1 Farm Development .......................................................................................................18
   6.2 Technology ....................................................................................................................20
7. PRODUCTION GROWTH INFLUENCERS ........................................................................22
   7.1 Industry Leadership ......................................................................................................22
   7.2 Farm Competitiveness ..................................................................................................24
   7.3 Fundamentals to sustained milk production growth .....................................................25
   7.4 The ‘Grain’ Factor .........................................................................................................26
8. QUOTA REMOVAL IMPACT .............................................................................................27
   8.1 Global Price Impact ......................................................................................................27
   8.2 Impact Time Frame ........................................................................................................29
9. THE PROMAR EUROPEAN FARMER TYPE MODEL .....................................................30
10. IMPLICATIONS ................................................................................................................33
    10.1 Implications For Input Suppliers .................................................................................33
    10.2 Implications For Dairy Farmers ................................................................................34
    10.3 Implications for Industry Support Organisations .......................................................36
11. APPENDICES ..................................................................................................................37
Management Summary - Key Country Snapshots

<table>
<thead>
<tr>
<th>Production / % of Quota*</th>
<th>Spain</th>
<th>Ireland</th>
<th>Denmark</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5,981,000 t / -2.2%</td>
<td>5,581,000 t / +0.6%</td>
<td>5,025,000 t / +2.1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resources</th>
<th>Reasonable climate in the NW, hot/dry continental climate across rest of the country</th>
<th>Good maritime climate, rainfall, adequate land</th>
<th>A mild maritime climate with good rainfall</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Farming system</th>
<th>Diverse – ranging from extensive grazing to large intensive housed systems</th>
<th>Homogenous – pasture based, extensive dairy farms</th>
<th>Homogenous – intensive. Large scale, family run dairy farms</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Farming alternatives</th>
<th>Mainly sheep/goats in dairy areas – the arable sector dominates in non dairy areas</th>
<th>Limited - beef/sheep</th>
<th>Other intensive sectors – pigs / poultry, some beef</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Consumer influence</th>
<th>Low – dairy has a low production intensity – the wider economy tends to be bigger issue for consumers</th>
<th>Low – the dairy industry is seen as a key part of Irish economy</th>
<th>High - increases in production will require lower levels of environmental impact</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Cost of production**</th>
<th>Low – €236/t</th>
<th>Low - €240/t. Farms are currently budgeting for a five year average price of €320/t</th>
<th>High - €401/t mainly due to high depreciation and interest payments</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Farmer confidence</th>
<th>Low – many farmers are concerned about low cost imports</th>
<th>High – “if good Irish farmers cannot make a profit who else in Europe can?”</th>
<th>Farmers are generally positive about a market free from milk quotas</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Processing capacity</th>
<th>Typically smaller and more fragmented processing base</th>
<th>Many improvements and new plants build in recent years – mainly powder and cheese</th>
<th>Strong – Arla has invested in processing and marketing to meet expected increased milk flows</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Ownership</th>
<th>Mainly private companies (80%). 40% foreign owned</th>
<th>The majority is farmer owned cooperatives – 90%+</th>
<th>One large co operative, Arla, dominates the market</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Growth focus</th>
<th>Limited – most of the focus is on the slow growing domestic market</th>
<th>High – farmers have been constrained by quota – Ireland is a traditional exporter</th>
<th>Many Danish farms see opportunities to maximise efficiency</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Access to export markets</th>
<th>Limited – some companies are trying to develop branded FMCG exports</th>
<th>Strong – via the Irish Dairy Board and private companies</th>
<th>A long history of exporting across Europe and globally</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Industry Support</th>
<th>Medium – industry organisations tend to be focussed on implementing the Milk Package</th>
<th>High – there is strong political support + focussed research and technology transfer institutions</th>
<th>Strong – numerous levels of integrated R&amp;D and support organisations</th>
</tr>
</thead>
</table>

* Indicates percentage amount 2013 production was over or under quota
** Cost of Production data based on EU FADN 2013 Operating Costs + Depreciation and External Factors
3 MKILK PRODUCTION TO 2020

3.1 Today

Europe is currently the world’s largest milk producer with 2013 production totalling more than 140 billion litres. More than 93% of this milk is produced by 14 countries with the top nine countries, Denmark, France, Germany, Ireland, Italy, the Netherlands, Poland, Spain and the United Kingdom accounting for over 80% of total EU milk production.

Figure 1 EU Cows’ Milk Collected - 2013 (million litres)

Germany and France have consistently been the largest dairy producers in Europe for many years. These two countries alone account for almost 40% of EU milk production. Rules preventing trading of quota between countries and the punitive super levy for above quota milk production has meant that rankings of EU countries based on production have been fairly consistent since 1984.
By 2020

Based on published data, the feedback gained from our interviews and our own knowledge and insight into the EU dairy sector, we estimate the top 14 milk producing countries in Europe will increase their production by anywhere between 6.8 and 23.2 billion litres by 2020. This represents a potential 6 – 20% increase over 2013 production of around 114 billion litres.

The large variation in production growth estimates is partly driven by the conservative ‘model’ based forecasts from organisations such as the EU DG Agriculture. These lower forecasts are not surprising, as the rapid growth in milk production over the last two years in many countries has left processors and industry groups surprised by the speed of change.

As might be expected, the majority of growth will come from the nine largest producers, who should add between 7.6 – 21.5 billion litres by 2020. Apart from Spain and Italy, all of these big producers are expected to increase milk production.

![Figure 2 Potential Milk Production Increase to 2020 (million litres)](chart)

Source: Various/ Promar Analysis

The next five largest producers are far less clear in terms of whether they will increase or decrease production. Sweden and Finland are widely expected to actually decrease production. Although Austria, Czech Republic and Belgium are generally expected to decrease production as well – some forecasts show slight increases in production. Apart from an optimistic forecast from Belgium showing an extra 1.2 billion litres – most increases from these five countries would, overall, have a minimal impact on European production levels.
3.3 Drivers & Constraints

The key growth drivers for milk production are relatively uniform across Europe – only the most reclusive dairy producer is unaware of world population growth forecasts (9 billion by 2050) or that China’s increasing (long term) demand for dairy products is huge. Consultants, policy makers, banks and exporters et al are all talking about the growing demand for dairy products globally.

While the drivers behind expansion are quite uniform, the brakes or constraints on increased production tend to vary by country. In some markets, such as Ireland and Germany, quotas are the immediate constraint, but in others, production growth is likely to be limited by the next most tangible constraint, in the Netherland’s case, environmental pressures. In other markets, such as Poland and France, removing the quota constraint reveals a number of other less tangible issues that will have varying levels of impact on milk production growth.

The table below summarises the main production constraints in the nine largest EU dairy producers.

Figure 3 Main Production Constraints

<table>
<thead>
<tr>
<th>Country</th>
<th>Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>Environment: Environmental constraints particularly in the North can add significant costs for manure disposal etc.</td>
</tr>
<tr>
<td></td>
<td>Land Availability: High land costs – particularly in the North or fragmented land ownership in the South constrains farm expansion growth.</td>
</tr>
<tr>
<td></td>
<td>Export Market Access: Not all farmers are located near to processors that are willing to accept more milk. Many of the smaller co-ops have limited access to export markets.</td>
</tr>
<tr>
<td>France</td>
<td>Price Volatility: Volatility – French farmers are unused to variation in market prices and export markets are seen as being volatile. ‘Why double production to have your milk price’ is a common attitude.</td>
</tr>
<tr>
<td></td>
<td>Export Market Access: Although the largest French companies have strong export channels many are focussed or orderly marketing of products and are less willing to accept additional milk that they do not have a ‘home’ for.</td>
</tr>
<tr>
<td></td>
<td>Arable Competition: Dairy production resources are often in direct competition with arable farming. Better returns from arable farming decreases the resources available for milk production.</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Confidence: The UK dairy industry is pre occupied with the 5-6 billion litres of milk that are used for domestic liquid milk. Many farmers will not expand until a ‘whiteknight’ emerges that will offer them the same high price for any additional milk.</td>
</tr>
<tr>
<td></td>
<td>Processing Capacity: The UK dairy industry has limited processing capacity – unless new capacity is built, it is hard to see how production can increase by any significant amount.</td>
</tr>
<tr>
<td></td>
<td>Producer Focus: The UK has some very good, highly efficient farmers, but too many farmers are focussed on farming as they have always done, rather than focussing on meeting customers’ needs and maximising profitability.</td>
</tr>
</tbody>
</table>
4.3 Average Herd Size

Given the previous trends of increasing milk supply and mainly decreasing herd numbers across Europe, it is logical to assume that herd size will continue to increase.

The table below summaries Promar estimates of herd size range by 2020. The data is based on estimated farm numbers and projected national herd size in 2020.

The chart shows a continuation of the trends seen over past decades, with potential increases in countries where EU quotas have restricted farm growth in the past.

Denmark and the UK are expected to continue to have the largest herds. Countries like Poland should continue their gradual increase in herd size. By 2020, Poland could have a similar herd size structure as seen in France/Germany back in 2006.

Although Denmark’s predicted average herd size of 300 cows is historically large for Europe, this is by no means an unimaginable or unmanageable herd size. Numerous dairy regions around the world are already operating with average herd sizes at this level. Most other European countries are still way below a 300 cow average herd size. Even with our optimistic forecast, the average herd size for the largest nine European countries would still only be 116 cows.

**Figure 4 EU Average Herd Size – Range of Estimates for 2020**

<table>
<thead>
<tr>
<th>Country</th>
<th>2006</th>
<th>2013</th>
<th>2020 Forecast</th>
<th>Growth Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>low</td>
<td>high</td>
<td>2006-13</td>
<td>2013-20 low</td>
</tr>
<tr>
<td>Denmark</td>
<td>94</td>
<td>152</td>
<td>260</td>
<td>301</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>99</td>
<td>123</td>
<td>179</td>
<td>191</td>
</tr>
<tr>
<td>Netherlands</td>
<td>65</td>
<td>84</td>
<td>109</td>
<td>128</td>
</tr>
<tr>
<td>Ireland</td>
<td>48</td>
<td>63</td>
<td>84</td>
<td>102</td>
</tr>
<tr>
<td>Italy</td>
<td>36</td>
<td>53</td>
<td>61</td>
<td>85</td>
</tr>
<tr>
<td>Germany</td>
<td>37</td>
<td>52</td>
<td>73</td>
<td>76</td>
</tr>
<tr>
<td>France</td>
<td>34</td>
<td>46</td>
<td>68</td>
<td>72</td>
</tr>
<tr>
<td>Spain</td>
<td>32</td>
<td>42</td>
<td>68</td>
<td>74</td>
</tr>
<tr>
<td>Poland</td>
<td>8</td>
<td>15</td>
<td>30</td>
<td>36</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>136</td>
<td>163</td>
<td>197</td>
<td>217</td>
</tr>
<tr>
<td>Sweden</td>
<td>44</td>
<td>64</td>
<td>99</td>
<td>106</td>
</tr>
<tr>
<td>Belgium</td>
<td>36</td>
<td>52</td>
<td>69</td>
<td>102</td>
</tr>
<tr>
<td>Finland</td>
<td>18</td>
<td>28</td>
<td>42</td>
<td>45</td>
</tr>
<tr>
<td>Austria</td>
<td>8</td>
<td>11</td>
<td>15</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: Eurostat/Promar Analysis
7.2 Farm Competitiveness

Most farmers tend to see changes in the farm gate milk price as the main cause of variation in their own profitability and often also attribute differences in profitability between their farm and other farmers due to differences in milk price. Research from Promar and other industry groups, however, consistently show that it is the actual cost of production that is a key driver of profit. In almost all countries, there are farmers with a low milk price making good profits, as well as farmers on a high milk price making no profit/losses.

The chart below shows average cost of production (excluding imputed family labour and capital costs) for each country. The chart reflects the large variation in farming systems and environments across Europe - which leads to a large variation in production costs. As well as large variation between countries and regions, most farm accounting data sets show there is considerable variation in costs between farms – even those in similar locations and running similar systems.

Most of this variation is largely due to farmer skill and focus.

Figure 5 Selected Countries – Cost of Production

The above data is useful in explaining the high levels of producer confidence in Ireland, where low costs of production mean that Irish dairy products should be competitive on any European market. Similarly, the low production costs in Poland makes many (Polish) producers and processors feel confident that there is a strong future for their milk and finished dairy products in European markets and other parts of the world.

The data is less useful when trying to explain similar high levels of producer confidence in countries like Denmark and the Netherlands.

Although the above averages do not fully demonstrate the cost competitiveness of some countries, cost competitiveness is a corner stone of farmer confidence and therefore intentions.
In 2015, most countries in Western Europe have farmers located across all of the first three quadrants. Countries such as Poland, with its very large numbers of small, traditional farms, would still have the majority of its farmers in Quadrants 1 and 2. Highly developed dairy economies, such as the Netherlands and Denmark would have few farmers left in Stage 1 and the majority in Stage 2 & 3, with a minority of farmers already moving into Stage 4. Countries like the UK and France would be somewhere in between Poland and the Netherlands.

Although EU milk quotas have often not directly constrained farmer development, in many countries they have limited the ability of farmers to grow the size of their businesses. Achieving a critical size is one of the key drivers of giving farmers the ability to hire staff and ultimately the space to move away from doing the day to day farming to being able to allocate time for higher value strategic thinking/planning. Removing EU quotas will not convert farmers into strategic thinking ‘Stage 4’ businesses overnight, but it will provide a better environment for progressive farmers to develop further and faster than they could have previously.
10.2 Implications For Dairy Farmers

The removal of EU milk quotas will lead to opportunities and threats for all European farmers – regardless of whether they have been producing under or over quota. These impacts may not be felt immediately in many areas, but over time they will have an impact across Europe.

As an organisation with a large on-farm dairy consulting business unit, Promar is acutely aware that many farmers often do not like hearing messages about efficiency and change. Unfortunately this ‘inconvenient’ truth is one that all farms will need to hear and act upon if they want to be a part of the European dairy industry in 2020. We are big believers in the saying “farming as a way-of-life is bad business, but farming as a business, is a good way of life”.

For some farmers, the changes will simply be incremental adjustments to their current trajectory and plan. For others, the changes will need to be far more fundamental. These changes in the industry will provide opportunities for a range of other new and innovative business that provide services and products to the dairy industry.

Our view on the major changes at farm management simply to get the majority of farmers into our Stage 3 level are summarised below:

Personal Management

- Farmers need to view and value themselves as CEO’s of the business, not simply as a low cost labour unit
- They need to understand their personal strengths and weaknesses and then focus on doing what they are good at, while bringing in experts to cover their areas of weakness
- They need to be positive and remain focused on the areas they can control

Financial Awareness

- Understanding the farms costs of production is fundamental to be able to implement changes that will improve profitability. Across Europe, far too many farmers do not have or do not act upon cost of production information
- Bench marking is critical – again, across Europe far too many producers do not work with other farmers to identify where and how they can improve farm efficiency

Maximising Assets

Across Europe, many farmers do not consider return on investment as a realistic measure. While very high land prices make these measures unattractive the principle remains a vital tool to improve profitability. To maximise assets farmers will need to employ a range to tools
The European Dairy Industry Towards 2020

Country Profiles
Challenges, Strategies and Change
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>INTRODUCTION</td>
<td>VII</td>
</tr>
<tr>
<td>1.1</td>
<td>Report Structure</td>
<td>vii</td>
</tr>
<tr>
<td>1.2</td>
<td>Acronyms</td>
<td>viii</td>
</tr>
<tr>
<td>1.3</td>
<td>Country Abbreviations</td>
<td>x</td>
</tr>
<tr>
<td>2</td>
<td>GERMANY: DAIRY INDUSTRY</td>
<td>1</td>
</tr>
<tr>
<td>2.1</td>
<td>Dairy Snapshot</td>
<td>1</td>
</tr>
<tr>
<td>2.2</td>
<td>Milk Production</td>
<td>2</td>
</tr>
<tr>
<td>2.3</td>
<td>Herd and Farm Numbers</td>
<td>3</td>
</tr>
<tr>
<td>2.4</td>
<td>Herd Structure</td>
<td>4</td>
</tr>
<tr>
<td>2.5</td>
<td>Milk Production Distribution</td>
<td>5</td>
</tr>
<tr>
<td>2.6</td>
<td>Farm Types</td>
<td>7</td>
</tr>
<tr>
<td>2.7</td>
<td>Farm Development Pathways</td>
<td>9</td>
</tr>
<tr>
<td>2.8</td>
<td>Growth Drivers/Barriers</td>
<td>10</td>
</tr>
<tr>
<td>2.9</td>
<td>Dairy Processing</td>
<td>11</td>
</tr>
<tr>
<td>2.11</td>
<td>Processors/Industry Influence on Milk Production</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>FRANCE: DAIRY INDUSTRY</td>
<td>14</td>
</tr>
<tr>
<td>3.1</td>
<td>Dairy Snapshot</td>
<td>14</td>
</tr>
<tr>
<td>3.2</td>
<td>Milk Production</td>
<td>15</td>
</tr>
<tr>
<td>3.3</td>
<td>Herd and Farm Numbers</td>
<td>16</td>
</tr>
<tr>
<td>3.4</td>
<td>Herd Structure</td>
<td>17</td>
</tr>
<tr>
<td>3.5</td>
<td>Milk Production Distribution</td>
<td>18</td>
</tr>
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<td>3.6</td>
<td>Farm Types</td>
<td>21</td>
</tr>
<tr>
<td>3.7</td>
<td>Farm Development Pathways</td>
<td>23</td>
</tr>
<tr>
<td>3.8</td>
<td>Growth Drivers/Barriers</td>
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<td>3.9</td>
<td>Dairy Processing</td>
<td>25</td>
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<tr>
<td>3.11</td>
<td>Processors/Industry Influence on Milk Production</td>
<td>26</td>
</tr>
</tbody>
</table>
THE EUROPEAN DAIRY INDUSTRY TOWARDS 2020
Report Extracts – Country Profiles

9.2 Milk Production ................................................................. 93
9.3 Herd and Farm Numbers ...................................................... 94
9.4 Farm Types ........................................................................ 95
9.5 Farm Development Pathways ............................................... 96
9.6 Growth Drivers/Barriers ...................................................... 97
9.7 Dairy Processing ............................................................... 98
9.8 Processors/Industry Influence on Milk Production ................. 99
9.9 Industry Leadership ........................................................... 100

10 DENMARK: DAIRY INDUSTRY .............................................. 101
10.1 Dairy Snapshot ................................................................. 101
10.2 Milk Production ............................................................... 102
10.3 Herd and Farm Numbers ................................................... 103
10.4 Farm Types ....................................................................... 104
10.5 Farm Development Pathways ............................................. 106
10.6 Growth Drivers/Barriers .................................................... 107
10.7 Dairy Processing ............................................................... 108
10.8 Processors’ / Industry Influence on Milk Production ............. 109
10.9 Industry Leadership ........................................................... 110

11 BELGIUM: DAIRY INDUSTRY .............................................. 112
11.1 Industry Snapshot ............................................................. 112
11.2 Milk Production ............................................................... 112
11.3 Herd and Farm Numbers ................................................... 113
11.4 SWOT ............................................................................. 113

12 AUSTRIA: DAIRY INDUSTRY .............................................. 114
12.1 Industry Snapshot ............................................................. 114
12.2 Milk Production ............................................................... 114
12.3 Herd and Farm Numbers ................................................... 115
12.4 SWOT ............................................................................. 115

13 SWEDEN: DAIRY INDUSTRY .............................................. 116
13.1 Industry Snapshot ............................................................. 116
13.2 Milk Production ............................................................... 116
1. COUNTRY SAMPLE: DAIRY INDUSTRY

1.1 Dairy Snapshot

- Germany is a net exporter of dairy products and almost 50% of milk production is exported.
- The German dairy industry has the capability to supply both commodity and value added products to European and other international markets.
- There is a long history of dairy farming across Germany, but with the potential for significant rationalisation, as milk (production) moves to the most suitable areas for (milk) production.
- Some farmers are waiting for EU quota removal to increase farm size/scale, but many have already made investments. Further investment is likely to be influenced by milk prices.
- Milk production is expected to continue to increase after 2015, but most growth forecasts are cautious (2.9 – 3.9 billion litres) increase in milk production by 2020.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- There are reasonable forage growing conditions, good soils and rainfall and large areas of grassland – all suitable for dairy farming</td>
<td>- Most German farms operate intensive systems, which are relatively high cost to build and operate</td>
</tr>
<tr>
<td>- There is a wide range in costs of production – but some low cost producers/professional producers</td>
<td>- There is a fragmented processing sector, with many smaller co operatives, which limits profitable growth opportunities for some farmers</td>
</tr>
<tr>
<td>- There is a diverse processing sector, with some modern, export focussed companies</td>
<td>- Consumer preferences for small, traditional local farms is at odds with industry economics</td>
</tr>
<tr>
<td>- A strong domestic market – 80 million consumers</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Many German farmers have made significant investments in infrastructure - EU quota removal will allow them to utilise this capacity more efficiently</td>
<td>- Land in good dairy areas is increasingly expensive and hard to obtain</td>
</tr>
<tr>
<td>- Differentiating German dairy products in global markets through private and industry quality standards to build demand for German products</td>
<td>- Continued growth of the biogas industry increases demand for land – this impacts on rents/prices for land suitable for dairy farming</td>
</tr>
<tr>
<td>- The large differences in costs of production between farms provides an opportunity for the industry to improve its efficiency</td>
<td>- EU standards regarding animal welfare are expected to increase – no slatted floors, tethers, access to outdoors/pasture. All have potential to add to production costs</td>
</tr>
<tr>
<td></td>
<td>- Increased volatility in dairy market prices, especially compared with other sectors, could encourage farmers to exit the industry</td>
</tr>
</tbody>
</table>
2. MILK PRODUCTION

Today

The UK is Europe’s 4th largest dairy producer. Despite having favourable conditions for producing milk, the UK was 14% under quota in 2012/13 and 11% under in 2013/14.

Figure 7 Milk Production Trend

![Milk Production Trend Graph](Image)

Source: Eurostat/ Various

UK milk production has been in decline for much of the last 20 years. It is only in the last 2 years that production has increased (although bad weather in 2012/13 reduced milk production significantly, so even an average season in 2013/14 would have seen a production increase). Since 2013, good prices and weather have resulted in higher milk production.

Future

UK milk production of around 15 billion litres by 2020 was commonly cited as a ‘reasonable’ production level from many of our respondents. However, the NFU’s strategy¹ ‘Leading the Way’ is more bullish and calls for an increase in production equivalent to 4 billion litres by 2025.

The current low milk prices are expected to result in decreased production as more farmers than usual leave the industry and others focus on reducing costs. Assuming milk prices improve globally in late 2015/2016, many expect that UK milk production resume a slow growth pattern.

Significant changes in milk production will be heavily dependent on the global milk price. There is a view that the milk price will have to be over €37 cents/litre (30ppl) (all things being equal) before the average UK farmer will look at expansion.

Dairy farmers in the UK have only just started to develop a positive view of the future of the industry. A prolonged period of low prices (i.e. beyond 2015), could knock this limited confidence and further discourage many younger/new people from entering the industry.

¹ Produced with DairyCo, Dairy UK, RABDF et al
2.1 Herd and Farm Numbers

Figure 8 National Herd Size

Today
Alongside farm numbers, the Polish dairy herd has been in decline for many years. Much of this is ‘positive’ decline, as poorer quality cows are being replaced with better quality dairy cattle. However, since 2010, the national herd has decreased from 2.54 million to 2.36 million cows.

Future
Using the last three years as a guide, this would see the Polish herd decline to around 2.0 million cows.

Promar estimates, based on milk production forecasts, suggest herd numbers could vary from 1.88 to 2.22 million cows.

Figure 9 Farm Number Trend

Today
Commercial farm numbers have fallen rapidly since Poland’s accession to the EU. Between 2003 and 2013, Polish dairy farm numbers shrank by almost 6% per year to around 153,000 farms (the decrease in percentage terms was higher than any other large European dairy producer and more than twice the rate experienced in the Netherlands, as an example).

Future
Farm numbers are expected to continue to decrease towards 2020. As in the past, the current period of low prices will see an increase in the numbers of farms exiting the industry.

Farm exits are likely to increase further if the grain price to milk price become more favourable for grain (more farmers will cease dairy and move to arable farming).

Using historic rates – farm numbers are likely to be touching 100,000 by 2020. Promar estimates are more aggressive, with farms numbers ranging from 45,000 to 78,000.
2.2 Herd Structure

Figure 10 Share of Milk production and Farm Number by Farm Size (milk produced)

Source: CNIEL

Today

As with most other modern dairy producing countries, farm numbers in France are declining faster than the total herd size and therefore average farm sizes are increasing. Between 2003 and 2013, the average French herd size increased from 31 to 46 cows, an increase of over 45%.

More importantly than changes to the average herd size, has been the growth of ‘large’ (greater than 100 cow) farms. CNIEL estimates that these have grown from almost nothing in 2000 to over 16% of French herds in 2013.

Future

Based on recent growth rates, French farms would average around 60 cows by 2020. Promar estimates show a slightly higher range of between 68-72 cows per farm. With EU milk quotas removed, we believe French herds will follow a faster path towards fewer, better managed farms, milking more cows.

The chart above shows that between 2008 – 2012, the number of farms producing greater than 400,000 litres increased, with the number farms producing over 600,000 litres doubling. In contrast, the number of farms producing less than 400,000 litres has decreased. Importantly, farms producing over 400,000 litres accounted for over 52% of all milk produced in France, up from 39% in 2008/09. Large French farms (those producing over 700,000 litres) accounted for 15% of all milk produced, up from 8% in 2008/09.

Given the potential for increased milk production in Europe and the trends in other markets, it is difficult to see the trends towards large farms slowing down. The clearest barrier to increasing farm size maybe that production of around 800,000 litres per farm is often seen as a ceiling for a family run dairy farm, before additional labour has to be employed.
2.3 Milk Production Distribution

Today

Dairy farms are located across almost all of the Netherlands.

Milk production is common across all 12 regions of the Netherlands, but four regions account for almost 65% of production. Friesland is the largest milk field with over 2 billion litres. The next three largest production regions all produce over 1.7 billion litres. Overijssel is the densest milk production region in the Netherlands (and indeed all of Europe), producing over 550 tonnes of milk/km².

Between 2009 – 2013, all of the 12 regions in the Netherlands increased milk production, albeit at relatively modest volumes, of between 16 – 127 million litres.

Over recent years, there has been a gradual shift of dairy herds to the North and North East. Farmland in the South of the Netherlands is dominated by pig and poultry operations, while the Western areas are increasingly urban.

Future

We expect few major changes in the distribution of farms around the Netherlands. The major influencers around farm growth in the future are likely to be based on environmental constraints and local population – areas with lower population density should have fewer planning/development constraints.
Figure 13 Milk Production Density by Region

<table>
<thead>
<tr>
<th>Ref</th>
<th>Region</th>
<th>Milk t/km²</th>
</tr>
</thead>
<tbody>
<tr>
<td>NL21</td>
<td>Overijssel</td>
<td>560</td>
</tr>
<tr>
<td>NL31</td>
<td>Utrecht</td>
<td>447</td>
</tr>
<tr>
<td>NL12</td>
<td>Friesland (NL)</td>
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</tr>
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<td>NL22</td>
<td>Gelderland</td>
<td>348</td>
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<td>NL41</td>
<td>Noord-Brabant</td>
<td>333</td>
</tr>
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<td>Drenthe</td>
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<tr>
<td>NL11</td>
<td>Groningen</td>
<td>247</td>
</tr>
<tr>
<td>NL23</td>
<td>Gelderland (NL)</td>
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<td>NL32</td>
<td>Noord-Holland</td>
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<tr>
<td>NL42</td>
<td>Limburg (NL)</td>
<td>101</td>
</tr>
<tr>
<td>NL33</td>
<td>Zeeland</td>
<td>49</td>
</tr>
</tbody>
</table>

Source: Eurostat / Promar Analysis
2.4 Farm Types

Today

There are three main farming systems used within the UK. Within each of these broad systems there is considerable variation in terms of management skill as well as scale and efficiency/profitability.

- **Low Input/Low Output**
  - Predominantly grass-based farms operating at lower yield levels.
  - Cows tend to live outside all year.
  - Typical yields of 4–5,000 litres/cow.
  - Often based on Friesian/Jersey cross bred herds with NZ genetics.

- **Mixed**
  - Cows are fed a mixture of concentrated feed as well as fresh and preserved forages.
  - Cows would be outdoors for most of the summer months.
  - Average yields would be 7–8,000 litres from 1–3 tonnes of concentrate.

- **High Input High Output**
  - Cows would be fed exclusively on a TMR ration and milked 2-33 times per day.
  - Most cows would be 100% housed when milking – dry cows may graze outside in summer months.
  - Yields would be higher – typically around 9-10,000 litres.

Future

All respondents believed the three main UK farm systems would continue to operate. In most cases, profitability is determined by farmer skill and expertise, rather than farm system or even milk price.

Regardless of system, all farms would need to increase their own efficiency to survive expected future volatility and price competition. Dairy farm business that do not know fully their costs of production and profit level were less likely to survive. As one respondent said, opportunities exist for technically brilliant farmers with good cost control, “but there is no guarantee”.

The main points to note are as follows:

- **Low Input/Low Output – small growth**
  - Cost pressures and milk price volatility should continue to encourage some farmers to adopting Irish or NZ style grazing operations. Parts of the UK, such as West Wales and the South West of England, are well suited to this system.

- **Mixed – flat to small decrease**
  - The UK is gradually moving towards the high input/high output model. The US industry is seen as a leading example and input sales people naturally tend to promote high input systems –
more concentrated feed, bigger feed wagons etc. There is also a relatively abundant supply of
cost food processing co-products in the UK which supports the mixed system - from
brewers’ grains to sugar beet pulp.

The UK processing industry is also geared towards a level milk supply with most processors
offering incentives for flat milk production systems.

The trend towards intensive US style systems is arguably the wrong direction for many UK
farms. The UK’s comparative advantage is in growing forage and converting that low cost feed
into milk. Despite efforts by industry groups and many consultants to promote higher forage
production and better utilisation, many farmers still end up producing too little milk from
forage.

- **High Input High Output – small growth**

Volatility in milk prices and cost pressures are encouraging some farmers to move towards
more intensive units. Public opposition to large intensive style farms and retailer (consumer)
pressure to have cows outdoors and grazing grass are the two major constraints to this trend.

**Faster Change**

While the above scenario represents a gradual shift in farming systems, there some experts that
believe UK farms will increasingly move away from the “middle ground” mixed system to either a
high input/high output system or an extensive low input/low output system.

This shift could actually be driven by continued low milk prices (< €30/litre) or by higher milk
prices (> €40/litre). In the high milk price scenario, many UK farmers would be likely to
increase their milk production. This means milk processors would be able to source all their
milk requirements locally without having to travel to more isolated areas, such as West Wales,
to collect milk.

Without access to processors with high value added products, farmers in these isolated areas
would most likely be supplying commodity processors. To survive in global commodity
markets, these farmers would need to adopt the low cost extensive grazing systems to survive.

In the low milk price scenario, more farmers would be driven to adopting a low cost Irish-style
system to stay in business.
2.5 Farm Development Pathways

The Italian industry has undergone significant consolidation over the last 20 or so years. However, the overall level of consolidation and change in many areas has been less than other European countries, such as Netherlands and Denmark.

Given the uniformity of dairy production systems in Italy, the growth or development pathways chosen by individual farms are relatively similar.

The high land costs and limited availability of land restrict any large scale farm developments in the North of Italy. Larger developments have taken place in other parts of Italy, where a processor has specific demand/market for milk.

Many farmers in the North of Italy have made significant investments in land and farm infrastructure in recent years. These farms are already carrying high levels of debt and are often unable to access finance to fund any further expansion. This means incremental growth in cow numbers tends to be the most common form of development.

Automation is increasingly common. Many automatic milking systems have been installed over the last 5 to 6 years. Most farmers using these systems are satisfied and would reinvest in these systems if required. However, the relatively large herd sizes seen in the North of Italy also make large rotary dairies a viable proposition. Italian dairy farms use increasing amounts of imported labour, particularly from Pakistan and Bangladesh, to overcome skills shortages.

There are few, if any new dairy farmers entering the industry. High land costs effectively prohibit any new entrants.

Cooperation with other farmers is limited. Share milking and other joint farming systems are very rare.

Lower prices for milk and high debt levels are driving some farmers to take a more commercial approach to managing their farms. Very few Italian farms would know their actual cost of production or use financial data/budgets to manage their business more efficiently.

Increasing numbers of young, better educated sons and daughters are returning to manage family farms. Many are realising that they need to run the farm as a business with better planning and financial management.
2.6 Growth Drivers/Barriers

The main barriers and drivers towards increased milk production in France are relatively consistent across the wide range of dairy farm types and can be summarised as follows:

Drivers

- France has large areas of land very suited to pasture/maize production and therefore dairy farming. These areas include the coastal strip from Calais to Western Brittany, as well as parts of the mountainous regions to the South

- In contrast to other parts of Northern Europe, good dairy land in France is still relatively low in cost, with prices as low as €10,000 per hectare in some areas

- Some farms have low costs of production and are competitive with the best across Europe

- Some processors with specialist products or access to growing export markets, have encouraged their farmer suppliers to increase production levels

Barriers

- Milk price volatility is a key barrier to expansion for many French farmers. For the past 20 years, milk prices have been relatively stable. A common attitude would be “why double production to receive half the price”

- The relatively low share of specialised dairy farms means most farmers have an alternate enterprise to focus on if milk prices are low. Many farmers are keen to maintain this production diversity as a means of managing volatility. The milk price to crop price ratio will be a large determinant of milk industry growth in the future

- Many French farmers are small scale and fragmented land ownership means consolidation into large farm blocks is more difficult. Fragmented land ownership also supports diversified businesses i.e. cows are milked on land near the parlour, while more distant blocks are used for dry stock or cropping

- Milk processors have often been cautious in their communication regarding the likely level future milk volumes they require. Many farmers do not know if their processors will all want to accept more milk (some private companies have already stated that “they are not in the business of processing more milk simply for farmers benefit”). The introduction of A/B pricing means that farmers will bear most of the risk of supplying increased milk volumes

- Most French farms are run as family businesses, and increasing herd size invariably means hiring labour or investing in an automatic milking system. French labour laws are seen as being particularly restrictive and onerous, therefore, many farmers are very uncomfortable about having to hire staff
2.7 Dairy Processing

The Netherlands has a long history of dairy production and the industry produces a wide range of consumer and industrial dairy products.

Cheese is the most important product, accounting for over half of all Dutch milk processed. Large volumes of cheese produce equally large volumes of whey proteins, which processors are increasingly refining and selling as high value ingredients.

Milk powders are next largest user of Dutch milk accounting for almost 15%. Liquid drinking milk accounts for < 10% of the raw milk processed.

Over the last 3 years, Dutch processors have invested in additional processing capacity covering cheese and milk/whey powders, as most additional milk produced in the Netherlands will be sold on international markets.

The Dutch dairy industry has always had a very strong co-operative ethos. Leading co-operatives, such as Friesland Campina are committed to processing and maximising the value of all milk produced by their members.

Dutch co-operatives have a track record of exporting and have invested significantly over recent years in building new export markets in growth areas, such as China and Africa.

The overall trend is towards a bigger and even more export focused industry. The main challenge will be the speed at which Dutch companies can develop their export markets and move sales from commodity ingredients to higher value branded products or specialised ingredients.

The fact that companies such as Fonterra are investing in new processing capacity in the Netherlands, suggests the country is a good place to produce and process milk.
2.8 Processors/Industry Influence on Milk Production

Today

Co-operatives have played a key role in developing the Dutch dairy industry. Their continued appetite for increasing milk intake is one of the key reasons behind Dutch farmers’ enthusiasm for expansion.

Key co-operatives, such as Friesland Campina, have been proactive in understanding their members’ needs and developing strategies to maximise the value from increased milk flows after 2015. Friesland Campina launched its Route 2020 strategy, back in 2010. Included in this strategy was an assumption of 20% milk intake growth by 2020 and a target of increasing value added product sales by 5% per year.

Future

Given the dominance of co-operatives in the Dutch dairy industry, we expect little change in the basic strategic direction over the next five years. Processors will continue to expand and build capacity to maximise the value of the milk they process. Most, if not all Dutch dairy farmers will continue have a ready outlet for their milk.

The challenge for processors will be to process this additional milk into products that can achieve the return desired by farmers.

If milk prices bounce back quickly and remain above €0.35 cents/kg, this should not be a problem. However, if prices and demand remain low (less than €0.25 cents/kg); achieving higher returns may require co-operatives and others to make even larger investments in export markets.

These investments would be processing/value adding as well as marketing and brand/demand building. Whether Dutch farmers are willing to fund this development is uncertain.
2.9 Industry Leadership

The Irish dairy industry is often seen as the best example across Europe of a united approach to maximising the opportunity presented by quota removal. The Irish Government’s *Food Harvest 2020* strategy calls for a 50% increase in milk production, as well as increases in exports and value added processing by 2020.

Irish farmers have long been looking for the ability to produce more milk and the larger co-operative, export-focused processing sector has been willing to support them.

However, the Government’s role in galvanising the industry and setting a clear target is seen as a key factor underpinning current and expected future growth in the Irish dairy industry.

The *Food Harvest 2020* strategy has bought the industry together and allowed farmers, processors, researchers, consultants etc. to see how their role contributes to the wider goal. It has also assisted all parties to allocate resources more effectively and to focus on activities that will help the industry achieve its goal.

Is the Irish strategy led model replicable?

Many countries see the Irish industry development and implementation of *Harvest 2020* as a role model for industry development.

There is no doubt that even if the Irish industry’s targets are only half met, the strategy has been successful in creating a focus and building a common purpose across the industry.

Although the strategy concept has been a success, there are a number of factors that were critical to development of the strategy that may not exist in other countries. These are:

- The strategy was conceived when Ireland was in the middle of an economic recession – the Government was looking for a positive growth story for the economy and therefore very willing to support and drive an agriculture led recovery

- Irish farmers typically operate a single system. This has made it easier for R&D and agricultural related training organisations to focus on specific areas and communicate simple, consistent messages to almost all farmers

- Much of Irish processing capacity is controlled by co-operatives with relatively large capacity for commodity milk powders/cheese. These companies are willing to support their members’ growth ambitions