Australian Government

Department of Agriculture

Relative Costs of Doing Business: Dairy Product Manufacturing 2014

Submission from the Department of Agriculture

Provided on 13 May 2014

Contents

1. EXECUTIVE SUMMARY

The purpose of this submission is to provide the Productivity Commission with an overview of the Australian dairy industry as well as relevant information on the key costs facing businesses operating in the Australian dairy product manufacturing sector.

The Australian dairy industry is Australia's third largest rural industry, producing around 9200 million litres of milk annually. The supply chain was worth approximately $13.3 billion in 2012–13 (including production, processing, export and retail).

Australia is the world's fourth largest exporter of dairy products after New Zealand, the European Union and the United States. However, volatility in climatic and market conditions, along with increases in costs of production, has impacted on the profitability, productivity and international competitiveness of both producers and processors.

The Australian Government supports the sector to increase its international competitiveness and sustainability through various mechanisms including the development and maintenance of biosecurity systems and processes, the pursuance of improved trade and market outcomes (reduced tariffs, improved quota access, reduced technical market access barriers) and funding both directly and indirectly through grant programmes and funding for industry services bodies to undertake eligible research, development and extension activities.

Key factors that impact the profitability and productivity of producers include: increasing costs of production (especially feed to produce raw milk out of season, electricity and labour), changing contractual arrangements with processors and retailers, and fluctuation of the international dairy price.

Raw milk supply, including the challenges of a seasonal production regime can be a key factor affecting the profitability and international competitiveness of processors and manufacturers. Other factors include: market expansion and diversification opportunities, particularly into Asia; food processing and export regulatory requirements; and international market competition from other suppliers.

This submission has been set out as a series of chapters that provide information relating to the various aspects of the cost of doing business across the dairy supply chain in Australia. It provides an overview of the dynamic nature of the dairy supply chain from production to processing, through to consumption. The submission outlines the current regulatory arrangements under which processors and manufacturers operate and summarises the international competitiveness of Australia's dairy processing and manufacturing sectors.

2. LIST OF ACRONYMS

ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ACCC	Australian Competition and Consumer Commission
ADHIS	Australian Dairy Herd Improvement Scheme
ADIS	Australian Dairy Industry Survey
AFGC	Australian Food and Grocery Council
CECA	India–Australia Closer Economic Cooperation Agreement
Dairy Futures CRC	Dairy Futures Cooperative Research Centre
DIAL	Dairy Innovation Australia Limited
EU	European Union
FSANZ	Food Standards Australia and New Zealand
FTA	Free Trade Agreement
MG	Murray Goulburn Cooperative
NDFS	National Dairy Farmers' Summit
NFF	National Farmers' Federation
OECD	Organisation for Economic Cooperation and Development
RD&E	Research, Development and Extension
RIS	Regulation Impact Statement
SRA	State Regulatory Agency
WCB	Warrnambool Cheese and Butter

3. AUSTRALIAN DAIRY INDUSTRY OVERVIEW

a) Dairy Supply Chain

The Australian dairy supply chain consists of producers, processing/manufacturing and retail/food service entities. The Australian Government works to support the sector increase its domestic and international competitiveness and sustainability through various mechanisms including developing and maintaining biosecurity systems and processes and pursuing improved trade and market outcomes (reduced tariffs, improved quota access). The Australian Government also fosters innovation by providing funding both directly and indirectly through grants programmes and funding for industry services bodies to undertake eligible research, development and extension activities.

All raw milk produced for consumption must be processed or manufactured. Typically, processing refers to processes (pasteurisation and homogenisation) used to make fresh milk or fresh dairy produce (such as cream or yoghurts) while manufacturing refers to transformation of product into milk powders, cheese, butter and other goods/products. In this submission the terms 'processor' or 'manufacturer' will be used interchangeably unless otherwise stated.

Despite a steady growth in average farm size and herds, most farms remain family-owned and operated and account for approximately half of the 9200 million litres of milk produced in 2012–13. Corporate farms comprise around three per cent of dairy farms in Australia, but also account for a large share of national milk production [source: Dairy Australia National Dairy Farmer Survey (NDFS) and ABARES Australian Dairy Industry Survey (ADIS)].

There are five main dairy processors/manufacturers. Four of the five are foreign owned: Fonterra (New Zealand Cooperative); Lion (Japanese 'Kirin' Holdings Company); Parmalat (French group, Lactalis); Warrnambool Cheese and Butter (Canadian dairy manufacturer, Saputo); and Murray Goulburn, which remains the only major dairy processor to be fully Australian owned. Smaller processors include Bega Cheese (publically listed), Norco (Australian cooperative) and other vertically integrated dairying enterprises.

Deregulation of the Australian dairy industry:

The industry has been deregulated since 1 July 2000 when government price support measures ceased. Deregulation is considered to be a major driver in making the industry export-focused, innovative and responsive to market demands. The average farm size and average milk production per farm has risen between 1999–2000 and 2012–13. However, the number of dairy farms has more than halved, from 15 396 farms in 1989–90 to 6398 in 2012–13. A significant proportion of this reduction occurred prior to deregulation.

b) Raw Milk Production, Farm Inputs and Costs of Production

Raw Milk production

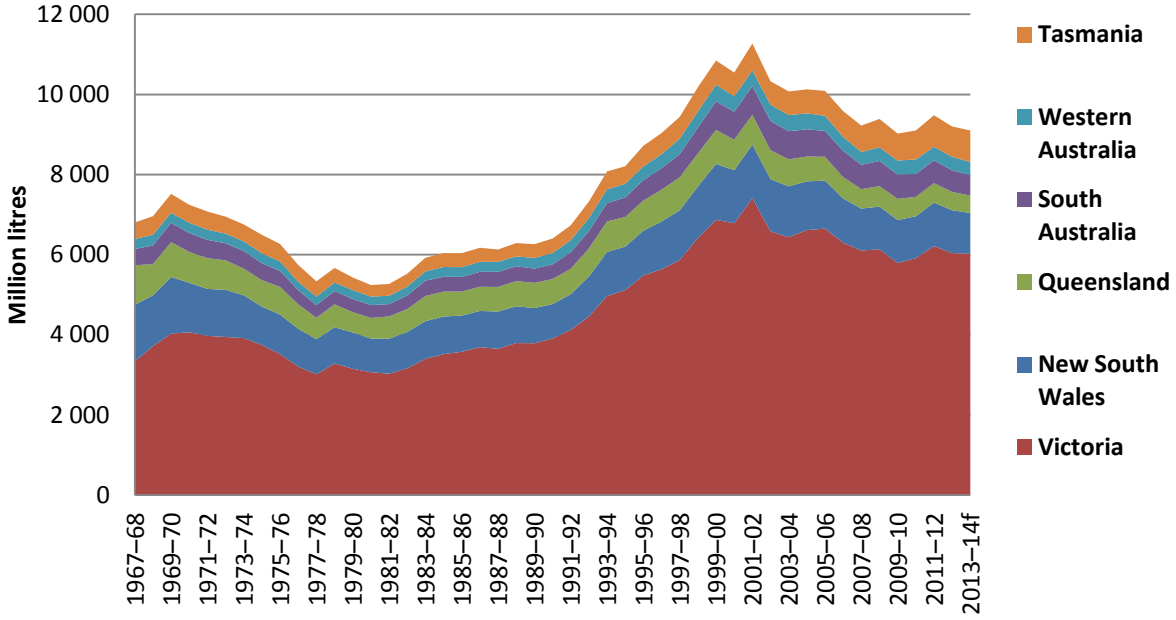
Since 2009–10 Australian raw milk production has remained steady at around 9200 million litres after declining by more than 18 per cent from its peak of 11 127 million litres in 2001–02 (Figure A). The lowest production occurred in 1980–81 with 5243 million litres.

Since 2001–02, milk production has became more concentrated in the south-eastern states and declined in Queensland and northern New South Wales. In contrast, production has steadily increased in Tasmania and Victoria.

Factors that have shaped raw milk production since 2001–02, include:

- widespread drought in 2003, 2004, 2006 and 2007 (more than 50 per cent of dairy farms in the ADIS reported drought conditions in these years) and associated large reductions in availability of water for irrigation in many dairying areas
- cyclones in the northern production regions in 2006 and 2011 and widespread flooding in 2011 and 2012
- farmgate milk price decreases ('step downs') from announced milk prices in response to reduced sales and lower export prices resulting from the Global Financial Crisis in 2009
- increased variability in both prices received for raw milk and in the prices paid for major farm inputs, particularly fodder.

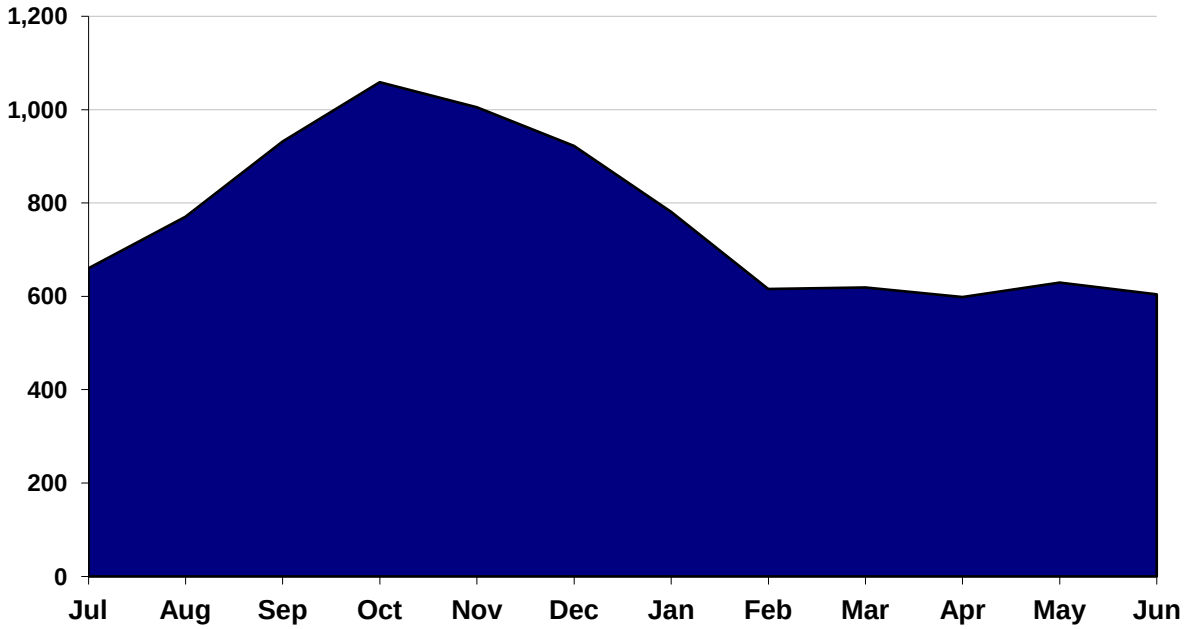
Figure A. Australian production of raw milk, by state



f ABARES forecast. Source: Australian Bureau of Statistics and Dairy Australia

Raw milk production in Australia is seasonal, with production conditions reaching the optimum during October, and progressively declining from summer months into the cooler months of May and June (Figure B). This seasonal fluctuation in raw milk production poses a risk for dairy processors and manufacturers that are required to meet contracted supply arrangements, regardless of variations in production levels across the year.

Figure B. Seasonality of milk production in Australia, 2012–13 (million litres)

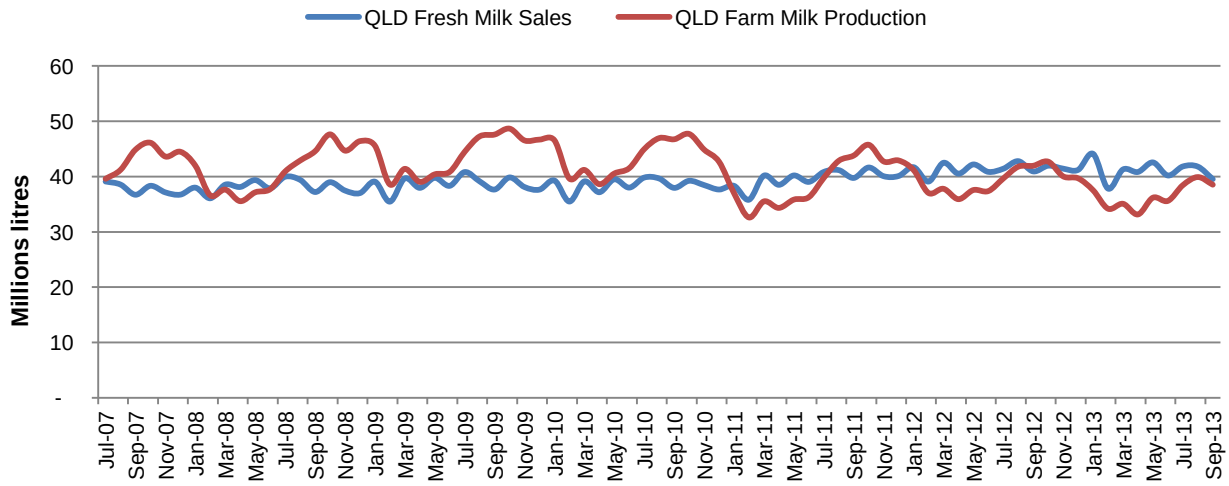


Source: Dairy Australia; Dairy manufacturers, 2014

The seasonal nature of raw milk production results in periods of excess supply and shortfalls particularly in domestic drinking milk markets, such as Queensland. These seasonal excesses and shortfalls force processors to manage fluctuations in production to minimise impact on supply of dairy products. Management can include sending market signals such as a two-tiered (Tier 2) contract pricing system which pays farmers a higher price per litre for tier one milk, which secures supplies for the drinking milk market, and a lower price for excess (tier two) milk.

The gap between Queensland's total farm milk production and its total fresh milk sales has increased in recent years, potentially affecting processor / manufacturer returns (Figure C).

Figure C. Queensland fresh milk sales and farm milk production 2007–2013



Source: Dairy Australia; 2014

Farm inputs

Purchased fodder is the largest single cash cost (fodder includes purchased grain, hay and prepared stockfeed) (Figure D). From 2008–09 to 2012–13, purchased fodder accounted for 26 per cent of the total milk production cost, on average.

Interest payments are the second largest cash cost, accounting for eight per cent of total costs. Debt is an important source of funds for farm investment and ongoing working capital for dairy farms. For family farms, funding for farm expansion and improvement is limited to the funds available to the family, the profits the farm business can generate and the funds it can borrow.

Increases in average debt per farm business over the past decade have, to a substantial extent, been the consequence of a rapid increase in average farm size (Figure E). An increase in average debt per farm was also partly due to the exit of small farms. Many of these small farms had little or no debts and their exit raised the average debt for remaining farms.

The proportion of dairy farms with relatively high debt varies across states and regions. Around 47 per cent of Tasmanian dairy farms, 43 per cent of Western Australian and 39 per cent of South Australian dairy farms carried in excess of $1 million in debt, at 30 June 2013. Over the same period, the national average dairy farm debt was $783 700.

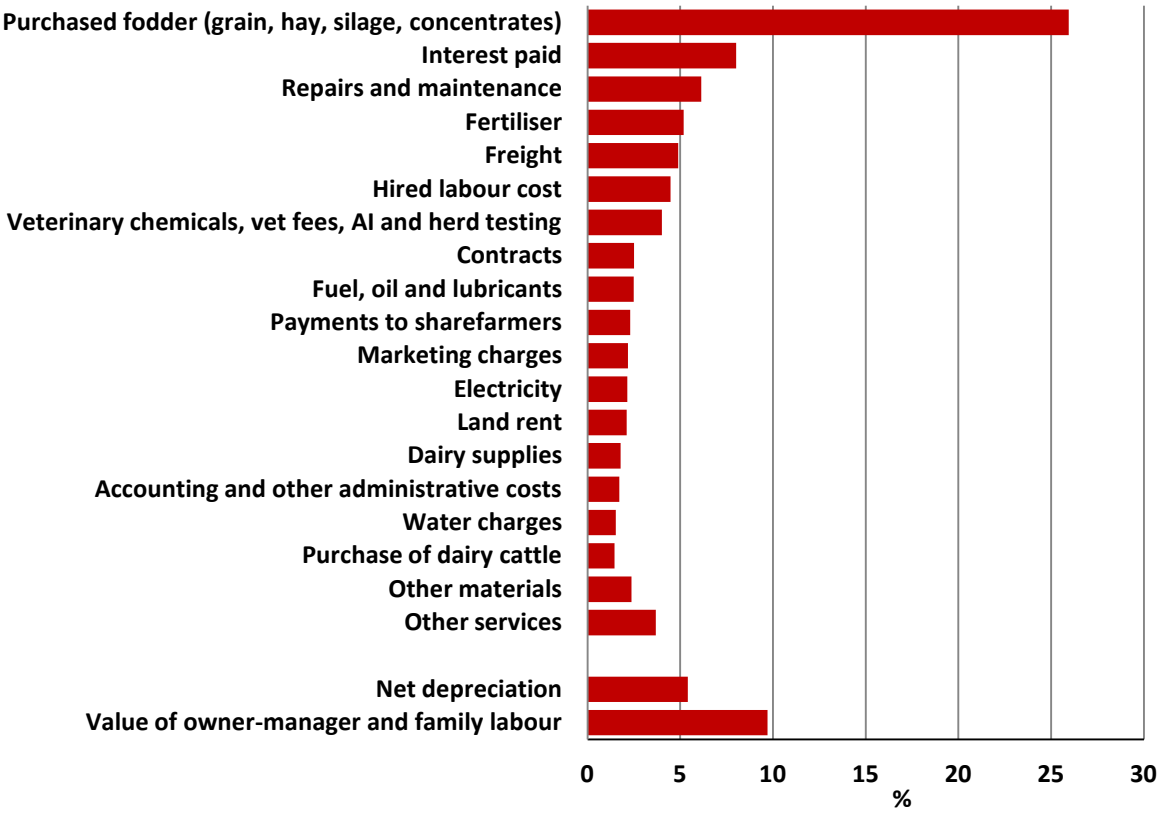
The high proportion of farms with debt exceeding $1 million in these states reflects a high proportion of larger businesses in those jurisdictions and a high level of new investment on larger dairy farms in recent years. This new investment has been principally driven by increased demand for Australian dairy products overseas. New investments in large dairy operations have been focussed in northern Tasmania, Western Victoria and South Australia.

Repairs and maintenance, the third largest cash cost, accounts for six per cent of total dairy farm production costs and have a significant discretionary element. Repairs, maintenance and capital expenditure are likely to increase in years of higher milk receipts and are substantially reduced in years of lower milk receipts.

In the short term, dairy farms need only to generate sufficient receipts to cover total cash costs to continue to operate without needing to borrow or utilise financial assets to cover cash shortfalls. In addition to the cash costs of production, farms have the requirement to replace and upgrade farm capital over time to maintain productivity as capital wears out (replace vehicles, machinery, plant, dairy shed, fencing etc). This cost is mostly captured in net depreciation, although repairs and maintenance included in cash costs also includes the replacement and upgrade of some farm capital. Farms typically vary their expenditure on capital items depending on need and available cash flow, in some years investing much more than the calculated net depreciation and in others much less. A farm business that invests less than the calculated depreciation over the longer term will lose production capacity.

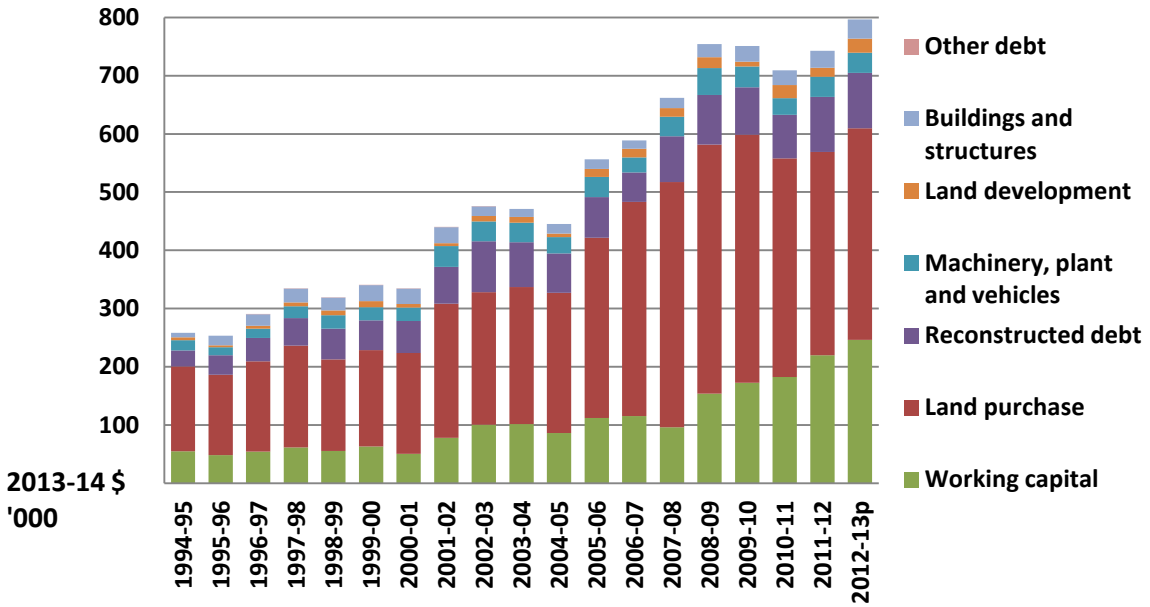
The value of unpaid labour should also be a consideration when calculating costs for raw milk production. As most Australian dairy farms are family owned and operated using a substantial amount of family labour. Typically, these farms do not pay wages or salaries to family and partners who provide labour for the farm's operation. Valuation of this labour input enables the performance of all farm businesses to be compared on an equal basis regardless of the labour arrangements in place (paid or un-paid). Valuation of unpaid labour also captures the requirement for the farm's operators to receive a fair return for their labour input. ABARES values unpaid labour inputs at standard Federal Pastoral Industry Award rates.

Figure D. Composition of on-farm milk production costs, average 2008–09 to 2012–13, Australia



Source: ADIS

Figure E. Dairy farm debt, average per farm



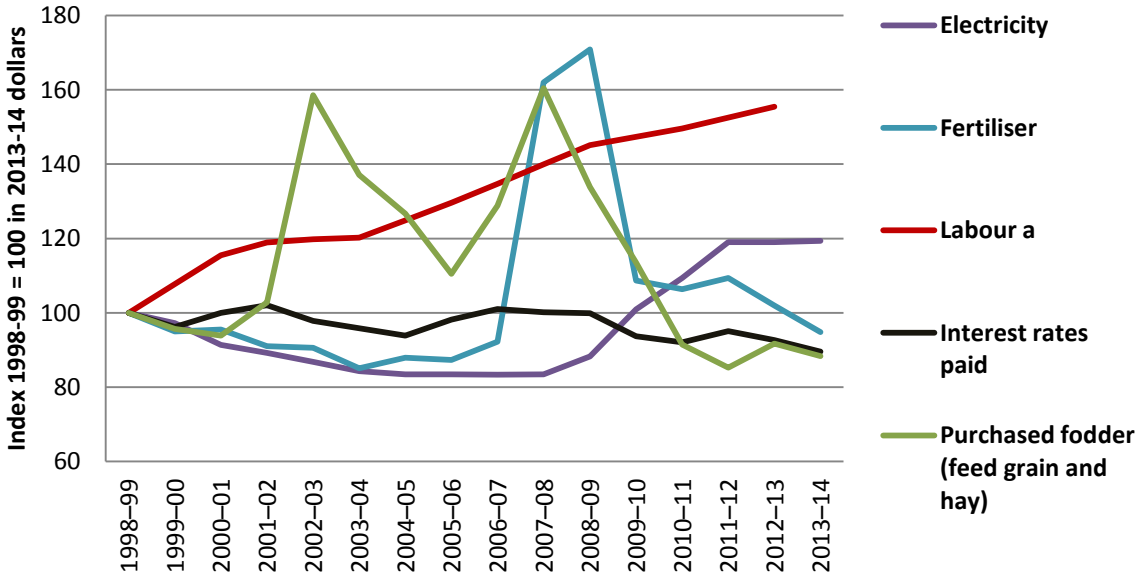
p ABARES preliminary estimate. Source: ADIS

Some farm input prices have been highly variable over the past 15 years, with particularly large fluctuations in purchased feed costs and fertiliser (Figure F).

- Feed costs rose in response to high demand and reduced production during the periods of drought and reduced irrigation water availability in the 2000s.
- Award rates for farm labour have largely risen in line with the general rate of inflation. However, the rates actually paid by dairy farmers have risen faster. According to ADIS data, wage rates paid to full time employees rose by 55 per cent between 1998–99 and 2012–13, in real terms. This is likely to reflect the higher than award rates farmers have needed to pay to attract and retain skilled farm labour.
- Between 2008–09 and 2012–13, electricity accounted for an average of 2 per cent of total farm costs. Electricity costs have increased by 20 per cent over the past 15 years, with most of this increase occurring since 2007–08 and following a prolonged period of decline in real prices between 1998–99 and 2007–08.

In contrast to the increases in many input prices, interest rates paid by dairy farmers, as recorded in the ADIS, declined from an average of 7.7 per cent in 1998–99 to an average of 7.1 per cent in 2013–14.

Figure F. Change in prices for selected farm inputs, Australia

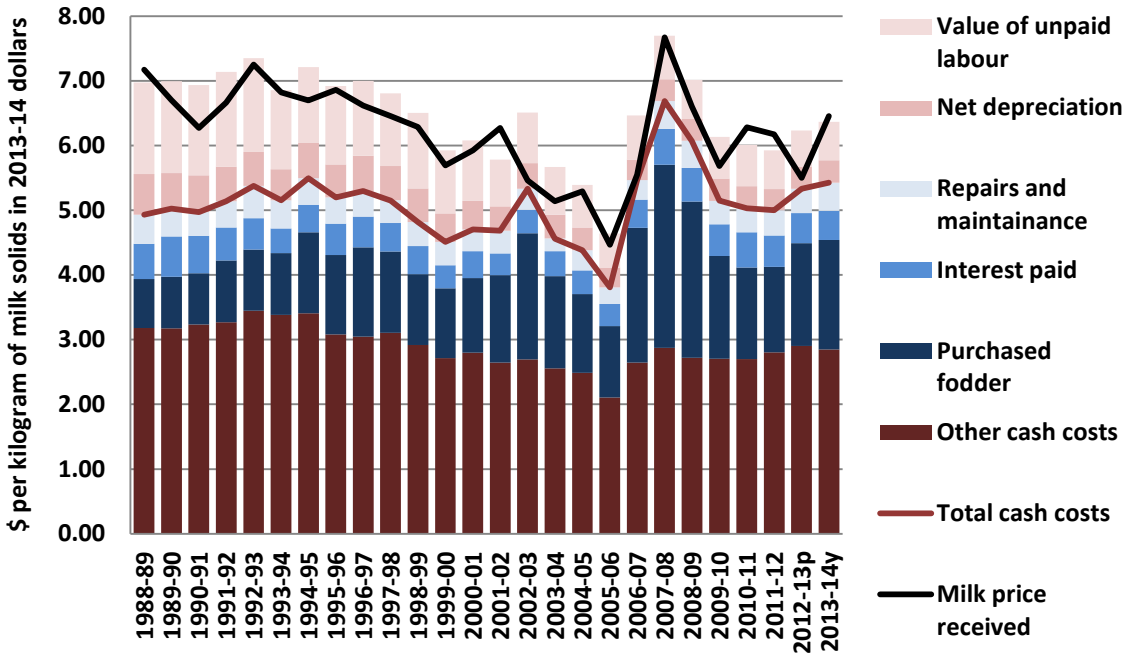


a Average weekly full-time wage paid to dairy employees as recorded in ADIS. Source: ABARES index of prices paid and ADIS

Figure G shows the average national annual milk price received and the major components of milk production costs for the same farms to 2013–14. Over the long term the margin between the milk price received and total cash costs of milk production has declined. Note: total cash costs equates to payments made by the business for materials and services and for permanent and casual hired labour (excluding owner–manager, partner and family labour).

Nationally, there have been several years where the margin between milk price and milk cash costs narrowed markedly – particularly years of major widespread drought in 2002–03 and 2006–07 when fodder prices increased markedly. The margin is also narrowed significantly in 2012–13 in response to the lower milk price received.

Figure G. Costs of milk production, dollars per kilogram of solids, Australia



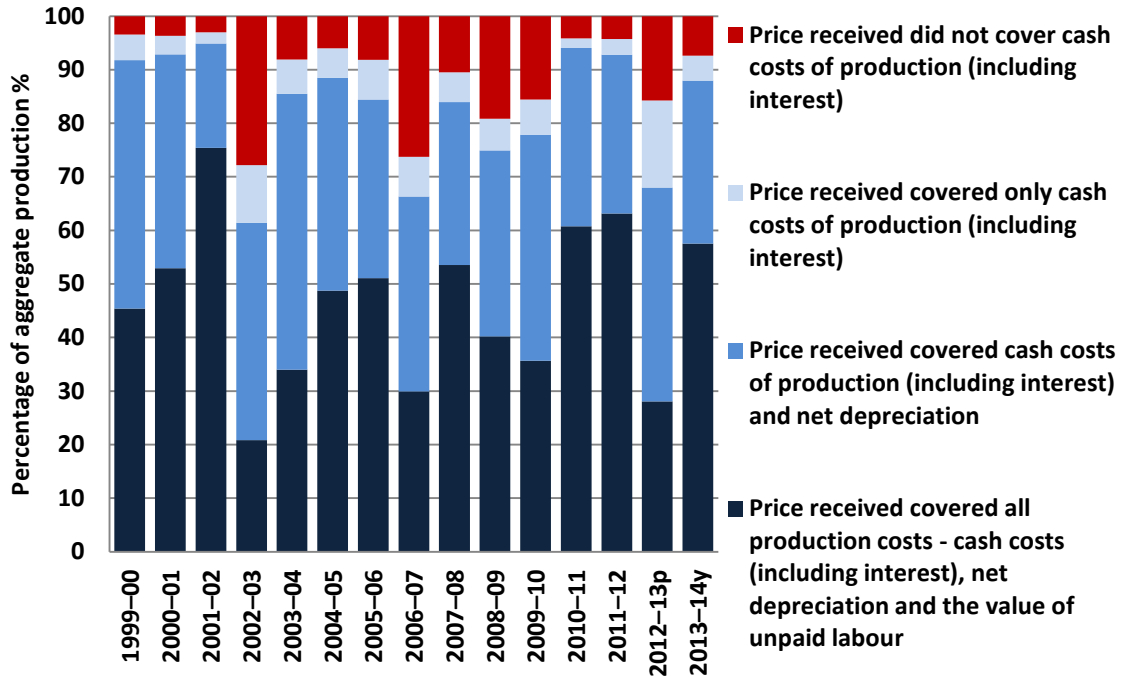
p ABARES preliminary estimate. **y** ABARES provisional estimate ***Source:*** ADIS

On average, for the three years ending 2012–13, 92 per cent of farms received a milk price that covered at least the cash costs of production but not necessarily depreciation or unpaid labour.

- 83 per cent of farms received a milk price that exceeded cash costs of production (including interest) and depreciation. These farms accounted for 85 per cent of production.
  - An average 43 per cent of farms received a price for milk that covered all costs of production including interest, depreciation and unpaid labour. These farms accounted for an estimated 51 per cent of total milk production.
  - The price received by 39 per cent of farms did not cover the value of unpaid labour. These farms accounted for an estimated 34 per cent of total milk production.
- Six per cent of farms (five per cent of production) received a price that did not cover depreciation or the value of unpaid labour. The price these farms received covered only the cash costs of production (including interest).
- Around 8 per cent of farms received a milk price that did not cover cash costs of production. These farms accounted for 8 per cent of total production.

These proportions vary between years, states and regions. In 2013–14, the proportion of farms receiving a milk price that covered most production costs is estimated to have increased. Nevertheless, an estimated 15 per cent of Australian dairy farms received a milk price below their cash costs of production. These farms accounted for an estimated 12 per cent of total Australian milk production. Figure H shows whether the milk price received covered the costs associated with production including interest, depreciation and unpaid labour.

Figure H. Share of Australian milk production, by profitability of production

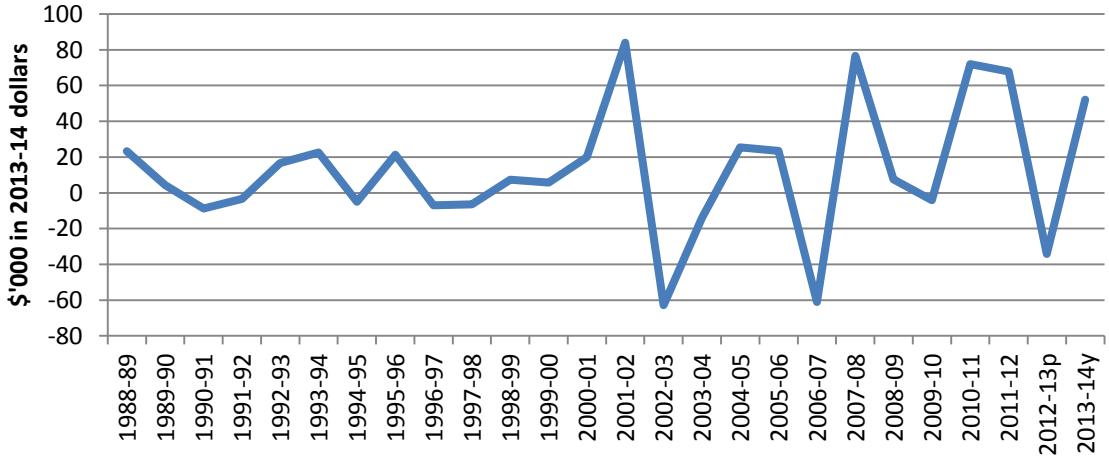


p ABARES preliminary estimate. y ABARES provisional estimate Source: ADIS

Profitability of milk production

Increased intensity of production systems with larger herd sizes producing high milk volumes at low profit margins together with higher debt servicing commitments have increased both business and financial risks for many dairy farms. ABARES ADIS data indicates that variability in farm business profits has increased in the period since 2000–01 (Figure I). Whilst in some recent years, farm business profits have been very high, on average, relative to those recorded historically, large farm business losses have also been recorded in five of the past 13 years (2000–2013).

Figure I. Farm business profit, dairy industry farms, Australia



p preliminary estimate. y provisional estimate. Source: ADIS

c) Relationship between farmgate and processors

Traditionally, contracts for the supply of dairy products (including drinking milk) have been exclusively established between the processor and the retailer or export customer. Processors secure the milk supply required to meet the terms of the contract by negotiating price and contract conditions with individual farmers, collective bargaining groups or cooperatives.

In many regions, there are several processors to which milk is delivered and it is common for each processor to have multiple payment systems. In some regions this results in substantial variation in the average prices received by individual farms. For example, in northern Victoria in 2012 there were at least nine dairy processors and 20 payment systems. This has resulted in an increase in the spread of average milk prices received by farmers.

Collective Bargaining

There are approximately 19 dairy farmer collective bargaining groups that negotiate contractual arrangements with processors under an umbrella determination. The determination was extended by the Australian Competition and Consumer Commission, to Australian Dairy Farmers (ADF), in 2011. It allows groups of dairy farmers to form collective bargaining groups, through which they may negotiate terms of supply, including pricing, with a dairy processing company that each member of the group wishes to supply until 30 August 2021.

The current collective bargaining authorisation held by ADF has several conditions. These include:

- **Condition 2**: Collective bargaining groups can only be formed by dairy farmers who have a 'shared community interest'. Dairy farmers will have a shared community interest where they have a reasonable expectation of supplying the same plant of a dairy processor and are within the economic delivery zone of that plant and demonstrate one of the following:
    i. They have similar supply patterns, or
    ii. They supply a specialty raw milk product.
- **Condition 3:** Dairy processing companies are able to choose whether or not to negotiate with collective bargaining groups. Dairy processing companies are able to negotiate with one, or some, of the dairy farmers within a particular group based on their own commercial requirements.
- **Condition 4:** Dairy farmer participation in collective bargaining is voluntary. Dairy farmers retain the right to negotiate and enter into individual contracts. Dairy farmers can leave collective groups on giving written notice to the group.

The full determination is at: registers.accc.gov.au/content/index.phtml/itemId/977053/fromItemId/401858/display/acccDecision.

The department understands that while a number of collective bargaining groups have been formed, a majority of producer–processor supply contracts are established on an individual farmer basis.

Direct Source Arrangements

During 2013 and 2014, major supermarkets announced a number of direct source contracts with dairy farmer cooperatives, such as Murray Goulburn and Norco. A range of smaller direct source contracts between major retailers and dairy farmers have also been established.

Producers engaged under these direct arrangements are contracted to meet the supply requirements of the retailer. In these instances, processing and manufacturing contracts are established independently between the retailer and processor. To date, negotiation of these contracts is specifically excluded from ADFs collective bargaining authorisation.

Major supermarket retailers are claiming that this is a win for farmers as sourcing milk either directly or from farmer owned cooperatives will 'cut out the middle man' and result in farmers receiving a higher farmgate milk price. However the impacts of these arrangements, particularly on the processing and manufacturing sector, are yet to be seen [source: The Australian; *Coles to source milk directly from two dairy cooperatives,* 11 April 2013].

Dairy producers and representative groups remain cautiously optimistic about the new arrangements, noting that it may impact producers supplying to processors who have lost contracts with Coles and Woolworths. For example, in Queensland, Lion lost its long term contract with Coles to Norco. Producers in central and far north Queensland are concerned that this will drive Lion out of the domestic drinking milk market as it assesses its dairy operations [source: Lion website: lionco.com/2014/02/13/lion-fy13-result/].

Mandatory Dairy Bill and Code of Conduct

Dairy producers have also raised concerns via industry representative bodies about the complexity of contractual arrangements with processors and the need for greater transparency in contractual arrangements, including milk price formulas.

To address this issue, ADF proposed an industry specific, mandatory dairy Bill and Code of Conduct, with powers assigned to an industry ombudsman similar to that currently assigned to the Food and Grocery Ombudsman. This proposal is likely to be considered as part of the 'root and branch' review of Australia's competition laws, announced by the Hon. Bruce Billson MP, Minister for Small Business on 4 December 2013. Further information is at competitionpolicyreview.gov.au.

In parallel with ADF's proposal for a mandatory industry specific code, in late 2012, an industry working group (comprising Coles, Woolworths, the Australian Food and Grocery Council (AFGC) and the National Farmers' Federation (NFF)) began developing a prescribed voluntary code of conduct (supermarket code) aimed at improving food and grocery supply chain relationships, including those between dairy producers and processors. In March 2013, the NFF withdrew its support for the code, favouring a mandatory code.

The Treasury is currently preparing a Regulation Impact Statement on the Food and Grocery Code, which will include a public consultation period, to provide stakeholders opportunity to make submissions on the proposed code.

d) Risks to production

Factors that increase the risk to the production of milk by dairy farmers include increased input costs for dairy producers, fluctuations of international dairy market prices, and climatic volatility.

Farmgate Price

As discussed at section 3b (farm inputs), variability in costs of production can have a significant effect on production levels. A higher farmgate price will help to offset increases in costs of production and ultimately encourage higher production.

Farmers producing milk for the domestic drinking market such as those in the Northern Dairy Regions have limited ability to expand their businesses beyond the drinking market due to a lack of processing plants. Many processing plants have closed in these regions since deregulation in 2000. This means there is limited scope for processing excess milk, leaving farmers in these regions with little opportunity to absorb price fluctuations or to 'hold out' for a better price.

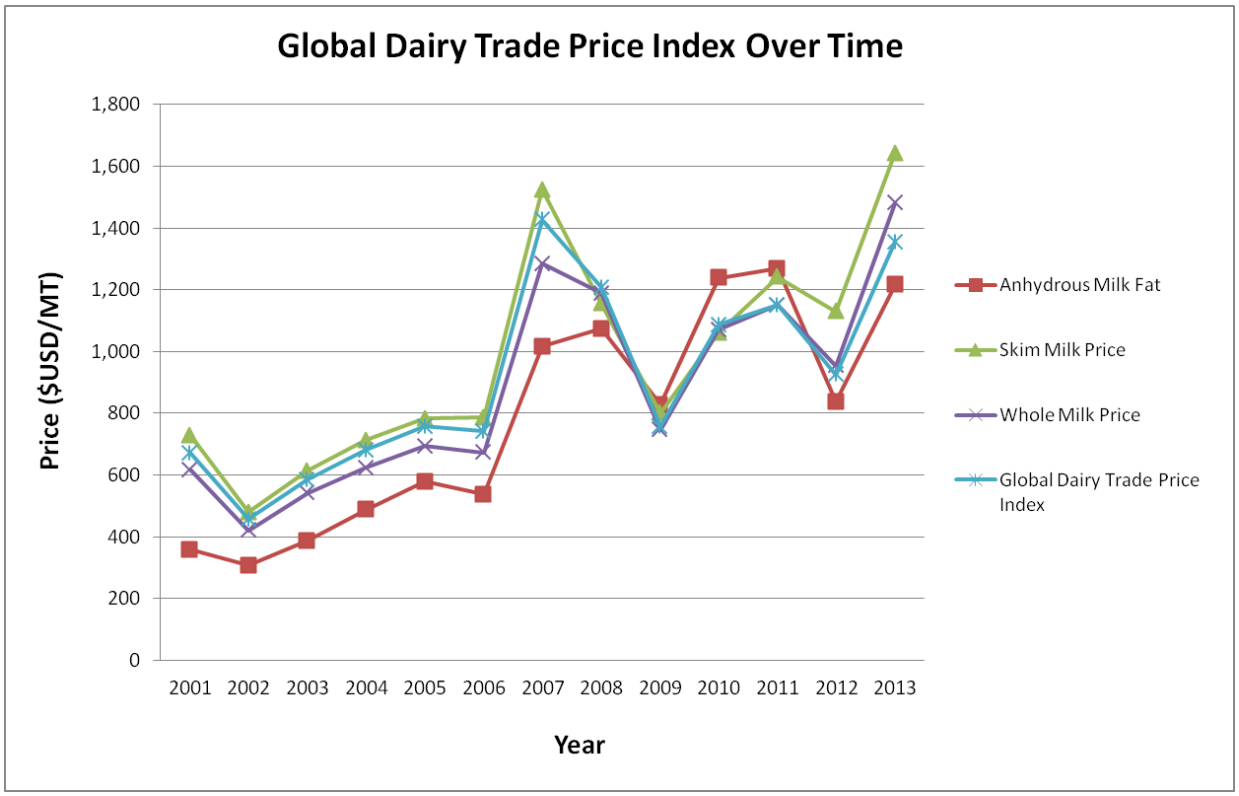
The discounting strategies of the major supermarkets have raised concerns about production risks. Industry representative bodies have suggested that strategies, such as $1 per litre milk campaigns, pose a risk to supply as it forces farmgate milk prices below the cost of production. In response to these concerns the Australian Government fully supported two senate inquiries in 2010 and 2011. Further information, including the government response to these inquiries, is available at: www.treasury.gov.au/PublicationsAndMedia/Publications/2012/Government-Response-Australian-Dairy-Industry.

Industry concerns about competition and discounting strategies are ongoing. The Australian Government is undertaking a 'root and branch' review of competition law. The review aims to examine the broader competition framework to ensure that it continues to play a role as a significant driver of productivity and to ensure that the current laws are operating as intended and are effective for all businesses. The issues paper is open for submissions until 10 June 2014. Further information on the review is available at competitionpolicyreview.gov.au.

International dairy market prices

Australian dairy farmers operate in an environment where international dairy prices can be a major factor in determining the farmgate price they receive. As processors compete on international markets, any international dairy price fluctuations flow through to prices received by producers. In recent years, global dairy production has been affected by a range of seasonal and economic conditions, resulting in higher prices for dairy products globally. Figure J highlights milk price fluctuations on the international dairy market from 2005 to 2013. Price is in US dollars per metric tonne.

Figure J: Global dairy trade price fluctuations over time.



[source: data from global dairy trade resources, 2014].

Climate

Regions that have temperate climatic conditions, with moderate to high rainfall, such as that of Tasmania, south eastern Australia, northern NSW and south east Queensland provide the best conditions for optimal milk production per cow. Changes (particularly sudden or catastrophic) in ideal climatic conditions have flow-on affects, after the event, for industry as producers return pasture and cows to productive health.

Milk production in Australia declined considerably during the severe drought conditions of 2003–2004 and 2006–2007. Production in northern dairy regions was again affected by hurricanes and floods in 2006 and 2011–12 (Figure A).

In 2013–14, climatic conditions again affected production levels, with ABARES forecasting milk production volume to reduce to about 9100 million litres. This implies a full year contraction of about 1.1 per cent from the 2012–13 season. This contraction is likely due to adverse climatic conditions experienced in the second half of 2012–13 and associated flow-on affects. [source: ABARES *March 2014 Quarterly, Agricultural Commodities*].

While a reduction in production for 2013–14 has not been unexpected, adverse weather has continued to play a constraining role, particularly in northern regions where severe rainfall deficits have undermined pasture and crop production; and in southern regions, a combination of hot summers and colder winters has slowed pasture growth since a spike in September 2013.

e) Innovation

There are a number of organisations, with support from the Australian Government, which undertake research, development and extension (RD&E) for the benefit of the Australian dairy industry. Dairy Australia, Dairy Futures Cooperative Research Centre and the Australian Dairy

Herd Improvement Scheme, are the main industry bodies that undertake research to improve productivity, efficiency and profitability of dairy producers.

Dairy Australia

Dairy Australia, as the industry services body for the Australian dairy industry, undertakes RD&E investments on behalf of the Australian dairy industry. These activities are predominately funded by the Dairy Services Levy, which is paid by dairy farmers, and matching government RD&E contributions.

The Australian Government provides dollar for dollar matching of industry expenditure on eligible RD&E up to a limit of 0.5 percent of each industry's Gross Value of Production (GVP), or 50 per cent of eligible RD&E expenditure (whichever is lesser). In 2012–13, the Australia Government matching contribution to Dairy Australia was $19.28 million.

In 2012–13, the Australian dairy industry's GVP at farmgate was estimated by ABARES at $3.69 billion. GVP is forecast to increase to $4.34 billion for the 2013–14 financial year and $4.63 billion in 2014–15. [source: ABARES *March 2014 Quarterly, Agricultural Commodities*].

In 2012–13, Dairy Australia expended approximately $40.7 million including matching Australian Government funding for eligible RD&E activities. Further information on Dairy Australia including its strategic priorities is available at www.dairyaustralia.com.au.

Dairy Futures Cooperative Research Centre

The Dairy Futures Cooperative Research Centre (CRC) is a large scale partnership between dairy farmers, pasture and cattle breeding companies, government and researchers, and is the largest single research programme for the Australian dairy industry.

The CRC was established in 2010 under the Commonwealth Government Cooperative Research Centre programme (administered by the Department of Industry). The Australian Government funding commitment is $27.7 million over six and a half years to July 2016. Other key contributors include Dairy Australia, the Victorian Government, La Trobe University, Fonterra and Murray Goulburn.

Research and development activities undertaken by the Dairy Futures CRC primarily focus on pasture improvement and breeding better dairy cattle. Key research programmes undertaken on cattle genetics and genomics are:

- Breeding with genomics programme to improve the reliability of Australian Breeding Values
- Improved fertility and feed conversion programme to introduce a new trait in cattle for feed conversion efficiency
- Sexed semen programme to invent new methods for sex-selection of sperm using stem cell technology that has the potential to deliver a 100 per cent female result.

Further information is available at: www.dairyfuturescrc.com.au.

Australian Dairy Herd Improvement Scheme

The Australian Dairy Herd Improvement Scheme (ADHIS) plays a vital role in lifting productivity through genetic improvement. It has directly accounted for at least one-third of the annual gain in Total Factor Productivity achieved from 1989 to 2012.

The main products of ADHIS are Australian Breeding Values (ABVs). ABVs estimate the genetic merit of cows and bulls and assist farmers in breeding cows that meet the needs of their own farming system. The impacts of breeding decisions are permanent and compound over time. ADHIS also supports farmers through the development of tools including the Australian Profit Ranking, Good Bulls Guide and Genetic Progress Reports.

Further information is available at: www.adhis.com.au.

4. PROCESSING / MANUFACTURING OVERVIEW

a) Processing / Manufacturing industry

The dairy manufacturing sector produces a range of products, including cheese, butter, whole and skim milk powders and related by-products for domestic and export customers. In 2013, approximately 73 per cent of Australian raw milk production (about 6700 million litres) was used in manufacturing. During the same period, the dairy manufacturing sector employed approximately 19 000 people [source: Dairy Australia, 2013].

The dairy manufacturing sector is dominated by a small number of companies, with smaller regional and niche processors producing comparatively small amounts. There is limited crossover of activities between fresh-milk processors and dairy-product manufacturers, owing to the significant differences in processing systems. About 60 per cent of national milk production is processed and marketed as either drinking milk or dairy products for the domestic food and beverage markets. The remaining 40 per cent is exported to more than 100 countries, with the largest markets for Australian dairy products being Japan, Greater China (including Hong Kong), Singapore, Malaysia and Indonesia.

b) Input Costs – Cost of processing/manufacturing

Due to the commercial-in-confidence relationship between dairy manufacturers and input suppliers, the department does not have data on the costs of inputs into manufacturing of dairy products.

c) Expansion opportunities

Increasing market access and diversification options are providing expansion opportunities for Australian dairy manufacturers. Some foreign markets have experienced rapid growth in demand for dairy products, particularly in nearby Asian markets. The lower Australian dollar and recent trade agreements with the Republic of Korea and Japan also provide for increased demand and decreased export costs, which can support expansion.

A number of processors are currently focussed on expanding their operations while also looking to expand into new markets. These include:

Norco – expanding fresh milk exports:

- Since late 2012, Norco (a NSW-based dairy processor cooperative) has been developing a market for its fresh milk into China. While the details of this process are commercial–in–confidence, media reports indicate that Norco has recently successfully sent a test shipment of fresh milk to China. Norco has forecast the final product selling for between $7–9 per litre in China.

- In April 2014, Norco announced that as a result of the successful trial shipments, it plans to commence commercial shipments of its full range of fresh milk products to China by May 2014.

Murray Goulburn – expansion in local production:

- In 2013, Murray Goulburn announced it will invest around $120 million into the construction of two dairy processing plants, in Sydney and Melbourne in response to its long term contract with Cole's supermarkets. The processing plants are due to commence operation in July 2014. [Source: Murray Goulburn Annual Report, 2013].
- On 2 May 2014, Murray Goulburn announced three new capital projects worth approximately $127 million. Media reports indicate that the projects will be located at the company's existing sites in Victoria and Tasmania and will be delivered over the next 12 to 18 months. [source: Stock and Land *Murray Goulburn's $127m transformation;* 2 May 2014]
    - The three projects consist of a $74 million investment in cheese production at Cobram, Victoria, $38 million in infant nutrition at Koroit and Cobram, and $14 million in dairy beverages at Edith Creek in Tasmania.

d) Risks to sustainable processing/manufacturing operations

A decline in raw milk production over the past decade has constrained Australian dairy manufacturers' capacity to invest operations in a period when many international competitors are aggressively pursuing such outcomes. Further, Australia's relatively small scale operations have affected its cost competitiveness in the global dairy commodity market.

A secondary risk to sustainable operations is the wholesale value of dairy products on the international dairy market. About 40 per cent of Australian milk production is processed into exported dairy products, which results in international dairy prices and currency fluctuations having a strong influence on raw milk prices in some production regions. For example, the wholesale value of cheeses is strongly influenced over time by the world market prices, where the products are traded as a commodity. Significant movement in these prices flows down into retail prices. Domestically, consistent competition from New Zealand cheese and butter importers also presents a challenge for Australian producers.

e) Innovation

There has been strong investment in research and development by dairy product processors between 2006–07 and 2011–12 (refer *table one*). There is a number of industry service organisations involved in pre and post-farmgate innovation in the Australian dairy industry. Further research, development and extension is undertaken by individual dairy processors.

Dairy Innovation Australia Limited

Dairy Innovation Australia Limited (DIAL) is an innovation hub for dairy manufacturing research and development. The company is industry led, with members including major dairy processors Murray Goulburn, Bega, Fonterra, Lion and Parmalat. It aims to bring together skills and expertise in:

- Dairy Ingredients and Applications
- Dairy Process Engineering
- Dairy Culture Research

- Cheese Technology, and
- Dairy Health and Nutrition.

DIAL is a not-for-profit organisation that has been operating since 2007, conducting research and development activities with scientific staff in process engineering and design, food technology and applications, microbiology and ingredients sciences.

Key research and development areas for DIAL include water recycling, anti-fouling membrane coatings and whey encapsulation technologies as well as developing skills and capability in powder technologies, natural microbials, foreign matter detection, carbon dioxide and shelf life extension and protein functionality. Further information on DIAL is available at www.dairyinnovation.com.au.

As highlighted in section 3b, the Australian dairy processing and manufacturing sectors are also affected heavily by productivity and efficiency gains made across the supply chain, in particular, in production.

Table one: Estimated yearly expenditure on research and development

	2006–07 $million	**2007–08 $million**	**2008–09 $million**	**2009–10 $million**	**2010–11 $million**	**2011–12 $million**
Dairy product processing	83.55	86.20	94.49	118.61	106.35	108.08

Source: Australian Bureau of Statistics, Research and experimental development, businesses, Australia, cat. no. 8104.0, Canberra

5. REGULATORY ARRANGEMENTS

a) Current regulatory environment

The Australian food regulatory system is composed of three levels of government, the Australian Government (Department of Agriculture and Department of Health primarily through Food Standards Australia and New Zealand (FSANZ)) state or territory governments and local councils. Each level has a role in regulating food for human consumption, including imported food, for compliance with Australian food standards and public health and safety.

Department of Agriculture: administers the *Export Control Act 1982* and subordinate legislation. It is the national competent authority responsible for managing exports of prescribed goods, such as dairy products.

Department of Health / FSANZ: The Department of Health directs/sets government policy on food safety in consultation with commonwealth, state and territory governments and in some cases, the New Zealand government. FSANZ develops food standards in line with this policy. These food standards are published in the Australia New Zealand Food Standards Code (ANZFSC).

b) Production/manufacturing

In addition to Australian Government requirements, processors and manufacturers must also comply with legislative requirements of state and territory governments. State and territory legislation aligns with the ANZFSC and is based on the Model Food Act supporting national consistency.

The state and territory governments are responsible for monitoring compliance of food legislation within their jurisdiction and for responding to food safety incidents; instigating food recalls; or triggering the National Food Incident Response Protocol if the food safety issues crosses into other jurisdictions. The Department of Agriculture and FSANZ are involved in the National Food Incident Response Protocol process.

c) Exports requirements

The export of certain food (known as prescribed goods) including dairy products for human consumption is regulated by the *Export Control Act 1982* with the key legislation being:

- *Export Control Act 1982*
- Export Control (Prescribed Goods - General) Orders
- Export Control (Milk and Milk Products) Orders

This legislation sets out the requirements exporters must meet to export dairy products, for the purpose of human consumption. (Note: not all dairy products are prescribed goods; the below information relates only to dairy products that are prescribed).

Key requirements are:

- Registration: All businesses that process, handle, store or load dairy products for export must be export registered with the department. All milk and milk products must remain within the 'export chain' for them to be export eligible. That is, they must be transported from one export registered establishment to another.
- Approved arrangement: For a processing establishment to gain export registration with the department, it must have in place an approved arrangement (AA) which details how the establishment will meet Australian export legislation and importing country requirements. An AA is a fully documented system which has been approved by the department and includes controls for food safety, traceability and verification.
- Audit: As a condition of registration (and ongoing registration), an export establishment is audited by the department or an external department approved auditor at a frequency based on risk (and compliance). Dairy processors are audited twice a year and dairy stores are audited annually. These audits verify the establishment is meeting all requirements set out in food export legislation and the establishment's approved arrangement.
- Most audits of export registered dairy processing businesses are done by state regulatory agencies (SRAs) which audit against both export as well as domestic requirements. This arrangement with SRAs was put in place in 1996 to streamline and reduce multiple food regulatory audits.
- Certification/Documentation: Documents specific to the shipment of goods being exported must be obtained from the department prior to export of prescribed goods. These include:
    - Export permit: Dairy products require an export permit to be able to be exported. A permit includes information such as the description of the product (what, type, how much), the registered establishment(s) where it was processed, the destination country, exporter and importer information etc. An export permit must be raised electronically, using the department's EXDOC system.

- Export health certificate: When an overseas country has a requirement in place for milk and milk products to be accompanied by an export health certificate, this can be issued via EXDOC at the time an export permit is issued.
- Fees and charges: Fees and charges are incurred for registration, certification and audit activities. The charges can be found at: www.daff.gov.au/biosecurity/export/fees-charges/food-guidelines, with specific dairy charges under Section 3.1.2 Dairy Export Programme Registration Charges.

d) International investment (opportunities for foreign companies to invest)

The Australian Government considers that foreign investment in the Australian dairy industry to be a good news story for the sector, increasing job opportunities and supporting rural and regional communities. Generally, industry representative bodies are supportive of both domestic and international investment in the sector. It is proactive in its promotion of the sector to investors through a range of forums, some of which are facilitated by Dairy Australia.

The Australian Government encourages investment in agriculture, where it is not contrary to the national interest, as it is important to growth, innovation and regional development. Investment—whether from domestic sources or overseas—provides access to capital, supports production and trade, fosters innovation, creates jobs and contributes to the prosperity of rural communities and the broader Australian economy. Without foreign capital inflows, investment in Australia would be limited only to that provided by domestic savings.

While industry continues to support domestic and foreign investment across the supply chain some concern has been raised about the processes required to be undertaken by domestic and foreign investors for acquisition of agricultural land or enterprises, including processors. Under the *Foreign Acquisitions and Takeovers Act 1975*, the Treasurer can block foreign investment proposals found to be contrary to the national interest, or can impose conditions or undertakings on an investment to address national interest concerns.

Currently, proposals to acquire an interest of 15 per cent or more in a business valued at more than $248 million (or $1078 million for United States and New Zealand investors) must be notified to the Foreign Investment Review Board (FIRB). In addition, all foreign governments, their agencies or state-owned enterprises must notify the FIRB and receive an approval before making a direct investment in Australia, regardless of the value of the investment.

The factors typically considered by the Australian Government in assessing proposed acquisitions in the agricultural sector include the impact of the proposal on the quality and availability of Australia's agricultural resources; Australia's capacity to remain a reliable supplier of agricultural production; biodiversity; and employment and prosperity in Australia's local and regional communities.

There have been several recent and significant investments in Australian dairy processors, including:

- April 2014, Italian-based dairy processor Parmalat announced that it had purchased a 100 per cent share of Western Australian fruit juice and dairy processor Harvey Fresh. Although not confirmed by either party, media reports indicate that the deal was worth approximately $120 million.
    - Harvey Fresh processes about 130 million litres of milk per year, predominantly for the Western Australian fresh milk market.

- Between September 2013 and January 2014, Australian processors Murray Goulburn and Bega Cheese, and Canadian processor Saputo, bid for a controlling share of Victorian-based processor Warrnambool Cheese and Butter (WCB). In January 2014, the Saputo bid was successful, valuing WCB at over $500 million.
  - In 2013, WCB processed nearly 900 million litres of milk.
  - Saputo may use the acquisition to focus on dairy market expansion into Asia.

Domestic investors, are not required to apply to FIRB, but are required to apply to the Australian Competition and Consumer Commission that assesses application in line with competition laws. Figures released in September 2011 by the Australian Bureau of Statistics indicate that as at 31 December 2010, 89 per cent of agricultural land was entirely Australian owned and 99 per cent of agricultural businesses were entirely Australian owned.

e) General regulatory impediments

The Australian dairy industry is considered a provider of safe and high quality dairy product. However, industry has raised some concerns with regards to the application of Australian Food Standards and related regulation [source: Final Report of the Food Processing Strategy Group, 2012]. This is a matter for FSANZ, however some of the concerns raised include:

- variation in food safety requirement between states and territories. For those manufacturers and processors operating across jurisdictions, this can increase compliance and risk management costs, and

- cost and time delays in amendments to the Food Standards Code. Industry advised the strategy group that applications can vary in cost from $50 000 to $250 000. The time taken for approval of applications is also reported to be too long, with unpaid applications sometimes taking a further six to nine months in some instances.

6. INTERNATIONAL COMPETITIVENESS

a) Australian export markets and international competitors

Australia is the world's fourth largest exporter of dairy products after New Zealand, the European Union and the United States. Australian dairy exports are concentrated in Asia, which accounted for around 75 per cent of the total dairy export value of A$2.23 billion in 2013–14 [source: ABARES *March 2014 Quarterly, Agricultural Commodities*].

Australia's major dairy export destinations (by value and volume) are Japan, China (including Hong Kong and Macau), Singapore, Malaysia and Indonesia.

ABARES forecasts the real value of Australian dairy product exports to rise by 21 per cent between 2013–14 and 2018–19 to $3.6 billion (in 2013–14 dollars), with world dairy prices expected to remain favourable over the outlook period.

In the short term, the real value of Australian dairy product exports is forecast to rise by 11 per cent in 2014–15 to $3.3 billion (in 2013–14 dollars), reflecting forecast higher world dairy product prices and an assumed depreciation of the Australian dollar [source: ABARES *March 2014 Quarterly, Agricultural Commodities*].

Australia's main export competitors are New Zealand, the United States and the European Union. Table two below outlines the comparative milk production figures and dairy cow numbers for these countries.

Table two: Raw milk production summary (million litres) – approximate

	2012		2013		2014(f)	
	Milk Production (million L)	**Number of dairy cows ('000)**	**Milk Production (million L)**	**Number of dairy cows ('000)**	**Milk Production (million L)**	**Number of dairy cows ('000)**
Australia	9400	1650	9250	1650	9500	1660
EU-28	134 400	23 051	134 500	23 052	135 300	23 050
New Zealand	19 900	5018	19 000	5043	19 900	5111
United States	87 800	9233	88 400	9220	90 000	9250

Source: United States Department of Agriculture – Foreign Agricultural Service – (f) forecast –**NB** volumes have been converted from Metric Tonnes to Million Litres.

New Zealand

New Zealand is the seventh largest milk producing country and ranks first in production per capita. In 2013, domestic milk consumption accounted for 1.5 per cent of New Zealand's total milk production. The remaining milk is manufactured into dairy products, predominately for export. New Zealand accounts for about 34 per cent of world dairy exports and about two per cent of total world milk production.

Production systems in New Zealand are predominantly pasture based. This means that the average production per cow is relatively low compared to countries that use partial, or total, mixed ration feeding models that utilise grains and hay.

The main processors in New Zealand are Fonterra, Open Country Dairy and Westland Milk Products. Fonterra is the largest global milk processor by milk intake and is valued at about US$16 billion.

New Zealand's dairy industry is largely deregulated. However, Fonterra is regulated under the *Dairy Industry Restructuring Act 2001* (NZ) (the Act). The Act is designed to promote competition in the domestic milk market and to protect consumers from anti-competitive behaviour. Under the Act, Fonterra is required to create incentives for efficient milk pricing, and has a set formula for calculating farmgate milk prices. The Act also allowed for the merger of Kiwi Cooperative Dairies Limited, the New Zealand Cooperative Dairy Company Limited and the New Zealand Dairy Board. Since its formation in 2001, Fonterra has collected in excess of 95 per cent of total milk production in New Zealand.

United States of America

The United States is the second largest milk producing country with the second highest production per cow. In terms of processing capacity, six of the top 14 global milk processors by milk intake are based in the United States with Dairy Farmers of America (second largest with a value of US$13 billion) and Dean Foods (fifth largest with a value of US$13.1 billion) the biggest.

Dairy production in the United States is focussed on cows housed in barns and fed on grain and hay. This means there is higher output per cow in the United States, when compared with Australian (70 per cent higher), New Zealand (150 per cent higher) and European (64 per cent higher) herds, which rely more heavily on pasture based feed systems.

Dairy policy in the United States includes both Federal and State government support programmes. This includes Federal milk marketing orders and the milk price support programme.

Federal milk marketing orders are used to establish marketing conditions for the benefit of both milk producers and dairy product consumers. A classified pricing system and revenue pooling are the two key elements of these marketing orders. Milk marketing orders define the relationship among prices of fluid and manufactured dairy products and a geographic price structure.

The milk price support programme provides a bottom level for farmgate milk prices. The Commodity Credit Corporation (a United States Government body) buys butter, cheddar cheese, and skim milk powder that meet specifications to ensure that dairy farmers receive a predetermined farmgate price.

European Union

The European Union (EU) is the largest milk producing region with approximately 135 000 million litres of milk produced in 2013. Six of the ten largest milk processors by milk intake are based in the EU, with Parmalat (valued at US$16.9 billion) and Nestle (valued at US$19.1 billion) the two largest.

Due to the large geographical area encompassed by the European Union dairy industry, production systems can vary significantly. Northern countries tend to employ systems more similar to the United States (heavy reliance on grain and hay feeds). More temperate countries incorporate more pasture based feed into production systems.

The EU agricultural sector is highly supported by domestic and EU-wide policies. The EU dairy industry is supported predominately through the Common Agricultural Policy. The milk market in the EU has been regulated by a quota system since 1984. The quota was introduced in response to a significant overproduction of raw milk. Every member state has a national production quota which it distributes to farmers. Whenever a member state exceeds its quota, it has to pay a penalty (called 'super levy') to the EU. This national penalty is in turn financed by penalties imposed on farmers who have exceeded their individual quotas.

In April 2015, the EU will abolish the milk quota. Assessment of the removal of the quota has suggested that farmers in Germany, France, Ireland and Poland will produce about 10 000 million litres of extra milk between 2015 and 2020. Agricultural bank, Rabobank, suggest that this extra production will fill increasing demand in Asia and not significantly alter the markets for other production regions, such as Australia [source: Rabobank 2013].

b) Barriers to market access

Global dairy markets are affected by a range of barriers to market access and trade-distorting practices by competitors and importing countries including tariffs and quotas, technical requirements, export subsidies and excessive government intervention and domestic support. The dairy industries of many importing countries are also protected through a range of non-tariff barriers to trade. These may include restrictive customs procedures, port of entry inspections, product testing, factory inspections and stringent veterinary certificate requirements.

Australia's position in dairy export markets can be affected by third party trade agreements by competitors.

- The New Zealand-China free trade agreement (FTA) gives New Zealand a distinct commercial advantage over Australia with a gradual phasing out of tariffs on dairy products from New Zealand to 2019. Current import tariffs on Australian dairy products for China range from 5 to 30 per cent.

- The agreement between New Zealand and the Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu on Economic Cooperation, which entered into force in December 2013, includes early tariff reduction and elimination for dairy products from New Zealand. Australia ranks third behind New Zealand and the EU in market share of dairy exports to Taiwan [Source: Dairy Australia, 2013].

Tariffs and quotas

Dairy Australia estimates that Australian dairy exports attract in excess of $200 million in direct tariff charges each year as products enter destination markets. This has a direct impact on revenue and profitability for the Australian dairy industry [source: Trade and the Australian Dairy Industry, 2013].

Reduction of tariffs and increases to quotas through FTAs is one method for increasing the competitiveness of Australian dairy exports.

- The Korea-Australia FTA was signed in April 2014. Outcomes for Australian dairy exports include the elimination of tariffs of 36 per cent on cheese and 89 per cent on butter over the next 13 and 20 years. Australian dairy exporters will also benefit from growing duty-free quotas for cheese, butter and infant formula.

- Japan-Australia Economic Partnership Agreement negotiations concluded in April 2014. Key outcomes for dairy exporters include additional and immediate duty-free access and a preferential duty-free quota for Australian cheeses, and immediate duty-free access for milk products such as protein concentrates and casein.

- Dairy products are a priority interest for Australia in FTA negotiations with China. While tariffs are lower than those in Japan, these are sufficient to suppress demand in this price sensitive market.

- Indian applied tariffs on dairy products range from 30 to 60 per cent. Negotiations on the India Australia Closer Economic Cooperation Agreement (CECA) commenced in 2011.

Technical barriers to trade

While Australian dairy products have excellent access to markets due to a favourable plant and animal health status, there is scope to improve the systems underpinning exports and reducing other technical barriers to take advantage of this status.

- In Indonesia, along with the high dollar and competition from other countries, exporters are facing impediments such as regulatory barriers including labelling and registration requirements.

- In India, the dairy industry is seeking reductions in non-tariff barriers, such as labelling and testing requirements, under the CECA.

c) Government support and export subsidies

Government support for dairy producers in other countries has the effect of distorting trade by encouraging over-production in countries that pay higher subsidies and reducing market access opportunities for dairy producers in countries that pay lower or no subsidies, even if they are more efficient.

- The Australian Government works to support producers by creating a fairer international trading environment for them to compete in, through urging other countries to reduce the subsidies they pay and to lower their tariffs on agricultural products.

Amongst members of the Organisation for Economic Cooperation and Development (OECD), Australia maintains the second lowest level of trade distorting support to producers (three per cent). New Zealand has the lowest (one per cent). Many other developed countries' levels are much higher: Japan's is 56 per cent, Korea's 54 per cent, the European Union's 19 per cent, and the United States' seven per cent [source: OECD Producer Support Estimate, 2012–13].

Industry subsidised dairy exports from the United States also pose a serious threat to Australian dairy exports. These subsidies are funded by the United States dairy industry and are not covered under United States legislation. Since 2010 the subsidies have substantially increased, coinciding with the strong growth in US dairy exports and are mainly directed at cheese and butterfat. The dairy industry has advised that business has been lost by Australian exporters due to these subsidies, including cheese exports to Japan. The subsidies are expected to increase as US dairy production and exports continue to increase.

- The Australian dairy industry has requested two pathways to pursue this issue: for industry based subsidies to be included in a prohibition on the use of export subsidies in the Trans Pacific Partnership negotiations and, action under the World Trade Organisation.

d) Geographical indications

A current priority for the EU is promoting its geographical indications standards to be adopted by other countries via bilateral or regional trade agreements or other treaties.

- The EU-South Korea FTA has impacted Australian dairy exports as it prevents a number of products—including dairy products such as feta—from being marketed using what Australia considers to be generic names if they are produced outside of the EU.
- The EU is negotiating, or about to start negotiations, with a number of Australia's key trading partners including Japan, Vietnam, Thailand, Malaysia and the USA.

If the EU is successful in re-appropriating names for cheeses that Australia considers are generic in these FTAs (such as parmesan, mozzarella, feta, brie, camembert and cheddar) there will be significant implications for the Australian dairy industry relating to consumer recognition of products and costs associated with re-branding and re-labelling. It may also reduce variety and affordability for consumers in these markets.

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