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# Australia

# Dairy and Products Semi-annual

# 2015

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**Report Highlights:**
Australia is a small producer of milk and accounts for about 7 percent of international dairy trade (in milk equivalent terms) down from a peak of 15 percent a few years ago. The industry has been recovering from adverse seasonal conditions, but the outlook for 2015 is more positive as rainfall has been adequate in the main dairy producing regions. The size of the dairy herd will be almost unchanged at 1.7 million head, but milk output is expected to increase slightly to 9.8 million tons due to a rise in yield. Domestic consumption of dairy products in Australia is relatively mature but is expanding in Asian markets. The industry is increasing exports to this region and also seeking to move away from a reliance on commodities to more value-added products.

**Commodities:**

Dairy, Milk, Fluid

Dairy, Butter

Dairy, Cheese

Dairy, Dry Whole Milk Powder

Dairy, Milk, Nonfat Dry

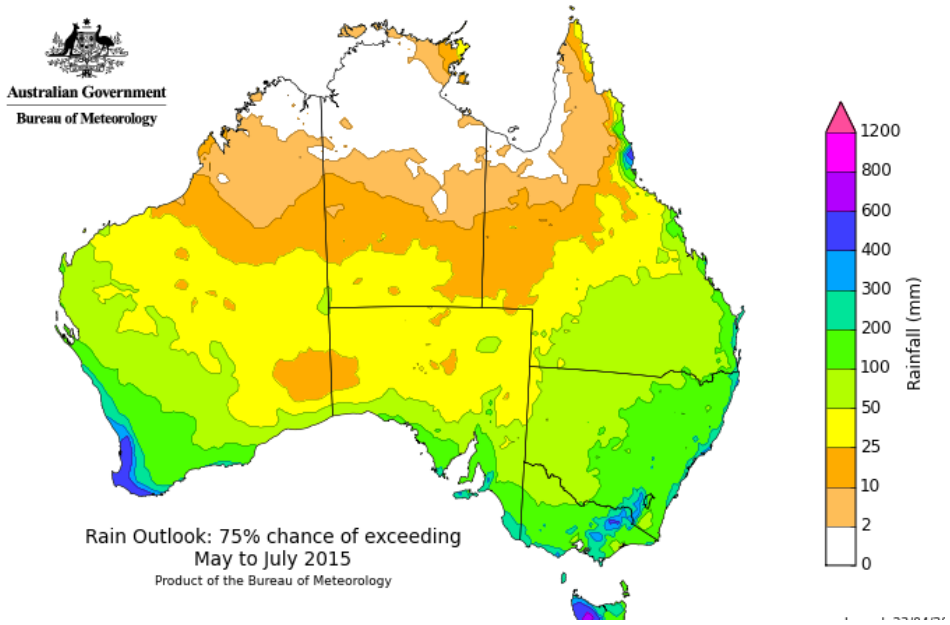
## OVERVIEW

The dairy industry is the third largest agricultural industry in Australia and dairy exports represent about 7 percent of international dairy trade. The industry is largely located in high rainfall regions along the coast of southern and eastern mainland Australia, the south-west corner of Western Australia and Tasmania. Dairy farming is generally pasture-based but grain feed supplements are often used to increase milk yield. Victoria accounts for two thirds of milk production because of its temperate climate, good pastures and established irrigation systems. Around half of dairy product manufacturing is located in Victoria. The industry consists of a large number of small dairy farms, many of which are family owned and operated.

One quarter of milk supply is used to produce drinking milk, while one third of output goes to cheese production. The remainder is used to manufacture skim milk powder (SMP), butter, wholemilk powder (WMP), consumer products such as yogurt and custard and ingredients including whey proteins and nutraceuticals. Dairy processors in south eastern Australia are oriented towards the export market, while those in Queensland and northern NSW are more dependent upon the domestic market. Around forty percent of dairy output is exported, mainly as cheese and milk powder with China and Japan as the largest export markets.

The six largest dairy processors in the industry (Murray Goulburn, Fonterra, Lion, Warrnambool Cheese and Butter, Parmalat and Bega Cheese) use 90 percent of Australia's raw milk supply. There is significant international investment in the industry. Fonterra is a New Zealand-based cooperative, Parmalat is a subsidiary of French company Lactalis, Lion is a subsidiary of Japanese company Kirin, while Warrnambool Cheese and Butter is owned by Canada's Saputo.

***Chart 1: Outlook for rainfall and temperature in Australia for the three months to July 2015***

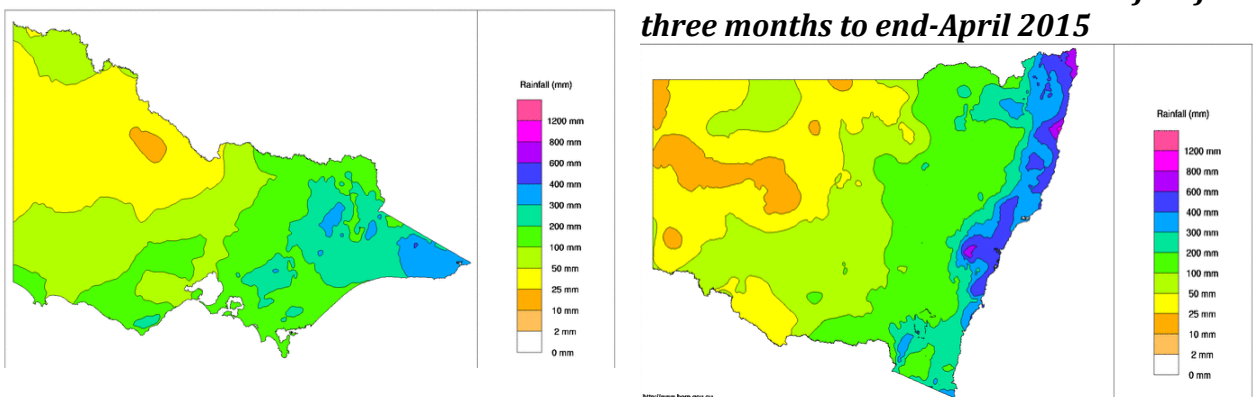



*Source*: Bureau of Meteorology

As dairy farming is mainly pasture-based, milk production is significantly affected by seasonal conditions and the reliability of rainfall. After suffering through drought in previous years, the outlook for dairy farmers in 2015 and beyond is more positive, as average rainfall has improved pastures and water storages for the three months to April 2015. Forecasts by the Bureau of Meteorology for the three months to July suggest most regions will enjoy above average rainfall.

However, in Queensland the continuation of drought has led to a fall in the number of dairy farmers in the State. Overall, climate predictions support the current official dairy production estimates.

***Chart 2: Victorian and NSW rainfall for the three months to end-April 2015***




*Source*: Bureau of Meteorology.

## FLUID MILK

### Production

The volume of milk production in Australia is expected to be 9.8 million metric tons in 2015, up slightly from previous estimates. This increase is supported by the return of better seasonal conditions and a rise in milk yields, especially in Victoria and New South Wales. In 2015, the dairy herd size is expected to remain virtually unchanged at 1.7 million head. However, the number of Queensland dairy farms fell below 500 in 2015, as higher cost farmers left the industry due to the continuation of drought in three quarters of the State.

The dairy farming industry is relatively fragmented and around ten percent of dairy farms have milking herds of over 600 cows. Dairy farms and processors in NSW and Western Australia typically supply the domestic sector, while those in Victoria, South Australia and Tasmania are export-oriented. In 2015, the average herd size is expected to be around 260 cows, with an average annual milk production of around 5,600 liters per cow. The largest one fifth of dairy farms account for 80 percent of total output.

Bureau of Meteorology forecasts for average or above-average rainfall in the three months to July is a major factor supporting the production forecast. Better seasonal conditions will allow a gradual increase in milk yield per cow and provide an increasing supply of milk to the consumers and processors for the domestic market and for exports. Therefore the official forecast has been retained for the semi-annual report. Similarly, the volumes of milk allocated for domestic consumption as fluid milk and for processing are only very slightly adjusted to account for rising Australian exports of fluid milk, although these exports still account for only one percent of the overall distribution.

As Australian milk production peaks in October, falls off until late-summer, and then slows in the cooler winter months, the continuation of more favorable seasonal conditions is occurring at an opportune time for the industry. Already, in 2015 milk production is ahead of the 2014 season, with a 6 percent growth year-to-date over the year to February 2015, according to Dairy Australia. Overall, better seasonal conditions in eastern Victoria and NSW and Tasmania, the major dairy States, have improved the production outlook in the major producing States. However, while Western Australia and Queensland have experienced recent rainfall, they are still recovering from earlier seasonal conditions.

### Production Systems and Technology

Milk production systems in Australia differ by region and according to climatic conditions, market requirements and the cost of inputs such as land, feed grains and irrigation water. The most common system is seasonal production, where cows calve during the peak period of pasture availability. This system is normally used by two-thirds of Australian dairy farms, especially in Tasmania, Victoria and South Australia. The other production system is year round production, in which calving is spread throughout the year making milk production stable over the year. This production system is used especially in areas which supply fresh milk for domestic production.

A recent ABARES survey reported that dairy farmers adopted a range of new technologies and management practices as farm size has increased and dairy production become more intensive. Improved milking shed layouts have contributed to productivity growth by reducing milking time and labor needs. Milking shed technology has moved toward automatic cup removers, automatic drafting, and automated cleaning. Some dairy farmers use unmanned aerial vehicles to provide precision maps of their soil and water resources. This can allow targeted use of inputs such as grain feed, irrigated water and fertilizers. Increased technology usually needs larger farm scale to be feasible.

Over the last decade, Australian milk yields have increased as a result of improved herd genetics, technology innovations and advances in pasture management. In the past decade to 2014, yields rose by 10 percent to reach 5,400 liters a cow. Average yield per cow is expected to reach 5,600 liters in 2015 due to better seasonal conditions, supporting the production forecast.

## Processing of Liquid Milk

Raw milk from dairy farms is processed into drinking milk or dairy products. Around ten percent of milk produced in Victoria and Tasmania is used for drinking milk, while the remainder is used for manufacturing products such as cheese, butter and yoghurt. Other States consume a significantly higher proportion of fluid milk, such as NSW where the ratio is about half for further processing.

Australian farm gate milk prices are closely related to international prices which have declined over the last year, although the depreciation of the Australian dollar has offset this trend. The dairy industry is adjusting to variable milk prices by switching to higher value added products and increasing its focus on exports.

Grain-based and other animal feed for dairy cows is the largest single cost item for dairy farmers and typically accounts for around 30 percent of each farm's cash costs. Generally, grain prices are expected to be somewhat lower in 2015, which will increase the viability of many producers. A 2014 report by the Productivity Commission found that raw milk prices paid by dairy product manufacturers in Australia were lower than in Ireland, the United Kingdom and United States, but similar to New Zealand.

## Consumption

Australian fresh milk consumption has been steadily increasing although it is unclear if lower supermarket prices for plain brand or price label milk is the reason for this trend. Dairy Australia has pointed to other factors, such as a move away from sugar-based drinks on health grounds and the expansion of "coffee culture" in Australia. Around half of Australia's milk production is consumed in the domestic market. Note that consumption includes both fresh milk and UHT milk products.

Overall consumption of fluid milk increased from 104 liters per capita in 2010 to 107 liters in 2013 and is expected to reach 110 liters in 2015. Dairy Australia has reported that Australian supermarket milk (fresh and UHT) sales volumes to early March 2015 were up two percent compared to the previous year. This included an increase in fresh milk consumption of one percent and 7 percent increase in production of UHT milk in the domestic market. Between

2000 and 2014, the share of low fat varieties of fresh white milk sales rose from 31 to 40 percent.

The major supermarkets in Australia reportedly account for 80 percent of total retail sales and half of dairy product sales. Their share has increased since late 2011, when they reduced the retail price of plain brand fluid milk to A$1 a liter which led to a shift in sales from higher-margin branded dairy products. In 2014, private labels of supermarkets accounted for over half of drinking milk sales. Major supermarkets have adopted a strategy of negotiating long-term supply contracts with fixed profit margins for dairy farmers to ensure the supermarkets can provide low cost private label milk to Australian consumers.

Demand for fluid milk is shifting from regular milk to modified milk types such as reduced and low-fat milks. In addition, 'A2 drinking milk' (without A1 beta-casein protein) has increased its market share to around 8 percent in 2015. Consumers shifted to this brand because they expected it to be more easily digestible, although this has been disputed by other processors. Liquid milk products also compete with a range of milk substitutes, including almond milk, soy milk, high-fiber milk and coconut milk. There has been a small shift in consumption of these products because of consumer concerns over allergies, fat content and due to lifestyle choices.

Dairy Australia has reported that plastic milk bottles represent nearly 80 percent of all milk sales in supermarkets, with the other categories being gable-top cartons (8 percent) and UHT cartons (13 percent). The 2-litre plastic bottle is the most popular size, with a market share of 45 percent while one liter cartons and plastic bottles together have around one fifth of the market.

## Trade

Australian dairy cattle exports to China increased by 33 percent to 80,000 head in 2014 and this market represents over 80 percent of total live dairy cattle exports. Pakistan and Russia are other markets for dairy cattle exports and live dairy cattle exports were excluded from the import embargo announced by Russia in the second half of 2014. There are quarantine restrictions on the importation of fresh dairy foods. Imports are negligible and are likely to be uneconomic.

Fresh milk is generally considered unsuitable for export due to its short shelf life and almost all fresh milk is processed to make cheese, or dehydrated to make milk powder. However during 2014, a number of Australian dairy companies began to airfreight liquid milk to Asian markets, especially China, for a premium price. It is expected that around 120,000 litres of fluid milk will be exported in 2015 and are expected to expand significantly in the next few years.

Previously, fresh milk exports to China had been restricted by lengthy testing and quarantine procedures taking up to 20 days, which limited their shelf life. In 2014, changes to Chinese import clearance procedures allows export milk from farms in Australia to reach the supermarket shelf in China in eight days. Australian fresh milk retails in China reportedly retails for around A$10 a liter and more Australian dairy companies intend to export fresh milk exports to China and other markets in the region. The opportunity to airfreight milk to this market is a positive development for geographically stranded dairy farmers and processors which normally supply only the domestic market. In addition, Australian manufacturers are

seeking to expand their production of UHT to help meet China's increasing demand for fluid milk.

## Production, Supply and Demand Data Statistics

| Dairy, Milk, Fluid | 2013 | | 2014 | | 2015 | |
|---|---|---|---|---|---|---|
| Market Begin Year | Jan 2013 | | Jan 2014 | | Jan 2015 | |
| Australia | USDA Official | New post | USDA Official | New post | USDA Official | New post |
| Cows In Milk | 1,650 | 1,650 | 1,700 | 1,700 | 1,705 | 1,705 |
| Cows Milk Production | 9,400 | 9,400 | 9,700 | 9,700 | 9,800 | 9,800 |
| Other Milk Production | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Production | 9,400 | 9,400 | 9,700 | 9,700 | 9,800 | 9,800 |
| Other Imports | 7 | 7 | 6 | 6 | 5 | 5 |
| Total Imports | 7 | 7 | 6 | 6 | 5 | 5 |
| Total Supply | 9,407 | 9,407 | 9,706 | 9,706 | 9,805 | 9,805 |
| Other Exports | 95 | 95 | 96 | 96 | 113 | 120 |
| Total Exports | 95 | 95 | 96 | 96 | 113 | 120 |
| Fluid Use Dom. Consum. | 2,494 | 2,494 | 2,600 | 2,600 | 2,675 | 2,670 |
| Factory Use Consum. | 6,818 | 6,818 | 7,010 | 7,010 | 7,017 | 7,015 |
| Feed Use Dom. Consum. | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Dom. Consumption | 9,312 | 9,312 | 9,610 | 9,610 | 9,692 | 9,685 |
| Total Distribution | 9,407 | 9,407 | 9,706 | 9,706 | 9,805 | 9,805 |
| | | | | | | |
| 1000 HEAD, 1000 MT | | | | | | |

*Note:* 'New Post' data reflect author's assessments and are not official data

## BUTTER

### Production

In 2015, production of butter in Australia is expected to be 118,000 metric tons, a slight increase on the previous Post estimate because of greater milk supplies and greater competitiveness on most export markets due to the lower Australian dollar. Butter is a dairy product that must contain over 80 percent milk fat according to Food Standards Australia and New Zealand. It is produced in a joint process, with either skim milk powder or casein also produced. Dairy blends are spreads in which edible (plant) oils, such as canola, are added to a content of around 60 percent butter to make the spread softer and easier to spread.

### Consumption

Demand for butter in Australia has been gradually increasing in recent years. Annual per capita consumption of butter in Australia is around 3.9 kilograms and is forecast to approach 4 kilograms per capita in 2015. Consumers reportedly continue are interested in the 'naturalness' of butter, together with its superior taste and cooking functionality. Consumer preferences have also been driven by greater concerns about the healthiness of butter alternatives such as margarine. In 2014, private labels of supermarkets accounted for one third of butter sales.

The introduction of spreadable butters and vegetable oil-based dairy blends (which are easier to spread and lower in saturated fat) appears to have stabilized domestic market sales after a significant period of decline in preceding decades. The market share of dairy spreads of all table spreads has increased from 30 percent in 2000 to approach 45 percent in 2015. Dairy Australia estimates that two thirds of domestic sales of dairy spreads occur through supermarkets.

### Trade

Over 40 percent of Australian butter production is exported. In 2015, exports of butter are expected to decline slightly despite the depreciation of the Australian dollar, which has increased export competitiveness. In 2015, export volumes are expected to fall to 45,000 tonnes in response to the ongoing Russian import embargo and declining domestic demand. In 2014, Russia accounted for 40 percent of butter exports and the closure of this market and continuation of the embargo means that other export markets are expected to become more important

## Production, Supply and Demand Data Statistics

| Dairy, Butter | 2013 | | 2014 | | 2015 | |
|---|---|---|---|---|---|---|
| Market Begin Year | Jan 2013 | | Jan 2014 | | Jan 2015 | |
| Australia | USDA Official | New post | USDA Official | New post | USDA Official | New post |
| Beginning Stocks | 46 | 46 | 49 | 49 | 57 | 52 |
| Production | 117 | 117 | 117 | 117 | 115 | 118 |
| Other Imports | 21 | 21 | 21 | 21 | 21 | 21 |
| Total Imports | 21 | 21 | 21 | 21 | 21 | 21 |
| Total Supply | 184 | 184 | 187 | 187 | 193 | 191 |
| Other Exports | 50 | 50 | 40 | 45 | 47 | 45 |
| Total Exports | 50 | 50 | 40 | 45 | 47 | 45 |
| Domestic Consumption | 85 | 85 | 90 | 90 | 91 | 91 |
| Total Use | 135 | 135 | 130 | 135 | 138 | 136 |
| Ending Stocks | 49 | 49 | 57 | 52 | 55 | 55 |
| Total Distribution | 184 | 184 | 187 | 187 | 193 | 191 |
| | | | | | | |
| 1000 MT | | | | | | |

*Note:* 'New Post' data reflect author's assessments and are not official data

## CHEESE

### Production

Cheese is a major product of the Australian dairy industry. In 2015, production of cheese is forecast at 330,000 metric tons, up slightly on the previous year due to the greater volume of liquid milk expected to be produced. Over 70 percent of cheese production occurs in Victoria. Demand for cheese in Australia is comparatively mature and sales are expected to be stable or slightly increasing in 2015. Within this market, consumers are gradually switching to more packaged hard cheeses and away from processed cheese. Demand for lower fat cheese varieties has increased.

Dairy Australia has identified five main cheese varieties: cheddar, semi-hard and stretch cheese such as mozzarella, fresh types such as goat's cheese and feta, hard-grating types including parmesan, and eye cheese and mould-ripened cheeses like blue vein and brie.

### Trade

Around half of Australian cheese production is exported and export volumes are expected to rise to 155,000 metric tonnes in 2015, encouraged by increasing demand in Asia and the weaker Australian dollar, which also makes exports more price-competitive. Around 60 percent of cheese by volume is exported in bulk. Japan is the major market for Australian cheese exporters and the Japan-Australia Economic Partnership Agreement (JAEPA) will increase some market opportunities. The agreement will halve the 40 percent Japanese tariff for processed cheese over ten years, while tariff reductions will occur on grated and powdered cheese. There will be a 20 percent tariff reduction on blue vein cheese with no volume restrictions and the elimination of tariffs on milk protein concentrates and lactose.

Australia's most significant dairy imports are cheese (75,000 tonnes or 25 percent of domestic cheese consumption), milk powders and butter (each about 20,000 tonnes or 20 percent). Around half of Australia's total dairy imports are from New Zealand. Imports from the European Union are typically specialty cheeses including parmesan and feta, while those from New Zealand and the United States are mainly cheddar cheese. Imports of mozzarella cheese from the United States have also been increasing for the Australian pizza industry. Demand for imported premium cheeses rose a few years ago because of the strength of the Australian dollar but has since declined.

### Consumption

Total cheese consumption in Australia is comparatively mature and is expected to be around 13.3 kilograms per capita in 2015. Cheddar cheese accounts for around half of total cheese consumption in Australia but this share has fallen in recent years with rising demand for specialty cheeses and fresh cheese varieties such as feta. Almost half of Australian cheese sales are made by major supermarket chains, with specialty cheeses mainly sold by independent specialty stores. There has been a consistent trend towards sliced cheese in preference to block cheese for reasons of consumer convenience. Major domestic buyers of dairy products include retailers, cafes, restaurants, fast food companies and food manufacturers.

It is estimated that nearly half of the domestic sales of Australian cheese are through the major supermarket chains. In 2015, private cheese labels are expected to account for one third of cheese sales. Private label cheese brands produced for the major supermarket chains have over one fifth of the domestic cheese market. Domestic production of soft cheeses is increasing in a market segment in which imports had predominated, possibly influenced by the weaker Australian dollar.

## Production, Supply and Demand Data Statistics

| Dairy, Cheese | 2013 | | 2014 | | 2015 | |
|---|---|---|---|---|---|---|
| Market Begin Year | Jan 2013 | | Jan 2014 | | Jan 2015 | |
| Australia | USDA Official | New post | USDA Official | New post | USDA Official | New post |
| Beginning Stocks | 18 | 18 | 24 | 24 | 34 | 34 |
| Production | 320 | 320 | 320 | 320 | 330 | 330 |
| Other Imports | 69 | 69 | 77 | 77 | 78 | 78 |
| Total Imports | 69 | 69 | 77 | 77 | 78 | 78 |
| Total Supply | 407 | 407 | 421 | 421 | 442 | 442 |
| Other Exports | 163 | 163 | 150 | 150 | 160 | 155 |
| Total Exports | 163 | 163 | 150 | 150 | 160 | 155 |
| Human Dom. Consumption | 220 | 220 | 237 | 237 | 245 | 245 |
| Other Use, Losses | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Dom. Consumption | 220 | 220 | 237 | 237 | 245 | 245 |
| Total Use | 383 | 383 | 387 | 387 | 405 | 400 |
| Ending Stocks | 24 | 24 | 34 | 34 | 37 | 42 |
| Total Distribution | 407 | 407 | 421 | 421 | 442 | 442 |
| | | | | | | |
| 1000 MT | | | | | | |

*Note:* 'New Post' data reflect author's assessments and are not official data

## MILK POWDER

### Production

Milk powder is categorized as either of skim milk powder (SMP) or whole milk powder (WMP) depending. Both products have a variety of uses, such as in bakery products, confectionery and milk chocolates, processed meats, ready-to-cook meals, baby foods, ice-cream, yogurt, health foods and reduced-fat milks. Industrial grade milk powder is used for animal fodder. In Australia, milk powder is mainly used as a food ingredient and to manufacture infant formula. Skim milk powder accounts for around 60 percent of local production of milk powder.

In 2015, production of whole milk powder (WMP) is expected to decline slightly from official forecasts to be 120,000 metric tons due to declining domestic demand for this form of milk powder and a pause in export demand stemming partly from a build-up in stocks in major markets such as China. In 2015, production of skim milk powder (SMP) is expected to increase significantly with export demand the main driver.

### Trade

Exported milk powder is used in overseas markets where fresh milk supplies are not readily available, due to either limited local production, or restricted access to cold storage facilities. In 2015, skim milk powder exports are expected to reach 150,000 tonnes, slightly above the official forecast of 145,000 tons because of greater milk supplies and export demand. Exports of whole milk powder are forecast to fall slightly from official forecasts because of a preference for skim milk powder. Around three quarters of Australian milk powder is exported and the remainder sold on the domestic market. Major markets for milk powder and infant formula are China, Indonesia, Singapore and Malaysia.

### Consumption

Whole milk powder is mainly used in food manufacturing and for infant formula for younger infants. Skim milk powder is mainly used for infant formula for infants over two years in age. In the domestic market, demand for whole milk powder has been falling compared to skim milk powder as Australians seek to reduce the fat content of milk products. In overseas markets, demand for whole milk powder appears to be slowing because of stockpiling and a slight decline in WMP exports from the previous official forecast is expected in 2015.

## Production, Supply and Demand Data Statistics

| Dairy, Dry Whole Milk Powder | 2013 | | 2014 | | 2015 | |
|---|---|---|---|---|---|---|
| Market Begin Year | Jan 2013 | | Jan 2014 | | Jan 2015 | |
| Australia | USDA Official | New post | USDA Official | New post | USDA Official | New post |
| Beginning Stocks | 18 | 18 | 10 | 16 | 28 | 22 |
| Production | 120 | 120 | 130 | 122 | 130 | 120 |
| Other Imports | 8 | 8 | 10 | 10 | 10 | 10 |
| Total Imports | 8 | 8 | 10 | 10 | 10 | 10 |
| Total Supply | 146 | 146 | 150 | 148 | 168 | 152 |
| Other Exports | 96 | 90 | 80 | 84 | 90 | 85 |
| Total Exports | 96 | 90 | 80 | 84 | 90 | 85 |
| Human Dom. Consumption | 40 | 40 | 42 | 42 | 44 | 44 |
| Other Use, Losses | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Dom. Consumption | 40 | 40 | 42 | 42 | 44 | 44 |
| Total Use | 136 | 130 | 122 | 126 | 134 | 129 |
| Ending Stocks | 10 | 16 | 28 | 22 | 34 | 23 |
| Total Distribution | 146 | 146 | 150 | 148 | 168 | 152 |
| | | | | | | |
| 1000 MT | | | | | | |

*Note:* 'New Post' data reflect author's assessments and are not official data

| Dairy, Milk, Nonfat Dry | 2013 | | 2014 | | 2015 | |
|---|---|---|---|---|---|---|
| Market Begin Year | Jan 2013 | | Jan 2014 | | Jan 2015 | |
| Australia | USDA Official | New post | USDA Official | New post | USDA Official | New post |
| Beginning Stocks | 75 | 75 | 96 | 96 | 71 | 71 |
| Production | 215 | 215 | 205 | 205 | 195 | 220 |
| Other Imports | 5 | 5 | 5 | 5 | 5 | 5 |
| Total Imports | 5 | 5 | 5 | 5 | 5 | 5 |
| Total Supply | 295 | 295 | 306 | 306 | 271 | 296 |
| Other Exports | 119 | 119 | 150 | 150 | 145 | 150 |
| Total Exports | 119 | 119 | 150 | 150 | 145 | 150 |
| Human Dom. Consumption | 80 | 80 | 85 | 85 | 85 | 85 |
| Other Use, Losses | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Dom. Consumption | 80 | 80 | 85 | 85 | 85 | 85 |
| Total Use | 199 | 199 | 235 | 235 | 230 | 235 |
| Ending Stocks | 96 | 96 | 71 | 71 | 41 | 61 |
| Total Distribution | 295 | 295 | 306 | 306 | 271 | 296 |
| | | | | | | |
| 1000 MT | | | | | | |

*Note:* 'New Post' data reflect author's assessments and are not official data

## Supporting Tables and Charts

### *Table 1: Structure of the Australian dairy industry, 2014 (a)*

| Region | Milk production (million liters) | Herd size ('000) | Farm (number) | Processors (number) | Major (b) irrigation storages |
|---|---|---|---|---|---|
| **West Victoria** | 2,087 | 337 | 1,039 | 5 | Waranga (40%) |
| **Gippsland** | 1,922 | 311 | 1,110 | 6 | Dartmouth (75%) |
| **Tasmania** | 791 | 149 | 286 | 5 | |
| **Murray** | 2,266 | 307 | 1,088 | 9 | Lake Victoria (28%) |
| **Central NSW** | 695 | 100 | 357 | 5 | Copeton Dam (18%) |
| **South Queensland** | 546 | 92 | 469 | 4 | Beardmore (84%) |
| **South Australia** | 514 | 70 | 237 | 2 | Lower Lakes (84%) |
| **Western Australia** | 329 | 51 | 140 | 2 | |
| **Total** | 9,150 | 1,417 | 4,726 | 38 | |

*Note:* (a) Financial year to June 2014. (b) Water storage capacity of major dams as a March 25 2015.
*Source*: Dairy Australia, Murray Darling Basin Authority, Bureau of Meteorology and the ANZ Bank.

### *Table 2: Structure of the Australian dairy product manufacturing industry, 2012-13*

| Company | Volume of raw milk purchased (million liters) | Share (%) | Revenue (A$ million) | Number of plants (2014) |
|---|---|---|---|---|
| **Murray Goulburn** | 2,990 | 33 | 2,385 | 8 |
| **Fonterra** | 1,600 | 17 | 2,500 | 10 |
| **Lion** | 1,000 | 11 | 2,536 | 16 |
| **Warnambool Cheese** | 890 | 10 | 497 | 2 |
| **Parmalat** | 850 | 9 | 1,233 | 9 |
| **Bega Cheese** | 641 | 7 | 1,010 | 6 |
| **Other** | 1,229 | 13 | 3,271 | 430 |
| **Total** | 9,200 | 100 | 13,432 | 481 |

*Source:* Australian Bureau of Statistics, ABARES, IBIS World and dairy processing companies.

*Table 3: Australian butter exports by country, 2010-2014 (metric tons)*

| Country | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|
| **Russia** | 1,616 | 5,635 | 13,999 | 8,281 |
| **Singapore** | 4,902 | 3,865 | 4,866 | 5,930 |
| **Thailand** | 3,332 | 2,316 | 2,809 | 2,551 |
| **Hong Kong** | 2,540 | 2,197 | 2,696 | 2,512 |
| **Malaysia** | 3,246 | 2,724 | 2,375 | 3,177 |
| **Turkey** | 406 | 2,343 | 2,140 | 1,356 |
| **United States** | 754 | 2,269 | 1,949 | 1,175 |
| **Indonesia** | 1,238 | 1,196 | 1,932 | 677 |
| **Iran** | 2,658 | 4,006 | 1,848 | 0 |
| **China** | 869 | 1,990 | 1,719 | 1,465 |
| **Taiwan** | 1,345 | 2,014 | 1,605 | 1,530 |
| **Mexico** | 1,311 | 1,264 | 1,297 | 959 |
| **Other** | 14,342 | 19,246 | 8,816 | 12,513 |
| **Total** | 38,559 | 51,065 | 48,051 | 42,126 |

*Note:* Financial years from July to June.
*Source*: Global Trade Atlas.

*Table 4: Australian cheese exports by country, 2010-2014 (metric tons)*

| Country | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|
| **Japan** | 49,163 | 49,302 | 43,998 | 33,362 |
| **China** | 3,930 | 5,113 | 5,610 | 6,508 |
| **Singapore** | 4,863 | 4,047 | 3,936 | 4,168 |
| **Malaysia** | 6,099 | 3,358 | 3,470 | 3,858 |
| **Saudi Arabia** | 5,880 | 1,880 | 3,821 | 3,240 |
| **Philippines** | 2,557 | 2,196 | 2,908 | 2,841 |
| **South Korea** | 3,410 | 4,058 | 3,586 | 2,736 |
| **Thailand** | 2,443 | 1,838 | 2,139 | 2,477 |
| **United States** | 559 | 1,623 | 2,268 | 2,391 |
| **Other** | 27,808 | 22,794 | 27,253 | 20,722 |
| **Total** | 106,712 | 96,209 | 98,989 | 82,303 |

*Note:* Financial years from July to June.
*Source*: Global Trade Atlas.

***Table 5: Australian skim milk powder (SMP) exports by country, 2010-2014 (metric tons)***

| Country | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|
| **Indonesia** | 24,182 | 22,687 | 20,929 | 33,464 |
| **China** | 12,706 | 12,163 | 15,391 | 15,735 |
| **Singapore** | 17,192 | 20,267 | 13,370 | 14,338 |
| **Malaysia** | 7,792 | 15,860 | 9,716 | 14,975 |
| **Thailand** | 9,611 | 13,836 | 8,839 | 8,313 |
| **Kuwait** | 5,849 | 6,176 | 8,519 | 10,639 |
| **Philippines** | 7,914 | 14,287 | 6,793 | 9,721 |
| **Yemen** | 5,756 | 7,378 | 5,795 | 7,424 |
| **South Korea** | 7,661 | 6,258 | 5,702 | 5,710 |
| **Other** | 41,235 | 48,723 | 24,257 | 43,236 |
| **Total** | 139,898 | 167,635 | 119,311 | 163,555 |

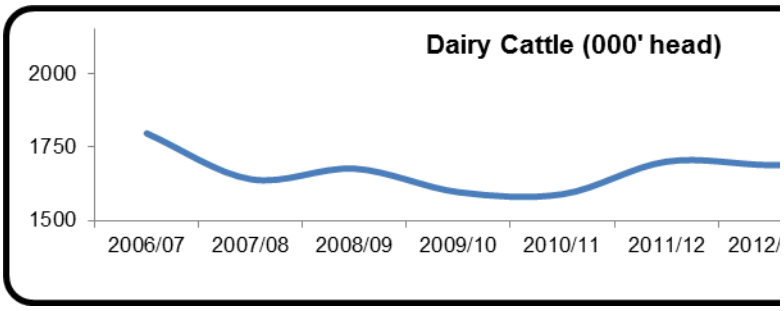
*Note:* Financial years from July to June.
*Source*: Global Trade Atlas.

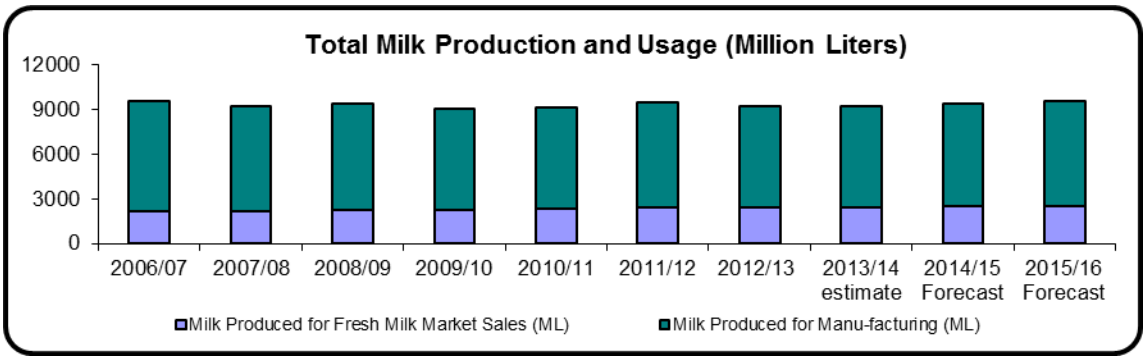
***Table 6: Australian whole milk powder (WMP) exports by country, 2010-2014 (metric tons)***

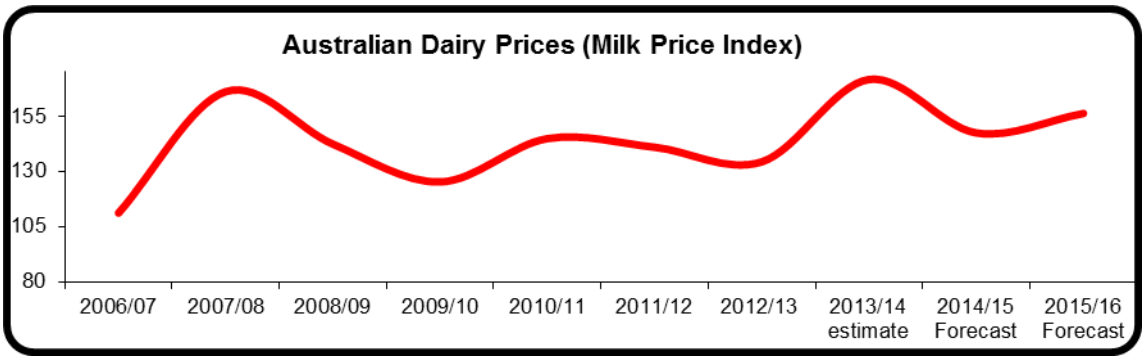
| Country | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|
| **Singapore** | 16,318 | 15,924 | 13,918 | 15,175 |
| **Sri Lanka** | 11,848 | 11,036 | 11,792 | 12,882 |
| **China** | 5,598 | 6,294 | 22,170 | 12,237 |
| **Bangladesh** | 4,100 | 3,907 | 6,627 | 7,562 |
| **Malaysia** | 998 | 6,124 | 3,668 | 3,471 |
| **Indonesia** | 10,033 | 7,740 | 7,188 | 3,082 |
| **Oman** | 14,204 | 6,519 | 725 | 3,151 |
| **El Salvador** | 2,499 | 3,488 | 3,480 | 3,124 |
| **Mauritius** | 2,849 | 2,306 | 1,621 | 2,210 |
| **United Arab Emirates** | 3,405 | 4,310 | 1,972 | 1,215 |
| **Taiwan** | 2,411 | 3,085 | 3,165 | 1,664 |
| **Thailand** | 2,778 | 2,132 | 2,952 | 1,480 |
| **Other** | 25,668 | 24,563 | 10,297 | 26,384 |
| **Total** | 102,709 | 97,428 | 89,575 | 78,462 |

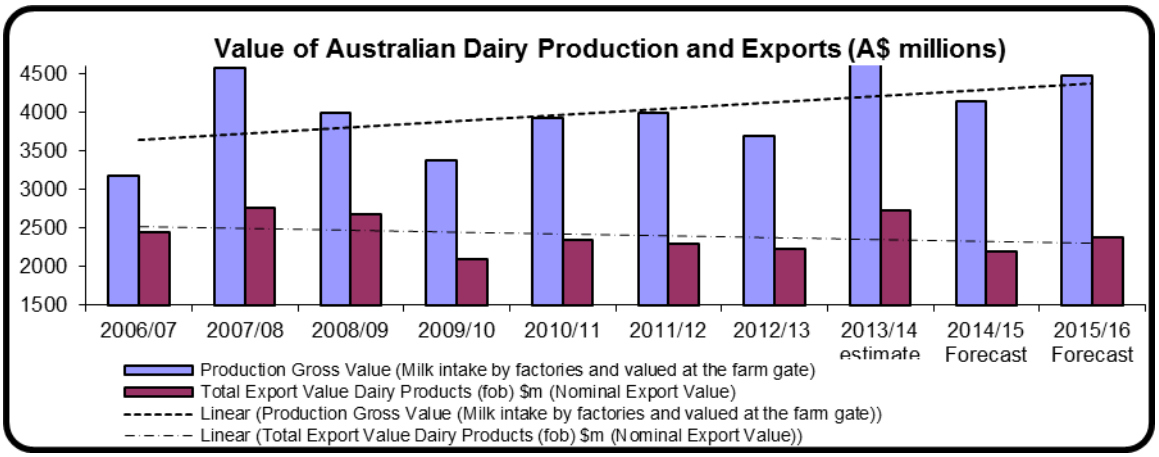
*Note:* Financial years from July to June.
*Source*: Global Trade Atlas.

***Charts 3-10: Performance of the Australian Dairy Industry, 2005-2015***

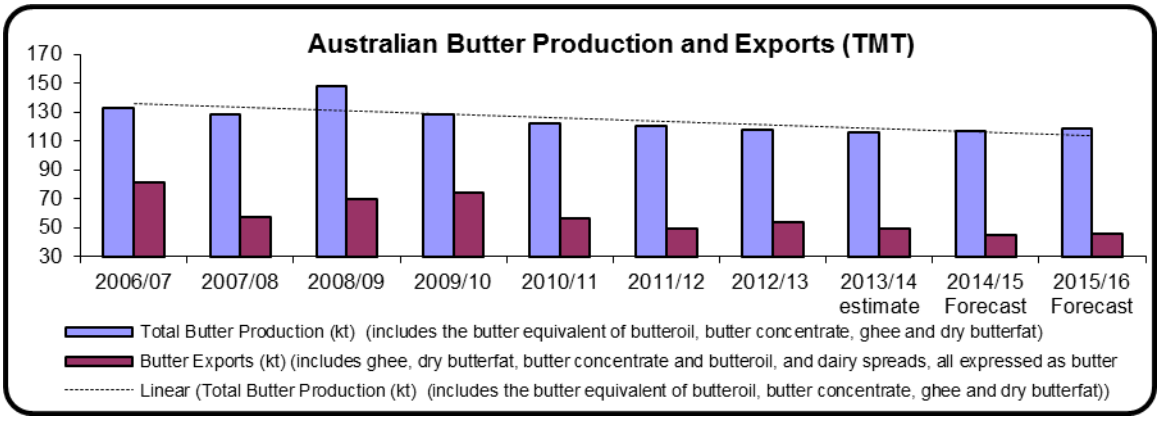


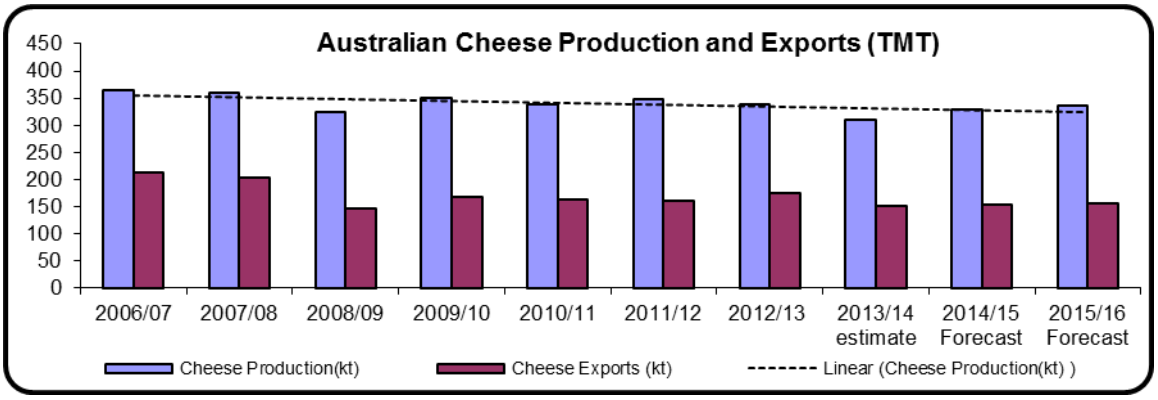



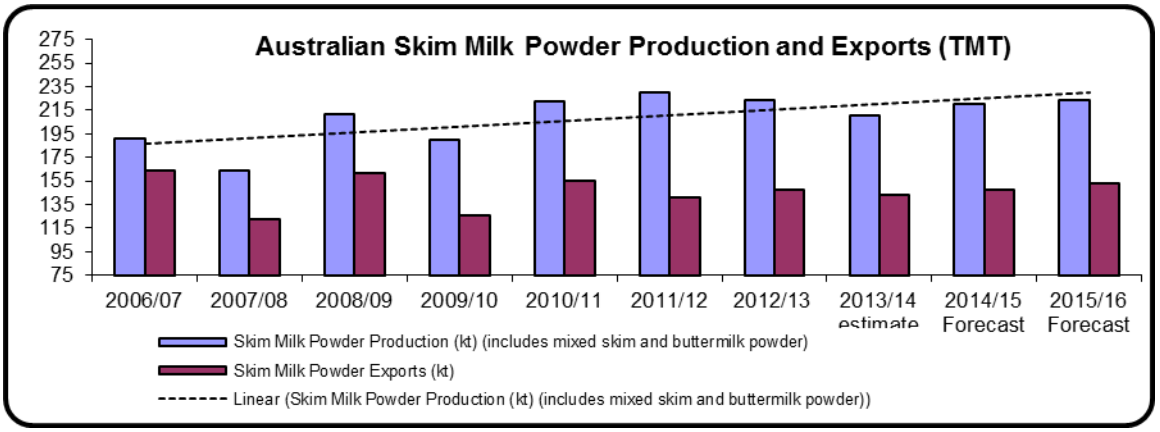



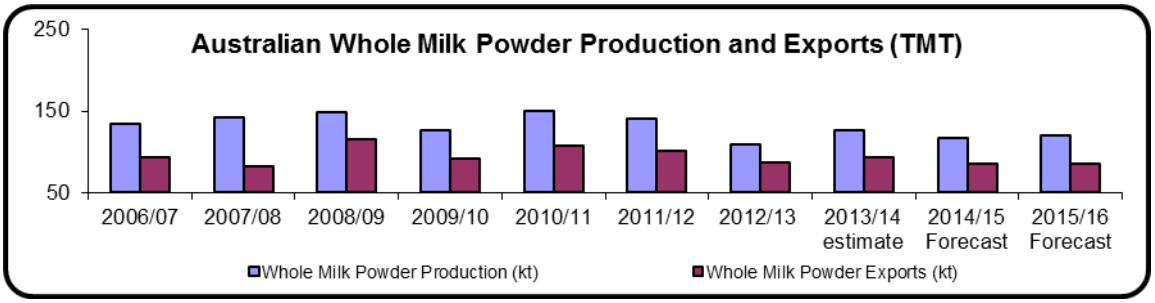




*Source*: Calculated from ABARES and Dairy Australia data.



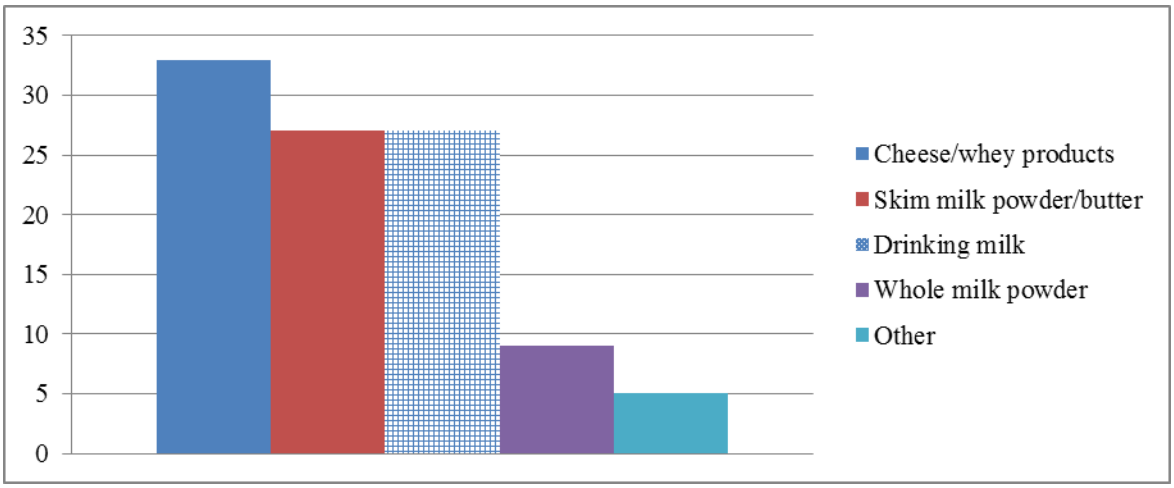



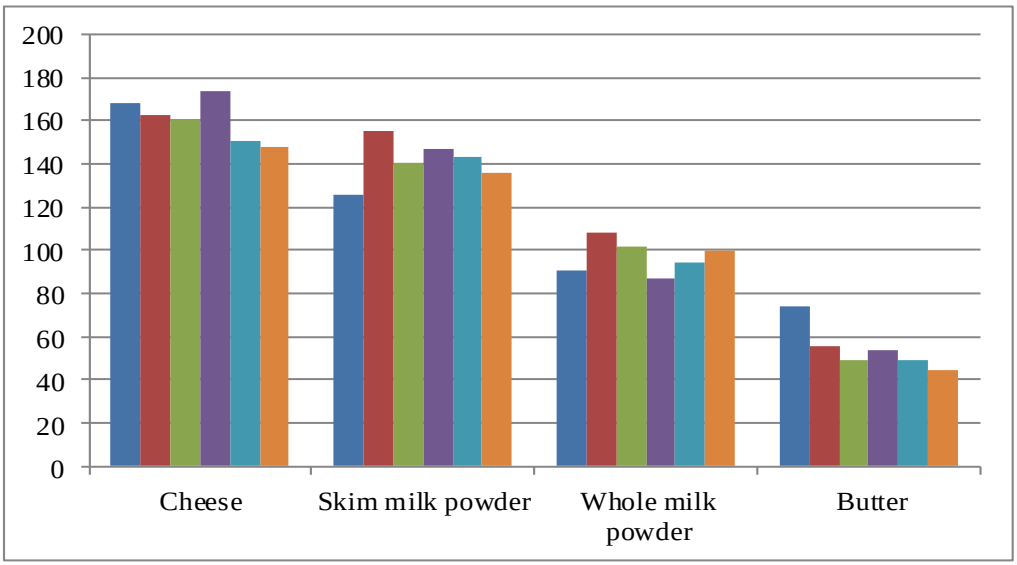

*Source*: Calculated from ABARES and Dairy Australia data.

***Chart 11: Utilization of raw milk in Australia, 2013-14 (share, %)***




*Source*: Productivity Commission (2014).

***Chart 12: Volume of Australian Dairy Exports, 2009-15 (tonnes, financial years)***




*Source*: ABARES (2014).