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Australia, Dairy and Products Annual

GAIN Report, October 2016

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Report Highlights:
Australia is a comparatively small producer of milk but normally accounts for around five percent of international dairy trade. In recent years, the industry has been affected by adverse seasonal conditions and low international dairy prices. Despite investment in processing, liquid milk output is forecast to decline due to a smaller dairy herd. A more positive trend is the turnaround in seasonal conditions since mid-2016, which has contributed to significant pasture growth. Post forecasts milk production to reach a decade low of 9.3 million MT in 2017, which will limit production of cheese, butter and milk powder. Rebuilding of the dairy herd is expected to be gradual over the coming decade. Domestic consumption of milk and other dairy products is comparatively stable.

Commodities:
Dairy, Butter
Dairy, Cheese
Dairy, Dry Whole Milk Powder
Dairy, Milk, Fluid
Dairy, Milk, Nonfat Dry

EXECUTIVE SUMMARY:

The dairy industry is the third largest agricultural industry in Australia and dairy exports normally account for around five percent of international dairy trade. In recent years, the industry has been affected by adverse seasonal conditions and low international dairy prices. Post forecasts milk production will fall to 9.3 million MT in 2017 as a result of a smaller dairy herd and exits from the industry.

Milk production in 2016 is estimated at 9.5 million MT, below the official forecast of 9.7 million MT due to the smaller herd. Lower milk production will limit expansion in the production of cheese, butter and milk powder while rebuilding of the dairy herd is expected to be gradual over the next decade. Average dairy farms incomes fell significantly over 2016 due to lower farm gate milk prices and lower milk production per farm.

A more positive trend is the turnaround in seasonal conditions since mid-2016, which has contributed to significant pasture growth. Heavy rain across much of eastern Australia has broken the drought like conditions in some regions and reduced the need for feed supplements. In addition, the stable domestic market has supported the dairy industry in the face of declining international prices and demand. Overall trends for supermarket sales of major dairy categories have remained fairly stable. Exports of specialty and bulk cheeses from the United States to the Australian market have declined slightly over 2016 due to competition from New Zealand.

Note: The data and analysis presented in this report are current to USDA's September Official estimates.

SEASONAL OUTLOOK

Dairy farming in Australia is mainly pasture-based and the volume of milk production is significantly affected by seasonal conditions and the reliability of rainfall. In early 2016, most dairy and cropping areas in the south-east States and Tasmania received very low levels of rainfall. Above average rainfall from May 2016 to date has removed concerns over shortages of feed for dairy farmers. The three-month rainfall forecast to December 2016 is also positive (Chart 1) although intense rain in some regions and waterlogging could affect dairy production.

Soil moisture and water storages across eastern Australia have now returned to more normal levels, while the average price for temporary water for irrigation has halved compared to the same time in the previous year. Pasture growth is expected to be both significant and sustained in in Victoria, which accounts for 60 percent of the national dairy herd. Better seasonal conditions and lower prices for feed and water are likely to reduce herd culling over 2017 and pave the way for gradual herd rebuilding. The three-month temperature outlook for October to December 2016 is for above average temperatures in Victoria and South Australia cropping regions and average conditions in other cropping regions (Chart 2).

Chart 1: Likelihood of above median rainfall from October to December 2016

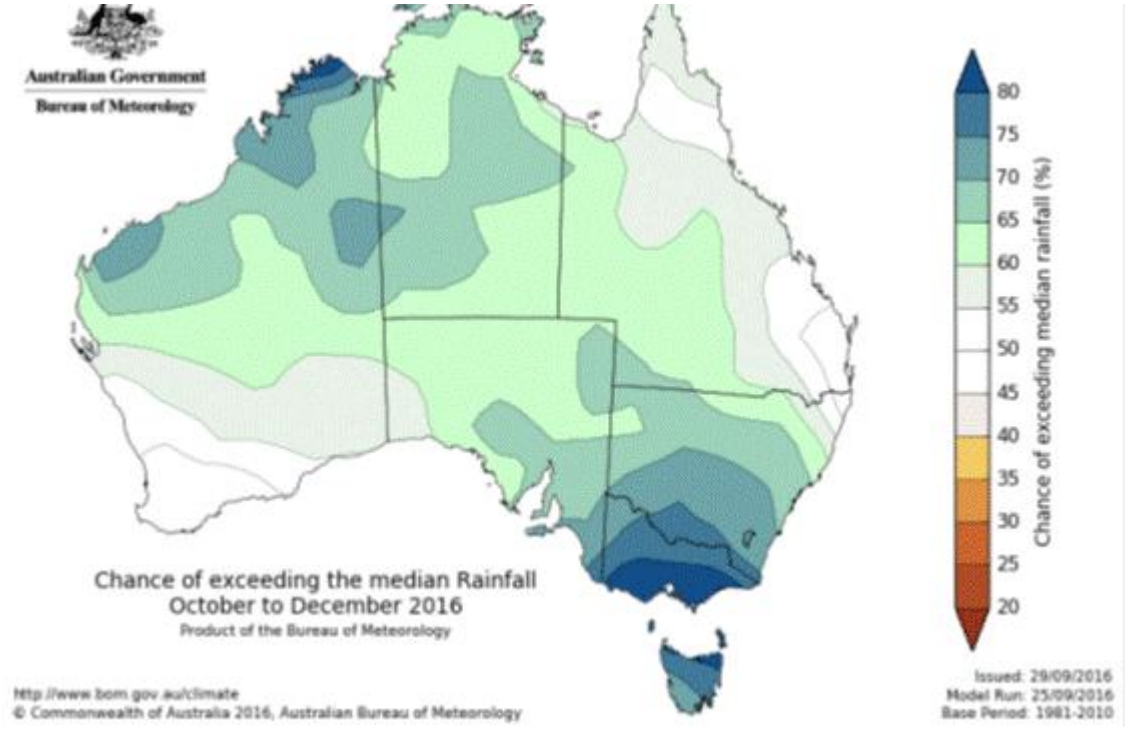
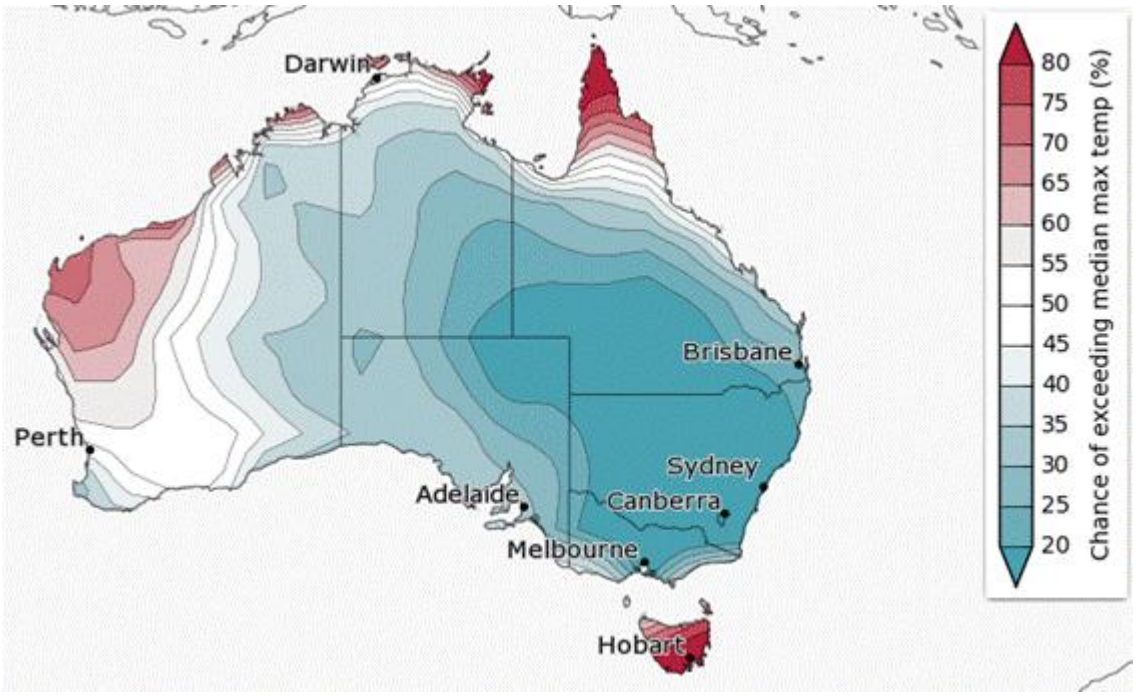


Chart 2: Likelihood of above median temperatures from October to December 2016



Source: Australian Bureau of Meteorology (September, 2016).

FLUID MILK

Production

Post forecast the volume of milk production in Australia at 9.3 million MT in 2017. Post estimates that milk production in 2016 will be 9.5 million MT, slightly below the official USDA estimate of 9.7 million MT. This forecast is based on the decline in the dairy herd due to culling and exits from the industry. Better seasonal conditions from mid-2016 will improve pasture growth in most areas and reduce the need for grain feed supplements. The greater availability of irrigation water will also lower industry costs. Together these trends could be expected to reduce culling over the year with gradual rebuilding of the dairy herd in Australia over the next decade.

Overall, about 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 New South Wales (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 the largest export markets.

Victoria accounts for two thirds of milk production and half of dairy product manufacturing is located in the State. 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.

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, SA and Tasmania are export-oriented. In 2016, the average herd size is expected to be around 260 cows. The largest one fifth of dairy farms accounts for around 80 percent of total output. There has been a trend to increasing farm and herd sizes as smaller farmers leave the industry.

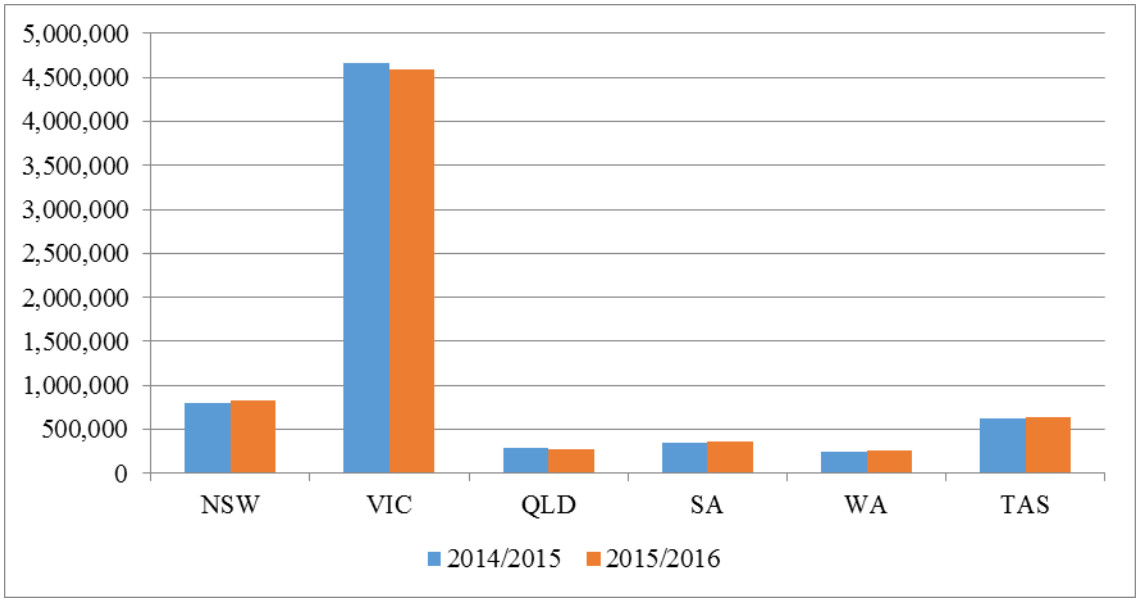
Lower Milk Prices Introduced

The Australian dairy industry has been partially insulated by the decline in international dairy prices with around 60 percent of production consumed on the domestic market. However, in April 2016, the major processors cut farm gate milk prices from A$6.00 to A$5.50 (US$4.50 to US$4.13) a kilogram for milk solids and prices have since fallen below A$5.00 (US$3.75). Following the cuts to milk prices, some of which were retroactive, many farmers became unprofitable and in response culled dairy cattle and removed cows from production. As a result, milk production is expected to decline further over 2017 although the favorable rainfall will boost pasture growth and the sustainability of farms which have relied on buying feed in earlier seasons.

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 in August and September. This system is normally used by two-thirds of Australian dairy farms, especially in Tasmania, Victoria and SA. The other production system is year round production, in which calving is spread throughout the year making milk production stable over the year. This system is used in areas supplying fresh milk for domestic production.

Chart 3: Australian milk production by State, 2014-16 ('000 liters)



Note: Australian financial years from July to June.
Source: Dairy Australia (2016).

A recent 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. However poor seasonal conditions in recent years impacted on this trend.

Consumption:

Australian fresh milk consumption is comparatively stable. The major supermarkets in Australia account for 80 percent of total retail sales and half of dairy product sales. Their share increased from

late 2011, when the retail price of plain brand milk fell to around A$1 a liter for private supermarket milk labels. Plain branded milk accounts for over half of drinking milk sales. Post has forecast that domestic milk consumption will decline slightly in 2017 because of the maturity of the market and in view of declining overall production.

There has been a continued shift away from full cream milk. Between 2000 and 2014, the share of low fat varieties of fresh white milk sales rose from 30 to 40 percent. 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. 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 to these products due to consumer concerns over allergies and fat content.

Trade:

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, a small but growing quantity of liquid milk has been airfreighted mainly to China in recent years, usually as UHT milk. Changes in Chinese import regulations and safety standards for a range of products including milk have occurred and bilateral talks are proceeding on these issues. It is expected that Australian exports of UHT milk will grow significantly in the future.

Production, Supply and Demand Data Statistics:

Table 1: Production, supply and distribution of fluid milk ('000 MT)

Dairy, Milk, Fluid	2015		2016		2017	
Market Begin Year	Jan 2015		Jan 2016		Jan 2017	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Cows In Milk	1705	1705	1690	1690	0	1660
Cow Milk Production	9800	9800	9700	9500	0	9300
Other Milk Production	0	0	0	0	0	0
Total Production	9800	9800	9700	9500	0	9300
Other Imports	5	5	5	5	0	5
Total Imports	5	5	5	5	0	5
Total Supply	9805	9805	9705	9505	0	9305
Other Exports	166	166	225	225	0	200
Total Exports	166	166	225	225	0	200
Fluid Use Domestic Consumption	2700	2700	2700	2600	0	2500
Factory Use Consumption	6939	6939	6780	6680	0	6605
Feed Use Domestic Consumption	0	0	0	0	0	0
Total Domestic Consumption	9639	9639	9480	9280	0	9105
Total Distribution	9805	9805	9705	9505	0	9305

Note: 'New Post' data reflect author's assessments and are not official data. Data for fluid milk is reported in 1,000 metric tons and one liter of cows' milk weighs around 1.03 kg.

CHEESE

Production

Post forecasts that production of cheese in 2017 will be stable at 330,000 MT, in line with the official forecast for 2016. Domestic demand for cheese in Australia is comparatively mature and exports account for about half of production. Within this market, consumers are gradually switching to more packaged hard cheeses and away from processed cheese, while demand for lower fat cheese varieties has increased. Over 70 percent of cheese production occurs in Victoria. 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.

Consumption:

Cheese consumption in Australia has been stable in recent years at around 13.5 kg per capita. Cheddar cheese remains the most popular variety with around half of the market, followed by a wide range of non-cheddar cheese varieties. Cheddar's share has fallen slightly 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 made through the major supermarket chains. In 2016, private cheese labels are expected to have accounted 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 because of exchange rate changes.

Trade:

Post forecasts that exports of cheese in 2017 will be stable at 170,000 MT, in line with the official forecast for 2016 and accounting for about half of cheese production. Post estimates that cheese exports in 2016 will also be 170,000 metric tonnes. Imports of cheese into Australia are forecast by Post at 100,000 MT in 2017, the same as in the previous year. 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 use in the Australian pizza industry, but exchange rate changes and competition from New Zealand have led to a decline in this segment of imports. Similarly, demand for imported premium cheeses increased a few years ago because of the strength of the Australian dollar but has since declined.

Production, Supply and Demand Data Statistics:

Table 2: Production, supply and distribution of cheese ('000 metric tons)

Dairy, Cheese	2015		2016		2017	
Market Begin Year	Jan 2015		Jan 2016		Jan 2017	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	34	34	33	33	0	49
Production	324	324	330	330	0	330
Other Imports	89	89	100	100	0	100
Total Imports	89	89	100	100	0	100
Total Supply	447	447	463	463	0	479
Other Exports	170	170	175	170	0	170
Total Exports	170	170	175	170	0	170
Human Domestic Consumption	244	244	249	244	0	244
Other Use, Losses	0	0	0	0	0	0
Total Domestic Consumption	244	244	249	244	0	244
Total Use	414	414	424	414	0	414
Ending Stocks	33	33	39	49	0	65
Total Distribution	447	447	463	463	0	479

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

BUTTER

Production

Post forecast that production of butter (and butter oil/anhydrous milk fat) in Australia will be 100,000 MT in 2017, the same as its estimate for the previous year. Post's estimate for butter production in 2016 is 15 percent below the official estimate due to lower milk availability and a sharp decline in export demand. The latter was mainly due to the Russian import embargo, which removed a growing market for Australian exporters, as well as increased competition from EU producers. In recent years, milk processors have reacted to lower overseas demand for butter by switching butterfat into other product streams, such as cream cheese and other cheeses that provide a better return.

Consumption:

Annual per capita consumption of butter in Australia has been relatively stable at around four kilograms per capita. However, there has been an increasing preference for butter as a spread as consumers move away from margarine. This trend has been based on reconsideration by consumers of the relative health benefits of the two spreads. Over 2016, private labels of supermarkets accounted for one third of butter sales. Butter oil or anhydrous milkfat (AMF) is mainly produced for export but also for domestic bakery and confectionary production.

Trade:

Post's forecast for 2017 is for Australian butter exports to be stable at 30,000 MT. Normally 30 to 40 percent of Australian butter production is exported and the Russian import embargo has constrained the share of butter going to exports. Post notes that Russia was Australia's largest export market for butter prior to the embargo in 2014.

Production, Supply and Demand Data Statistics:

Table 3: Production, supply and distribution of butter ('000 MT)

Dairy, Butter	2015		2016		2017	
Market Begin Year	Jan 2015		Jan 2016		Jan 2017	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	64	64	77	77	0	69
Production	120	120	115	100	0	100
Other Imports	23	23	22	22	0	25
Total Imports	23	23	22	22	0	25
Total Supply	207	207	214	199	0	194
Other Exports	35	35	30	30	0	30
Total Exports	35	35	30	30	0	30
Domestic Consumption	95	95	100	100	0	100
Total Use	130	130	130	130	0	130
Ending Stocks	77	77	84	69	0	64
Total Distribution	207	207	214	199	0	194

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

SKIM MILK POWDER

Production

Post forecasts that production of SMP will be stable at 260,000 MT in 2017. Milk powder is categorized as either of SMP or WMP depending on the fat content. In Australia, milk powder is mainly used as a food ingredient and to manufacture infant formula, which is increasingly exported. Skim milk powder accounts for over 50 percent of local production of milk powder.

Consumption:

In the domestic market, demand for skim milk powder has been increasing compared to whole milk powder as Australians seek to reduce the fat content of milk products.

Trade:

Post forecasts that exports of SMP will be stable at 190,000 MT in 2017. 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. 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.

Production, Supply and Demand Data Statistics:

Table 5: Production, supply and distribution of skim milk powder ('000 MT)

Dairy, Milk, Nonfat Dry	2015		2016		2017	
Market Begin Year	Jan 2015		Jan 2016		Jan 2017	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	62	62	57	57	0	55
Production	266	266	260	260	0	260
Other Imports	10	10	8	8	0	0
Total Imports	10	10	8	8	0	0
Total Supply	338	338	325	325	0	315
Other Exports	201	201	190	190	0	190
Total Exports	201	201	190	190	0	190
Human Domestic Consumption	80	80	80	80	0	80
Other Use, Losses	0	0	0	0	0	0
Total Domestic Consumption	80	80	80	80	0	80
Total Use	281	281	270	270	0	270
Ending Stocks	57	57	55	55	0	45
Total Distribution	338	338	325	325	0	315

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

DRY WHOLE MILK POWDER

Production:

Post forecasts that WMP production will be stable at 95,000 MT in 2017 as export demand replaces falling domestic demand for this product, which is used in the manufacture of infant formula for children under the age of two years. Post notes that there has been significant investment in recent years to increase Australian production of WMP and infant formula. This was in response to strong demand from Asian markets and especially from China.

Major producers Bega Cheese, Fonterra Australia and Murray Goulburn have all announced partnerships with established nutritional companies to develop their infant formula businesses for export markets. Fonterra purchased a share in Chinese infant formula company Beingmate, whilst Murray will invest up to A$300 million in a new infant formula plant in Victoria. Chinese demand for infant formula is expected to be resilient despite a build-up in stocks in that country.

Consumption:

WMP is mainly used in food manufacturing and for infant formula for younger infants. In the domestic market, demand for WMP has been falling as Australians seek to reduce the fat content of milk products. However, export demand for WMP from Australia has been strengthening.

Trade:

Post forecasts that WMP exports from Australia will meet the official forecast of 70,000 MT in 2016 and will continue to grow to reach 80,000 MT in 2017. 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. 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.

Production, Supply and Demand Data Statistics:

Table 4: Production, supply and distribution of whole milk powder ('000 MT)

Dairy, Dry Whole Milk Powder	2015		2016		2017	
Market Begin Year	Jan 2015		Jan 2016		Jan 2017	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	19	19	15	15	0	6
Production	95	95	95	95	0	95
Other Imports	11	11	10	10	0	10
Total Imports	11	11	10	10	0	10
Total Supply	125	125	120	120	0	111
Other Exports	65	65	70	70	0	80
Total Exports	65	65	70	70	0	80
Human Domestic Consumption	45	45	44	44	0	30
Other Use, Losses	0	0	0	0	0	0
Total Domestic Consumption	45	45	44	44	0	30
Total Use	110	110	114	114	0	110
Ending Stocks	15	15	6	6	0	1
Total Distribution	125	125	120	120	0	111

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