

# THE INVESTOR'S GUIDE TO THE NEW ZEALAND DAIRY INDUSTRY 2017

*Part of the New Zealand Food & Beverage Information Project*  
*FINAL REPORT; v104; June 2017*

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**MINISTRY OF BUSINESS,  
INNOVATION & EMPLOYMENT**  
HĪKINA WHAKATUTUKI



**NEW ZEALAND  
TRADE & ENTERPRISE**

**Ministry for Primary Industries**  
Manatū Ahu Matua



## STEERING & GUIDANCE

This project would not have been possible without the strong guidance of our Steering Committee. In particular, we would like to thank Andrew McCallum of MBIE for his tireless energy in keeping this project on track, while at the same time pushing us forward.

Draft versions of parts of this document were distributed to key firms for comment, addition or correction. This was done in the form of emails and phone calls. We thank those who helped us in this process for their time and effort. We also thank those who provided their photos.

We are grateful for all of the input we have received, but the report is ours and any errors are our own.

Finally, we acknowledge the support of the Ministry of Business, Innovation and Employment (MBIE), New Zealand Trade and Enterprise (NZTE) and the Ministry of Primary Industries (MPI). It is their funding that has made this report possible.

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Key global trade data analysed in all sections of the F&B Information project are calculated and displayed in US\$. This is done for a range of reasons:

- It is the currency most used in international trade
- It allows for cross country comparisons (e.g. vs. Denmark)
- It removes the impact of NZD exchange rate variability
- It is more comprehensible to non-NZ audiences (e.g. foreign investors)
- It is the currency in which the United Nations collects and tabulates global trade data

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# PURPOSE Why did the New Zealand government undertake this project?

## What is the purpose of the project?

The project presents a comprehensive, business-focused overview of the total New Zealand food and beverage industry.

The project pulls together the available information on the food and beverage industry into one place, in a form which is familiar and useful to business. The reports contain analysis and interpretation of trends and opportunities to materially assist with business strategy and government policy.

The information will be of vital use to businesses, investors, government, and research institutions as the industry expands and diversifies. This industry view will be very useful to government, enabling better dialogue and the opportunity to address issues collectively.

## What benefit will this bring to businesses?

- As support for raising capital
- As a base of market intelligence to enable business to be much more targeted in their own market research
- Reviewing and informing offshore market development (including export and investment) strategies
- Assisting in identifying areas of innovation and R&D for the future
- Identifying strategic partners and collaborators
- Enabling a company to benchmark performance with that of its competitors
- Monitoring industry activity
- Gaining a better understanding of their own industry sector
- Identifying internal capability needs or external inputs

## How will government use the reports?

While the government collects large amounts of industry data, little of this has an investor or industry-driven perspective.

This information will provide much greater insight into the industry, which is useful for a range of policy developments, from regulatory frameworks to investment in science and skills and facilitating access to international markets.

In particular, a single source of factual information will enable government agencies to better coordinate their efforts across the system and be more responsive to addressing industry issues.

All project resources are available online at: [www.foodandbeverage.govt.nz](http://www.foodandbeverage.govt.nz)

# **SITUATION SUMMARY** New Zealand primarily competes with other dairy cooperatives to supply bulk dairy ingredients to corporate consumer-focused dairy manufacturers primarily in dry/tropical areas

## **NEW ZEALAND**

New Zealand is the eight largest milk producing country in the world and accounts for 3% of global milk production. New Zealand produces a similar amount of milk to other temperate countries of a similar size (e.g. the UK, France). However as it only has a small population (similar to Singapore), the excess is exported.

The success of New Zealand in dairy is built around a natural environment conducive to agriculture. New Zealand, surrounded by the Pacific Ocean, has the light of Spain together with the climate of Bordeaux. This climate will also moderate the effects of global warming going forward (relative to large continents). New Zealand utilises a seasonal system aligned with feed availability. In winter most processing facilities close. However, this relatively remote location means New Zealand has historically focused on exporting transport-friendly dairy ingredients (e.g. milk powder), driven by the need to process the surge in seasonal milk rather, than perishable products.

As regional dairy collection is a natural monopsony, dairy farmers in all developed countries control milk collection and primary processing through farmer-owned cooperatives. About 84% of New Zealand milk supply is controlled by Fonterra, a farmer-owned cooperative. Fonterra was formed in 2001 in a mega-merger of dairy cooperatives and the export dairy

board (a former monopsony<sup>1</sup>). Most Western countries (e.g. Denmark, Netherlands) are in a similar situation with a single large regional farmer-controlled firm.

## **COMPETITORS**

In most developed countries, dairy co-op's transform milk from their farmers into bulk dairy ingredients or basic dairy products, sold under the co-op's own brand or retailer store brands.

New Zealand primarily competes with other dairy cooperatives from developed Western countries to supply bulk dairy ingredients. South America cooperatives are an emerging rival. While the BRIC<sup>3</sup> countries are four of the top five milk producers in the world, they are not yet major exporters as they effectively consume all they produce, and will do for the foreseeable future.

New Zealand does not directly compete with major corporate dairy players (e.g. Nestle, Kraft, Abbott), who are in most cases its major customers.

## **CONSUMERS/MARKETS**

Global dairy prices have taken a strong correction in the last few years, with the new supply attracted by high prices pushing prices down. However New Zealand continues to experience strong demand for its dairy products and volumes continue to grow,

driven by growing demand in China, SE Asia and NA/ME/CA<sup>2</sup>.

Dairy consumption is flat in the developed world. Developed temperate countries (e.g. Canada, Japan) typically produce all the milk they consume and use trade barriers to protect their dairy farmers - therefore New Zealand has limited access to these markets.

Dairy consumption is growing in the developing world faster than domestic production. In addition, dry and tropical countries are unable to efficiently produce all the milk they consume, therefore they import bulk dairy ingredients.

In most markets, developed or developing, corporate consumer-focused dairy manufacturers buy ingredient dairy and transform these into defensible consumer dairy-based foods (e.g. yoghurt).

In Australasia (AU/NZ), Fonterra and Goodman Fielder/Meadow Fresh (but not other key NZ milk processor/exporters) sell significant amounts of branded consumer dairy products to consumers. New Zealand also has a fast growing and rapidly emerging second tier of domestic and export processors and marketers.

1. A monopsony is a monopoly on buying not selling; 2. North Africa Middle East, Central Asia; 3. BRIC = Brazil, Russia, India and China



# DRIVERS OF SUCCESS

New Zealand's success in dairy has three key drivers



## IDEAL CLIMATE & SOILS

Low production cost

- Temperate climate similar to Italy or France
- Temperature extremes moderated by surrounding ocean
- Isolated location protected by natural barriers
- Climate aligns with grass-fed production system



## EFFICIENT PEOPLE & SYSTEMS

Trusted by consumers

- Long history of dairy production
- Industry focused on export for over 100 years
- Large pool of skilled people
- Strong systems and support networks
- Well-organised, cohesive industry



## LOCATION & MARKETS

High share in key products

- Excellent proximity to East & South-East Asian markets
- CER agreement with Australia
- NZ was the first developed country to sign a free trade deal with China (2008)

# **INVESTMENT OPPORTUNITIES** Potential areas for new and/or external investment primarily transforming ingredients rather than producing more ingredients

Farmers currently control about 85% of New Zealand dairy industry, limiting opportunities for external investment to take control of a significant share of the available milk supply. Farmers own Fonterra, Westland, Tatua and Dairy Goat Coop. “[Globally, dairy cooperatives have] three main objectives: (1) to maximise the milk price paid to farmer members, (2) to process and market the milk collected every day from member farms and (3) to maintain farmer control.”

Opportunities for new investment in ingredient dairy (particularly milk powder) are relatively limited. Globally, milk collection/disposal is dominated by farmer-owned co-operatives (typically marginal cost sellers). Processing of raw dairy into simple ingredients is a relatively high capital, low return sector. New Zealand is already fully capitalised with ingredient dairy processing plants and the existing co-ops continue to invest in new capacity to defend their position.

The domestic New Zealand dairy market is small, relatively saturated and low growth. New Zealand already has high levels of dairy consumption per capita and the market is dominated by two key players - Fonterra and Goodman Fielder/Meadow Fresh, each with a fluid milk core. Domestic product innovation is often copied from other markets (e.g. yoghurt). In addition, store brands are growing in most core dairy categories.

This is not to discount the potential for further investment, however those seeking significant growth should focus on export products outside of ingredient dairy. Synlait is a large export-focused listed firm (albeit with large cornerstone shareholders). And New Zealand has attracted a wide range of global investors in its dairy industry over the past fifteen years (since deregulation). Chinese investors have been particularly active recently as a result of (1) China’s milk deficiency and (2) the highly successful New Zealand-China FTA.

## **KEY OPPORTUNITIES**

For most potential investors, we believe there are three key opportunities for high return investment currently:

### **1. VALUE-ADDED DAIRY PRODUCTS**

There are strong opportunities for growth in export-focused, value-added dairy products, including infant formula, fitness-oriented whey powders and other dairy nutritional products (e.g. nutritional shakes). The historical model of New Zealand producing transport-friendly ingredients and in-market firms transforming these into consumer products is breaking down. Changing technology, changing market demand and new trade agreements have changed industry economics and created new opportunities for value to be added in New Zealand.

In response, significant new investment is occurring to produce a range of consumer-ready dairy products in New Zealand, including infant formula, UHT milk, “growing up” milk (GUMP) and other dairy nutritional products.

### **2. NICHE DAIRY**

There are opportunities for growth in smaller segments of export oriented specialty, niche dairy products that “fly under the radar”. Examples of successful segments in this space include specialty single serve butter (e.g. Canary) and premium specialty cheese (e.g. Whitestone), fresh milk (e.g. Oravida).

### **3. DAIRY-BASED PROCESSED FOODS & BEVERAGES**

There are very strong opportunities for investment in processed foods and beverages that contain significant dairy ingredients. Examples of products with strong potential for further investment, include chocolate, frozen bakery (e.g. croissants are ~50% butter) and dairy-derived nutraceuticals. Further discussion of these opportunities occurs in the related “Processed Foods” report in this series.

# SWOT ANALYSIS New Zealand is in a strong position in the global dairy industry, but the environment is becoming more challenging going forward

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>- Low cost predominantly pasture-based dairy production system</li> <li>- National champion Fonterra with resources to address global markets and opportunities; strong second tier of growing firms</li> <li>- High standards of food safety and animal welfare</li> <li>- Regulatory credibility</li> <li>- 130+ years experience in exporting dairy</li> <li>- Strong position in global dairy industry outside Europe and North America</li> <li>- Growing market leadership position in Australasia/Oceania</li> </ul>	<ul style="list-style-type: none"> <li>- Almost “all our eggs in one basket” (Fonterra); Fonterra is limited in its ability to add value due to the risks associated with competing with its own customers</li> <li>- No rich dairy cultural heritage or tradition to draw from for new product development (vs. France or Italy)</li> <li>- Only a mid-large sized milk producer in an absolute sense (vs. India, Brazil or US)</li> <li>- Limited defensibility of commodity and ingredient position</li> <li>- Significant trade barriers limiting New Zealand entry to North America and Europe</li> <li>- Farmgate price mixes returns on milk with returns on Fonterra ownership, leading to dairy land price increases, leading to decreased international competitiveness</li> <li>- Despite strong food safety systems &amp; reputation, a few high-profile issues (e.g. whey, nitrates)</li> </ul>
OPPORTUNITIES	ISSUES/THREATS/RISKS
<ul style="list-style-type: none"> <li>- Intensification through additional supplementary feed smoothing seasonal peak increasing total milk production and improving return on assets</li> <li>- Growing dairy product consumption in developing world; dry and tropical countries not able to produce all the milk they consume</li> <li>- Chinese dairy consumption per capita growing rapidly drawing in significant imported dairy product (in the short to medium term)</li> <li>- Asians more likely to be dairy intolerant, therefore different consumption patterns (e.g. yoghurt drinks; infant formula)</li> <li>- On-going consolidation of the global dairy industry, particularly in South America</li> <li>- Changing global weather patterns (also a threat)</li> <li>- Further investment in in-market production (e.g. Fonterra sourcing milk outside of NZ)</li> <li>- Removal of dairy subsidies into Europe (may also be a threat)</li> </ul>	<ul style="list-style-type: none"> <li>- Intensive feedlot dairy model (e.g. California) improving productivity faster than pasture system (e.g. NZ/AU)</li> <li>- Southern South America rapidly implementing the AU/NZ pasture system (e.g. Argentina, Uruguay, Brazil)</li> <li>- Push-back due to environmental concerns (e.g. water pollution, groundwater use)</li> <li>- The boom/bust economic cycle expresses itself in China</li> <li>- Experience of Japan &amp; South Korea suggest Chinese dairy consumption growth has another few years to run; after this point, China will likely be self-sufficient and possibly a major exporter</li> <li>- EU regulatory changes leading to increased production by some countries (e.g. Ireland) and decreased production by others</li> <li>- Developing country consumers, currently perceive dairy as healthy; however, science, attitudes or opinions could turn negative</li> <li>- Adoption of genetically modified animals or GM feed by poor countries, changing international competitive dynamics</li> <li>- Non-dairy substitutes (e.g. soy) more suited to East Asian tastes and physiology</li> </ul>

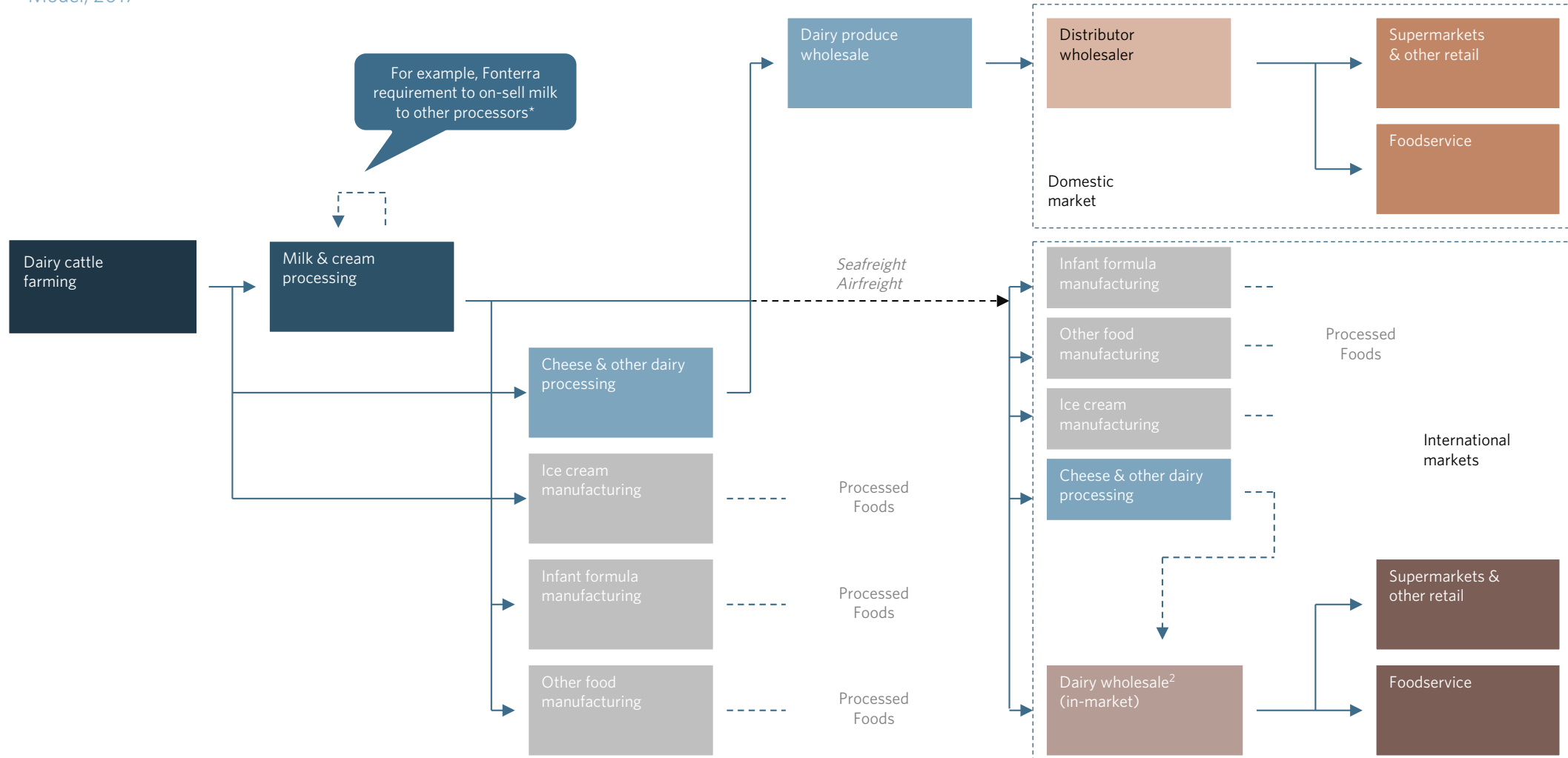


# SUPPLY CHAIN

New Zealand has a robust dairy supply chain that produces raw milk, then transforms, transports and delivers ultimately as consumer-ready products in markets around the world

## SIMPLIFIED MODEL OF NEW ZEALAND DAIRY SUPPLY CHAIN<sup>1</sup>

Model; 2017



\* See <http://www.mpi.govt.nz/law-and-policy/legal-overviews/primary-production/dairy-industry-restructuring-act/1>. Non-dairy supply chain is covered in the processed foods section; 2. There may be one or more layers of wholesaling, depending on product or market; some wholesale functions may be captive inside retailers or foodservice operators; Source: Coriolis

# Global Market Overview

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- + Consumption
- + Global situation
- + Import demand
- + Key markets
- + Export demand
- + Market growth

01

New Zealand leverages a significant per capita milk surplus and low cost production system into a strong and growing position in the global dairy trade

### **CONSUMPTION**

- Global milk consumption is concentrated in the Americas, Europe and South Asia
- Global per capita milk consumption is showing relatively low growth (~1%)

### **PRODUCTION**

- Global milk production is 802m tons of raw milk (82% cow milk, 14% water buffalo, 4% all other), growing at 2% CAGR
- Total global production has doubled in the last fifty years
- Cow milk production is spread across the globe with growth varying by region
- New Zealand produces 3% of the world supply and is growing production
- Per capita milk production varies widely by country, with much of the world producing very little per person
- New Zealand produces a significant milk surplus relative to its population

### **GLOBAL TRADE**

- Global cross-border dairy trade volumes are growing (4% CAGR)
- Price gains are moderate across the cycle leading to moderate value growth

### **DEMAND: PRODUCT CATEGORIES**

- The total global dairy product trade is spread across a wide range of products

- Cheddar cheese (\$16.4b), whole milk powder (WMP) (\$8.3b) and skim milk powder (SMP) (\$6.8b) stand out for their absolute volumes
- Milk albumins, fresh cheese (“mozzarella”), SMP and regular fluid milk stand out for global growth over the past five years

### **DEMAND: IMPORT MARKETS**

- Total global cross-border demand for dairy products was US\$68.9b in 2015
- Europe (including inter-EU) is the single largest market
- China/Hong Kong stand out for dairy import market growth
- Markets vary in average dairy import price, with the USA standing out as a high value market

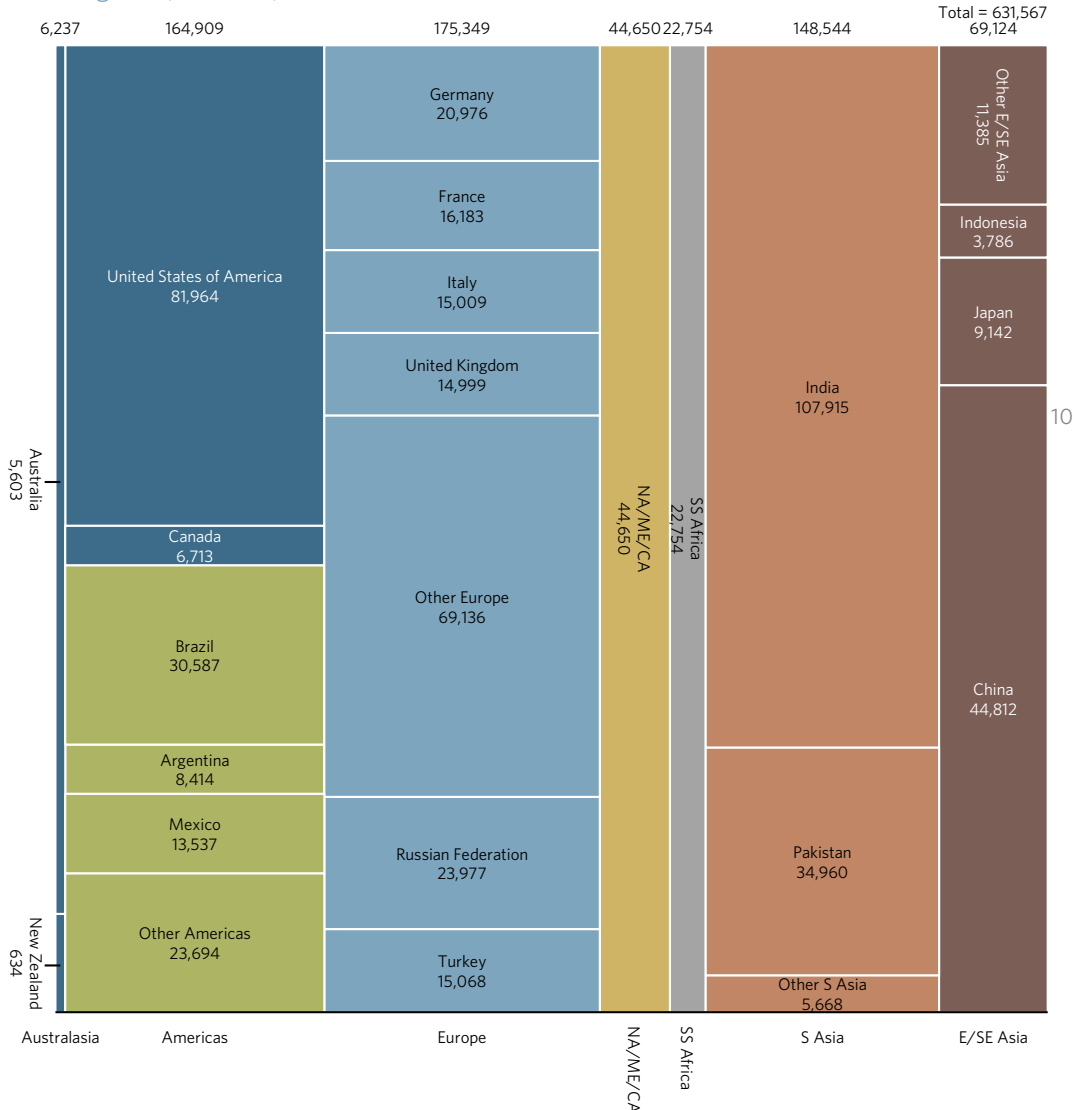
### **SUPPLY: EXPORTERS**

- New Zealand, the USA and Northern Europe lead in the global dairy trade
- New Zealand has gained +3.5% of global export share in the past decade and recently replaced Germany as the global share leader
- New Zealand, the USA and Malaysia stand out for driving total value growth over the past five years
- “Other Europe” stands out for growing volume at falling prices (more cross-border raw milk for processing)
- Exporters vary in their average dairy export price, with New Zealand and most key value-added competitors clustered in the US\$2-3/kg range

Global milk consumption is concentrated in the Americas, Europe and South Asia; global per capita milk consumption (all forms) is showing relatively low growth (~1%)

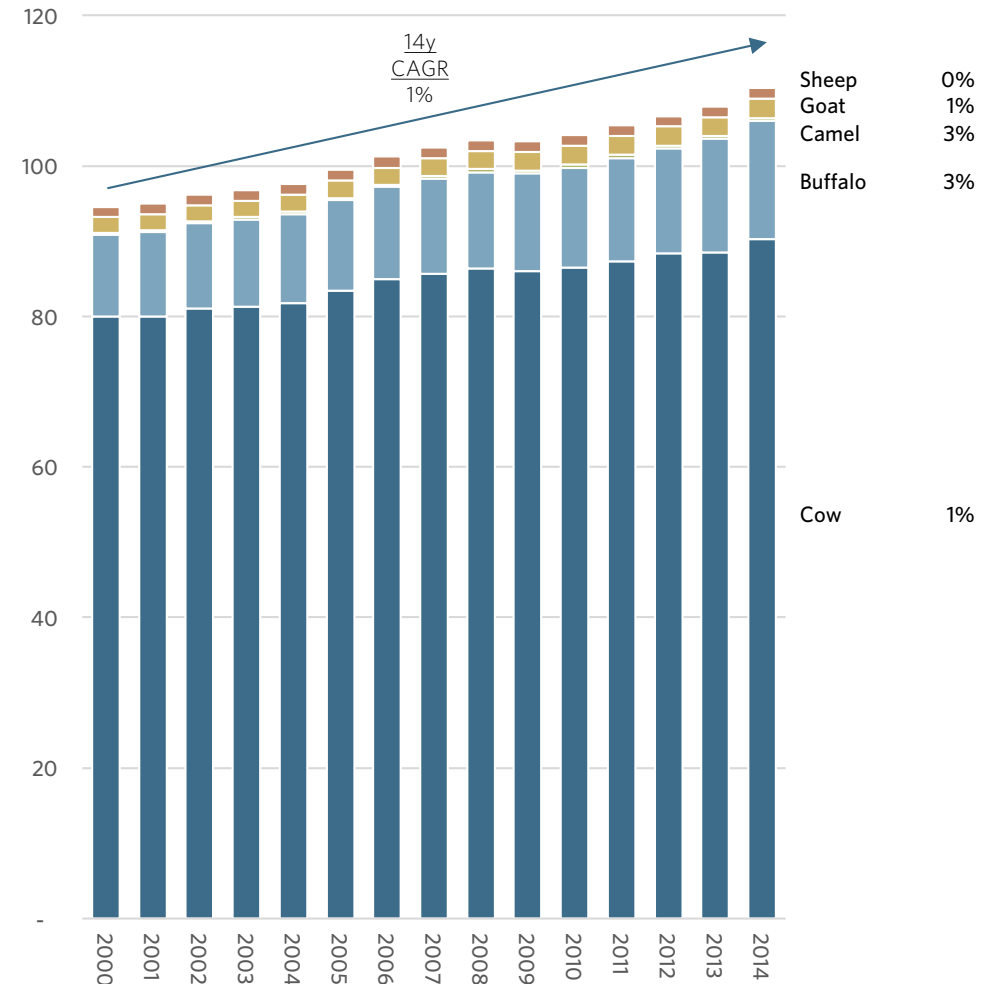
### AVAILABLE DAIRY FOOD SUPPLY BY REGION\*

Kilograms; millions; 2013



### 15Y GLOBAL MILK CONSUMPTION PER CAPITA BY SPECIES\*\*

Kilograms/person; 1961-2011

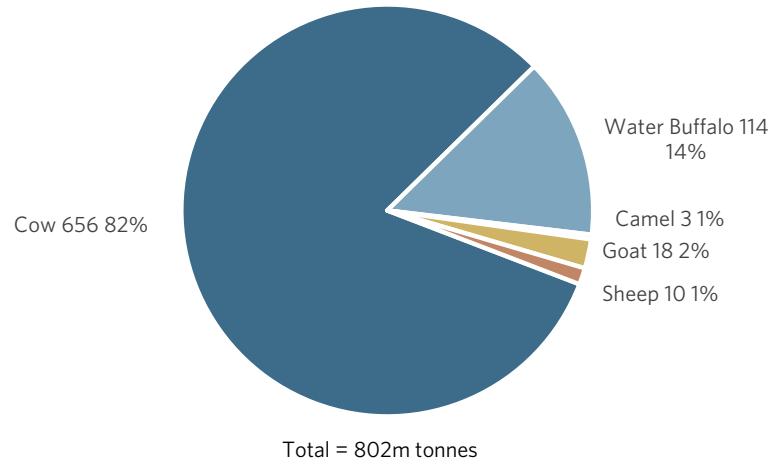


\* Includes non-cow; includes milk, cultured and cheese; excludes butter, infant foods and ingredient/processed; \*\* data is apparent consumption all forms; Source: UN FAO; Coriolis analysis

Global milk production is 802m tons of raw milk (82% cow milk, 14% water buffalo, 4% all other), growing at 2% CAGR; total global production has doubled in the last fifty years

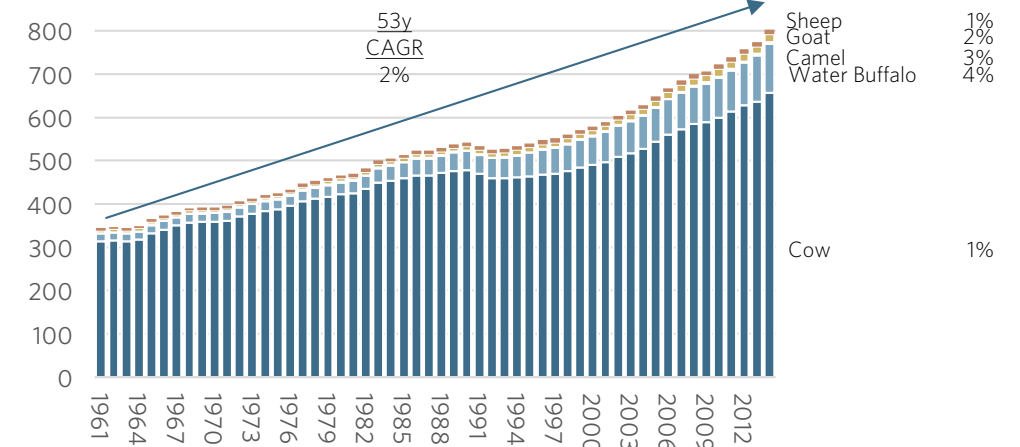
### GLOBAL MILK PRODUCTION BY SPECIES

Tonnes; million; 2014



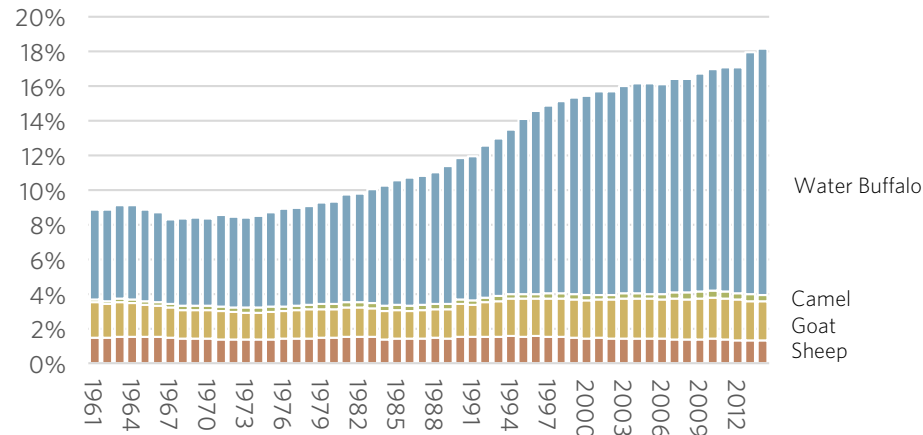
### 53 YEAR GLOBAL MILK PRODUCTION BY SPECIES

Tonnes; million; 1961-2014



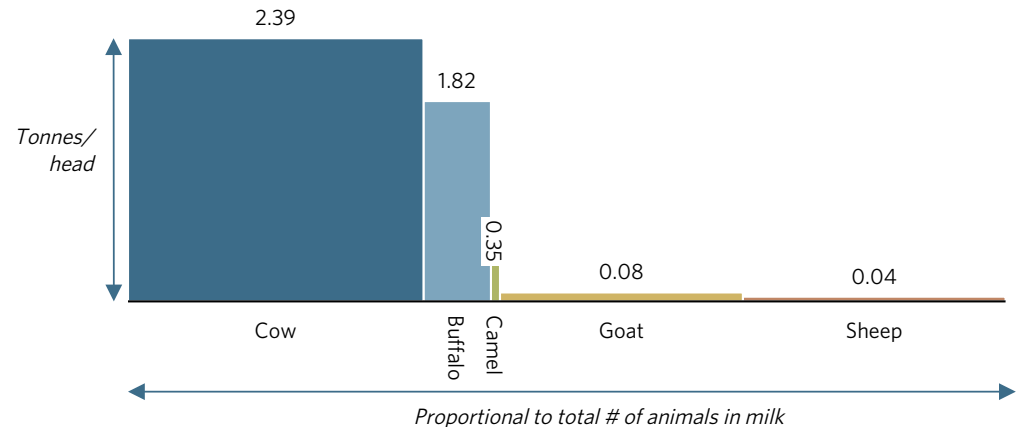
### NON-COW SHARE OF TOTAL GLOBAL MILK PRODUCTION

% of tonnes; 1961-2014



### GLOBAL YIELD BY SPECIES

Animals vs. tonnes/head; 2014



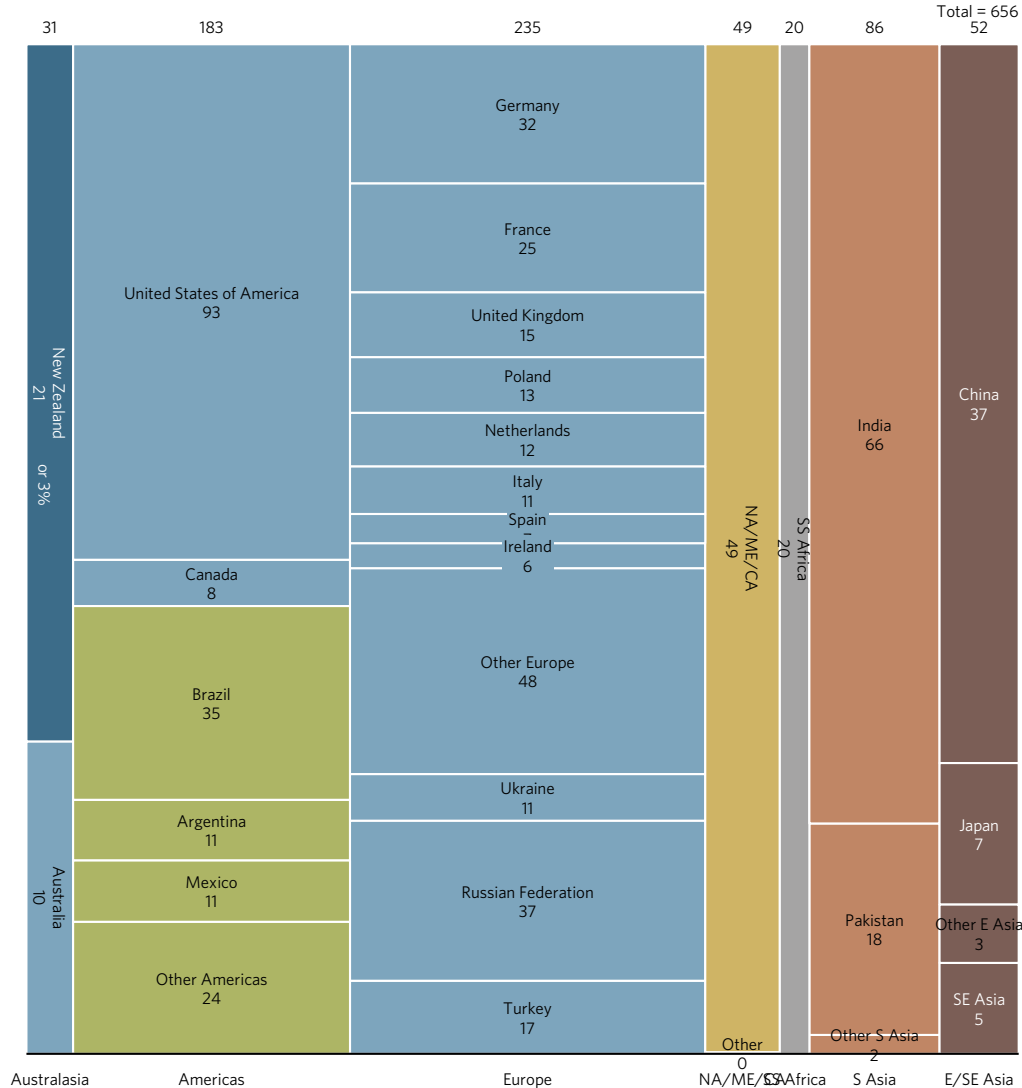
\* CAGR = Compound Annual Growth Rate; Note: 2014 is latest data available for all countries globally in FAOSTAT as of February 2017; Source: UN FAO database; Coriolis analysis



Cow milk production is spread across the globe with growth varying by region; New Zealand produces 3% of world supply and is growing production volume

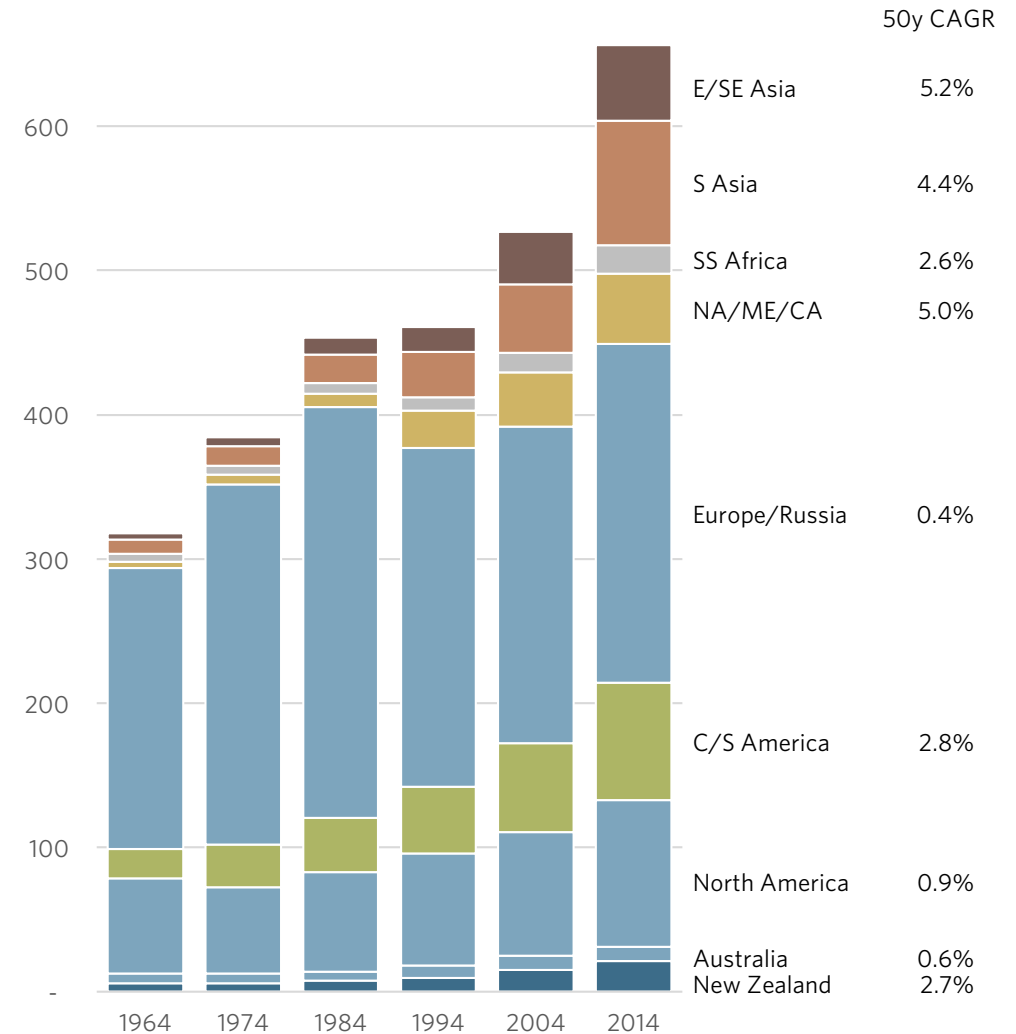
### GLOBAL COW MILK PRODUCTION BY KEY COUNTRIES & REGION

Tonnes; million; 2014



### GLOBAL COW MILK PRODUCTION BY KEY REGION

Tonnes; million; 1964-2014

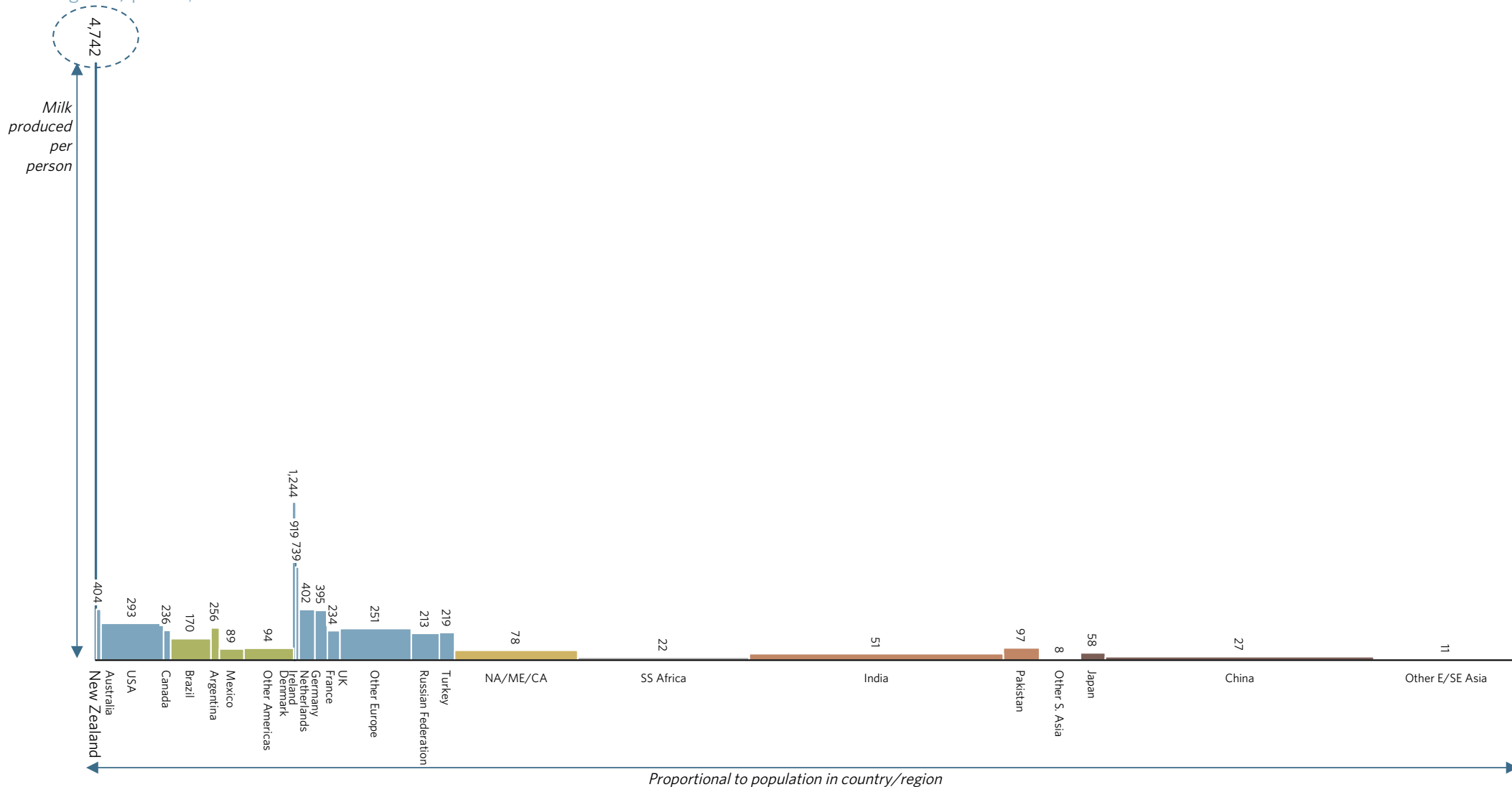


Note: 2014 is latest data available for all countries globally in FAOSTAT as of February 2017; Russia includes historical USSR; Source: UN FAO database; Coriolis analysis

Per capita milk production varies by country, with much of the world producing very little per person; New Zealand produces a significant milk surplus relative to its population

### RAW COW MILK PRODUCTION PER PERSON (BEFORE TRADE)

Kilograms/person; 2014

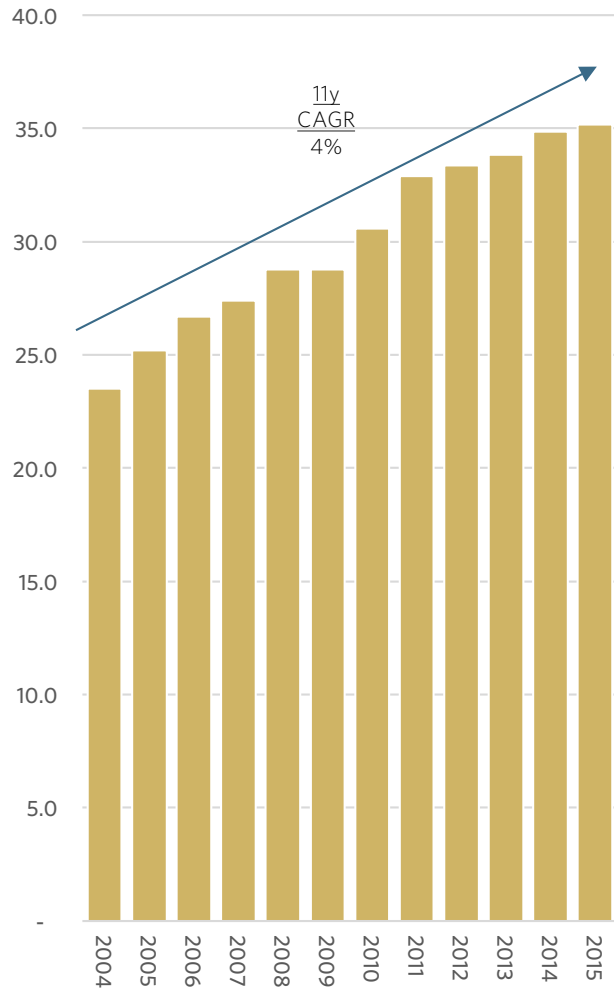


Note: 2014 is latest data available for all countries globally in FAOSTAT as of February 2017; Source: UN FAO database; Coriolis analysis

Global cross-border dairy trade volumes are growing (4% CAGR) with moderate price gains across the cycle leading to export value growth

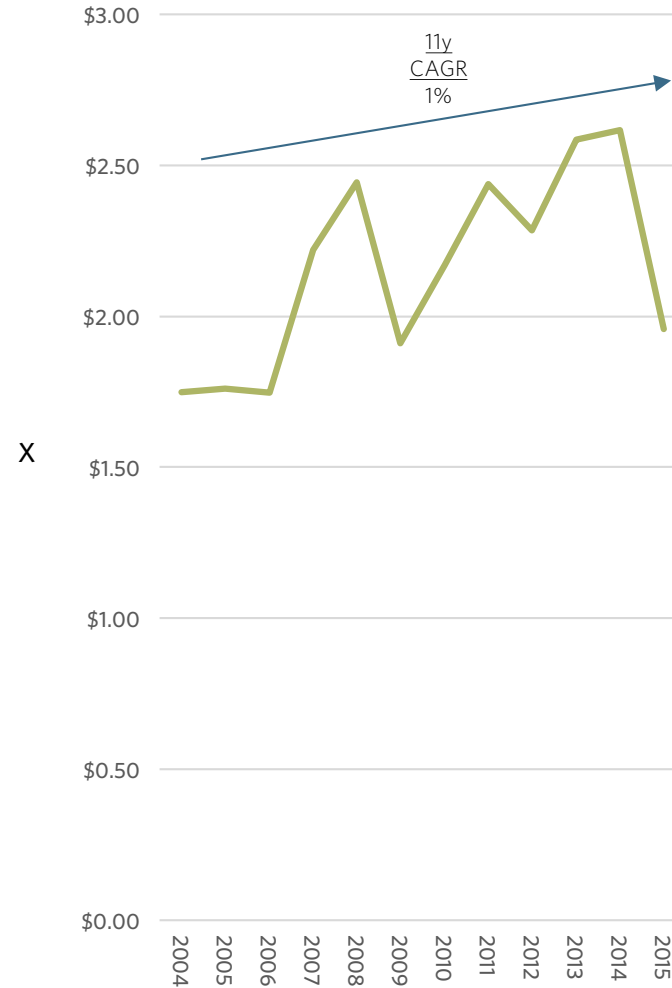
### GLOBAL EXPORT VOLUME

KG; b; 2004-2015



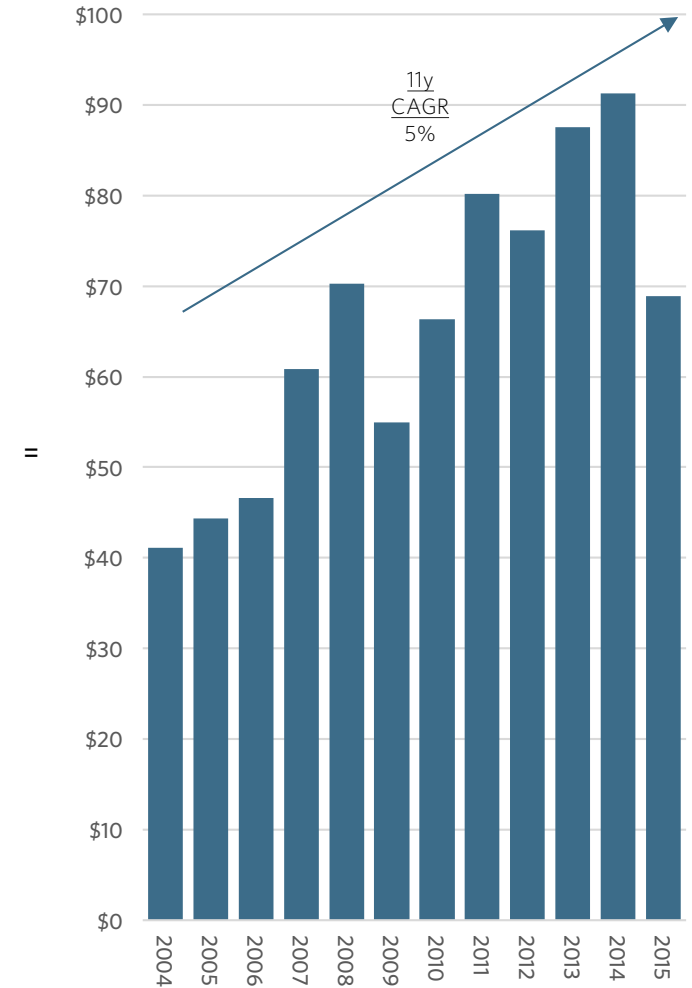
### AVERAGE GLOBAL EXPORT PRICE

US\$/kg; actual; 2004-2015



### GLOBAL EXPORT VALUE

US\$; b; 2004-2015

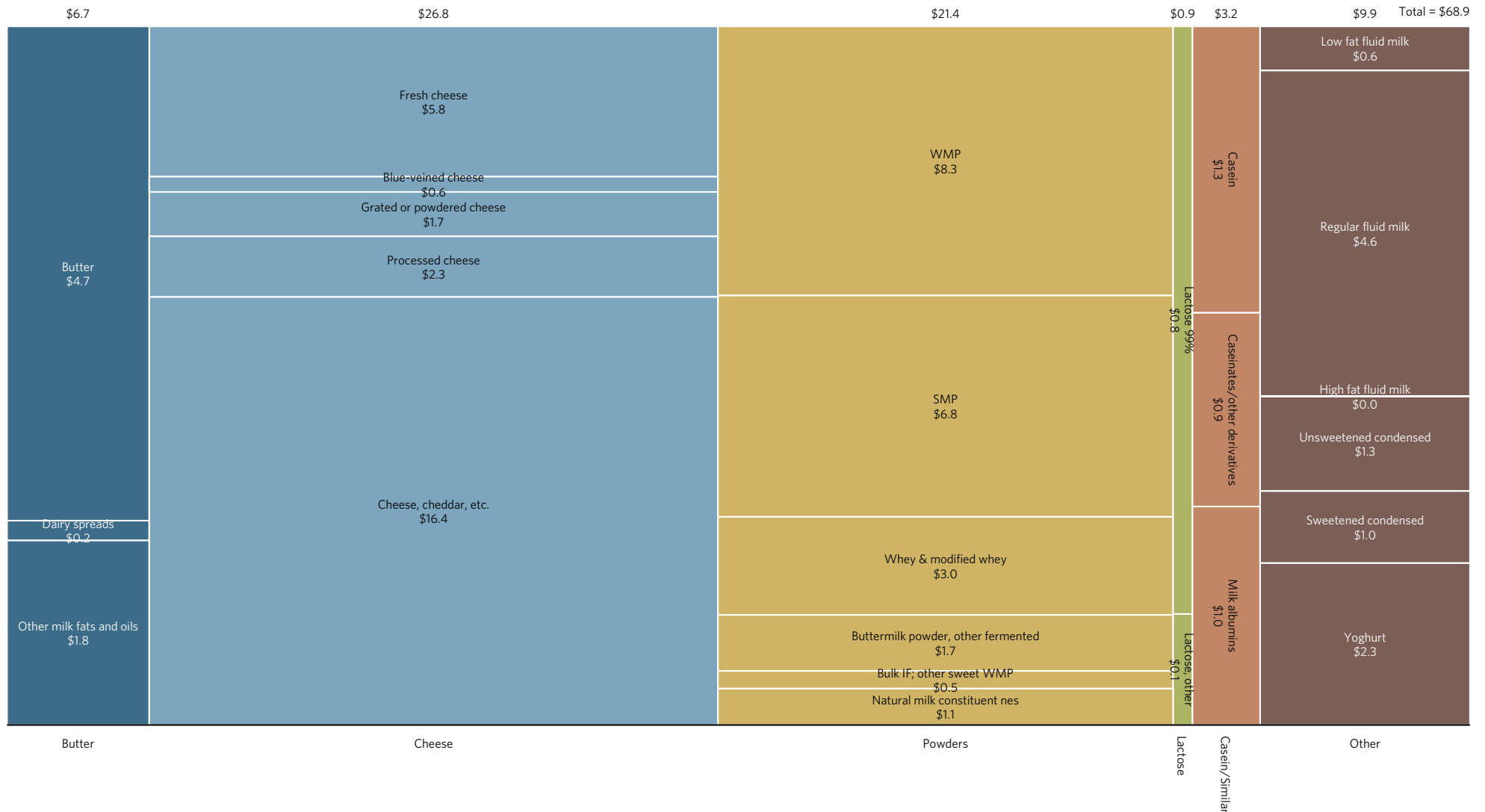


Note: data is as reported sender FOB; Source: UN FAO database; Coriolis classification and analysis

Total global cross-border dairy product trade spread across a wide range of products, though cheddar cheese (\$16.4b), WMP (\$8.3b) and SMP (\$6.8b) stand out for their absolute volumes

### TOTAL GLOBAL DAIRY IMPORT VALUE BY RECEIVING COUNTRY/REGION

US\$; b; FOB; 2015

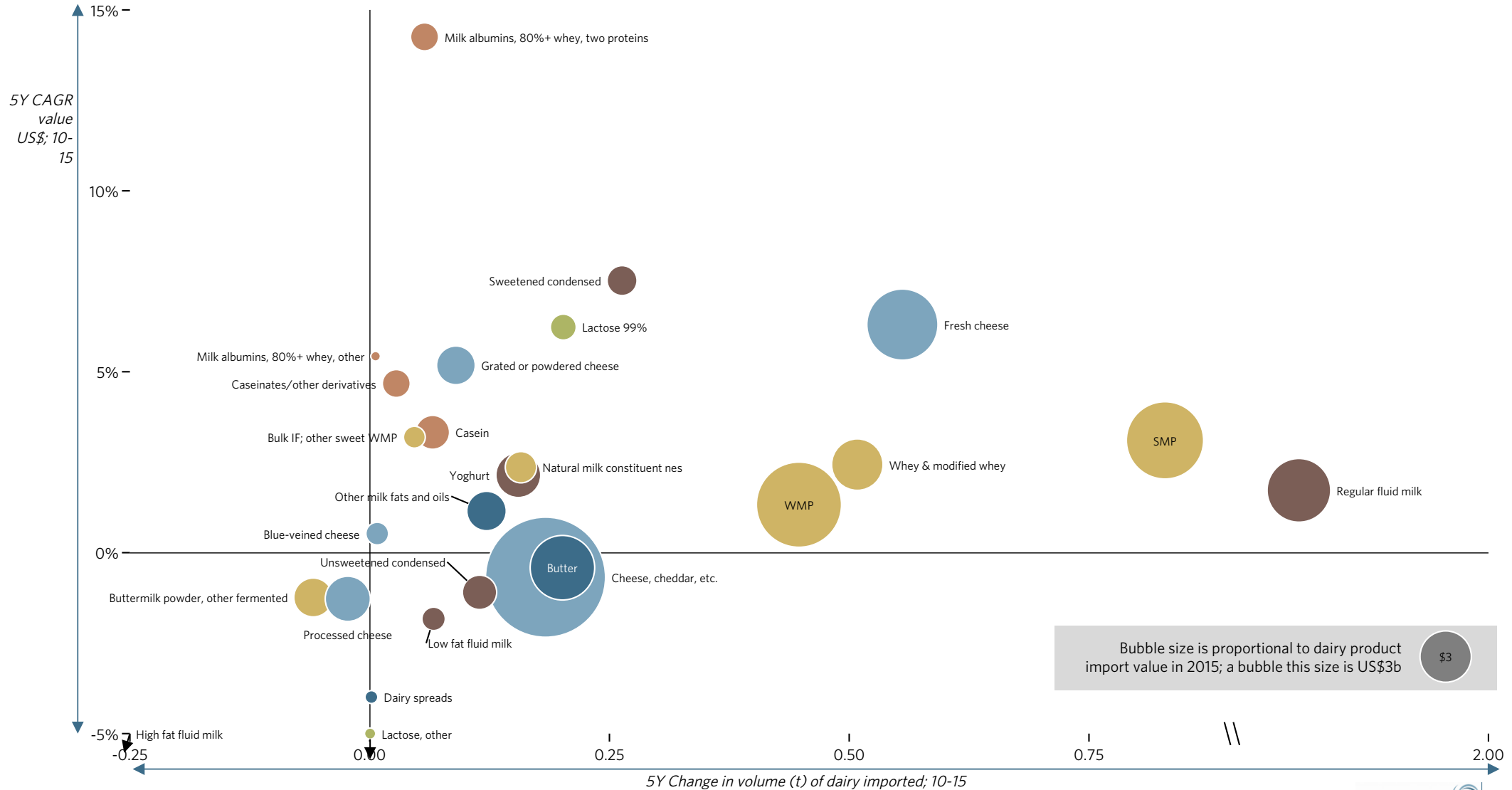


Note: 2015 is latest available globally; data is as reported sender FOB; Source: UN Comtrade database; Coriolis analysis

# Milk albumins, fresh cheese ("mozzarella"), SMP and regular fluid milk stand out for global growth over the past five years

## 5Y GROWTH MATRIX: 5Y VOLUME VS. 5Y CAGR VALUE VS. VALUE 2015 BY PRODUCT

T; b; % of US\$; US\$b; FOB; 2010 vs. 2015



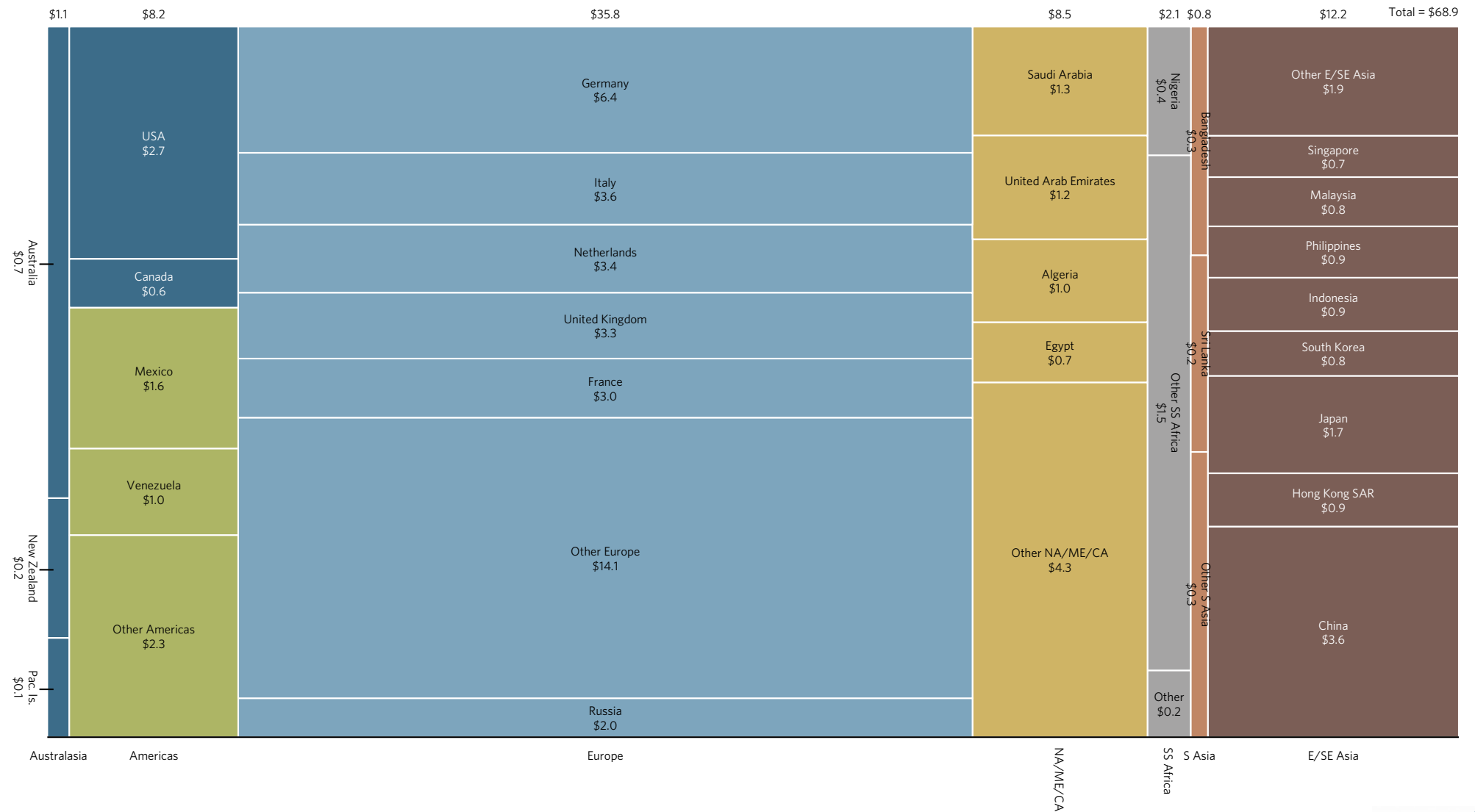
Note: 2015 is latest available globally; data is as reported sender FOB; Source: UN Comtrade database; Coriolis analysis



Total global cross-border demand for dairy products was US\$68.9b in 2015; Europe (including inter-EU) is the single largest market

### TOTAL GLOBAL DAIRY IMPORT VALUE BY RECEIVING COUNTRY/REGION

US\$; b; FOB; 2015

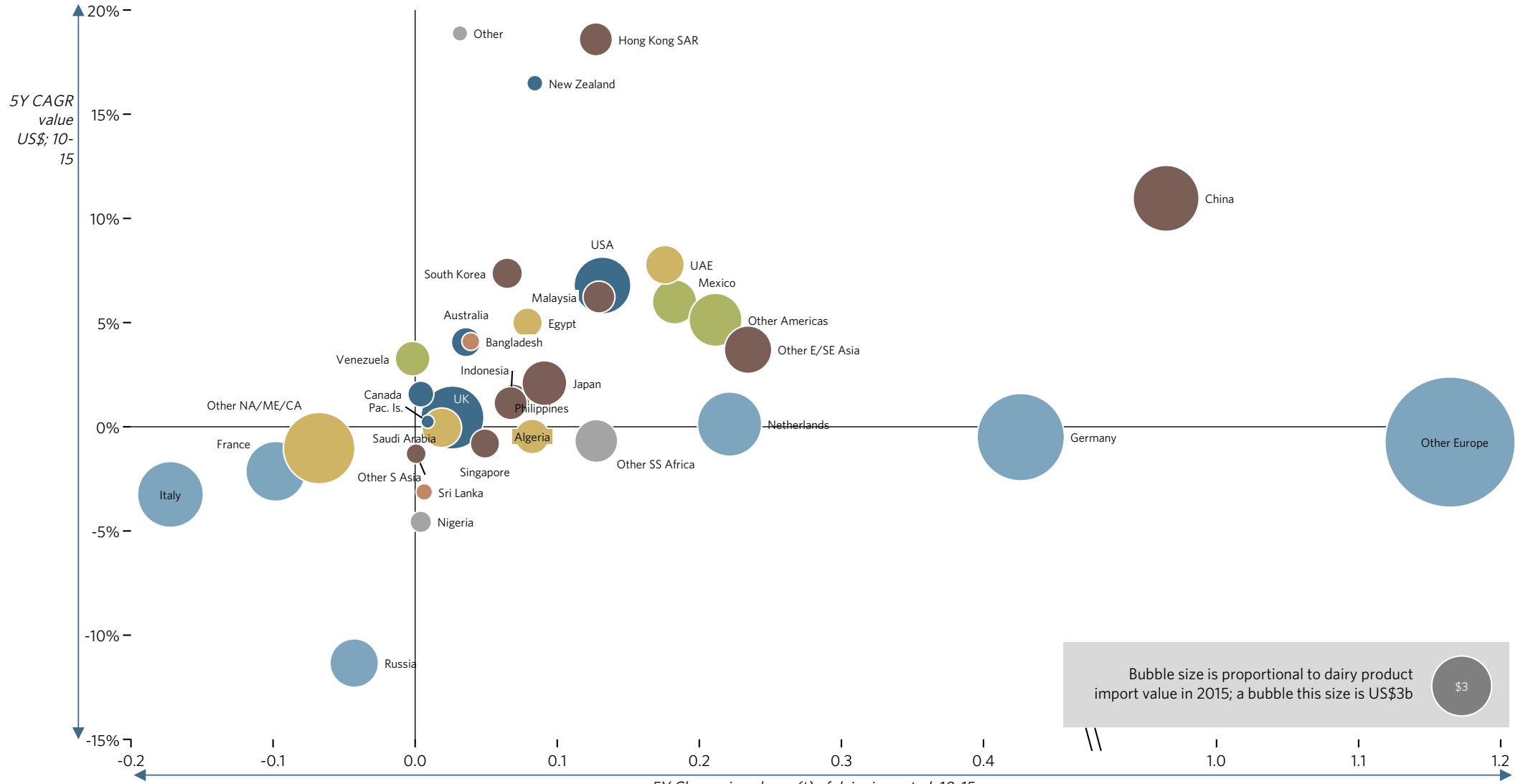


Note: 2015 is latest available globally; data is as reported sender FOB; Source: UN Comtrade database; Coriolis analysis

# China/Hong Kong stand out for dairy import market growth

## 5Y GROWTH MATRIX: 5Y VOLUME VS. 5Y CAGR VALUE VS. VALUE 2015 BY RECEIVING COUNTRY/REGION

T; b; % of US\$; US\$b; FOB; 2010 vs. 2015

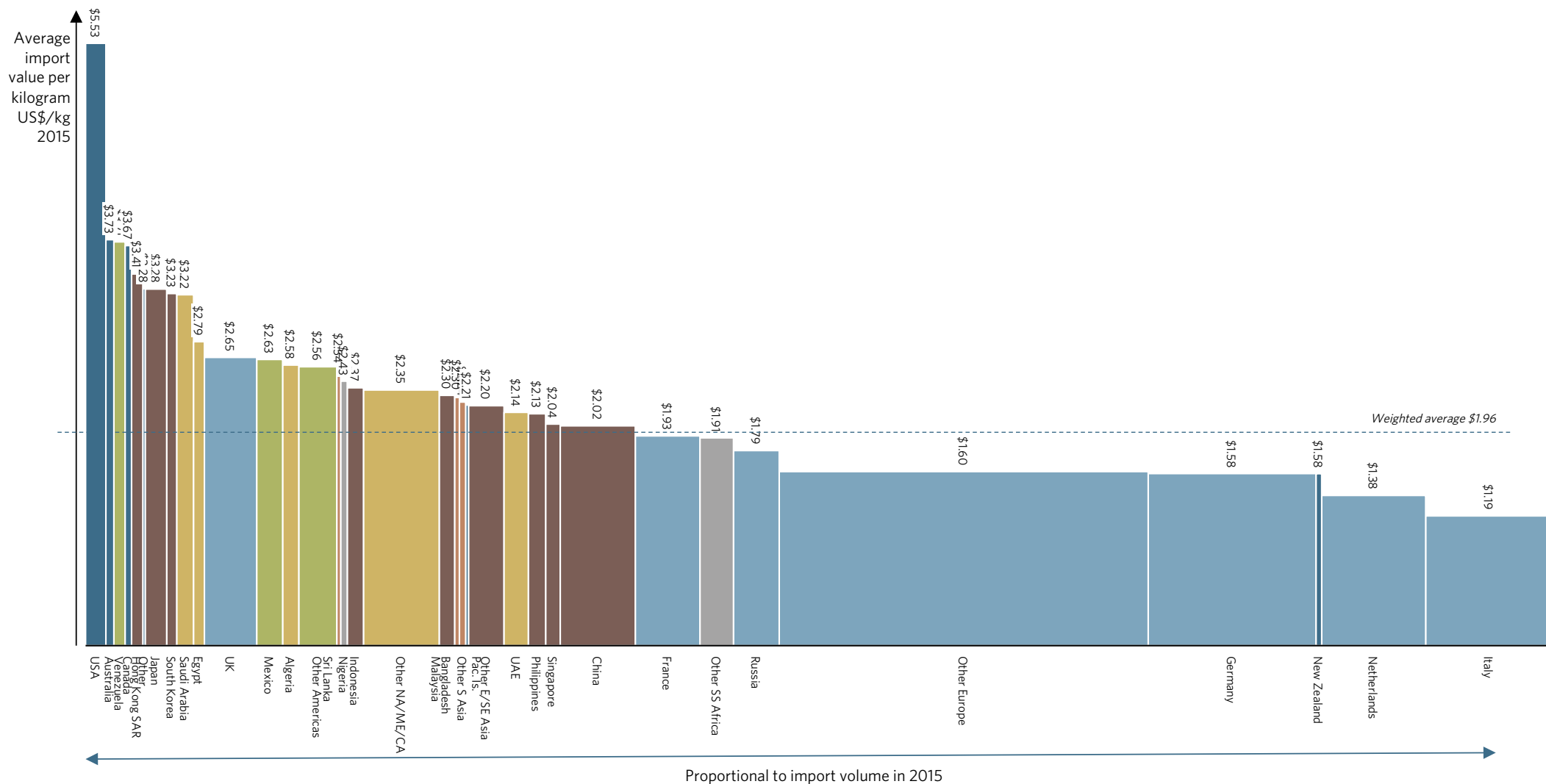


Note: 2015 is latest available globally; data is as reported sender FOB; Source: UN Comtrade database; Coriolis analysis

# Markets vary in average dairy import price, with the USA standing out as a high value market

## TOTAL GLOBAL DAIRY IMPORT VOLUME VS. AVERAGE IMPORT PRICE BY KEY MARKET

KG; millions; US\$/kg; actual; 2015

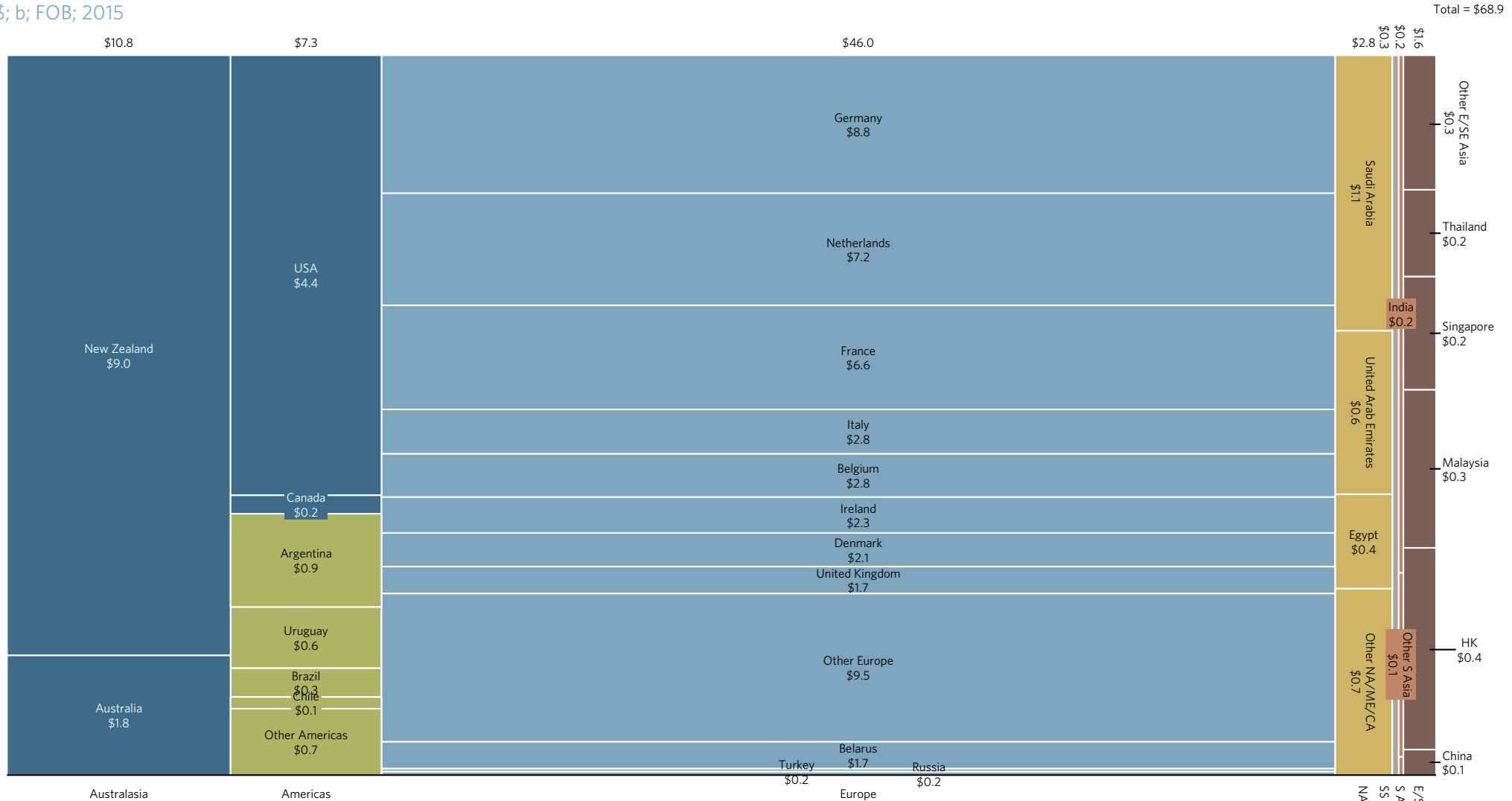


Note: therefore area under chart is proportional to import value (volume x \$/kg); Source: UN Comtrade data; Coriolis analysis and classifications

# New Zealand, the USA and Northern Europe lead in the global dairy trade

## TOTAL GLOBAL DAIRY EXPORT VALUE BY SENDING COUNTRY/REGION

US\$; b; FOB; 2015

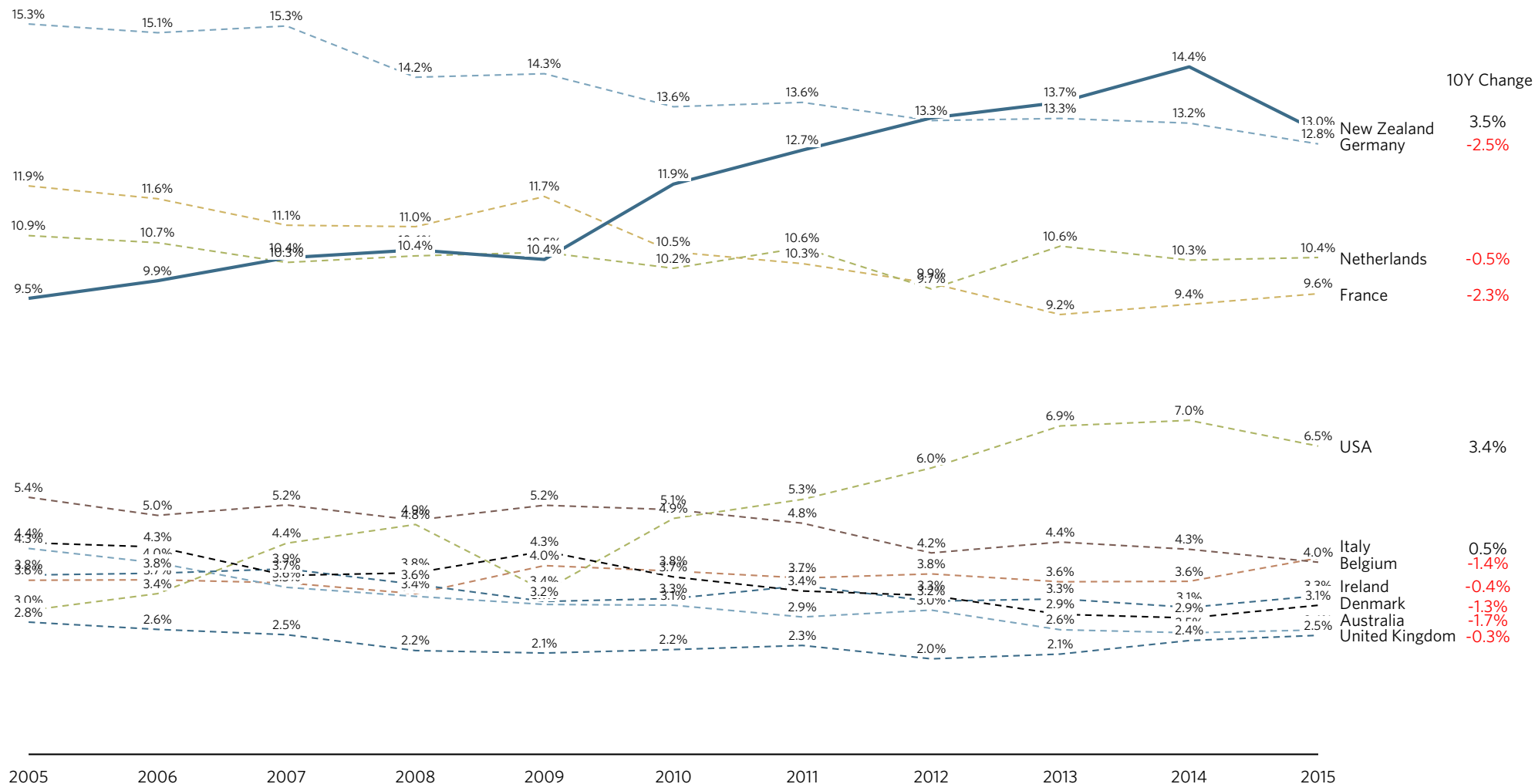


Note: 2015 is latest available globally; data is as reported sender FOB; Source: UN Comtrade database; Coriolis analysis

# New Zealand has gained +3.5% of global export share in the past decade and recently replaced Germany as the global share leader

## GLOBAL EXPORT MARKET SHARE: TOP 10 DAIRY EXPORTERS

% of value; US\$; 2005-2015



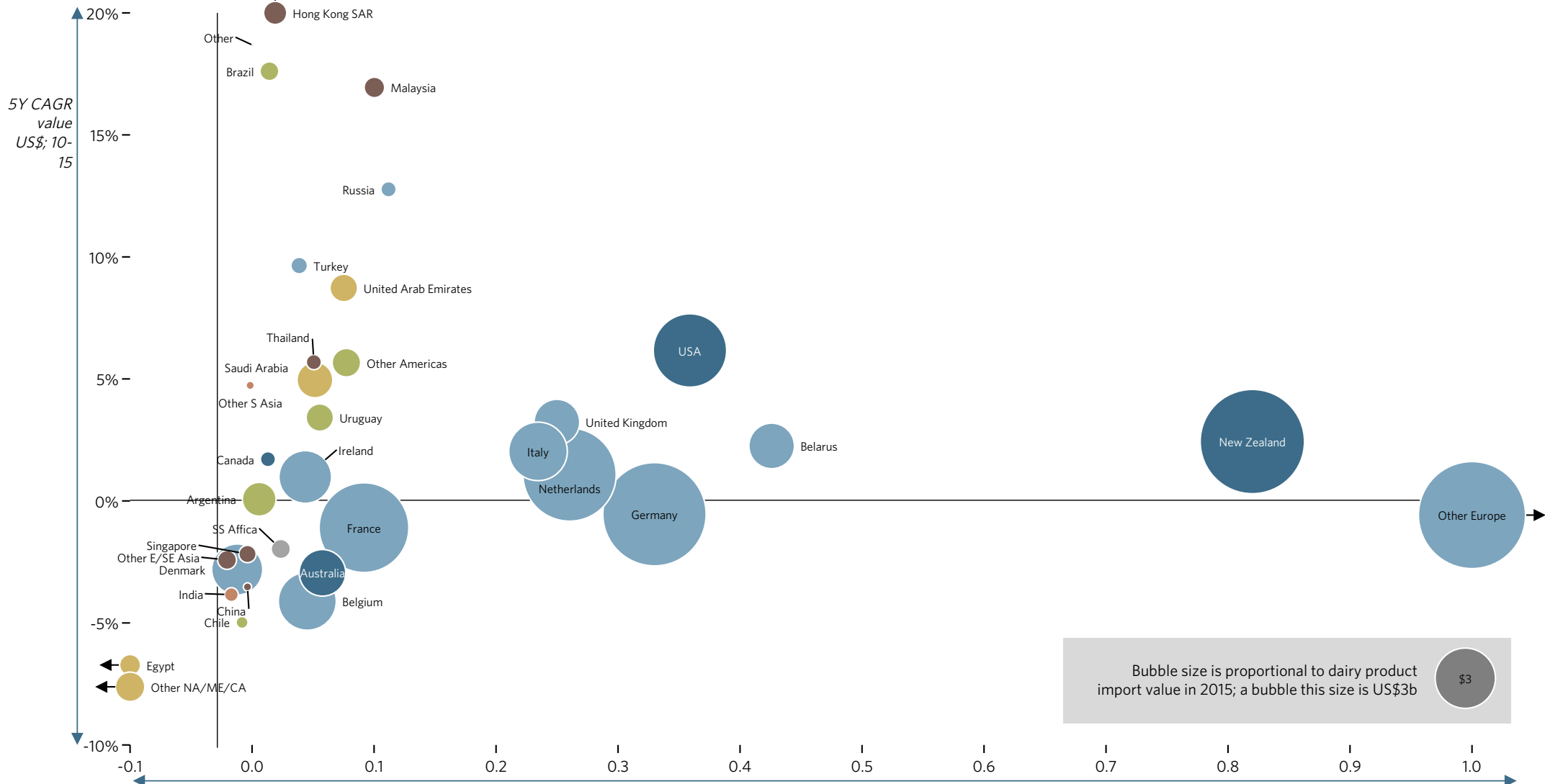
Note: Top 10 excluding Belarus; 2015 is latest available globally; data is as reported sender FOB; Source: UN Comtrade database; Coriolis analysis



New Zealand, the USA and Malaysia stand out for driving total value growth over the past five years; "Other Europe" stands out for growing volume at falling prices (more cross-border raw milk for processing)

5Y GROWTH MATRIX: 5Y VOLUME VS. 5Y CAGR VALUE VS. VALUE 2015 BY EXPORTING COUNTRY/REGION

T; b; % of US\$; US\$b; FOB; 2010 vs. 2015

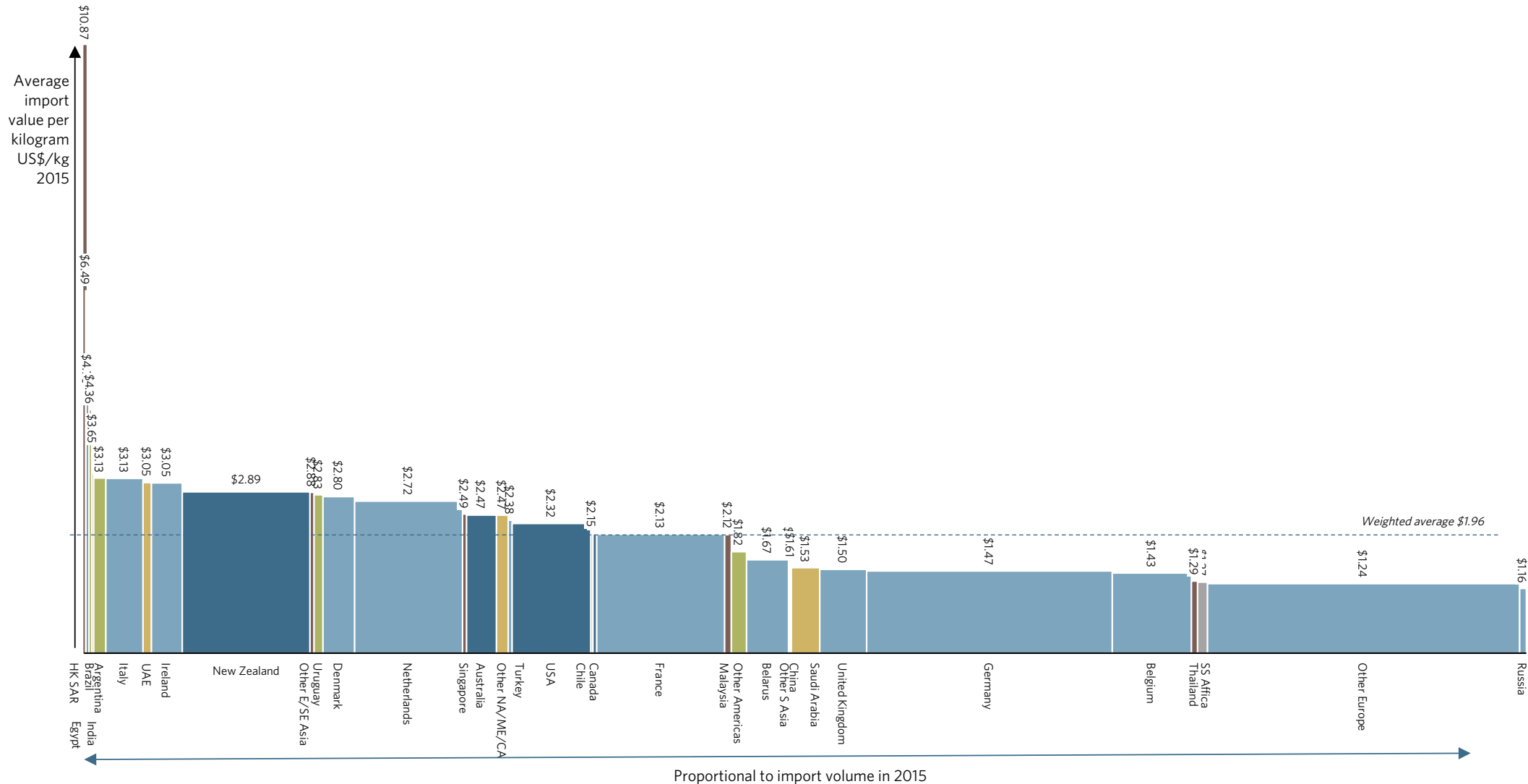


Note: 2015 is latest available globally; data is as reported sender FOB; Source: UN Comtrade database; Coriolis analysis

Exporters vary in their average dairy export price, with New Zealand and most key value-added competitors clustered in the US\$2-3/kg range

### TOTAL GLOBAL DAIRY EXPORT VOLUME VS. AVERAGE IMPORT PRICE BY KEY MARKET

KG; millions; US\$/kg; actual; 2015



Note: Therefore area under chart is proportional to import value (volume x \$/kg); Source: UN Comtrade data; Coriolis analysis and classifications

# New Zealand Milk Production

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- + Key inputs
- + Production
- + Yield/productivity
- + Growth upside

02

New Zealand has shown strong growth across multiple measures over the last 10 years, this appears to have stabilised more recently

### **INCREASING INDUSTRY INPUTS**

New Zealand continues to drive growth by bringing new resources into the dairy industry

- New Zealand is increasing (1) dairy area, (2) cow numbers and (3) on-farm employment
- Herd numbers are falling as consolidation leads to fewer, but larger units

### **IMPROVING PRODUCTIVITY**

New Zealand is increasing dairy farm productivity

- New Zealand continues to increase farm productivity through (1) higher stocking rates per hectare and (2) larger herd sizes
- Per cow milk yields vary significantly by country; New Zealand achieves mid-range yields per animal (driven by its low cost/low input/low intensity system)
- New Zealand continues to increase dairy animal productivity

### **INCREASING MILK AVAILABILITY**

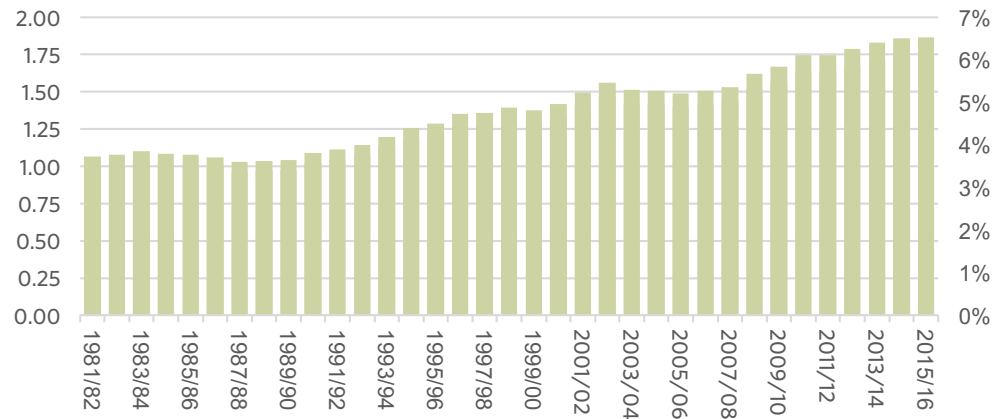
New Zealand has the potential to increase the available supply of milk

- New Zealand has grown total milk production at 3.6%/pa CAGR over the past thirty-three years
- New Zealand turns much of its dairy into "export friendly" dairy products
- Peers are showing high growth in tonnes/cow, however the majority of peers are utilising an intensive model

New Zealand is increasing (1) dairy area, (2) cow numbers and (3) on-farm employment; herd numbers are falling (fewer but larger)

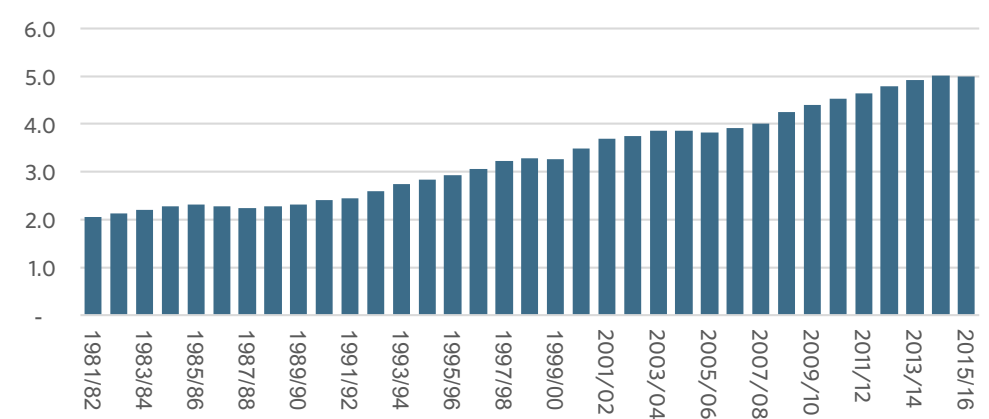
### TOTAL EFFECTIVE HECTARES IN DAIRY VS. % OF NZ AREA

Ha; millions; % of ha; 81/82-15/16



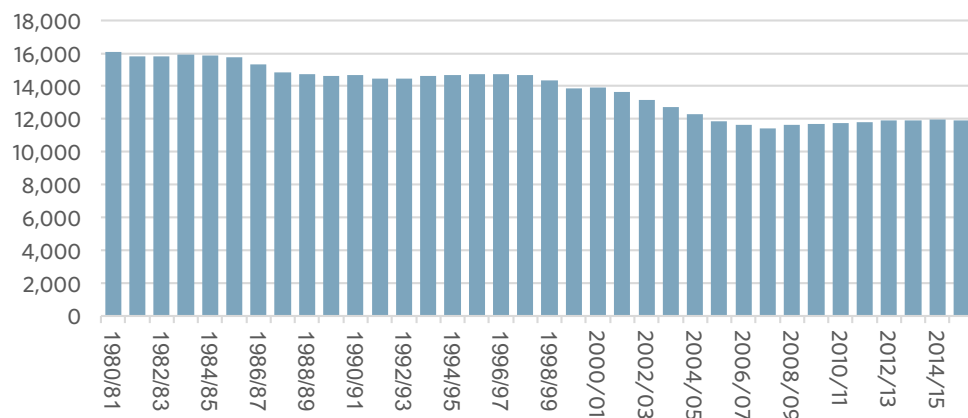
### TOTAL DAIRY COWS

Head; million; 81/82-15/16



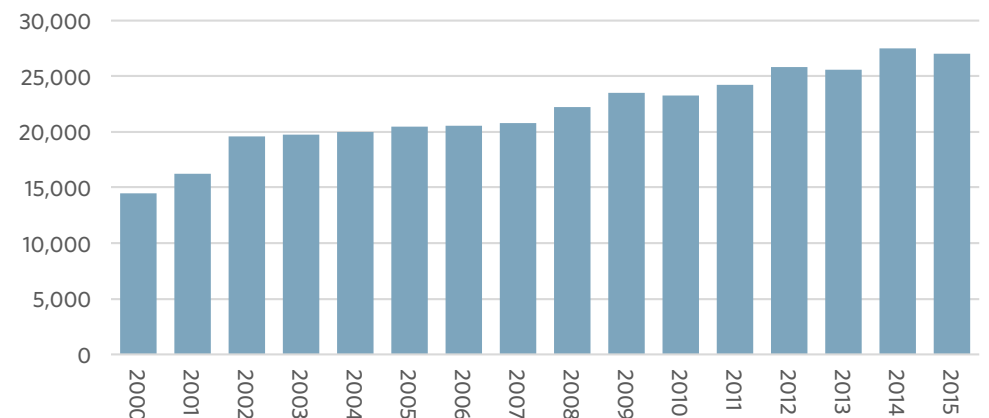
### TOTAL NUMBER OF DAIRY COW HERDS

Herds; 81/82-15/16



### DAIRY FARMING (A016) EMPLOYEE COUNT

People; New Zealand; as of Feb; 2000-2015



Note: 2015/16 data latest available as of Feb 2017; 1. Uses CY data from UN FAO as DairyNZ data does not include town milk supply prior to 1998/99 season;

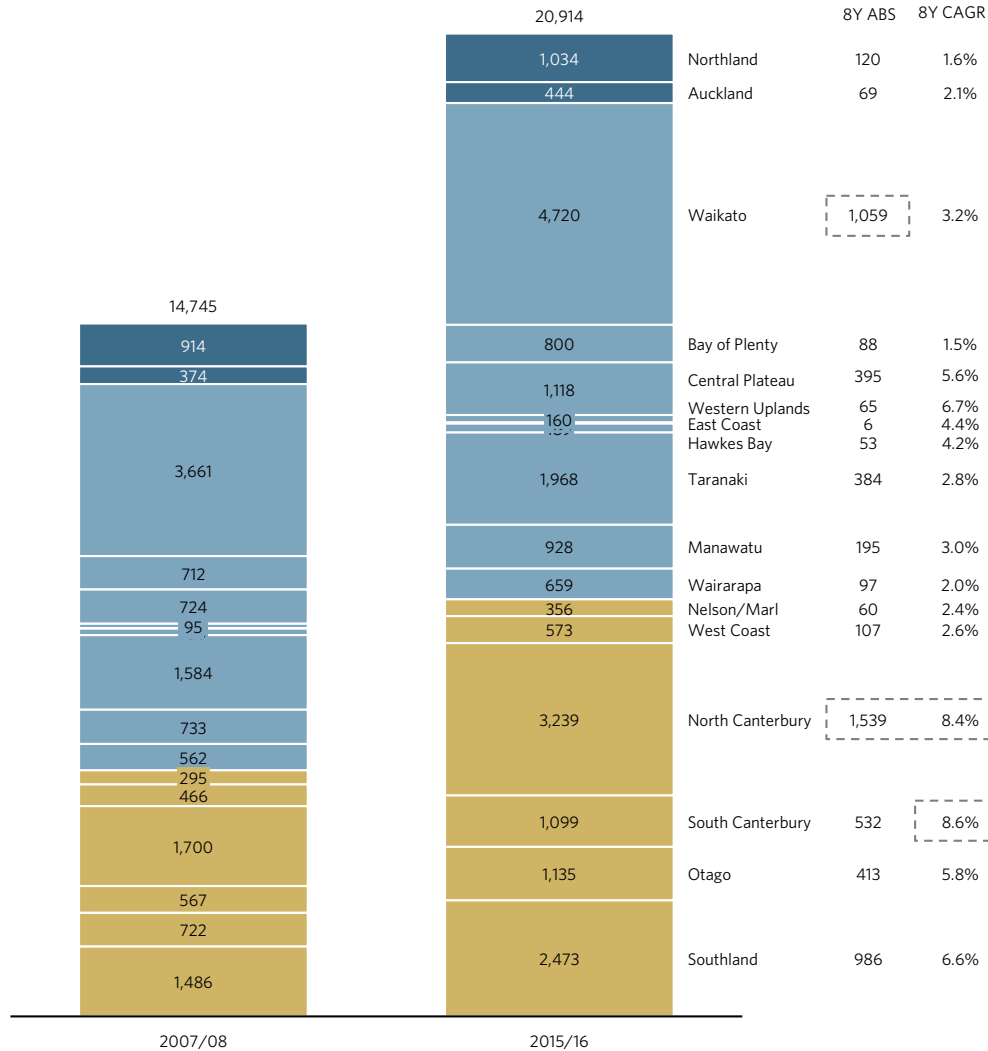
Source: DairyNZ New Zealand Dairy Statistics 2010-11; UN FAO AgStat database; MAF/MPI; Coriolis analysis



# Milk production is growing across all regions; however, Canterbury stands out for driving growth through larger farms and more milk per cow

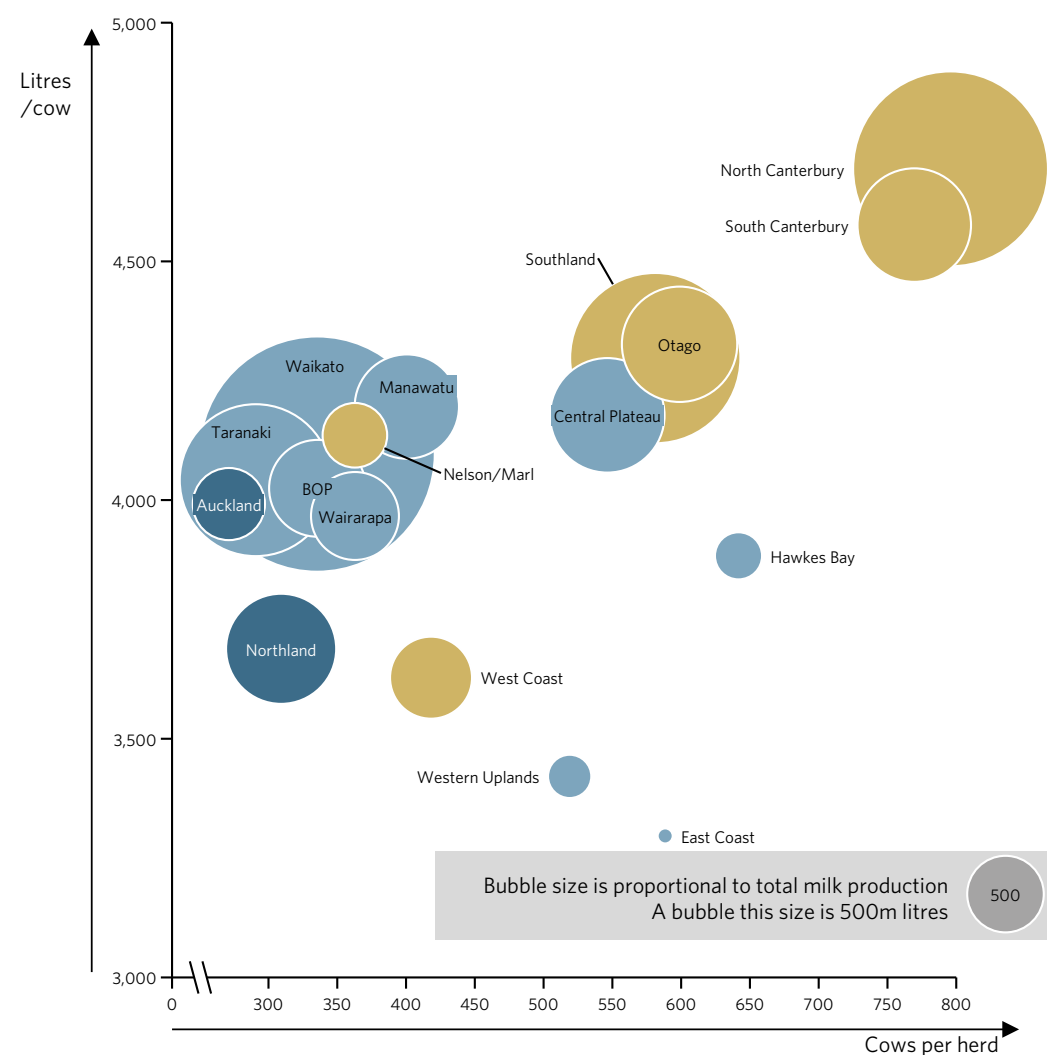
## NEW ZEALAND MILK PRODUCTION BY REGION

Litres; m; 2007/08 - 2015/16



## GROWTH MATRIX: COWS/HERD VS. MILK/COW VS. MILK

Head; Milk; 2015/16

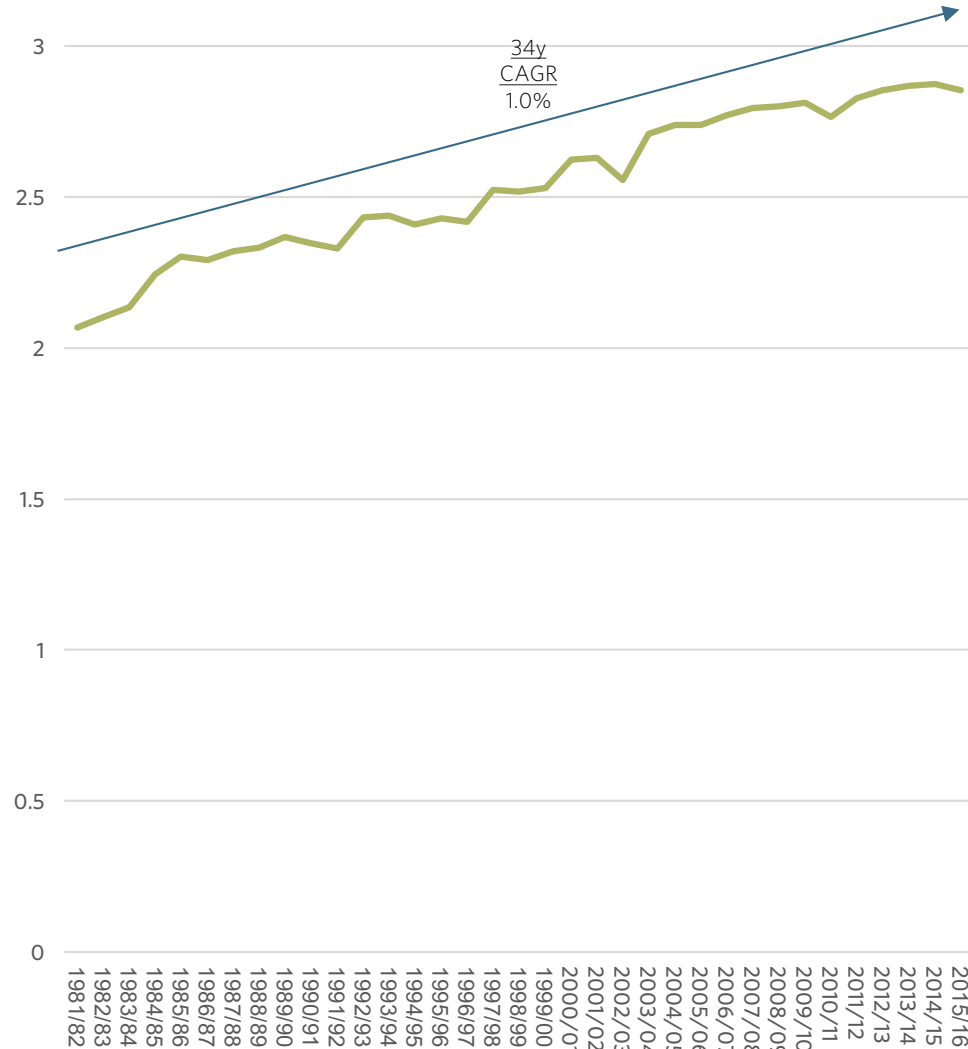


NOTE: Total does not match Source: DairyNZ Statistics Annual (various years); Coriolis analysis

# New Zealand continues to increase farm productivity through (1) higher stocking rates per hectare and (2) larger herd sizes

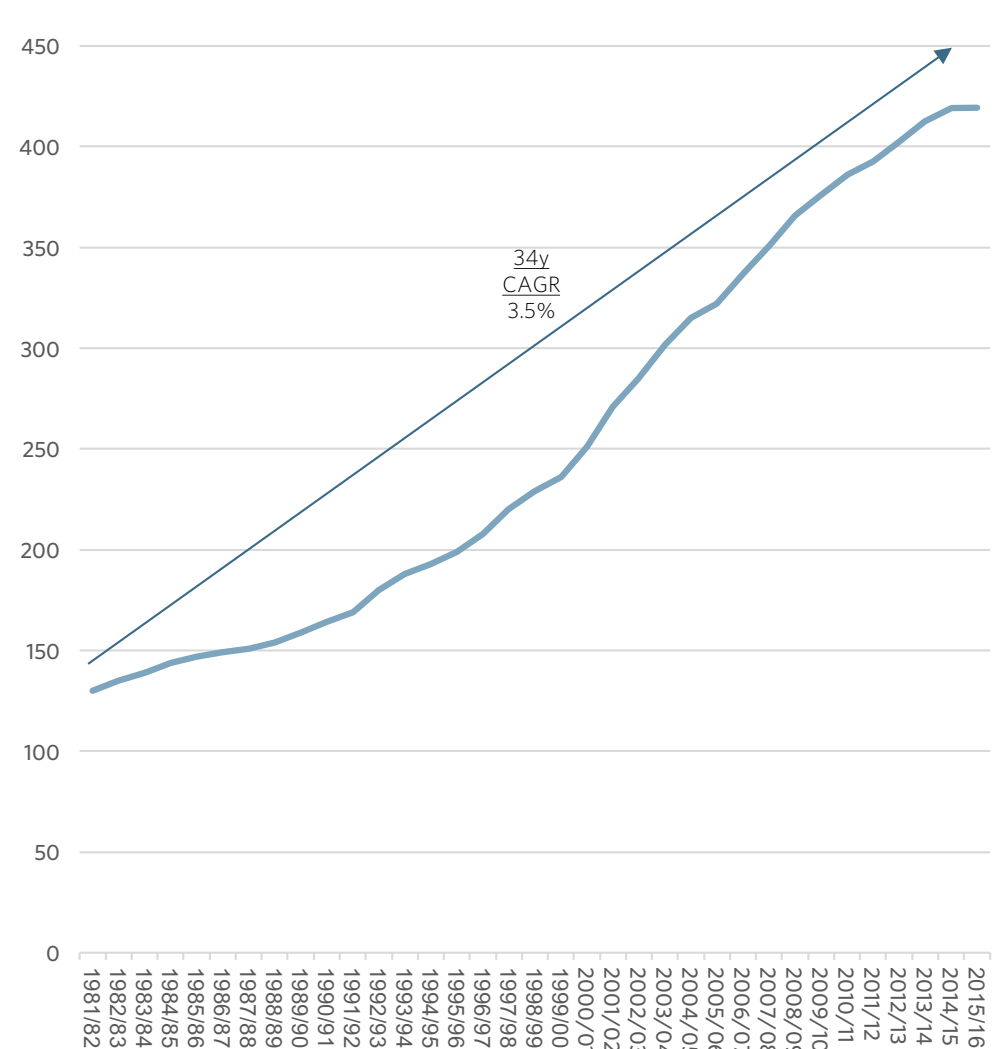
## AVERAGE NUMBER OF COWS PER HECTARE

Cows/ha; actual; 1982-2016



## AVERAGE NUMBER OF COWS PER HERD

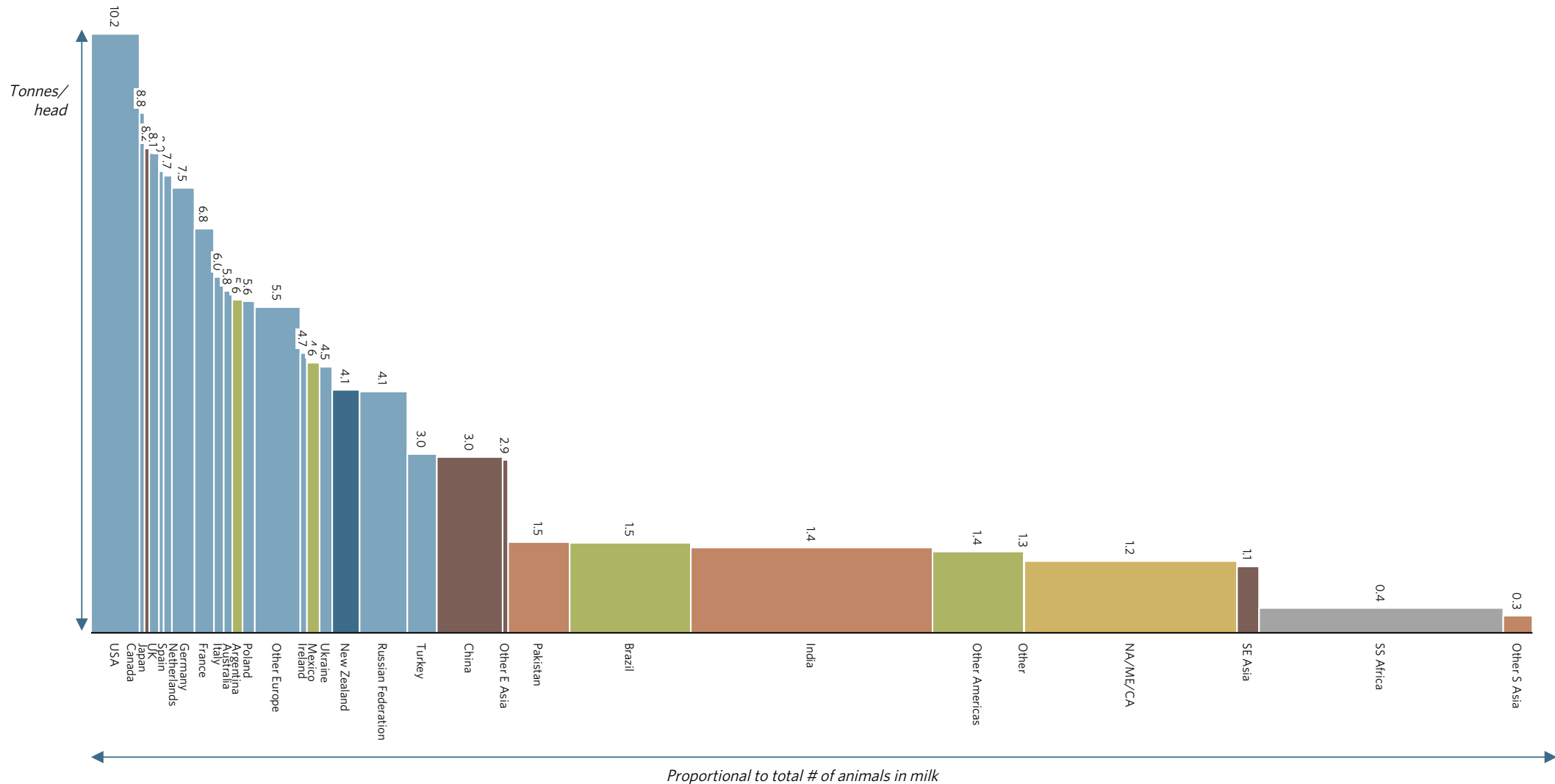
Cows/herd; actual; 1982-2016



Per cow milk yields vary significantly by country; New Zealand achieves mid-range yields per animal (driven by its low cost/low input/low intensity system)

### GLOBAL COW MILK YIELD BY COUNTRY/REGION

Animals vs. tonnes/head; 2014

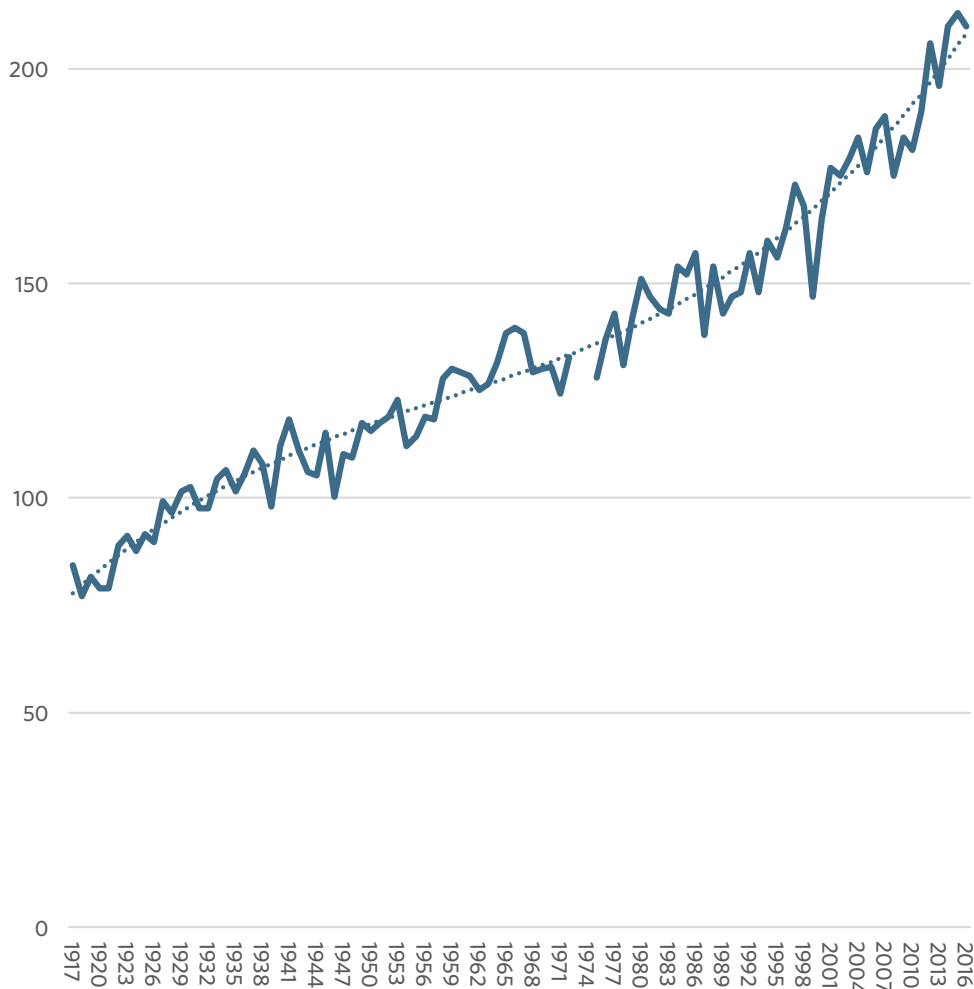


Note: 2014 is latest data available for all countries globally in FAOSTAT as of February 2017; Russian Federation incl. Belarus; Source: UN FAO database; Coriolis analysis

# New Zealand continues to increase dairy animal productivity

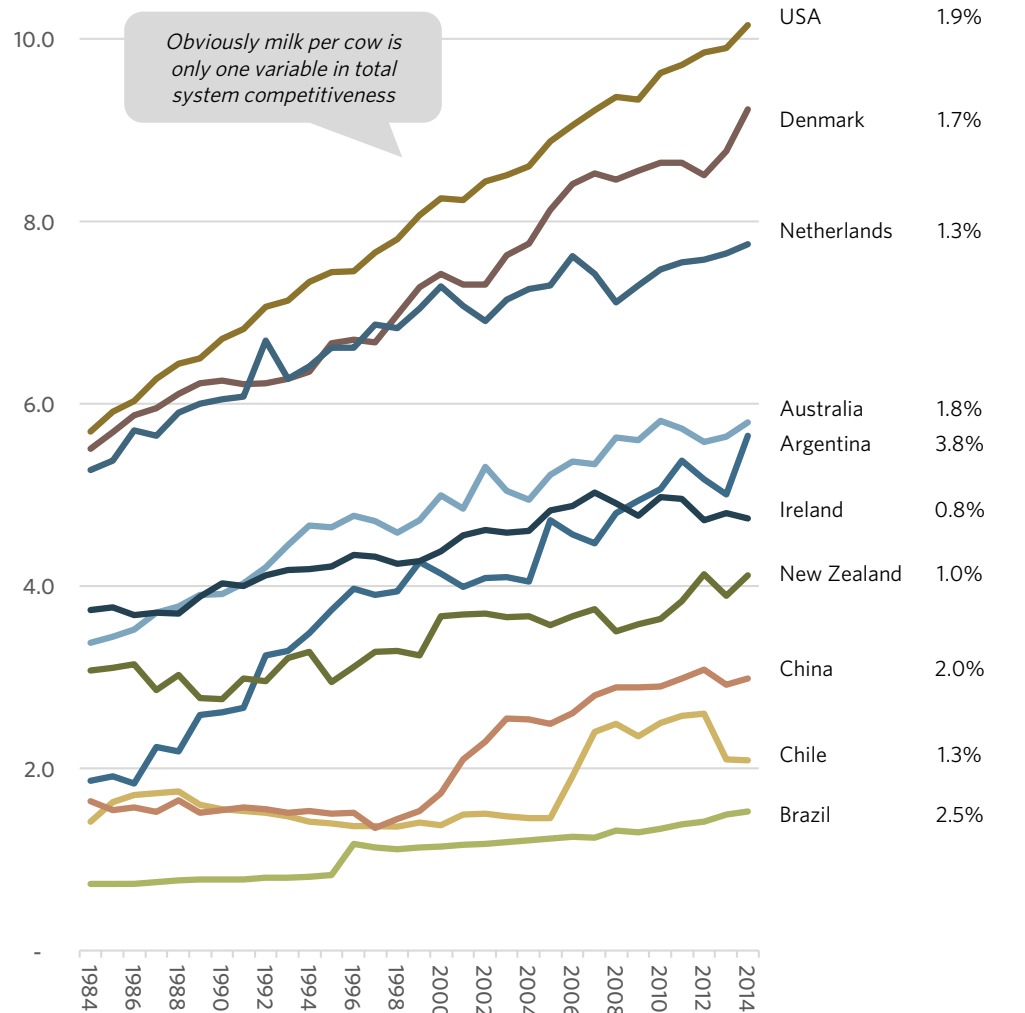
## 99 YEAR NEW ZEALAND BUTTERFAT PER COW

Kg/cow; 1917-2016



## MILK PER COW: NZ VS. SELECT PEERS

T/cow; 1961-2014



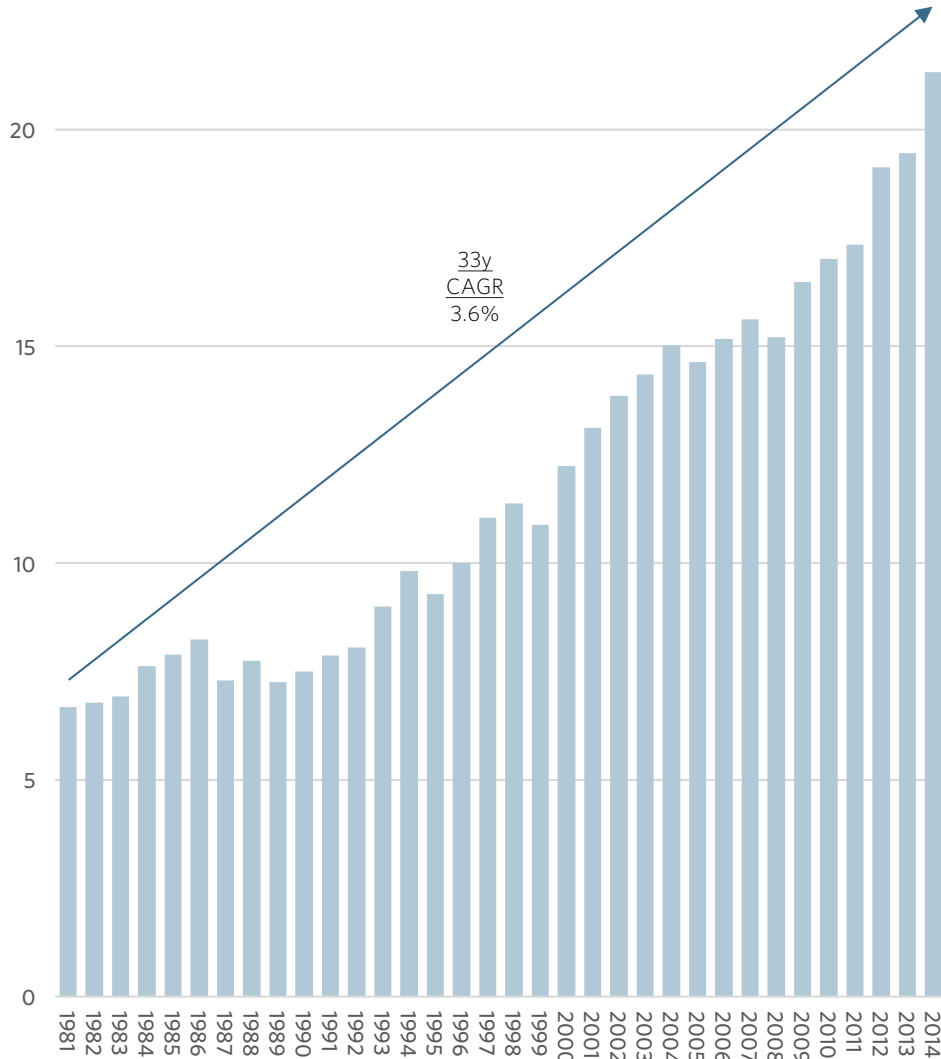
Note: latest available data as of Feb 2017; 1. Uses CY data from UN FAO as DairyNZ data does not include town milk supply prior to 1998/99 season;

Source: DairyNZ New Zealand Dairy Statistics 2010-11; UN FAO AgStat database; MAF/MPI; Statistics NZ; Department of Statistics; DairyNZ; Coriolis analysis

# New Zealand is growing total milk production and turning much of this into "export friendly" dairy products

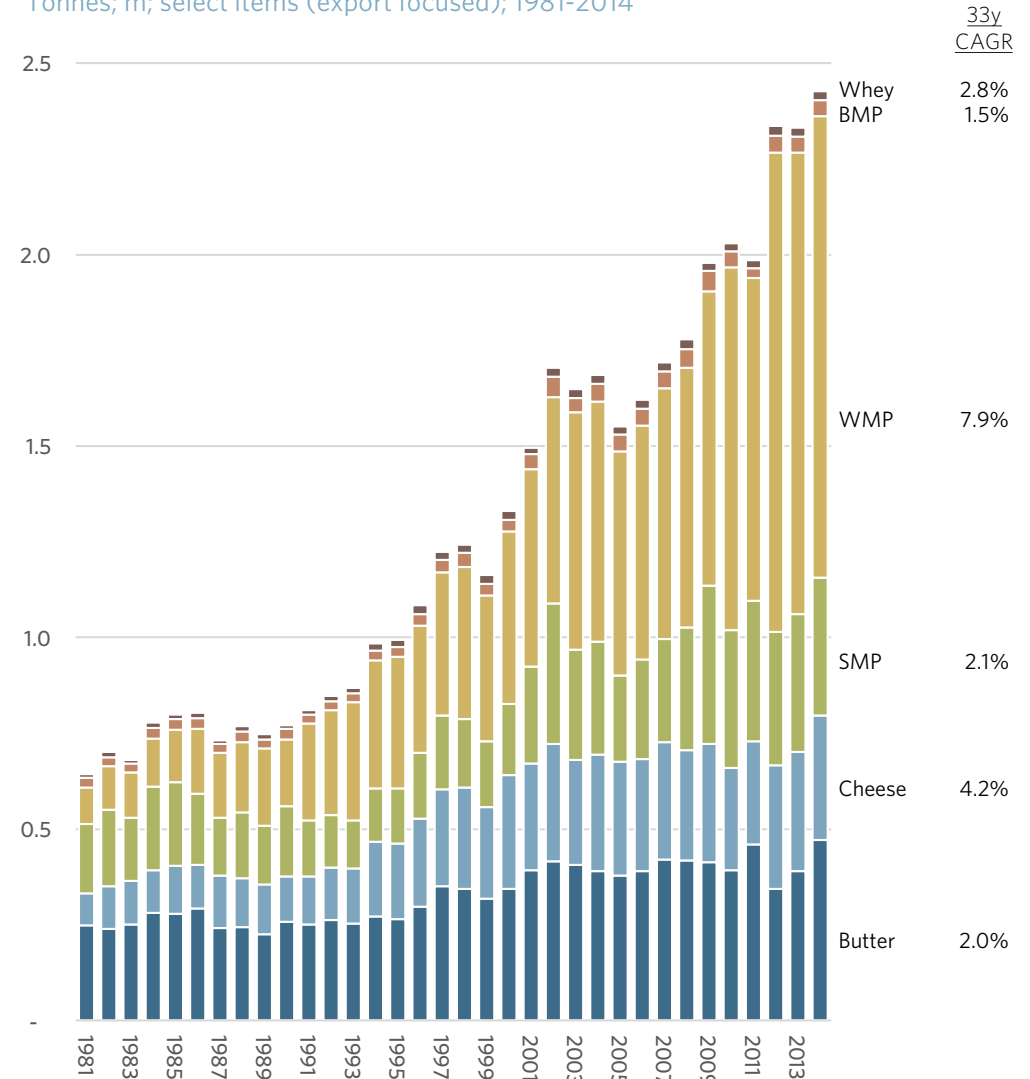
## TOTAL MILK PRODUCTION

Tonnes; million; 1982-2014



## DAIRY PRODUCTION BY PRODUCT

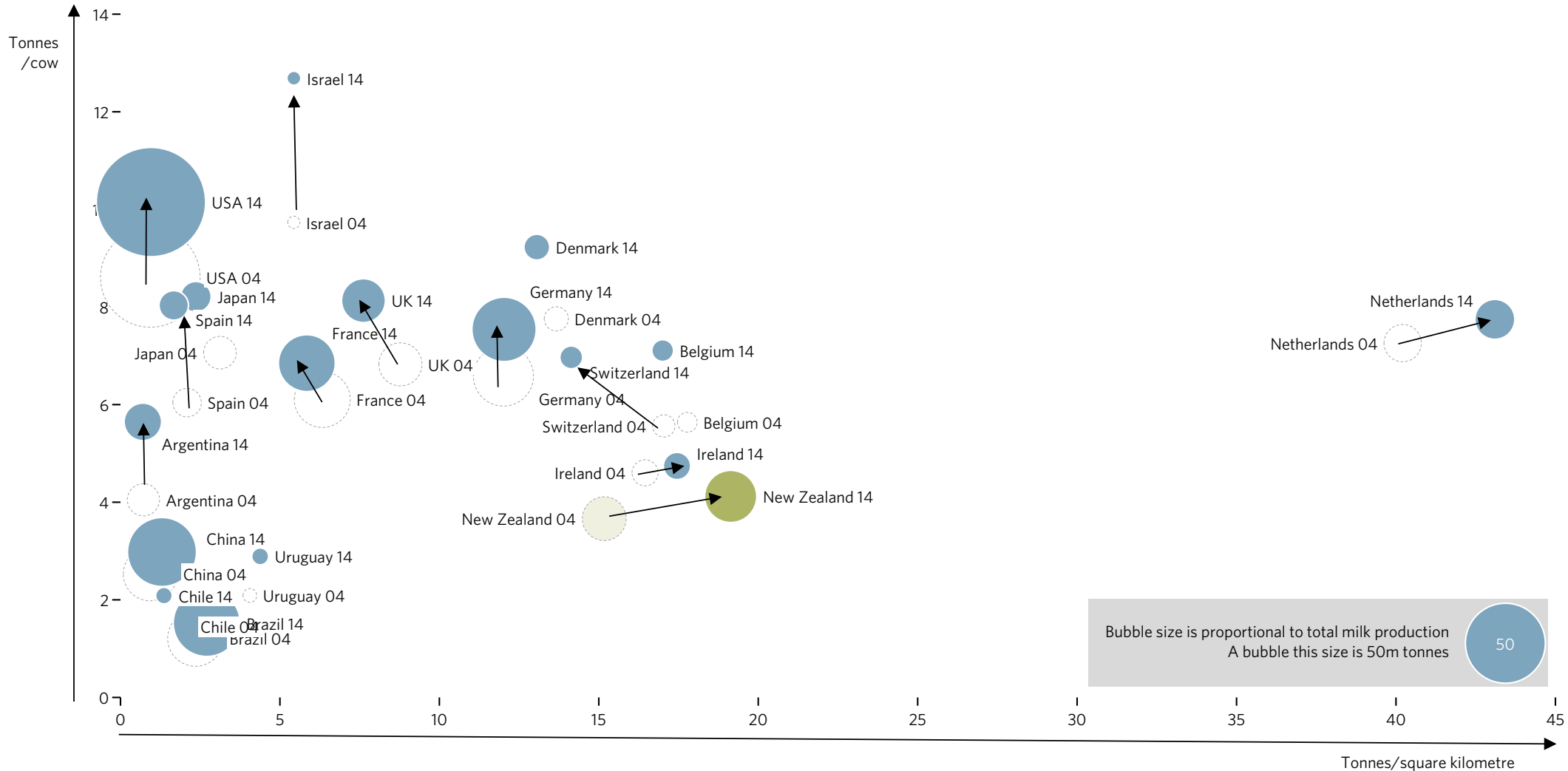
Tonnes; m; select items (export focused); 1981-2014



Peers are showing high growth in tonnes/cow, however the majority of peers are utilising an intensive model

### GROWTH MATRIX OF RAW MILK PRODUCED: TONNES/KM<sup>2</sup> VS. TONNES/COW VS. TOTAL MILK PRODUCTION

Tonnes/km<sup>2</sup>; tonnes/cow; 2004 vs. 2014



Note: 2014 data latest available as of Feb 2017; Source: UN FAOStat; Coriolis analysis

# New Zealand Category Performance

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- + Category segmentation
- + Exports & export growth by category
- + Average export price by category
- + Category profiles

03

# New Zealand is a global leader in most categories of the dairy trade

## OVERVIEW

- New Zealand produces all six major categories of dairy products
- New Zealand is the “market maker” in the global ingredient dairy trade and rapidly emerging in packaged/processed
- Exports are spread across all six categories, however powders (56%), butter (18%), cheese (13%) and casein (11%) are the largest
- New Zealand dairy export volumes are growing constantly, though value has been impacted by the recent fall in global commodity dairy prices
- Average New Zealand export price varies by category, with casein standing out for high prices and powders accounting for the bulk of export volume
- Powders are driving NZ volume growth, though not achieving aggregate price gains
- New Zealand is a leading global exporter across caseins (30.8%), butter/dairy fats (24.4%) and powders (23.5%); the country has a strong position in cheese (4.4%) and lactose (4.2%); small elsewhere







## BY CATEGORY

- New Zealand is the largest exporter of **dairy fats** and the leading exporter outside Europe
- New Zealand is the fifth largest global exporter of **cheese** and the leading exporter to Asia-Pacific
- While New Zealand currently has a small share of “**other dairy**”; exports of UHT milk and yoghurt are growing
- New Zealand is the market leader in export **dairy powders** and strong across Asia
- New Zealand is the fourth largest global exporter of **lactose**
- New Zealand is the global market leader in **casein/similar**



New Zealand produces all six major categories of dairy products; New Zealand is the “market maker” in the global ingredient dairy trade; rapidly emerging in packaged/processed

### HIGH-LEVEL CATEGORIES

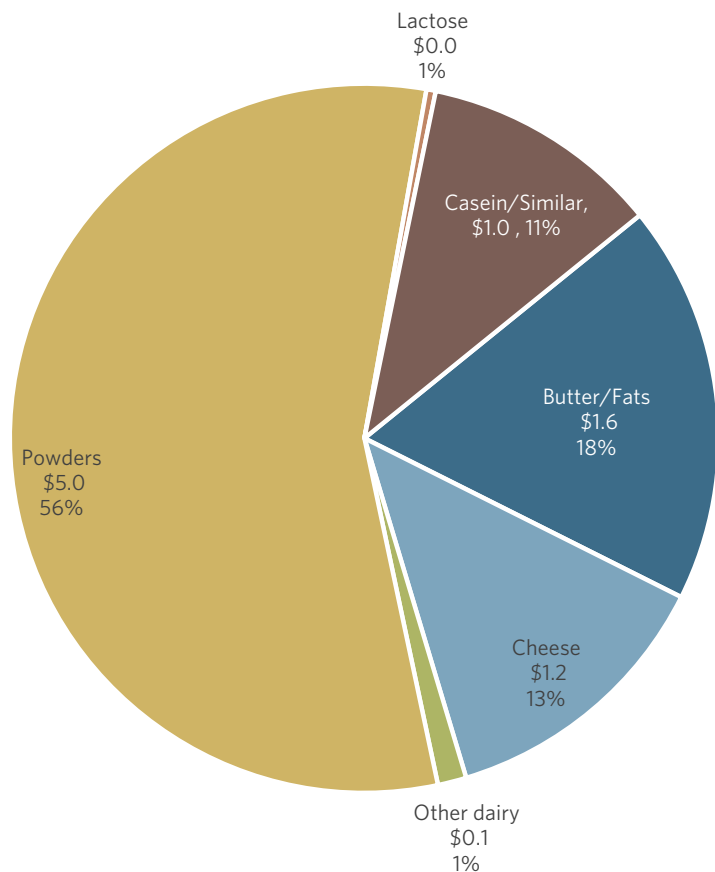
 <p><b>POWDERS</b></p>	 <p><b>CASEIN/SIMILAR</b></p>	 <p><b>LACTOSE</b></p>	 <p><b>BUTTER/FATS</b></p>	 <p><b>CHEESE</b></p>	 <p><b>OTHER</b></p>
<p>#1 Global Exporter #1 Asia Supplier</p>	<p>#X Global Exporter #X Asia Supplier</p>	<p>#X Global Exporter #X Asia-Pacific Supplier</p>	<p>#1 Global Exporter #1 Asia Supplier</p>	<p>#5 Global Exporter #1 Asia-Pacific Supplier</p>	<p>Growing to Asia</p>
<ul style="list-style-type: none"> <li>- “Market maker” in global trade</li> <li>- Largest supplier to E/SE Asia; growing share</li> <li>- Stellar growth into China on back of FTA in 2008</li> <li>- Supplier to effectively all packaged dairy firms in Asia, Africa &amp; Middle East</li> <li>- Pioneer in development of whole milk powders (WMP)</li> <li>- Active across Asia for 100+ years; trusted supplier</li> <li>- Deep local knowledge and skills around dairy powders</li> </ul>	<ul style="list-style-type: none"> <li>- Used in cheesemaking, protein supplements, paint, glue and a range of other areas</li> </ul>	<ul style="list-style-type: none"> <li>- Used in infant formula, food products, pharmaceuticals and a range of other areas</li> </ul>	<ul style="list-style-type: none"> <li>- Strong across butter, ghee and other dairy fats</li> <li>- Growing in butter-blend spreadables</li> </ul>	<ul style="list-style-type: none"> <li>- Strong position in bulk cheddar/similar</li> <li>- Rapidly growing in pizza cheeses for foodservice</li> <li>- Potential for premium, specialty currently underexploited</li> </ul>	<ul style="list-style-type: none"> <li>- NZ historically avoided competition with its own customers; freed-up with deregulation a decade ago</li> <li>- Strong growth off a low base</li> <li>- Rapidly growing UHT exports (driven by investment and changing economics)</li> <li>- Yoghurt a niche into developed Asian city states</li> <li>- New packaging technologies creating new product/category opportunities</li> </ul>

### EXAMPLE PRODUCTS UNDER THESE CATEGORIES

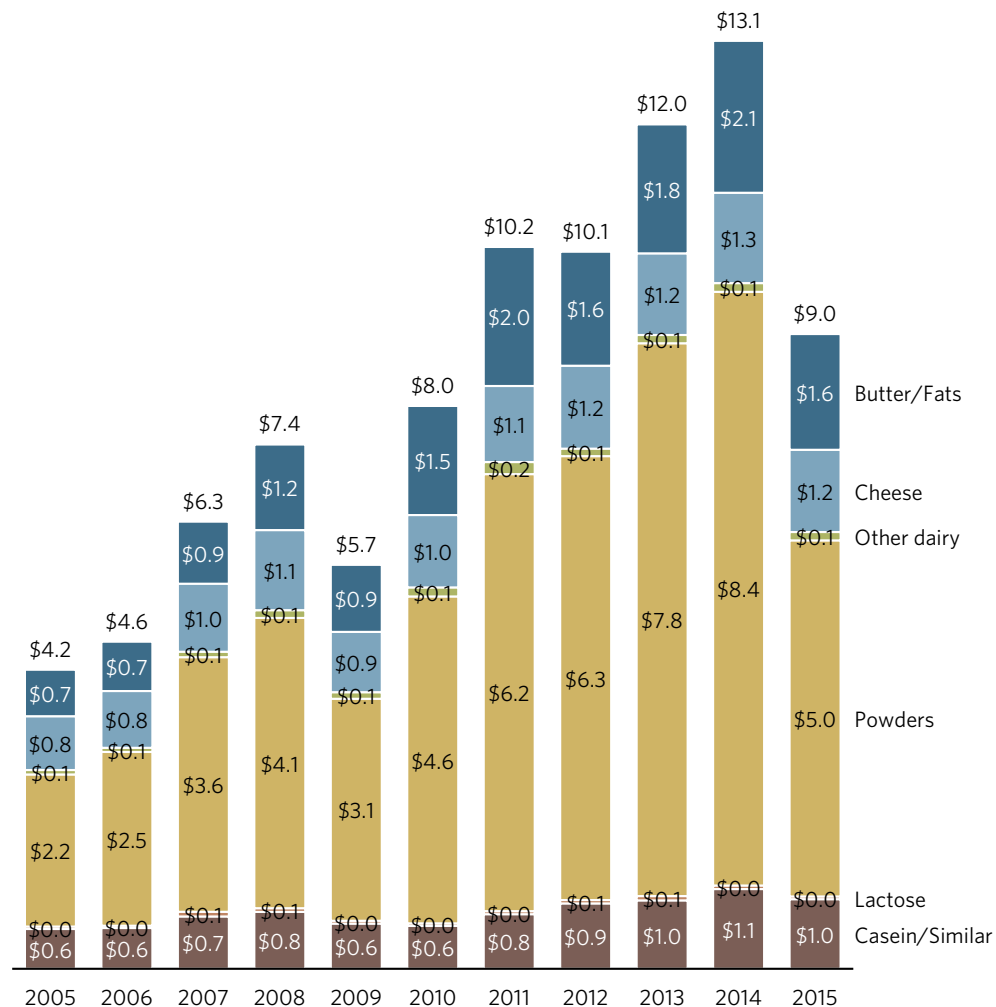
<ul style="list-style-type: none"> <li>- Whole milk powder (WMP)</li> <li>- Skim milk powder (SMP)</li> </ul>	<ul style="list-style-type: none"> <li>- Casein</li> <li>- Caseinates/other derivatives</li> <li>- Milk albumins</li> </ul>	<ul style="list-style-type: none"> <li>- Lactose 99% pure</li> <li>- Lactose, other</li> </ul>	<ul style="list-style-type: none"> <li>- Butter</li> <li>- Dairy spreads</li> <li>- Other milk fats &amp; oils</li> </ul>	<ul style="list-style-type: none"> <li>- Cheddar cheese, etc.</li> <li>- Fresh cheese</li> <li>- Blue cheese</li> </ul>	<ul style="list-style-type: none"> <li>- UHT Milk &amp; Cream</li> <li>- Fresh milk</li> <li>- Yoghurt</li> <li>- Condensed milk</li> </ul>
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Exports are spread across all six categories, however powders (56%), butter (18%), cheese (13%) and casein (11%) are the largest; exports are growing, though impacted by the recent fall in global commodity dairy prices

NEW ZEALAND EXPORT VALUE BY DAIRY SEGMENT  
US\$; b; 2015



NEW ZEALAND EXPORT VALUE BY DAIRY SEGMENT  
US\$; b; 2005-2015

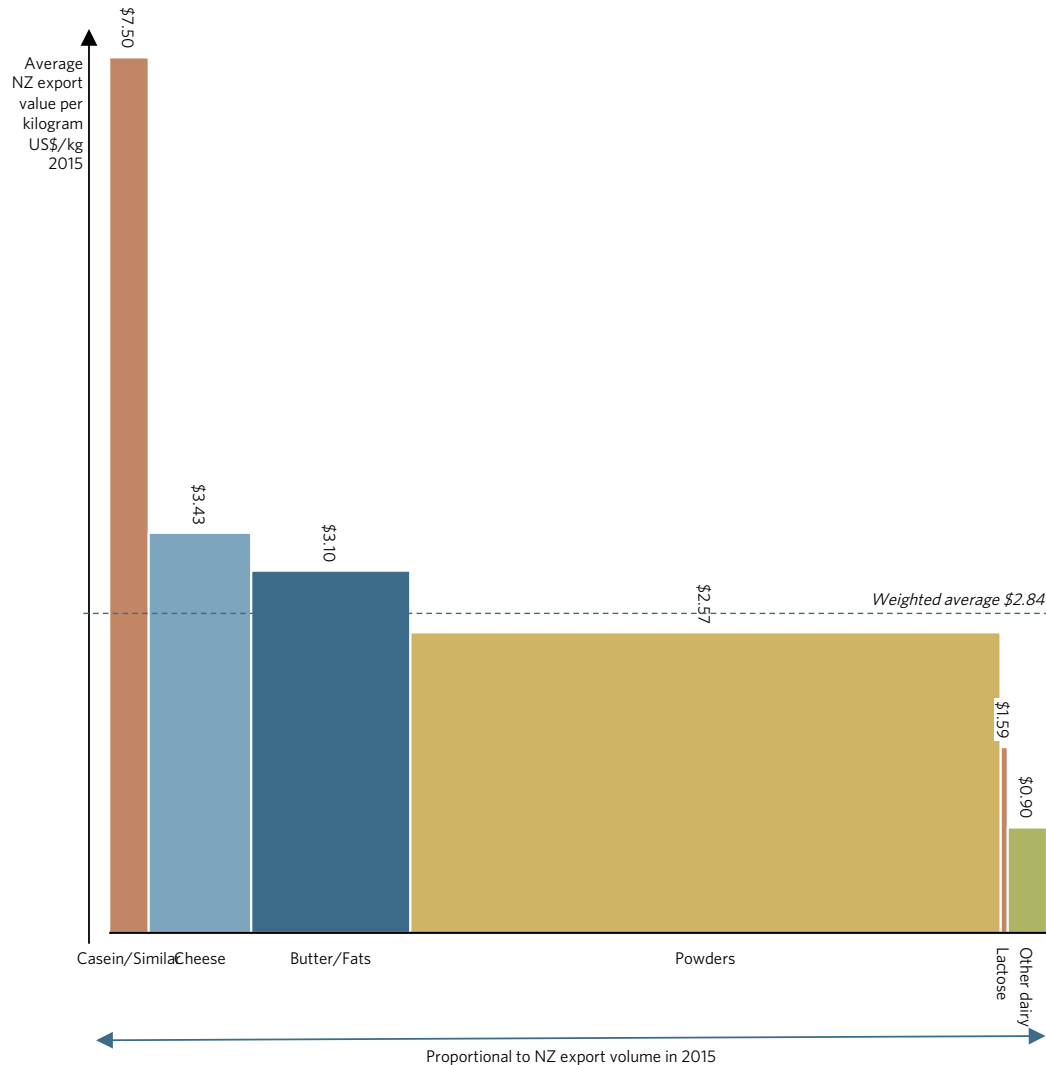


Source: UN Comtrade database (from NZ Customs data); Coriolis classifications and analysis

Average export price varies by category, with casein standing out for high prices and powders accounting for the bulk of export volume; powders are driving volume growth, though not achieving aggregate price gains

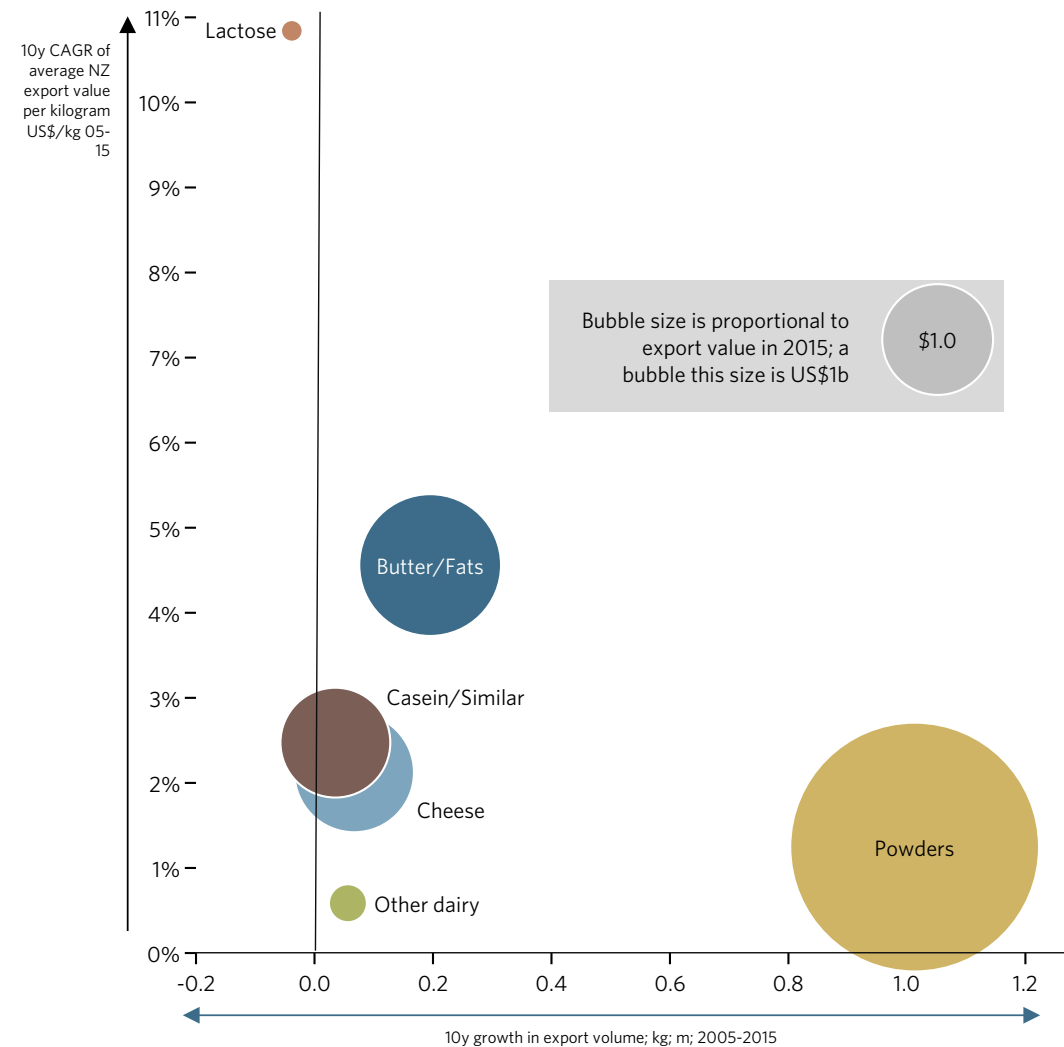
NEW ZEALAND EXPORT VOLUME VS. AVG \$/KG: BY SEGMENT

Kg; millions; US\$/kg; actual; 2015



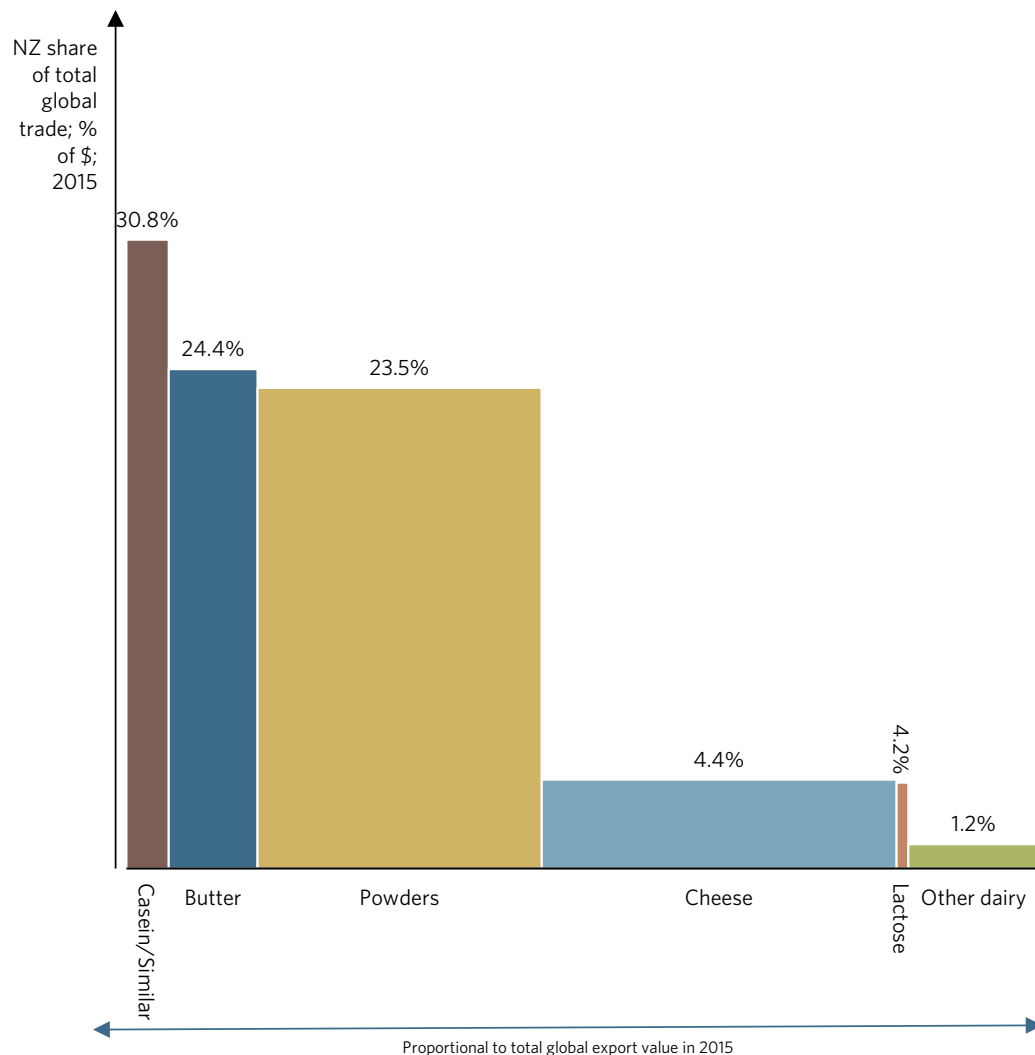
GROWTH MATRIX: 10Y VOLUME VS. 10Y CAGR \$/KG VS. \$

Kg; US\$/kg; US\$; 2005-2015

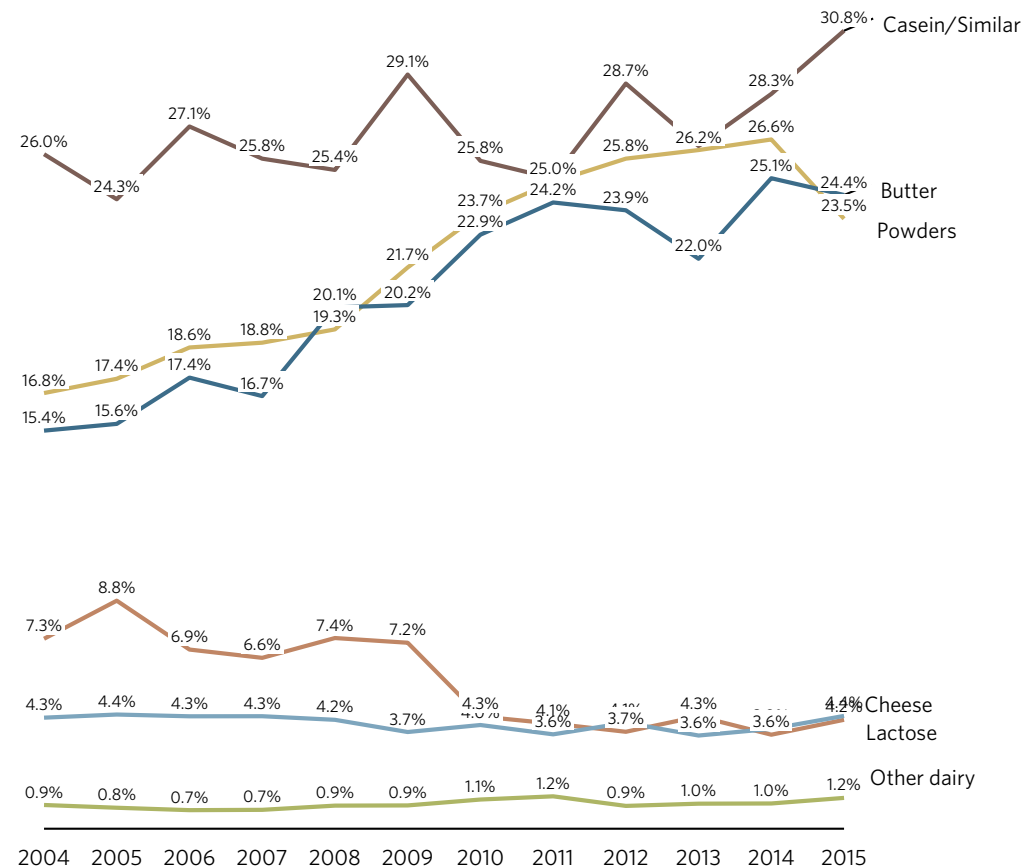


New Zealand is a leading global exporter across caseins (30.8%), butter/dairy fats (24.4%) and powders (23.5%); the country has a strong position in cheese (4.4%) and lactose (4.2); small elsewhere

NEW ZEALAND SHARE OF WORLD EXPORT VALUE BY CATEGORY  
US\$; % of US\$; 2015



NEW ZEALAND SHARE OF WORLD EXPORT VALUE BY CATEGORY  
% of US\$; 2005-2015

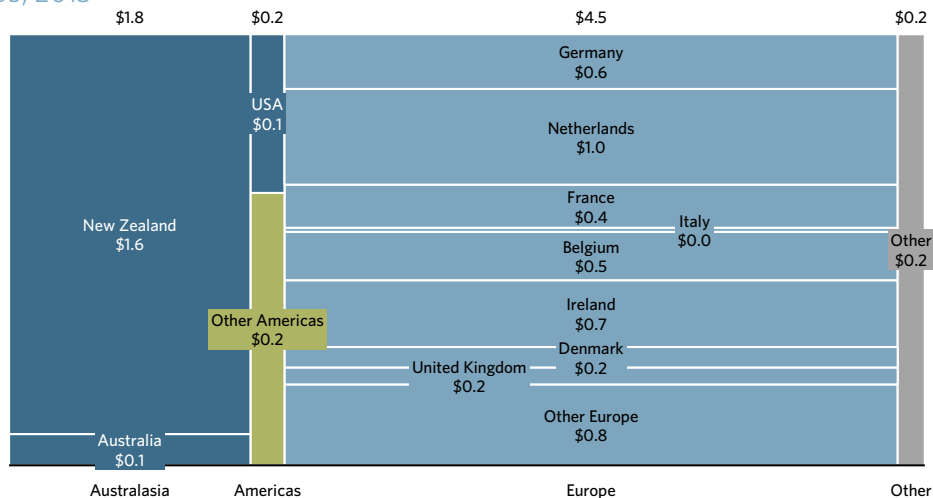


Source: UN Comtrade database (from NZ Customs data); Coriolis classifications and analysis

# New Zealand is the largest exporter of dairy fats and the leading exporter outside Europe

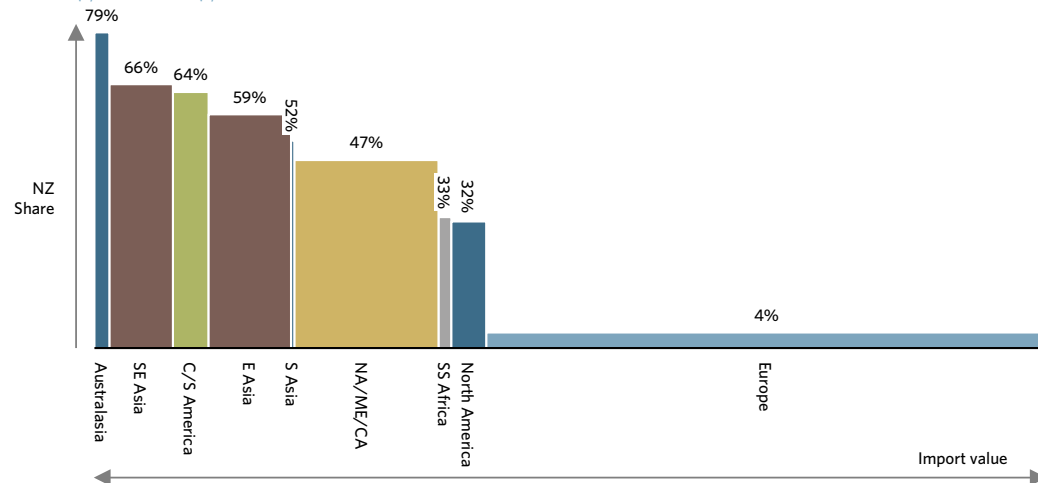
## GLOBAL EXPORT SHARE: BUTTER/FATS

US\$b; 2015



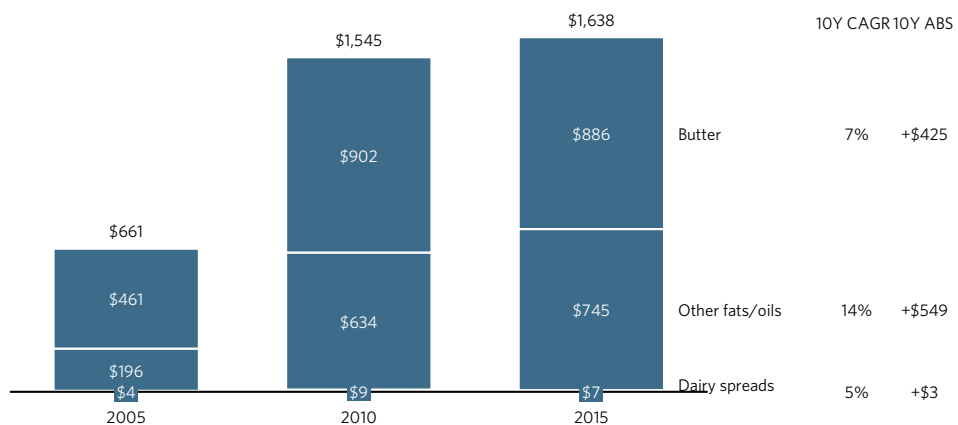
## REGIONAL IMPORT VALUE VS. NZ SHARE

US\$; % of US\$; 2015



## NZ EXPORTS BY TYPE: BUTTER/FATS

US\$m; 2005-2015



## EXAMPLE PRODUCTS: WESTLAND

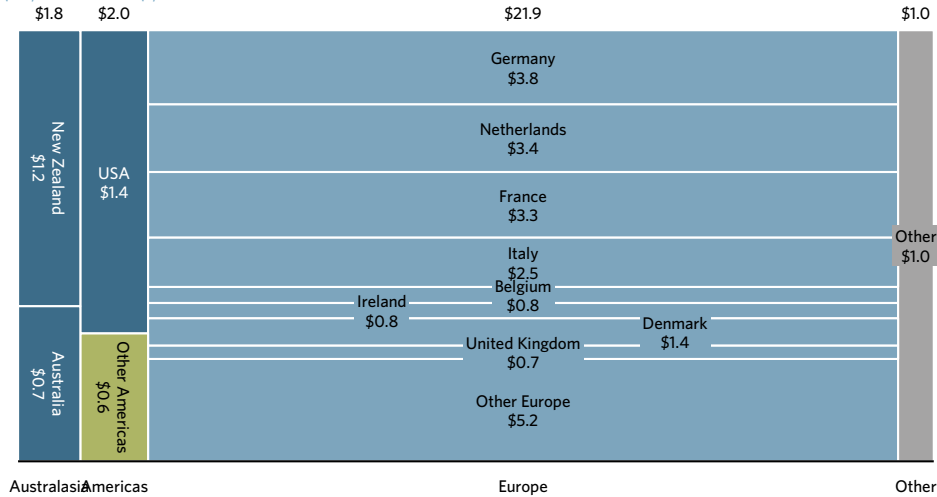
2017



# New Zealand is the fifth largest global exporter of cheese and the leading exporter to Asia-Pacific

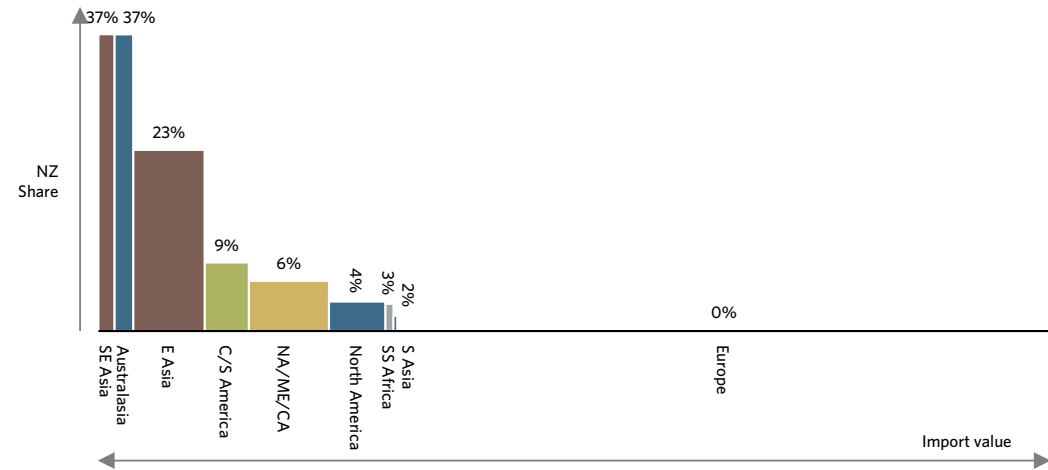
## GLOBAL EXPORT SHARE: CHEESE

US\$b; % of US\$; 2015



## REGIONAL IMPORT VALUE VS. NZ SHARE

US\$; % of US\$; 2015



## NZ EXPORTS BY TYPE: CHEESE

US\$m; 2005-2015



## EXAMPLE PRODUCTS: OPEN COUNTRY

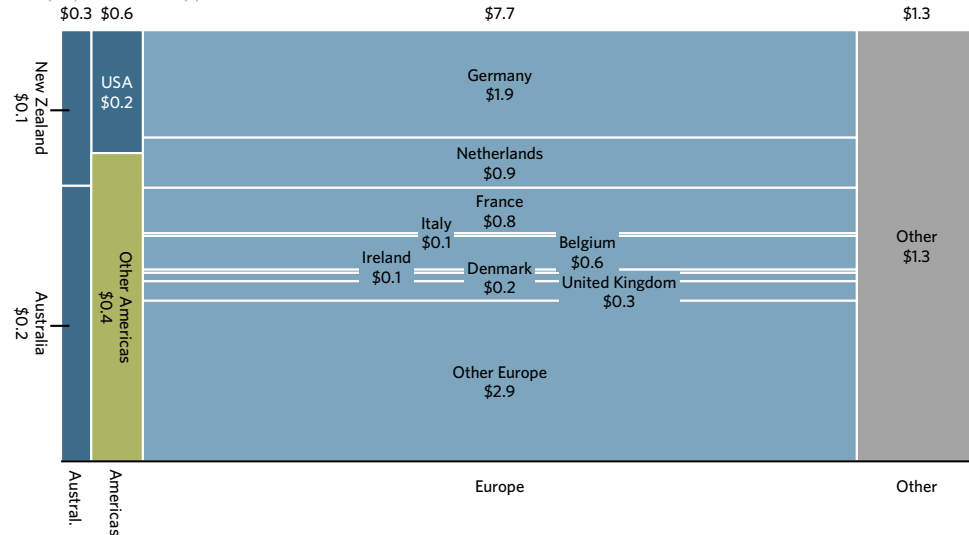
2017



While New Zealand currently has a small share of "other dairy"; exports of UHT milk and yoghurt are growing

### GLOBAL EXPORT SHARE: OTHER DAIRY

US\$b; % of US\$; 2015



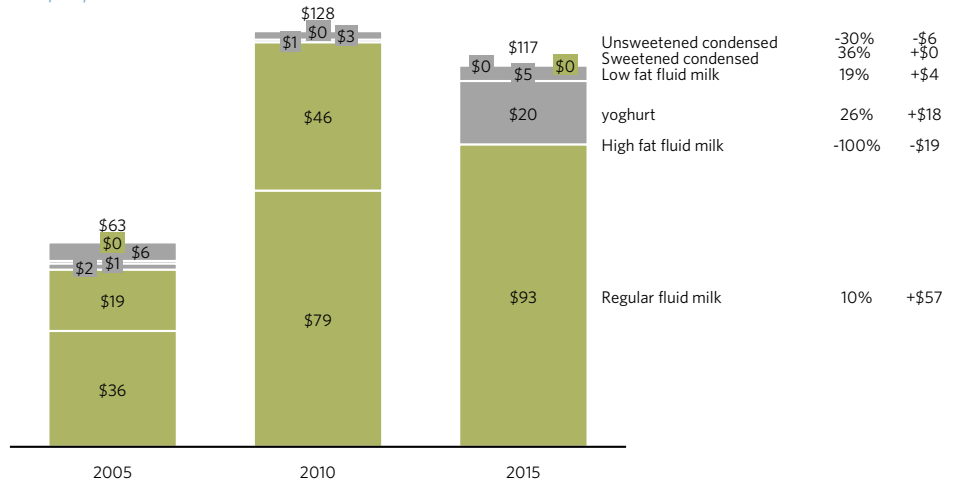
### NZ INDUSTRY STRATEGIC DIRECTION

Model; 2017



### NZ EXPORTS BY TYPE: OTHER DAIRY

US\$m; 2005-2015



### EXAMPLE PRODUCTS: GOODMAN FIELDER

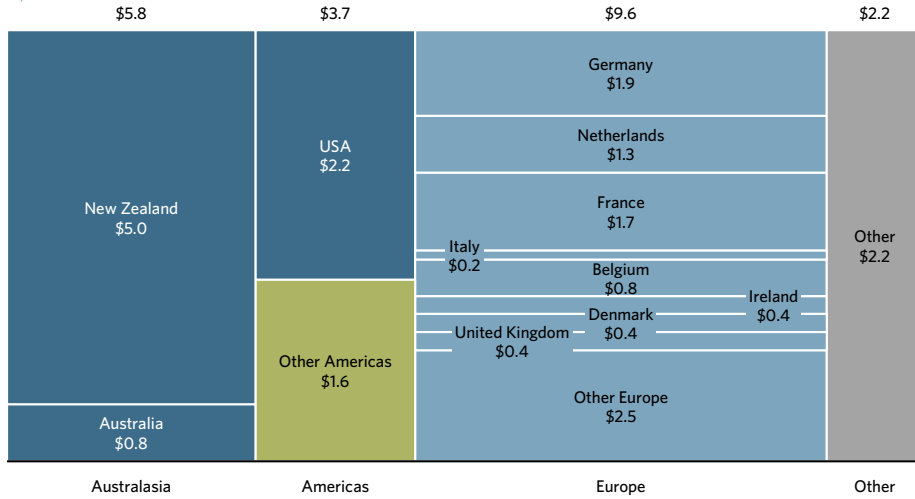
2017



# New Zealand is the market leader in export dairy powders and strong across Asia

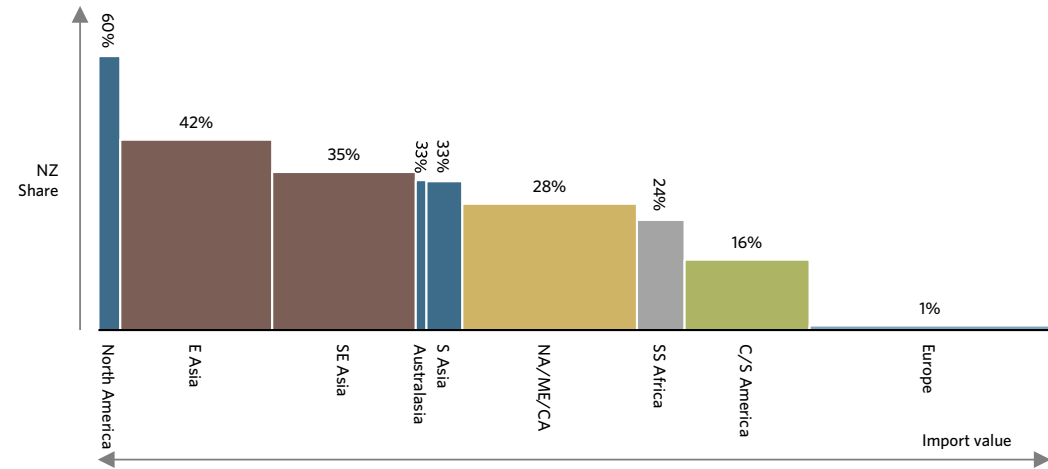
## GLOBAL EXPORT SHARE: POWDERS

US\$b; 2015



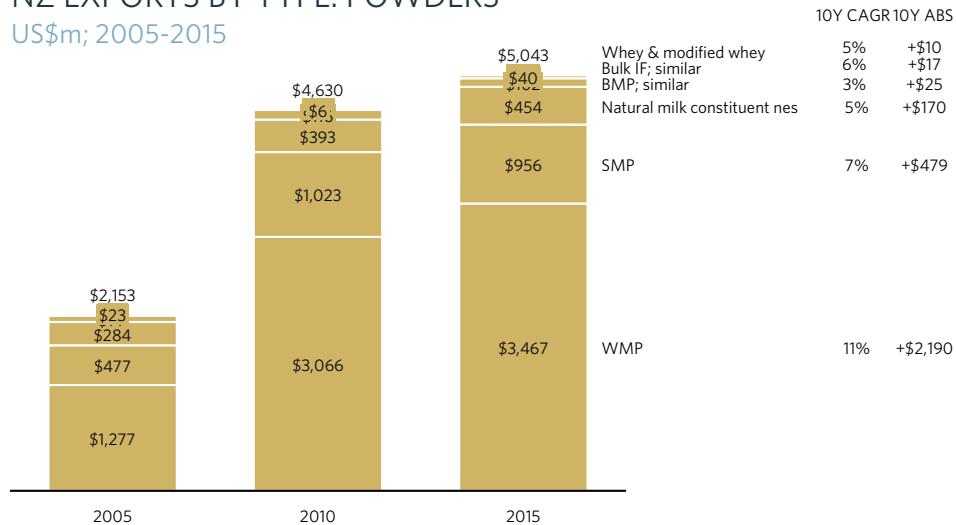
## GLOBAL REGIONAL IMPORT VALUE VS. NZ SHARE

US\$; % of US\$; 2015



## NZ EXPORTS BY TYPE: POWDERS

US\$m; 2005-2015



## EXAMPLE PRODUCTS: FONTERRA

2017

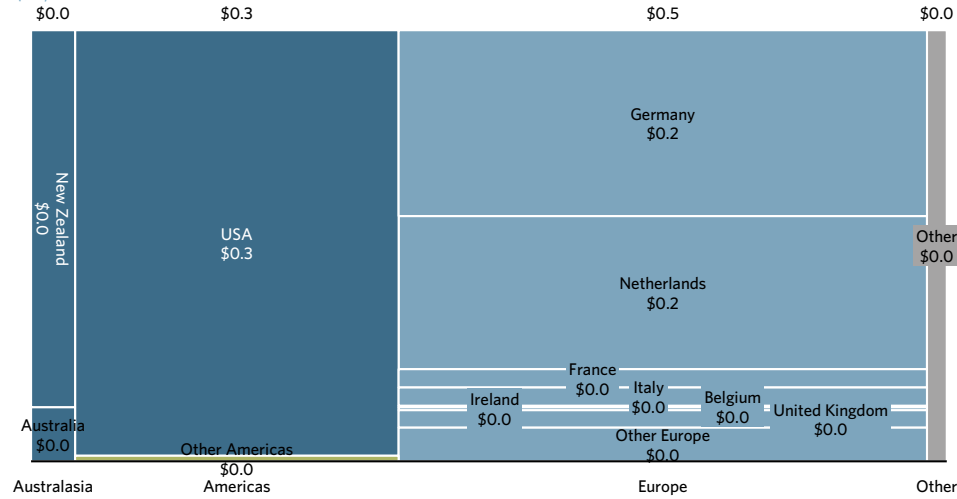




# New Zealand is the fourth largest global lactose exporter

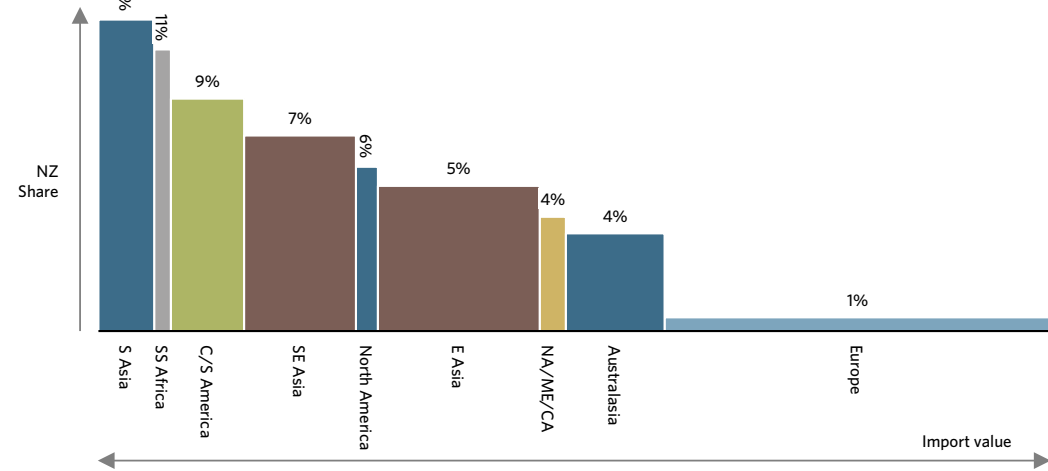
## GLOBAL EXPORT SHARE: LACTOSE

US\$b; 2015



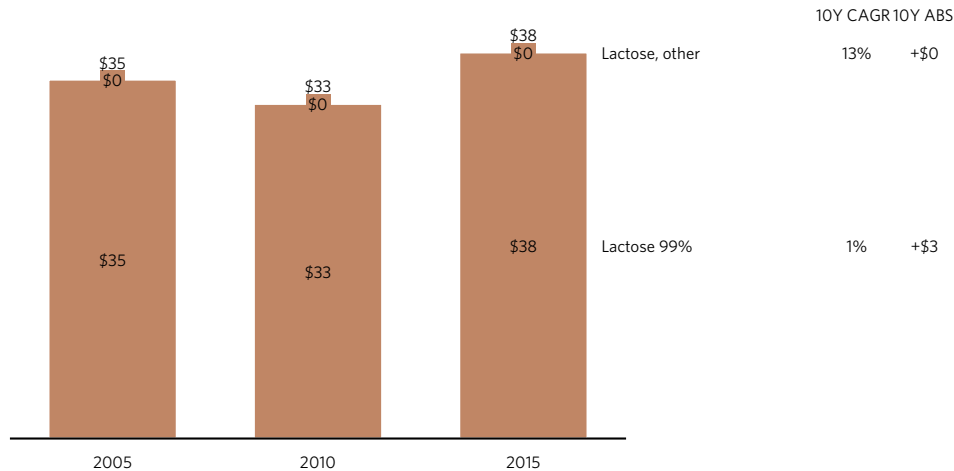
## GLOBAL REGIONAL IMPORT VALUE VS. NZ SHARE

US\$; % of US\$; 2015



## NZ EXPORTS BY TYPE: LACTOSE

US\$m; 2005-2015



## EXAMPLE PRODUCTS: FONTERRA/NZMP

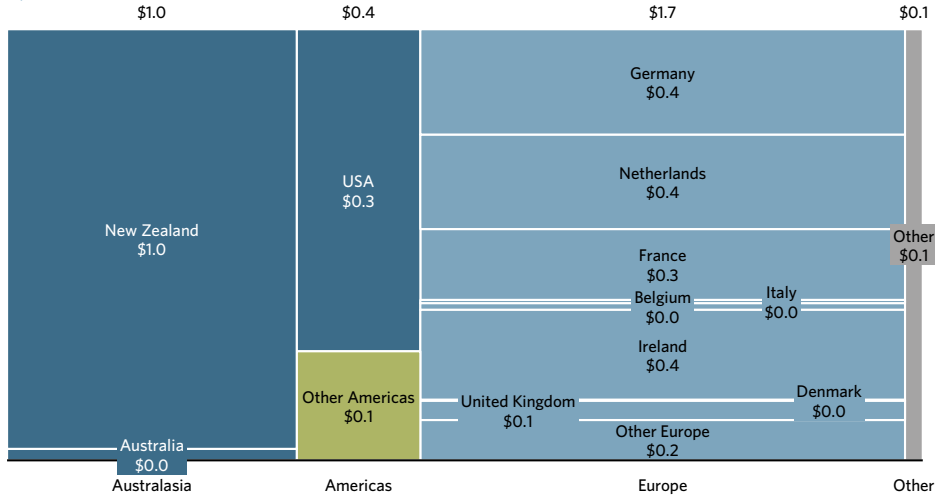
2017



# New Zealand is the global market leader in casein/similar

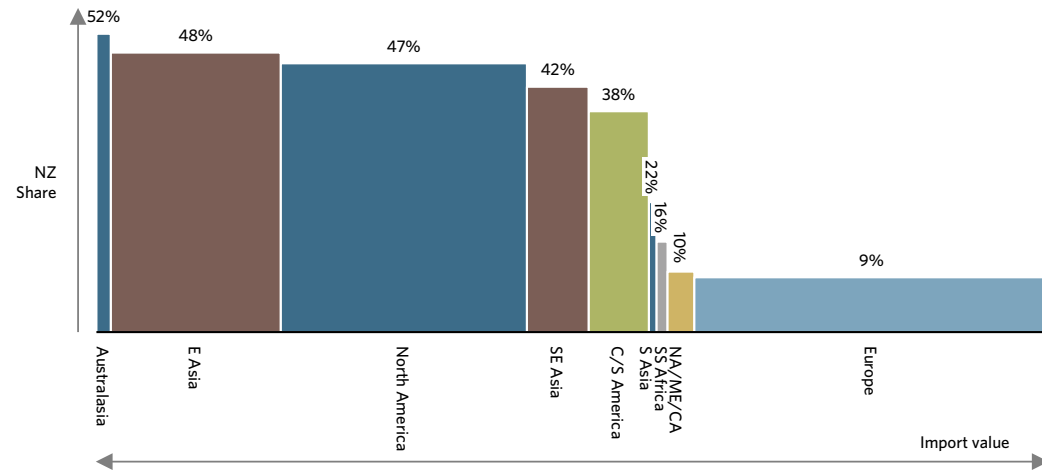
## GLOBAL EXPORT SHARE: CASEIN/SIMILAR

US\$b; 2015



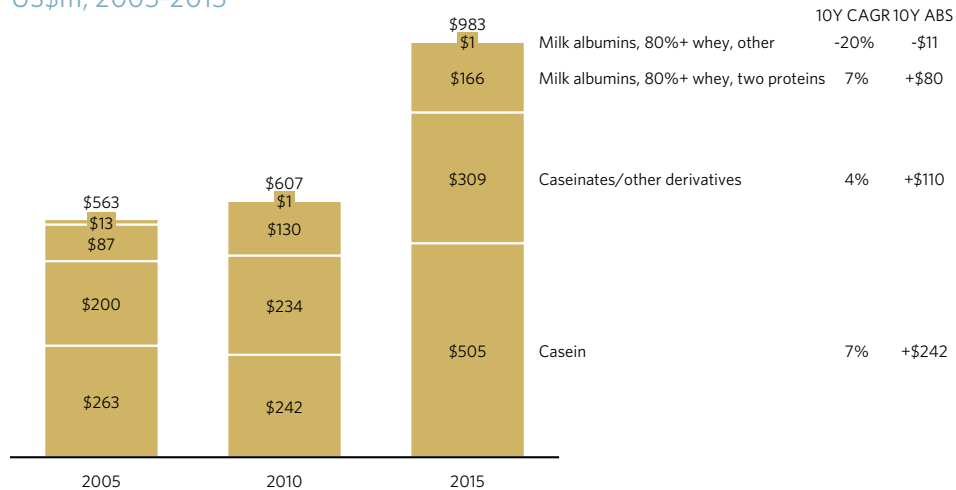
## GLOBAL REGIONAL IMPORT VALUE VS. NZ SHARE

US\$; % of US\$; 2015



## NZ EXPORTS BY TYPE: CASEIN/SIMILAR

US\$m; 2005-2015



## EXAMPLE PRODUCTS: TATUA

2017



# New Zealand Growth & Innovation

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- + Horizons for growth
- + Emerging export stars
- + New viable options
- + Mega-trends driving change

04

# New Zealand firms continue to develop a wide range of innovative new dairy products

## THREE HORIZONS OF GROWTH

- Beyond its mature core export products (Horizon 1), New Zealand has both a strong range of emerging export stars (Horizon 2) and continues to innovate and produce new, viable export options (Horizon 3)

## HORIZON 2: EMERGING EXPORT STARS

- In Horizon 2, New Zealand is building a range of emerging export products
- Two dairy products emerge as “growth stars” - UHT Milk and Yoghurt - from an evaluation of ten years of product-level trade growth
- UHT Milk exports are growing and the product plays to New Zealand strengths in shelf-stable dairy
- In a virtuous circle, the growth of New Zealand UHT Milk exports has triggered reinvestment in new packaging and new product innovation
- New Zealand yoghurt exports are growing, though they are currently highly reliant on a few countries

## HORIZON 3: NEW, VIABLE OPTIONS

- In Horizon 3, New Zealand is creating and nurturing a range of viable options for future export success
- Four broad global consumer mega-trends are driving growth and new product development in the food & beverage industry
- New Zealand dairy products succeeding on-shelf in export markets are aligned with these trends
- These trends drive new product development, through (1) packaging, (2) product, (3) category and (4) channel innovation; success, however, often comes down to implementation and execution
- New Zealand dairy firms are delivering on...
  - Packaging-driven innovation
  - Product-driven innovation
  - Category and channel innovation

Beyond its mature core (Horizon 1) export products, New Zealand has both a strong range of emerging export stars (Horizon 2) and continues to innovate and produce new, viable export options (Horizon 3)

## THREE HORIZONS OF GROWTH FRAMEWORK: NEW ZEALAND DAIRY INDUSTRY

Model; 2017

	FOCUS OF THIS SECTION		
	HORIZON 1 Mature export categories & products	HORIZON 2 Build emerging export products	HORIZON 3 Create viable export options
Strategic Focus	<ul style="list-style-type: none"> <li>– Defend and extend profitability of core business</li> </ul>	<ul style="list-style-type: none"> <li>– Expand and grow emerging businesses &amp; products</li> </ul>	<ul style="list-style-type: none"> <li>– Develop and discover new options for growth</li> </ul>
Key success factors	<ul style="list-style-type: none"> <li>– Efficiency &amp; cost control</li> <li>– Process innovation</li> <li>– Scale</li> <li>– Supply chain</li> </ul>	<ul style="list-style-type: none"> <li>– Customer acquisition</li> <li>– Speed &amp; flexibility</li> <li>– Execution</li> <li>– Resources/funding</li> </ul>	<ul style="list-style-type: none"> <li>– Risk taking</li> <li>– Market insight</li> <li>– Business model innovation</li> <li>– Culture &amp; incentives</li> </ul>
Key metrics	<ul style="list-style-type: none"> <li>– Profits, margins, costs</li> </ul>	<ul style="list-style-type: none"> <li>– Market share, growth</li> </ul>	<ul style="list-style-type: none"> <li>– Milestones</li> </ul>
Example products	<ul style="list-style-type: none"> <li>– Whole milk powder</li> <li>– Butter</li> <li>– Lactose</li> </ul>	<ul style="list-style-type: none"> <li>– Yoghurt</li> <li>– UHT Milk/Fluid Milk</li> <li>– Also a range of processed foods with significant dairy ingredients (e.g. Sport nutrition, infant formulas etc. see Processed Foods document)</li> </ul>	<ul style="list-style-type: none"> <li>– Alternative dairy (e.g. plant-based)</li> <li>– Sheep milk products</li> <li>– Dairy-based nutraceuticals</li> <li>– New unique cheeses</li> <li>– New unique milk based beverages</li> </ul>

# In Horizon 2, New Zealand is building a range of emerging export products

## THREE HORIZONS OF GROWTH FRAMEWORK: NEW ZEALAND DAIRY INDUSTRY

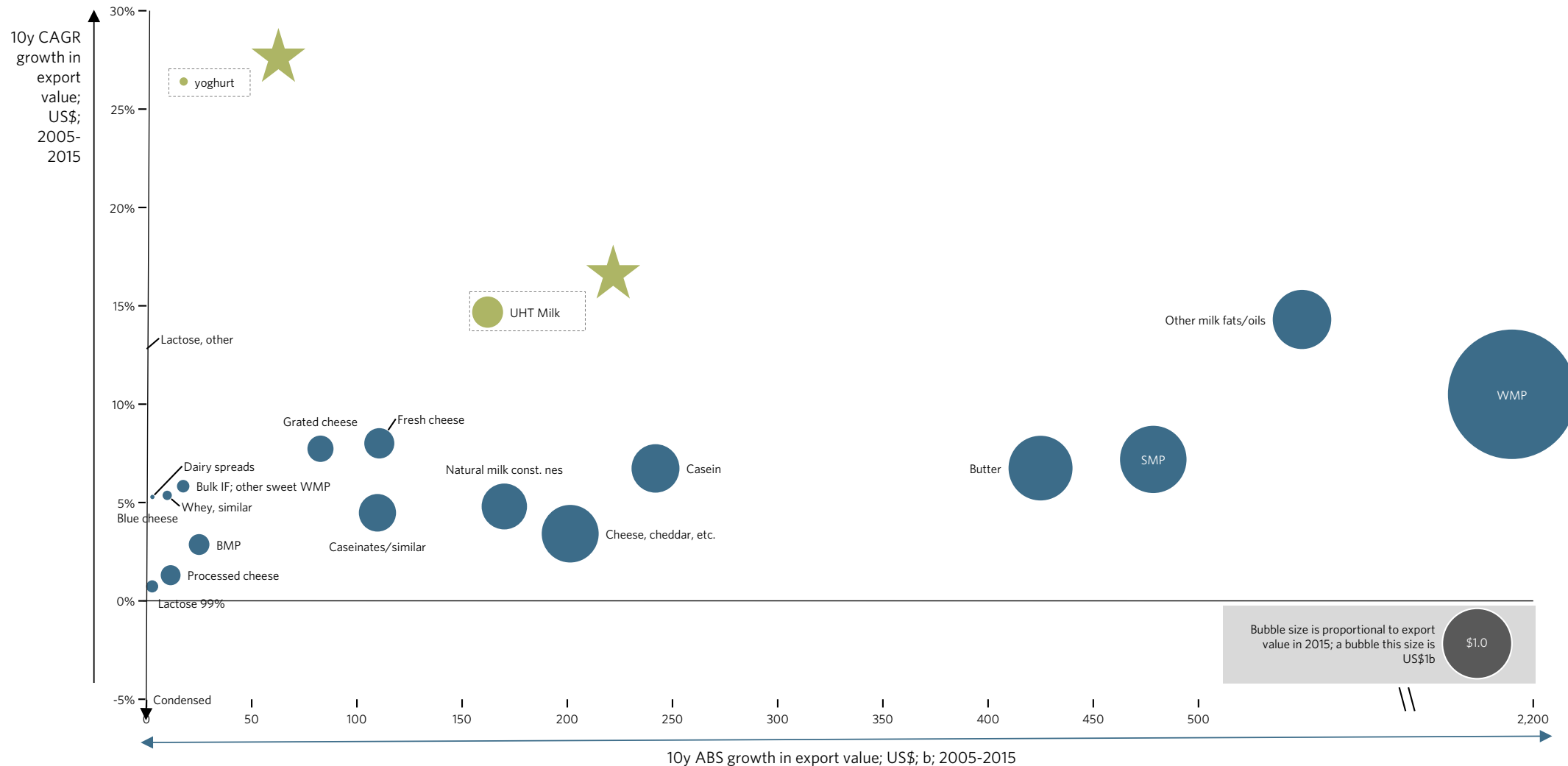
Model; 2017



Strategic Focus	<ul style="list-style-type: none"> <li>– Defend and extend profitability of core business</li> </ul>	<ul style="list-style-type: none"> <li>– Expand and grow emerging businesses &amp; products</li> </ul>	<ul style="list-style-type: none"> <li>– Develop and discover new options for growth</li> </ul>
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# Two dairy products emerge as “growth stars” - UHT Milk and Yoghurt - from an evaluation of ten years of product-level trade growth

NZ DAIRY EXPORT GROWTH STAR MATRIX: 10Y VALUE GROWTH VS. 10Y CAGR \$ VS. VALUE IN 2015  
 US\$; CAGR on US\$; 2005-2015

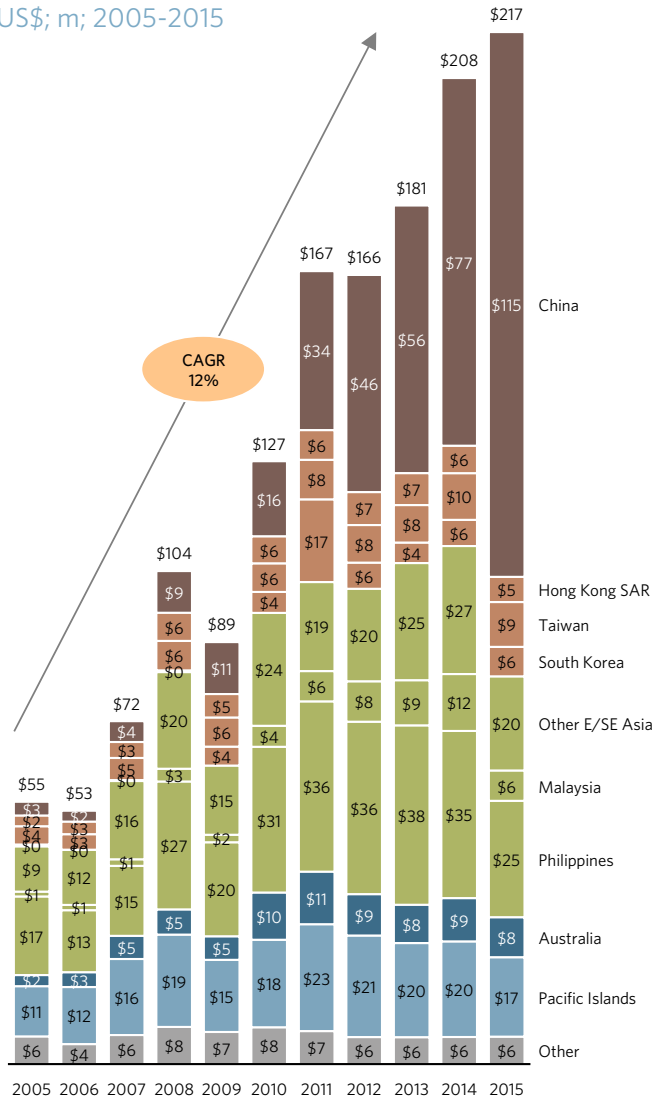


Note: Data on this page is product level trade codes, not segment level aggregates as presented earlier (e.g. the four cheese codes here sum to the cheese segment)

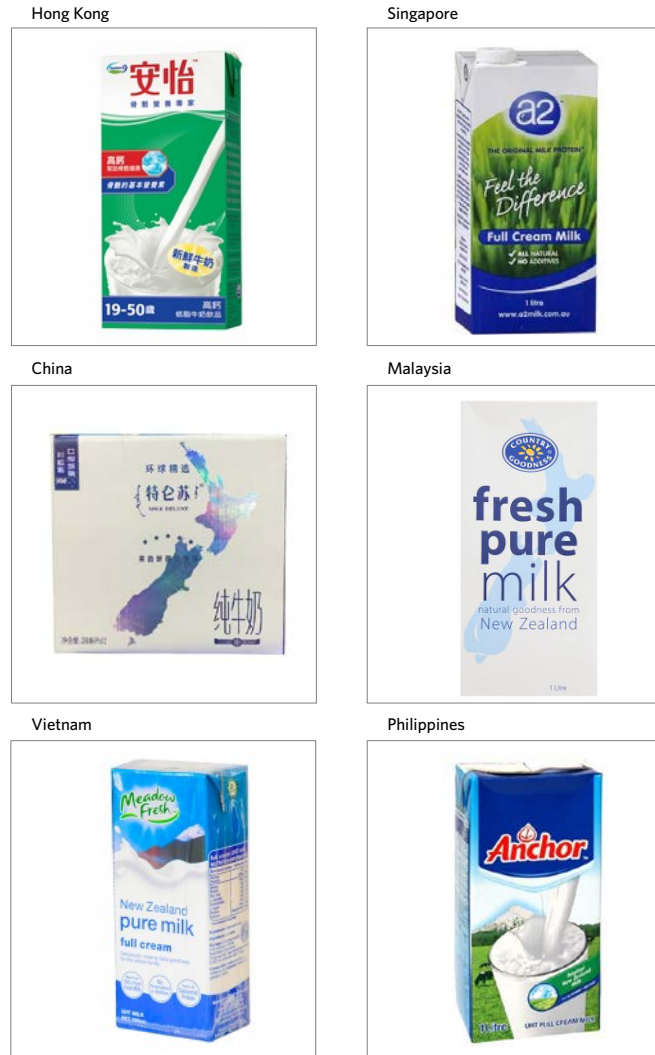
Source: UN Comtrade database (from NZ Customs data); Coriolis classifications and analysis

# UHT Milk exports are growing and the product plays to New Zealand strengths in shelf-stable dairy

UHT MILK EXPORT VALUE BY MARKET  
US\$; m; 2005-2015



EXAMPLE: NZ PRODUCTS ON-SHELF IN ASIA  
Select; Feb 2017



EXAMPLE: IN-STORE DISPLAY IN VIETNAM  
Select; Feb 2017



Note: defines UHT milk (and cream) as HS 040110/040120/040130;

Source: photo credit (fair use/fair dealing; low resolution; complete product/brand for illustrative purposes); UN Comtrade database (from NZ Customs data); Coriolis classifications and analysis



In a virtuous circle, the growth of New Zealand UHT Milk exports has triggered reinvestment in new packaging and new product innovation

## EXAMPLE: PRODUCT & PACKAGING INNOVATION IN UHT MILK PRODUCTS

Select; Feb 2017



- Historically standard industry 250ml and 1L UHT packaging
- Recently updated design and imagery

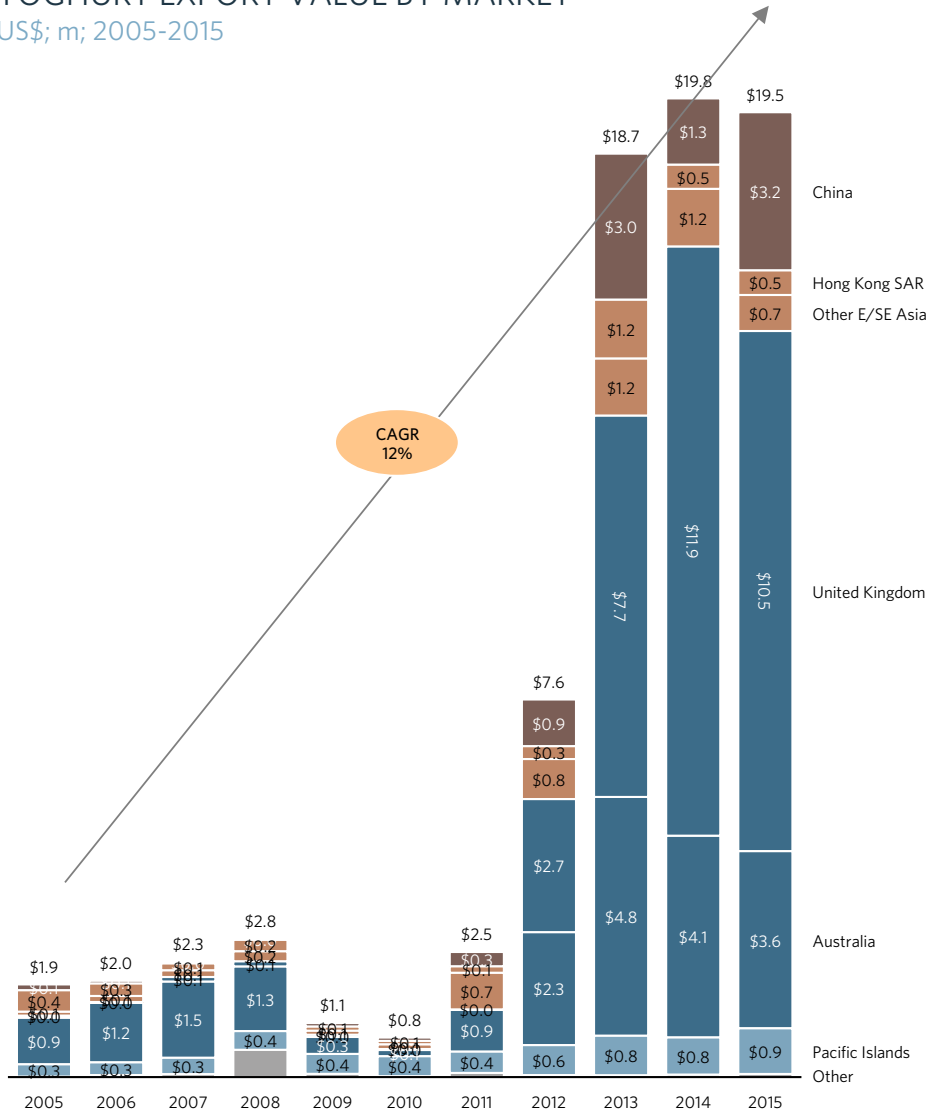
- Launched bulk multi-packs to support stock-up shop
- Stronger external imagery on packaging (not just cardboard outer)

- Launched kid-focused range
- Targeting Chinese "Dragon Mother"
- Contains "nothing but milk, vitamin A and vitamin D. No added sweeteners or additives"

- New "Up-line" range of premium milks
- "LiveUp" high protein milk (+50% more)
- "NaturalUp" certified organic milk (to China & NZ standards)

# New Zealand yoghurt exports are growing, though they are currently highly reliant on a few countries

YOGHURT EXPORT VALUE BY MARKET  
US\$, m; 2005-2015



EXAMPLE: NZ PRODUCTS ON-SHELF  
Select; Feb 2017



# In Horizon 3, New Zealand is creating and nurturing a wide range of viable options for future export success

## THREE HORIZONS OF GROWTH FRAMEWORK: NEW ZEALAND DAIRY INDUSTRY

Model; 2017



	HORIZON 1 Mature export categories & products	HORIZON 2 Build emerging export products	HORIZON 3 Create viable export options
Strategic Focus	<ul style="list-style-type: none"> <li>– Defend and extend profitability of core business</li> </ul>	<ul style="list-style-type: none"> <li>– Expand and grow emerging businesses &amp; products</li> </ul>	<ul style="list-style-type: none"> <li>– Develop and discover new options for growth</li> </ul>
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# Four broad global consumer mega-trends are driving growth and new product development in the food & beverage industry

## FOUR CONSUMER FOOD & BEVERAGE MEGA-TRENDS



### HEALTH & WELLNESS

I am concerned about my health and am trying to live a healthy lifestyle

- Mid-high income countries experiencing an aging population
- Spread of Western lifestyle and Western diseases of affluence (e.g. diabetes)
- Ongoing waves of media hype around fad diets and new "superfoods"
- Food presented and viewed as both the problem and the solution
- May be addressing specific conditions (e.g. weight management; cholesterol)
- May target a specific family member (e.g. grandparent)
- May reflect wider "healthy living" worldview



### AUTHENTIC & RESPONSIBLE

I am mindful of where my food comes from and how it is produced

- Dramatic global shift to city living; 1800=3%, 1900=14%, 2015=50%; developed nations 75%+; 400 cities 1m+
- Loss of attachment to the land and food production
- Ongoing "rights revolution" now spreading to animals
- Ongoing waves of food scares around contamination, additives
- May target specific foods perceived as high risk, unethical or visible (e.g. coffee, eggs)
- May target a specific family member (e.g. child)



### EASY & CONVENIENT

I am trying to achieve work-life balance and need quick-and-easy meal solutions

- Dramatic increase in female participation on the workforce globally
- Consumers working longer hours to maintain relative income
- Work hours no longer just "9 to 5"; food needs at all times (e.g. night shift)
- May represent a need for an immediate solution (e.g. thirst)
- May represent an easy solution to a future challenge (e.g. children's lunches)



### SENSORY & INDULGENT

I like to indulge in rich and sumptuous living beyond the bare necessities

- Growing income polarisation into "haves and have-nots"
- Strongly emerging trend to premium (and discount) at the expense of the mid-market
- Emerging middle class across developing world driving consumption growth
- Incredible power of food and beverages in many social settings
- May range from "everyday luxury" to an occasional "treat"
- May be used to demonstrate social status, taste or style

# New Zealand dairy products succeeding on-shelf in export markets are aligned with these trends

**Auchan 欧尚**

Shanghai



**FairPrice**

Singapore



**惠康 wellcome**

Hong Kong



**PARKSHOP**

Hong Kong



H&W	Whole milk
H&W	High in vitamins
A&R	Trusted brand
A&R	New Zealand flag
E&C	Bulk pack/easy carry handle
E&C	Shelf-stable
E&C	Ready-to-drink 250ml size
S&I	Cartoon cow

H&W	Rich in calcium
A&R	Cows & mountains imagery
A&R	Outline of New Zealand
A&R	Trusted brand
E&C	Value pack
E&C	Single serve slices
E&C	Ready-to-eat
S&I	"Excellent creamy taste"

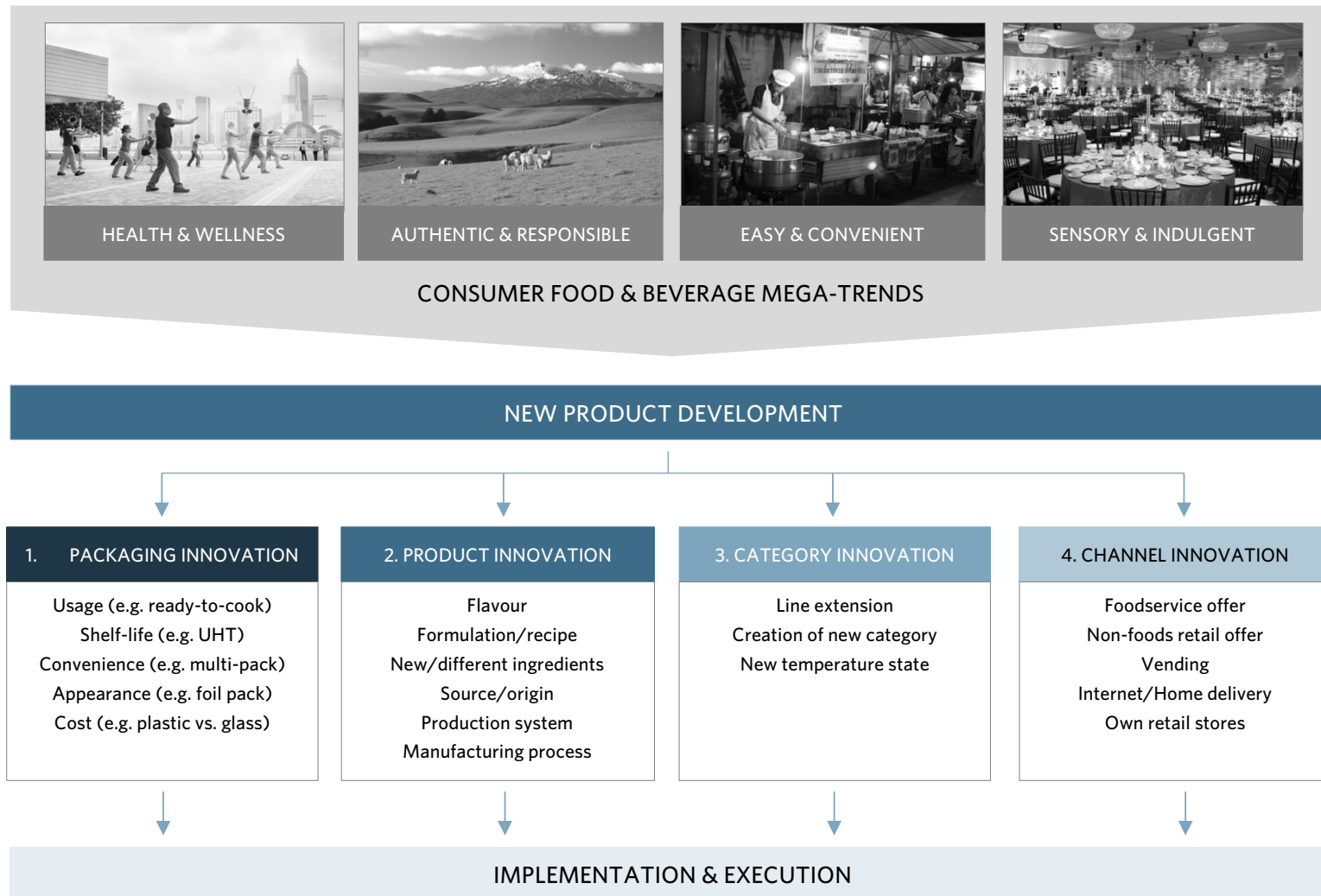
H&W	Contains calcium
H&W	Contains collagen
H&W	"Make you stronger bones, joints flexible, muscles more flexible"
H&W	Added vitamin C, D and E
H&W	Value pack
A&R	Packed in Malaysia from New Zealand milk powder
E&C	Shelf-stable
E&C	Just add water

H&W	Unsalted
A&R	Trusted brand founded in 1937
A&R	Imported from New Zealand
E&C	250g pack
S&I	Gold foil packaging

These trends drive new product development, through (1) packaging, (2) product, (3) category and (4) channel innovation; success, however, often comes down to implementation and execution

## CONSUMER FACING INNOVATION IN THE FOOD & BEVERAGE INDUSTRY FROM TREND TO EXECUTION

Simplified model; 2017





# New Zealand dairy firms are delivering on packaging-driven innovation

## SELECT EXAMPLES OF PACKAGING INNOVATION: NEW ZEALAND DAIRY FIRMS 2017

**COMMENTARY**

- Traditionally New Zealand produced transport-friendly dairy products (e.g. cheese, butter)
- Driven by location and use of sea freight (for cost competitiveness reasons)
- Emergence of new packaging forms, materials and technologies (e.g. aseptic pouch) is ongoing globally
- Creating opportunities for long distance exports from New Zealand to key markets
- End of NZ Dairy Board 15 years ago has enabled new investment and greater innovation
- Further innovation in longer shelf-life, in particular, would enable further penetration of New Zealand produced consumer-ready products into numerous new categories (e.g. drinking yoghurt)
- New packaging is often linked with new processing technologies (e.g. high pressure processing (HPP))



**INSIGHTS**

- Falling freight costs and rising energy costs changing fluid milk economics
- Strong demand from Chinese consumers for trusted liquid milk
- Fonterra reinvesting in UHT packaging, including new & upgraded lines
- Launch of over-wrapped pack of 12



**INSIGHTS**

- New packaging technology enables emergence of new yoghurt sub-category
- Product is single serve, re-sealable, ready-to-drink and "school-ready"
- Packaging delivers longer shelf life



**INSIGHTS**

- Traditional milk powder in a tin/bag revitalised with new packaging form
- Product is single serve, ready-to-drink
- New flavours (e.g. Black Sesame & Collagen, White Tea)

# New Zealand dairy firms are delivering on product-driven innovation

## 2. PRODUCT INNOVATION

### SELECT EXAMPLES OF PRODUCT INNOVATION: NEW ZEALAND DAIRY FIRMS 2017

#### COMMENTARY

- Large brands are innovating in the drive to increase value-added product lines
- Innovative products target a gap in the market (e.g. premium milk products, need for convenient snacking)
- Innovation is fostered in New Zealand by government supported programs (e.g. NZ Food Innovation Network facilities and pilot plants at FoodBowl and FoodWaikato)
- Innovation often enabled by availability of new technology or science
- Emergence of new packaging forms, materials and technologies (e.g. aseptic pouch) is ongoing globally



#### INSIGHTS

- Lewis Road Creamery founded in 2011 by Peter Cullinane, ex Saatchi & Saatchi
- Started selling range of gourmet organic and non organic milks in 2013
- Extended into flavoured milks, butters (truffle, chocolate), custard, ice cream, and most recently chocolate cream liqueur
- Cobrand with premium, iconic brands "Whittakers Chocolate", "Heilala Vanilla"
- Organic range in line with health & wellness and authentic and responsible
- Premium chocolate, custards, truffles in line with sensory and indulgent



#### INSIGHTS

- Fonterra's "Anchor Candy Cheese"
- Launched in Hong Kong, Nov 2016
- Convenient bite-sized cheese cubes
- Nutritious children's lunch and snack
- In line with health and wellness mega drivers
- Diversifying offer and range to consumers
- In line with rising consumption of dairy in Asia
- In line with consumer demand for high protein diets



#### INSIGHTS

- Spring Sheep jointly owned by Landcorp Farming Ltd (NZ Govt owned) LIC and Spring Sheep
- Producers of: free range sheep whole milk powder, gold probiotic sheep milk drink and calcium chews
- NZ Food Awards 2016: Artisan Food + Business Innovation Award Finalist + Primary Sector Winner
- In line with health and wellness and authentic and responsible mega drivers; high nutritional value, high protein, easier to digest than cow milk
- Supported by PGP new sheep funding programme in 2016 (\$31m over 6 yrs)



# New Zealand dairy firms are delivering on category and channel innovation

## SELECT EXAMPLES OF CATEGORY & CHANNEL INNOVATION: NEW ZEALAND DAIRY FIRMS 2017

### Lewis Road category expansion from fluid milk to cream liqueur

- Iconic New Zealand fresh dairy producer launches into alcoholic spirits category in February 2017
- Leverages late 2014 launch of highly successful chocolate milk product leading to rationing and ensuing "media circus" followed by custard, ice cream
- First product to be sold outside supermarkets (i.e. in liquor stores)
- Product is manufactured from cream, imported Belgian chocolate and "triple distilled spirits" (likely NZ whey alcohol)



### Blue River Dairy broadens range into sheep infant formula

- Blue River Dairy a traditional sheep cheese and fresh milk company expands into niche sheep powder and infant formula
- Chinese acquired business 2015 and expanded milk powder production
- Vertically integrated system with manufacturing facility based in Invercargill, South Island
- Accreditation to export infant formula to China
- NZ Food Awards 2016 finalist in Export Innovation for "Sheep milk infant formula"
- Recognise trend towards alternative dairy products, in line with health and wellness & authentic and responsible



### Envictus NZ expanding into non-dairy beverages

- Envictus develops new range of long life non-dairy beverages (PET bottling)
- Leader in PET Aseptic manufacturing in New Zealand (significant contract packing)
- Flavours almond, macadamia, coconut milk launched in NZ and Australia
- Strategy to diversify range away from dairy based sports nutrition and weight management products (Horley's)
- Products in line with health & wellness and convenience megatrends



### New Zealand Milk Bar retail stores in China

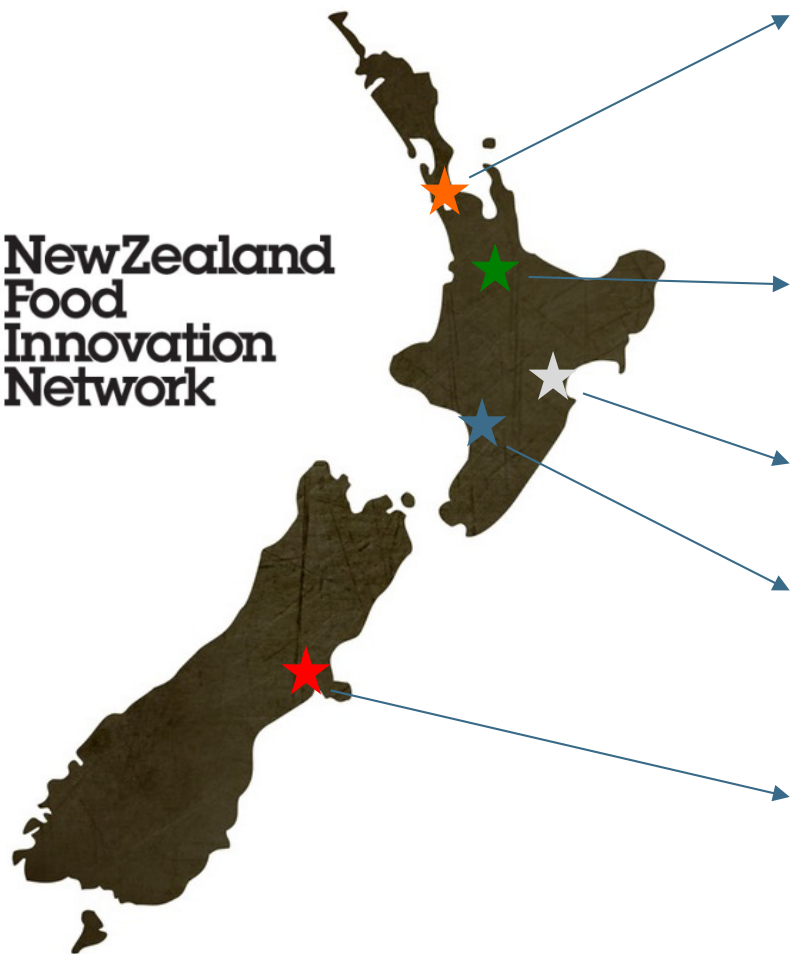
- New Zealand Milk Bar launched in China 2012
- Launched by Kiwi entrepreneurs Simon Page and Jane Li
- Biopure Health (HK) has opened 57 stores across 13 provinces
- Platform to sell New Zealand milk products in China; Infapure formula brand received China Accreditation Feb 2015
- <http://thenewzealandmilkbar.com/>  
<http://biopurehealth.co.nz>



New Zealand beverage firms are supported with access to advice, research facilities and pilot plants across five locations

NZFIN

New Zealand  
Food  
Innovation  
Network



LOCATION	FOCUS	CAPABILITIES
<b>THE <span style="color: orange;">FOODBOWL</span></b>	Processed/FMCG foods Space/equipment for hire Export registrations ~1000 kg/shift	<ul style="list-style-type: none"> <li>- Extrusion &amp; Milling/Blending</li> <li>- Liquids/Beverage</li> <li>- High pressure processing</li> <li>- Freeze drying</li> <li>- General processing</li> <li>- Multiple packaging styles</li> <li>- Product development kitchen</li> </ul>
<b>FOODWAIKATO</b>	Dairy & Infant Formula ~500 kg/hour Vegetable	<ul style="list-style-type: none"> <li>- Spray dryer</li> <li>- Evaporator</li> <li>- Other dairy equipment</li> <li>- Packing</li> <li>- Powder (vegetable)</li> </ul>
<b>HAWKES BAY</b>	All Food and Beverage	Specialist expertise <ul style="list-style-type: none"> <li>- business development</li> <li>- direct to other facilities</li> </ul>
<b>THE <span style="color: blue;">FOODPILOT</span></b>	Dairy Fruit & vegetables All Food and Beverage	<ul style="list-style-type: none"> <li>- Same equipment as Manukau (1/5<sup>th</sup> scale)</li> <li>- Same equipment as Waikato (1/20<sup>th</sup> scale)</li> <li>- Post harvest technologies</li> <li>- Meat and small goods pilot plant</li> <li>- Located at Massey University</li> </ul>
<b>FOODSOUTH</b>	Processed/FMCG Foods Space/equipment for hire Export registrations 20-200L batch size	<ul style="list-style-type: none"> <li>- Mixing /Blending/Emulsifying</li> <li>- Extrusion</li> <li>- Freezing/Cooking/Baking</li> <li>- General Processing</li> <li>- Product Development Kitchen</li> <li>- Technical and Business development expertise</li> </ul>

# New Zealand Dairy Firms

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+ History & Context

+ Enterprises

+ Production Share

+ Employment

+ Financial Performance

+ Ownership

+ Foreign Investors

+ Acquisitions

+ Investments

+ Firm Profiles

05

# New Zealand has a strong and growing dairy industry that continues to attract investment

## OVERVIEW

- New Zealand has a long history in dairy which has moulded the current industry structure

## KEY METRICS

- The number of dairy processing firms in New Zealand has grown, particularly since the signing of the NZ/China FTA and the melamine crisis in China
- New Zealand now has a large and robust dairy products industry with a wide range of participants of all sizes
- New Zealand has large raw milk/primary processing dairy plants, averaging 498m l/plant; New Zealand is in line with large peers
- Recent entrants are rapidly (17% CAGR) growing their share of the raw milk supply
- Employment in dairy processing in New Zealand is growing
- Dairy processing is spread across the country
- Fonterra accounts for ~80% of New Zealand dairy industry employment

## FINANCIAL PERFORMANCE

- Fonterra continues to be the largest dairy firm in New Zealand by turnover, though there is now a strong second tier
- Financial performance of key firms varies, with A2 and Synlait standing out for profitability and A2 also standing out for return on assets
- New Zealand firms profitability (EBITDA) performance varies by firm, but is generally in line with global peers
- Ten year growth of the current top ten highlights the rapid growth of new entrants

## INVESTMENT

- While the New Zealand dairy industry has a range of owners, ~85% of the industry is still owned by farmers
- The New Zealand dairy industry has attracted international investment from a range of sources
- New firms continue to invest in the New Zealand dairy industry
- Firms continue to make major investment in plant or equipment
- New Zealand dairy firms are also investing in new and improved marketing
- New leadership continues to enter the industry or be promoted from within

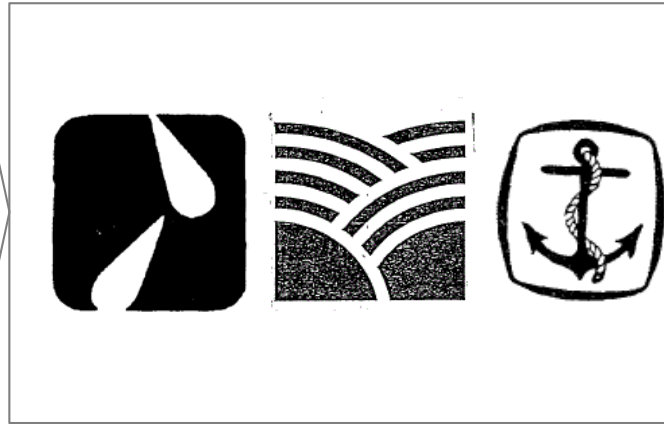
# New Zealand has a long history in dairy which has moulded the current industry structure



PIONEER ERA (1814-1923)

## Creating

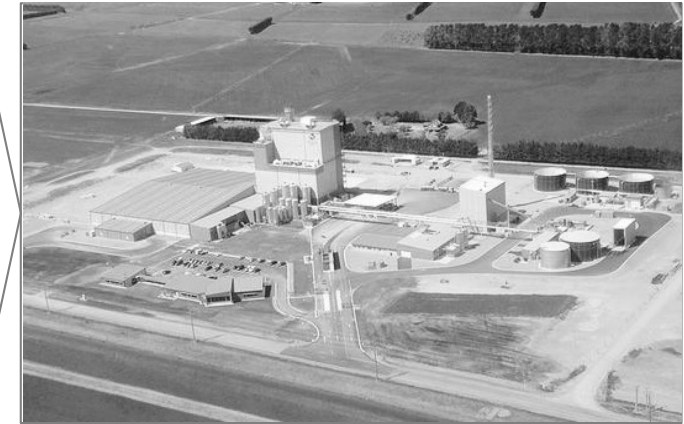
- Dairy cows introduced in 1814 and are suited to climate; industry grows rapidly
- Numerous regional farmer owned dairy co-operatives formed to produce export products
- Over 600 dairy processing factories by 1920
- Industry is lightly regulated and quality is variable
- Widespread product innovation (e.g. Glaxo (GSK) founded in NZ to produce infant milk)
- Early experiments with milk powders



DAIRY BOARD ERA (1923-2001)

## Improving

- Industry regulated by government in 1923 to create an orderly market and standardise product quality across processors
- Dairy Board primarily a marketer but with some in-market processing; hundreds of individual dairy processors were suppliers to it
- However, industry consolidation was ongoing through 20<sup>th</sup> Century until only four large firms remained (driven by fewer, larger factories)
- Board also funded many industry-good activities (e.g. breeding, science funding)
- Numerous improvements to industry systems and technology, particularly in milk powder



INNOVATION ERA (2001+)

## Innovating

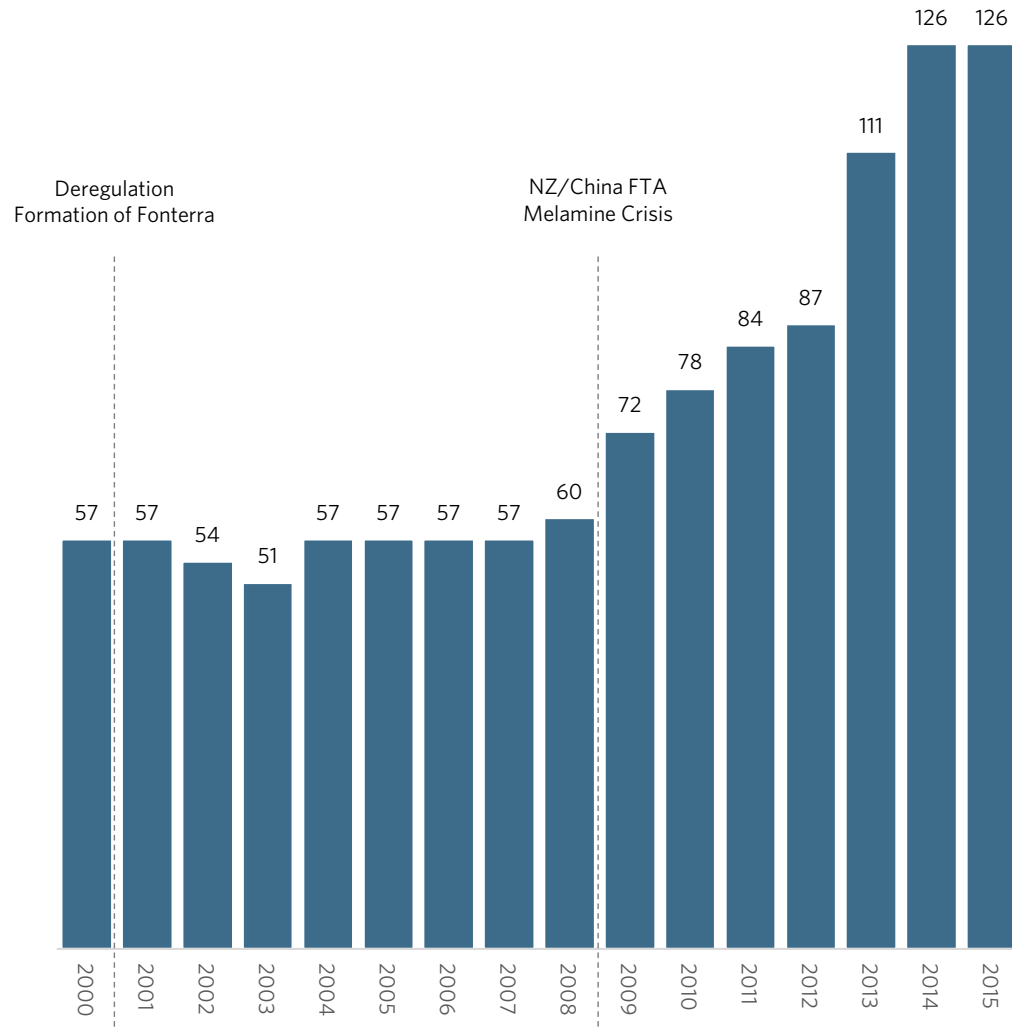
- Government allows mega-merger of the two largest processors (95% of volume) and the NZ Dairy Board into Fonterra
- Multiple waves of new dairy firms launched across the country
- Range of global investors begin investing in New Zealand dairy production and processing
- Range of innovative new products launched

\* For an overview of the current regulatory environment see: <http://www.mpi.govt.nz/law-and-policy/legal-overviews/primary-production/dairy-industry-restructuring-act/>

# The number of dairy processing firms in New Zealand has grown, particularly since the signing of the NZ/China FTA and the melamine crisis in China

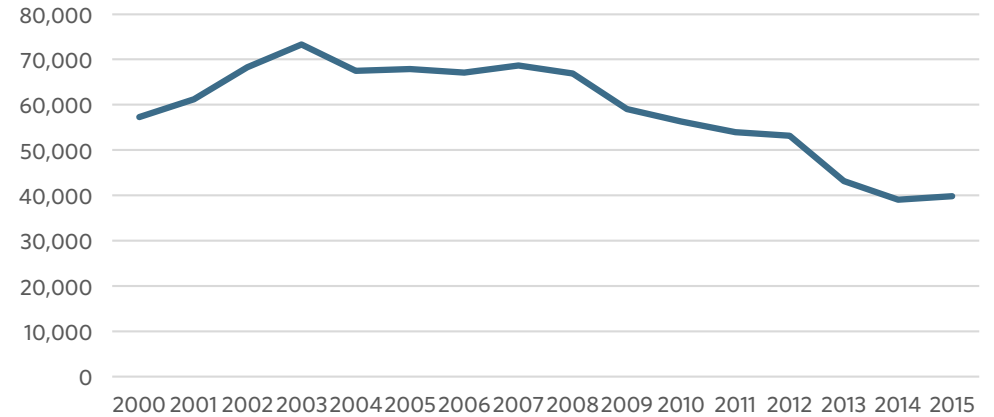
## NUMBER OF DAIRY PROCESSING ENTERPRISES<sup>1</sup>

Enterprises; 2000-2015



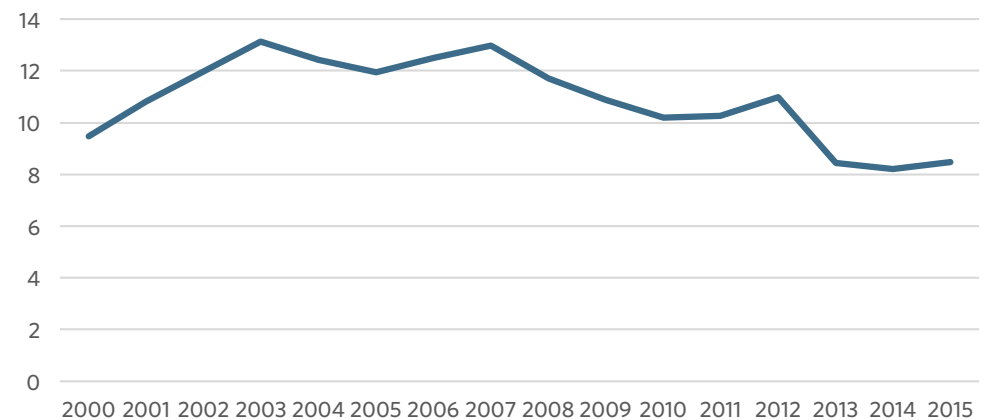
## AVERAGE COWS/PROCESSING ENTERPRISE

Head/unit; 2000-2015



## AVERAGE MILKFAT/PROCESSING ENTERPRISE

KG m/unit; 2000-2015



Note: 2015 data latest available as of February 2017; 1. Defined as C113-100 Milk & Cream processing and C113-300 Other dairy processing; Source: Statistics NZ business demographics database; Coriolis analysis



New Zealand now has a large and robust dairy products industry with a range of participants of all sizes

DEFINED DAIRY

LARGE PRIMARY DAIRY



MEDIUM/SMALL FLUID MILK



LARGER SECONDARY DAIRY



MEDIUM/SMALLER SECONDARY DAIRY



DEFINED PROCESSED FOODS

LARGE PRIMARY IF/NUTRITIONALS



PROCESSED - IF/NUTRITIONALS



PROCESSED - ICE CREAM



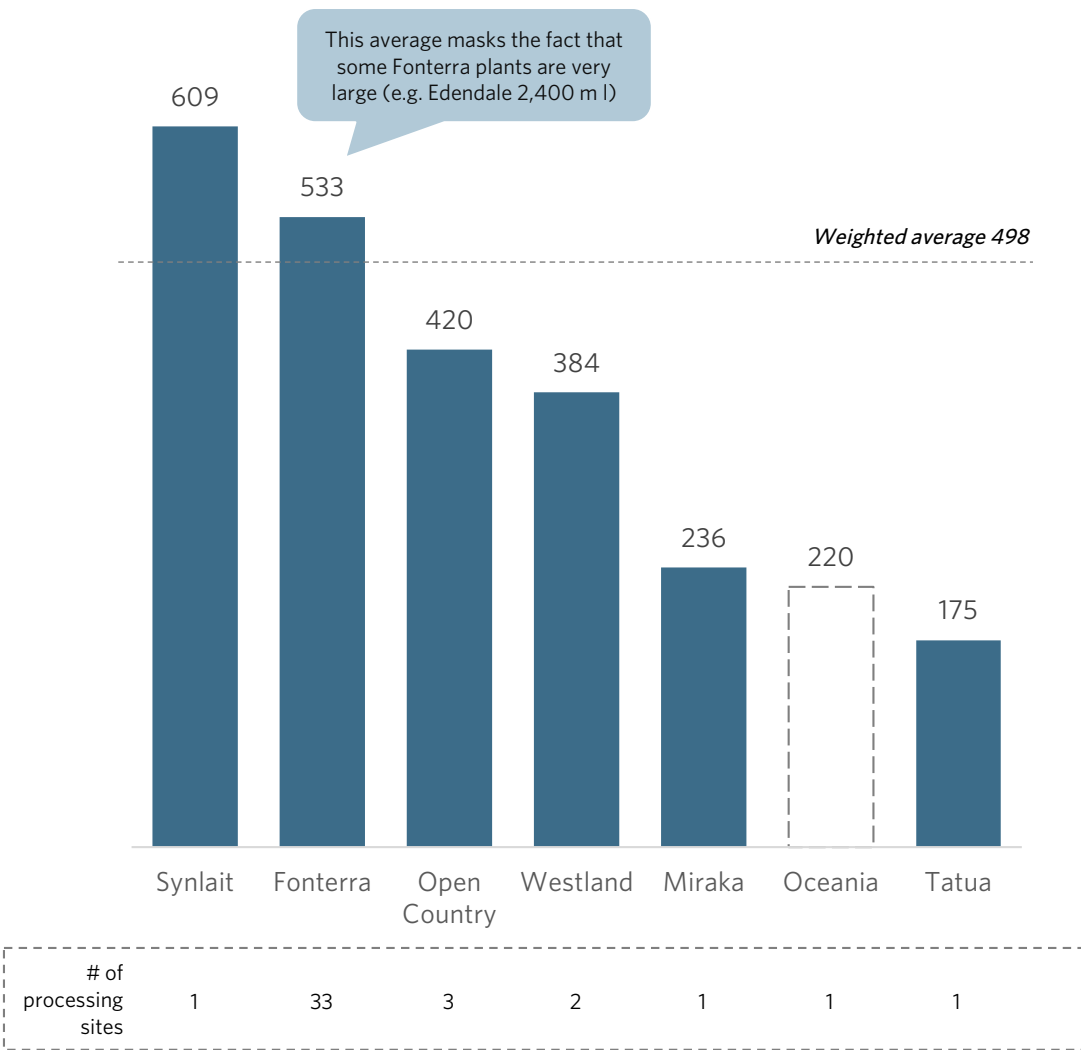
# New Zealand has large raw milk/primary processing dairy plants, averaging 498m l/plant; New Zealand is in line with large peers

## APPARENT OR IMPLIED MILK INTAKE PER PROCESSING SITE

Litres/unit; m; 2015-16

## AVERAGE MILK/PRIMARY PROCESSING SITE: NZ VS. SELECT PEERS

Litres/unit; 2016



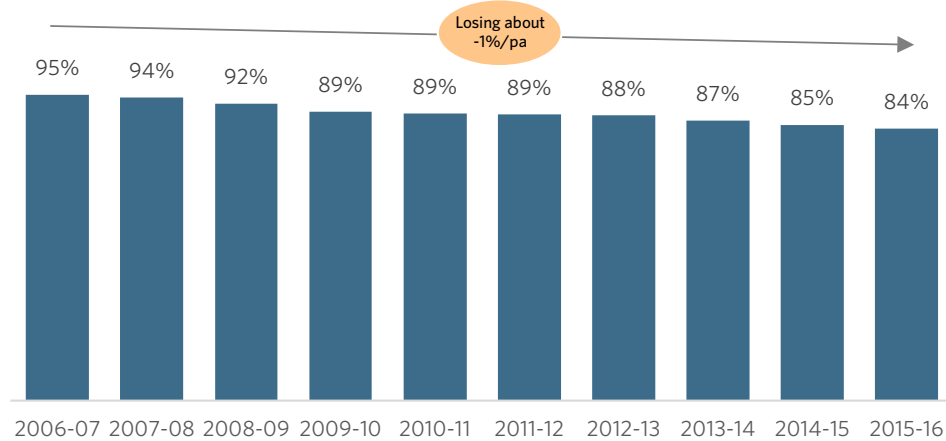
Source: DairyNZ (various reports); CCNZ "Review of the state of competition in the New Zealand Dairy Industry" March 2016; past Coriolis research; various press articles; Coriolis analysis



# Recent entrants are rapidly (17% CAGR) growing their share of the raw milk supply

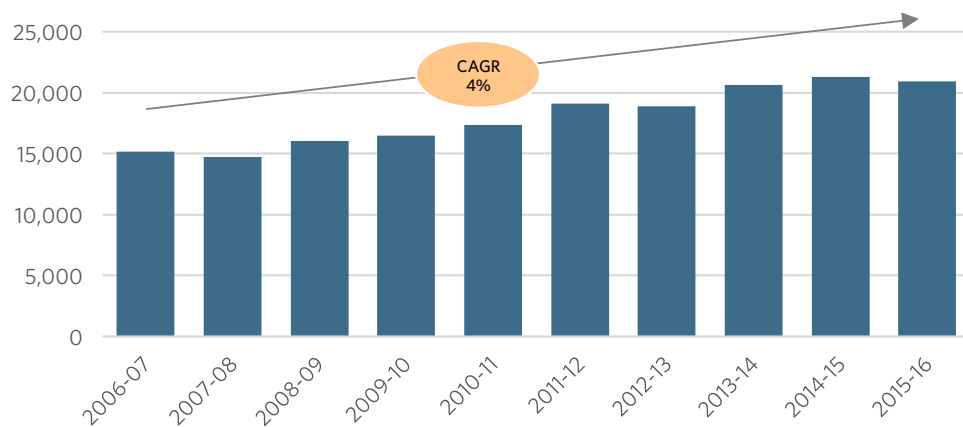
## SHARE OF NEW ZEALAND RAW MILK INTAKE: FONTERRA

% of total DairyNZ levies; 2006-07-2015-16



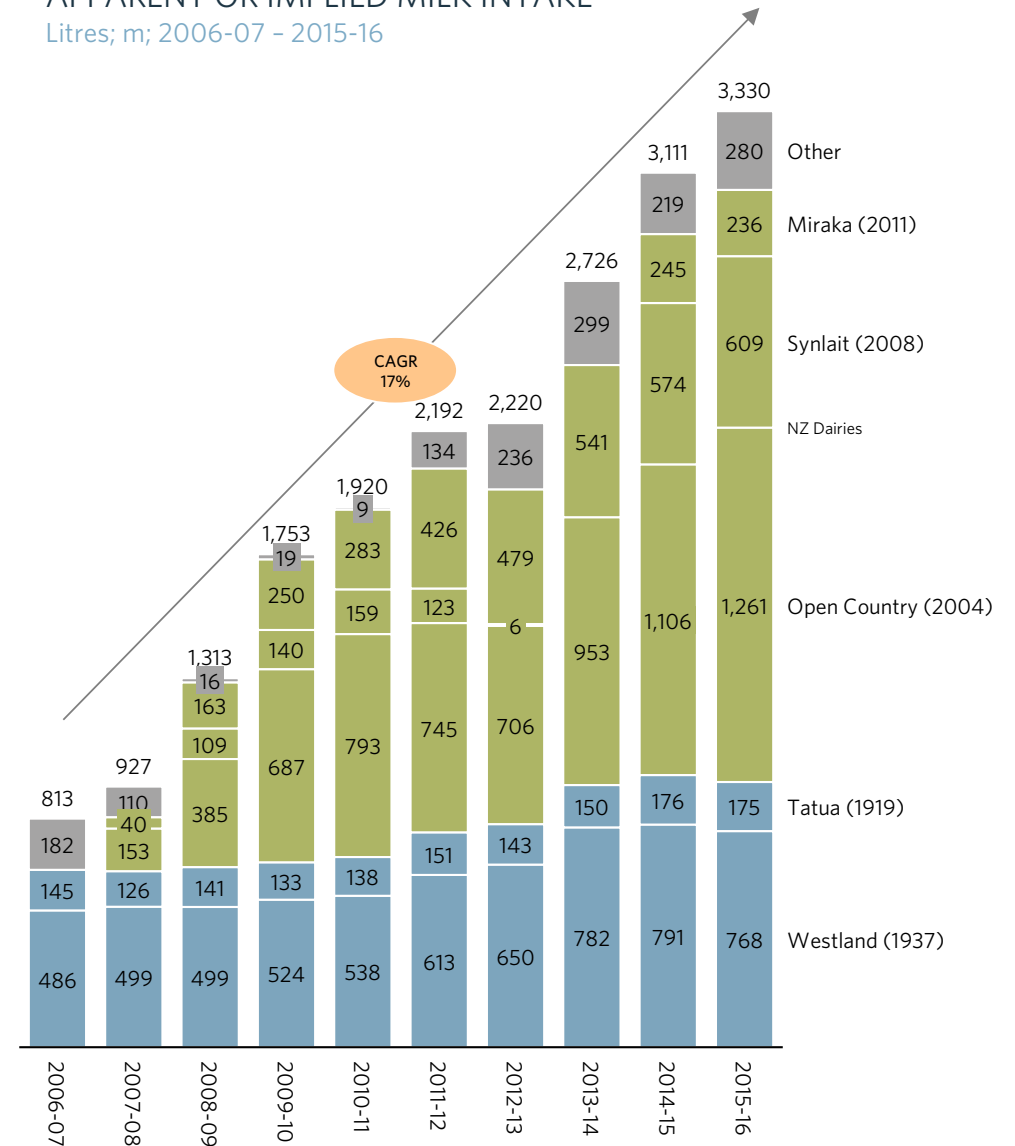
## TOTAL RAW MILK COLLECTED IN NEW ZEALAND

Litres; m; 2006-07-2015-16



## APPARENT OR IMPLIED MILK INTAKE

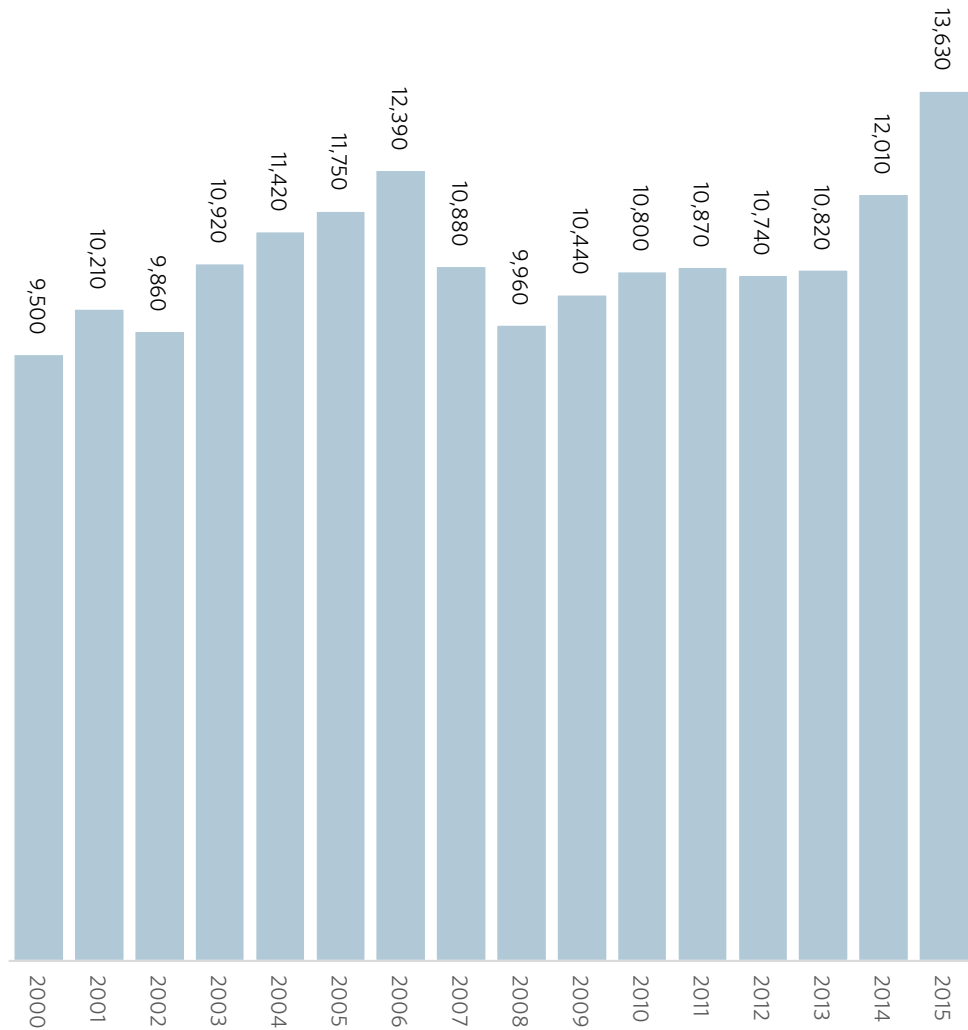
Litres; m; 2006-07 - 2015-16



# Employment in dairy processing in New Zealand is growing

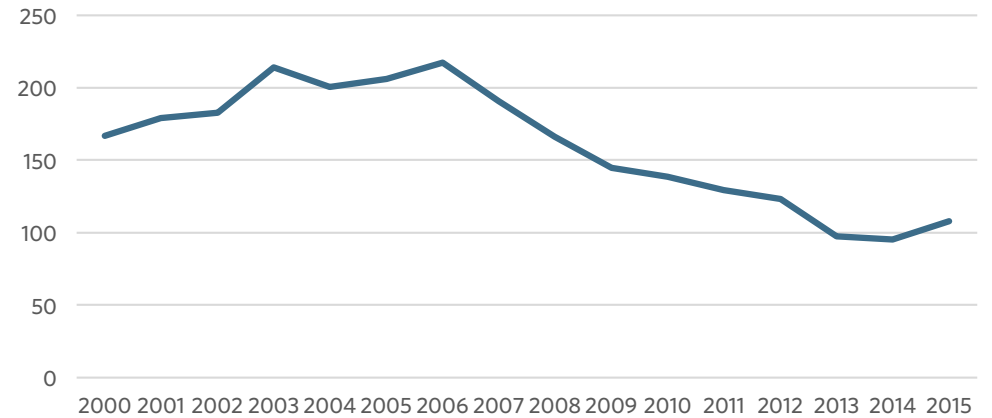
## TOTAL EMPLOYMENT BY DAIRY PROCESSING ENTERPRISES

Headcount; as of Feb; 2000-2015



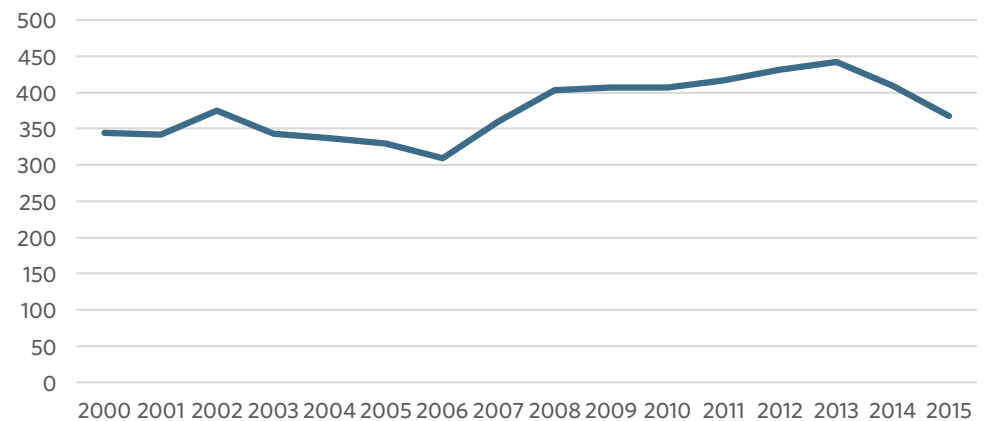
## AVERAGE EMPLOYEES/PROCESSOR

Head/unit; 2000-2015



## AVERAGE DAIRY COWS/PROCESSOR EMPLOYEE

Cows/head; 2000-2015

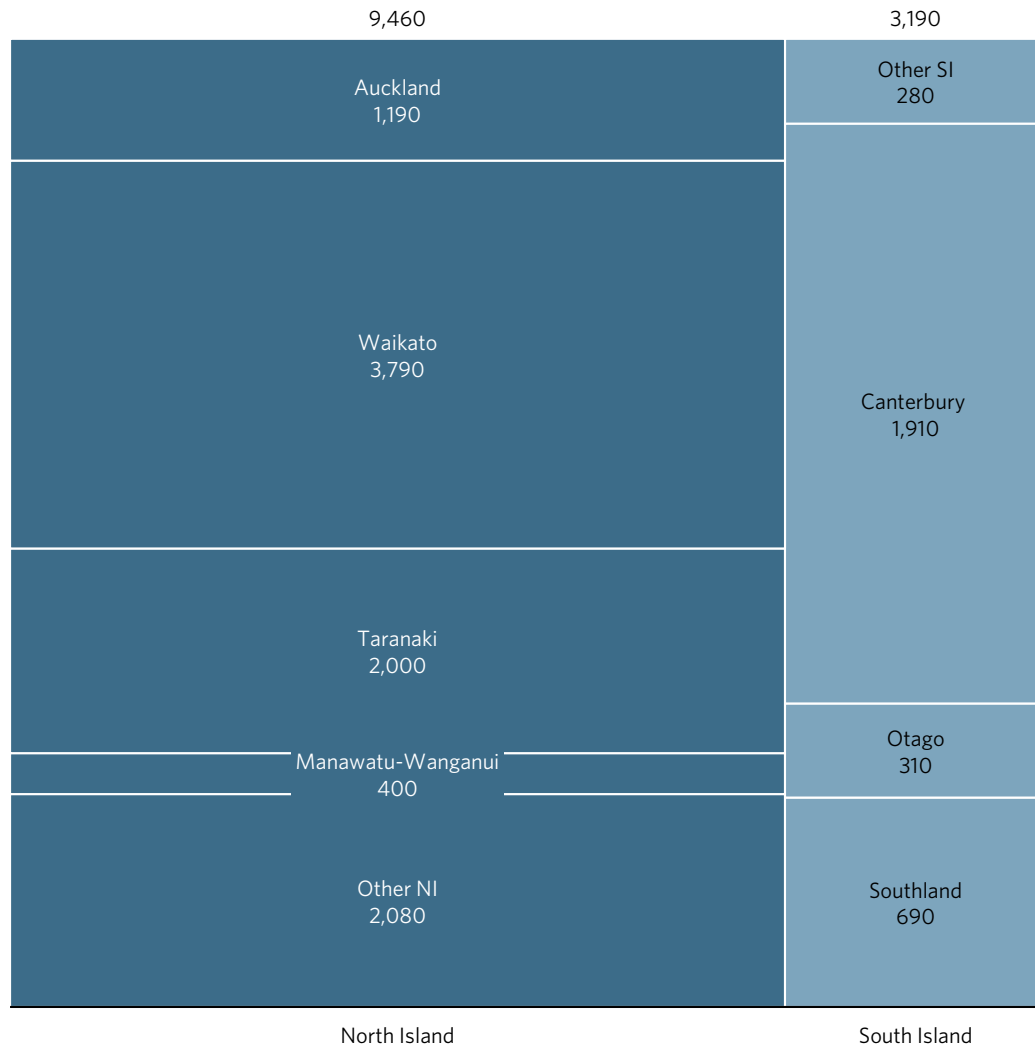


Note: 2015 data latest available as of February 2017; 1. Defined as C113-100 Milk & Cream processing and C113-300 Other dairy processing; Source: Statistics NZ business demographics database; Coriolis analysis

# Dairy processing is spread across the country

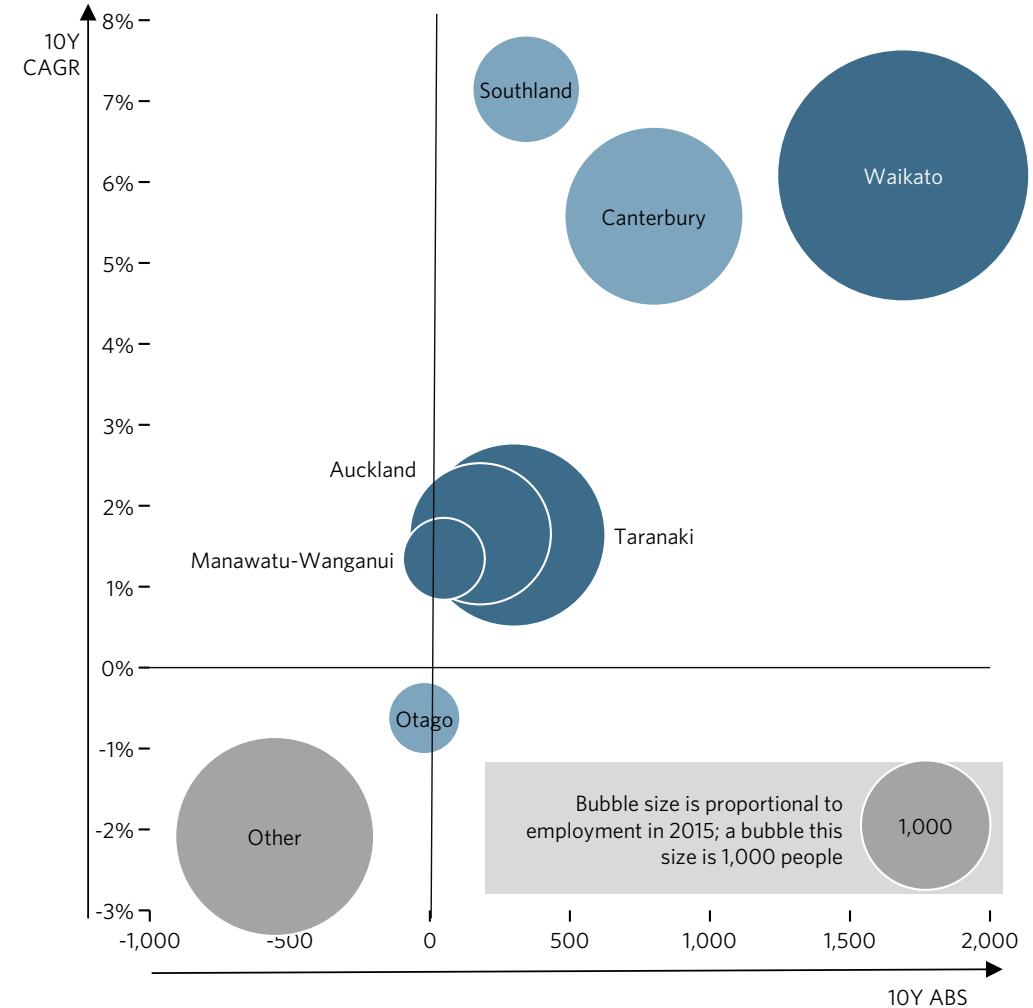
## DAIRY PROCESSING EMPLOYMENT BY REGION

Headcount; as of Feb; 2015



## 10Y CHANGE IN DAIRY PROCESSING EMPLOYMENT BY REGION

ABS; CAGR; 2015 total; Headcount; as of Feb; 2005 vs. 2015



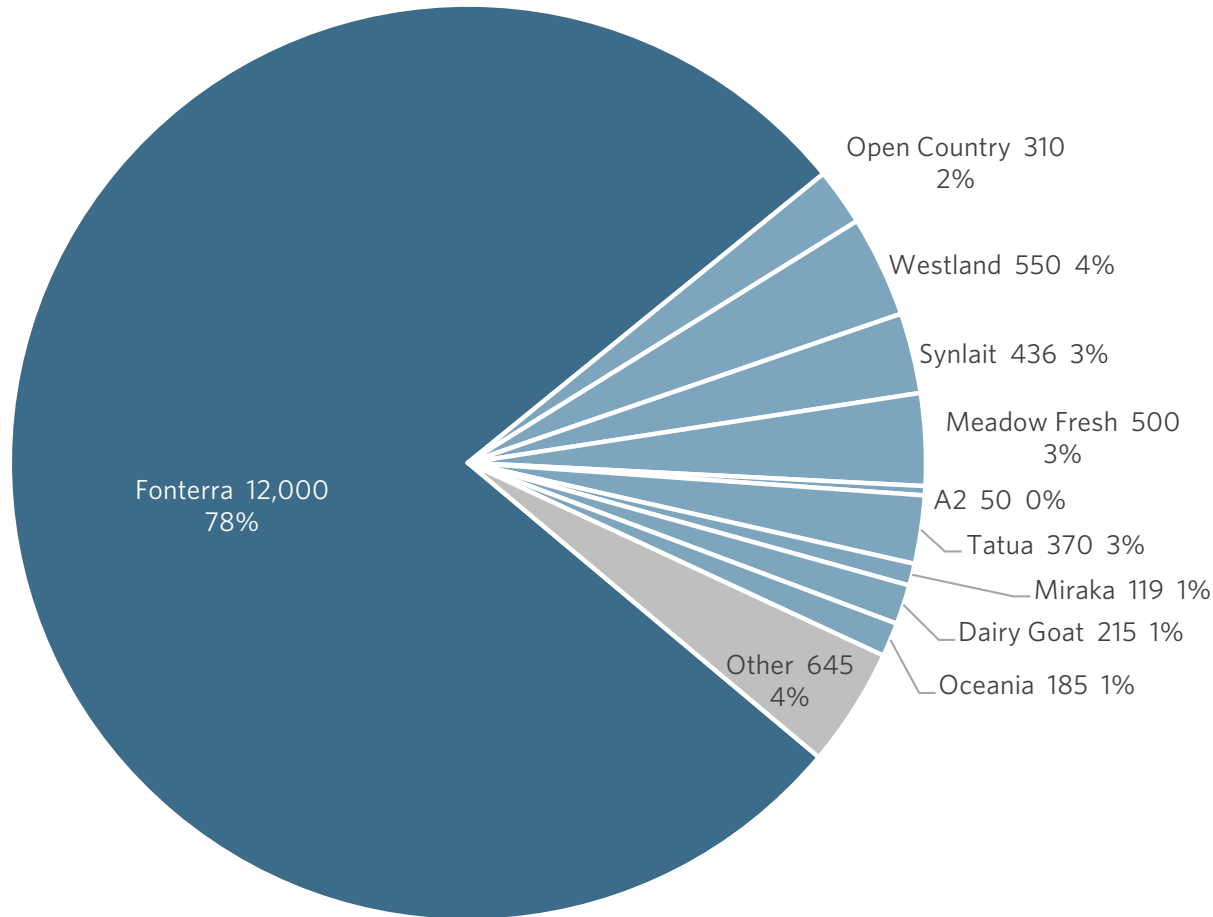
Note: data is geographic units (does not match enterprise units page prior) Taranaki, Other NI & Other SI are Coriolis estimates of confidential data from total and past data; 2015 data latest available as of February 2017; 1. Defined as C113-100 Milk & Cream processing and C113-300 Other dairy processing; Source: Statistics NZ business demographics database; Coriolis analysis

# Fonterra accounts for almost 80% of New Zealand dairy industry employment

## NUMBER OF PEOPLE EMPLOYED: NZ DAIRY MANUFACTURING BY KEY FIRM

People; 2016

INCLUDES CORIOLIS ESTIMATES



TOTAL = 15,380

## COMMENTS/NOTES

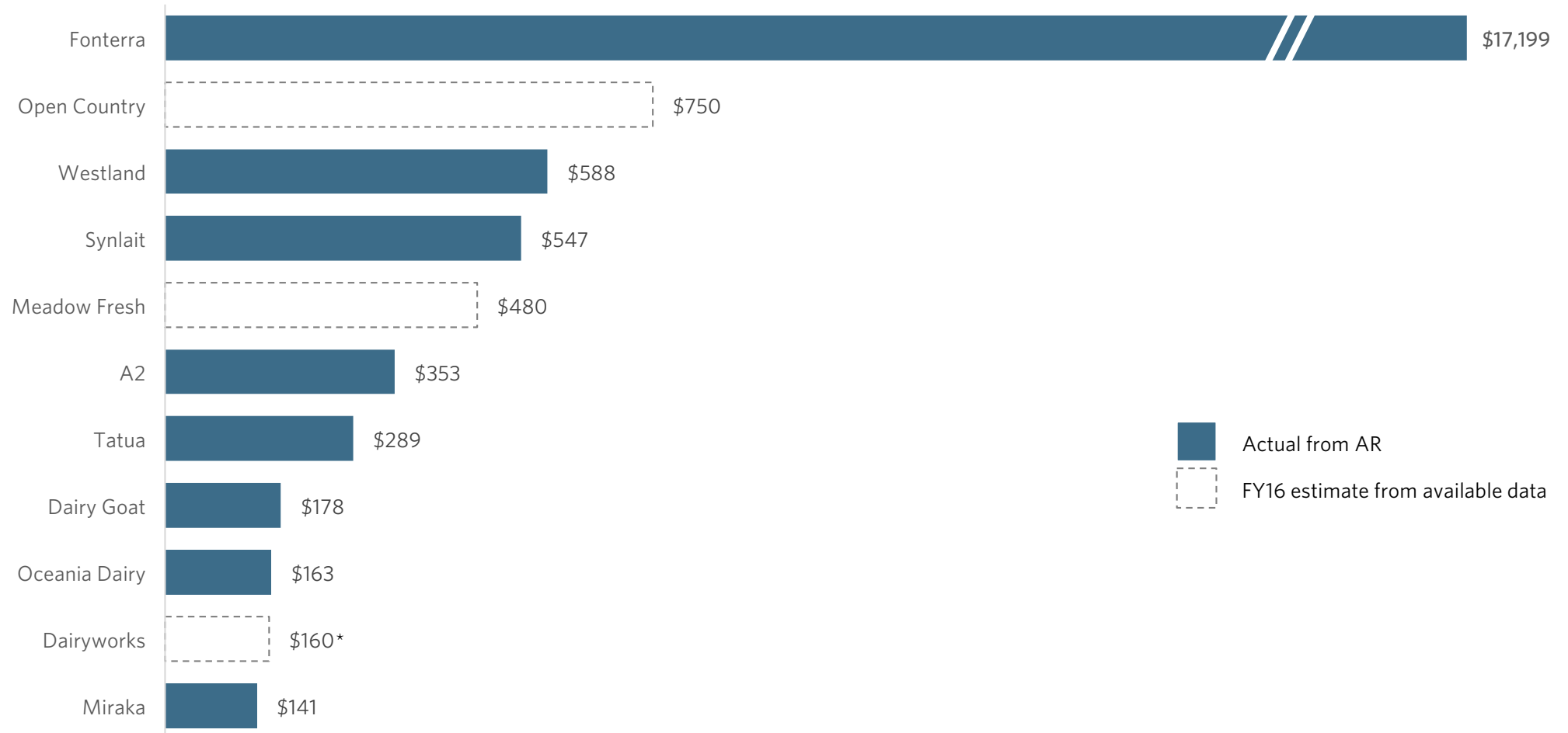
- Fonterra is New Zealand employees (global employees are 22,000)
- Meadow Fresh is an estimate (from total employees across the total NZ business)
- A2 is an estimate of NZ employees (Group employee figure is 111)

# Fonterra continues to be the largest dairy firm in New Zealand by turnover, though there is now a strong second tier

## ANNUAL TURNOVER OF TOP 11 FIRMS: NEW ZEALAND DAIRY INDUSTRY

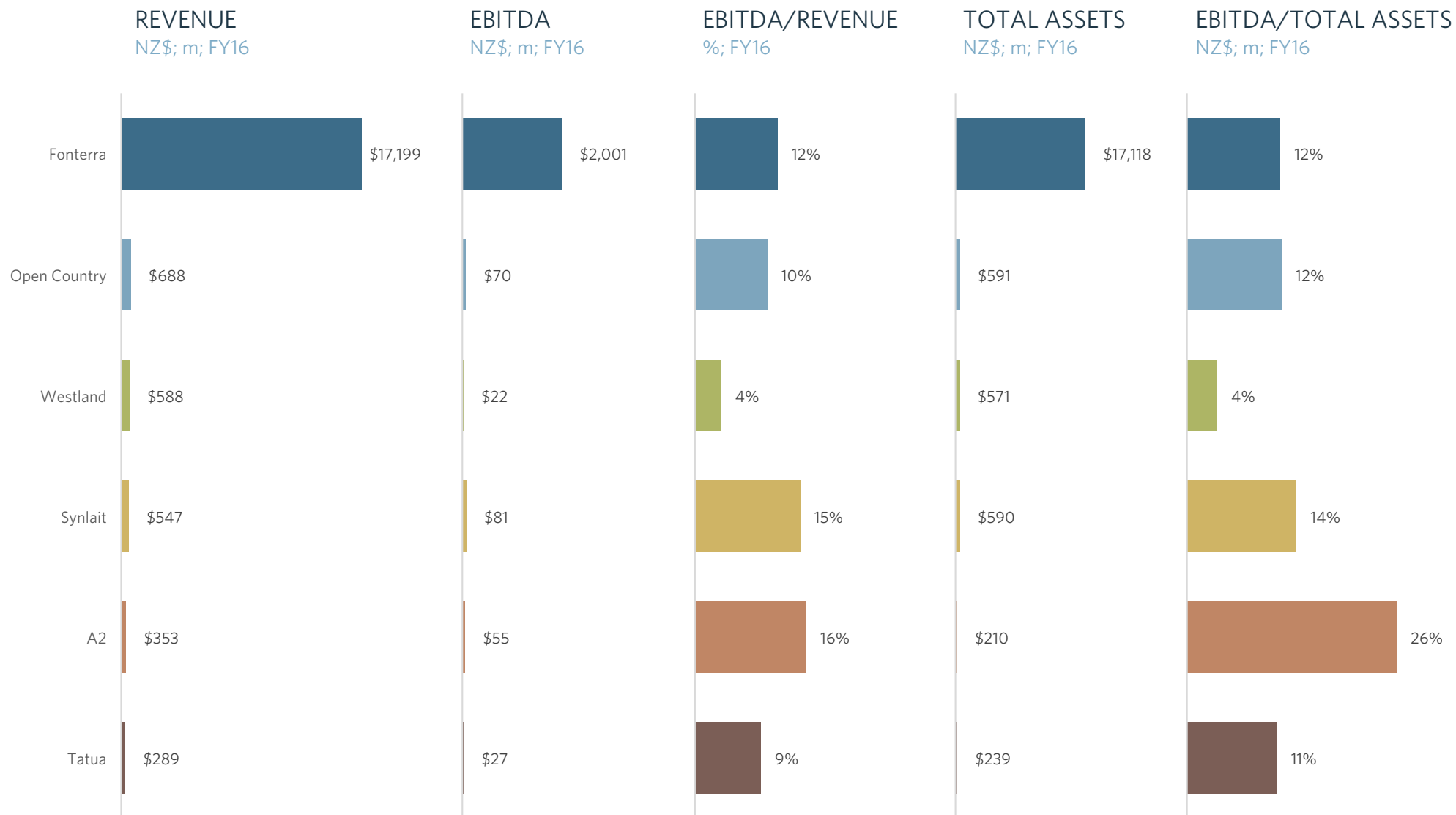
NZ\$; m; FY2016

INCLUDES CORIOLIS ESTIMATES



\* Revenue is median of supplied or estimated range, see Firm Profile for detail; Source: various company annual reports; NZCO; Coriolis estimates and analysis

Financial performance of key firms varies, with A2 and Synlait standing out for profitability and A2 also standing out for return on assets

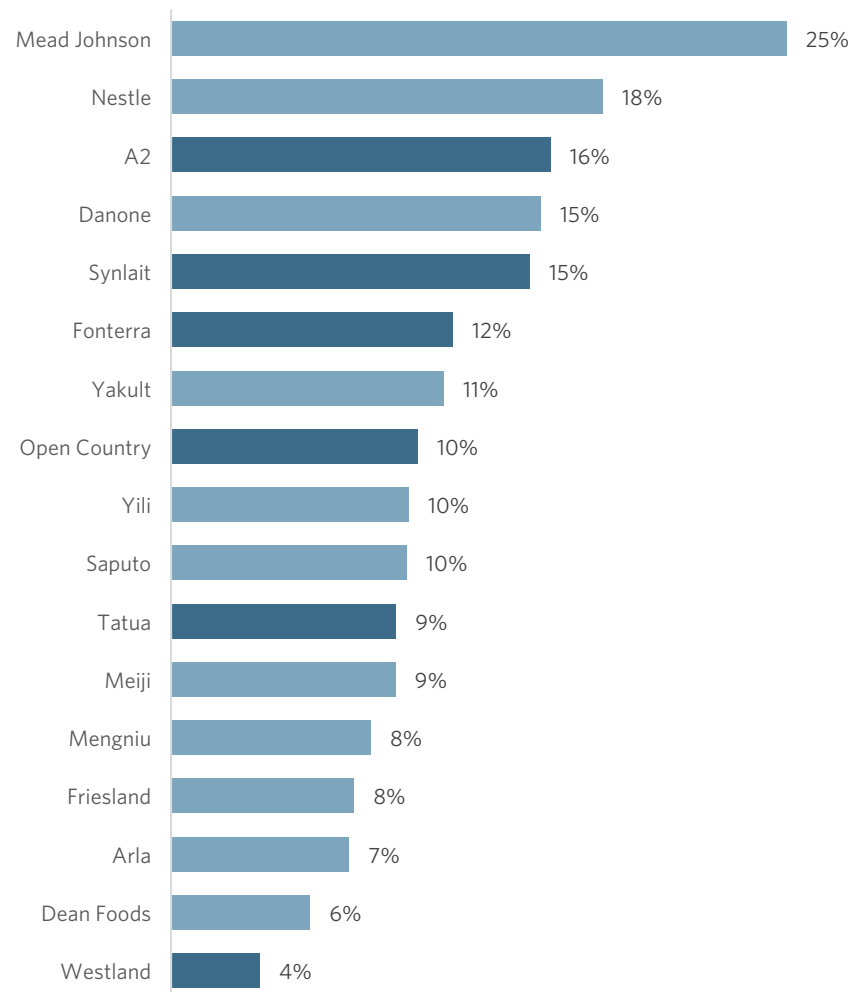


NOTE: Open Country uses AR 2015; EBITDA is calculated as OPBIT + depreciation; treat as directional; Source: various company annual reports; NZCO; Coriolis analysis

# New Zealand firms profitability (EBITDA) performance varies by firm, but is generally in line with global peers

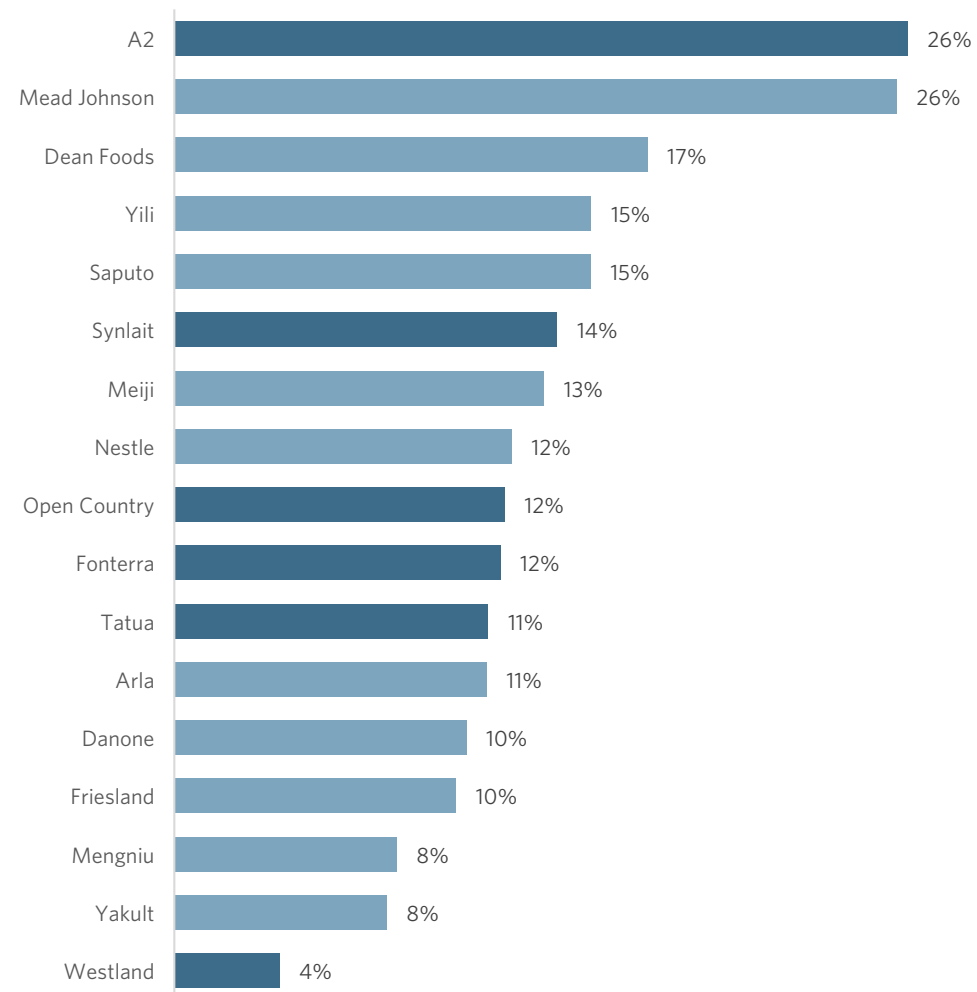
## EBITDA/REVENUE

%; FY16



## EBITDA/TOTAL ASSETS

NZ\$; m; FY16



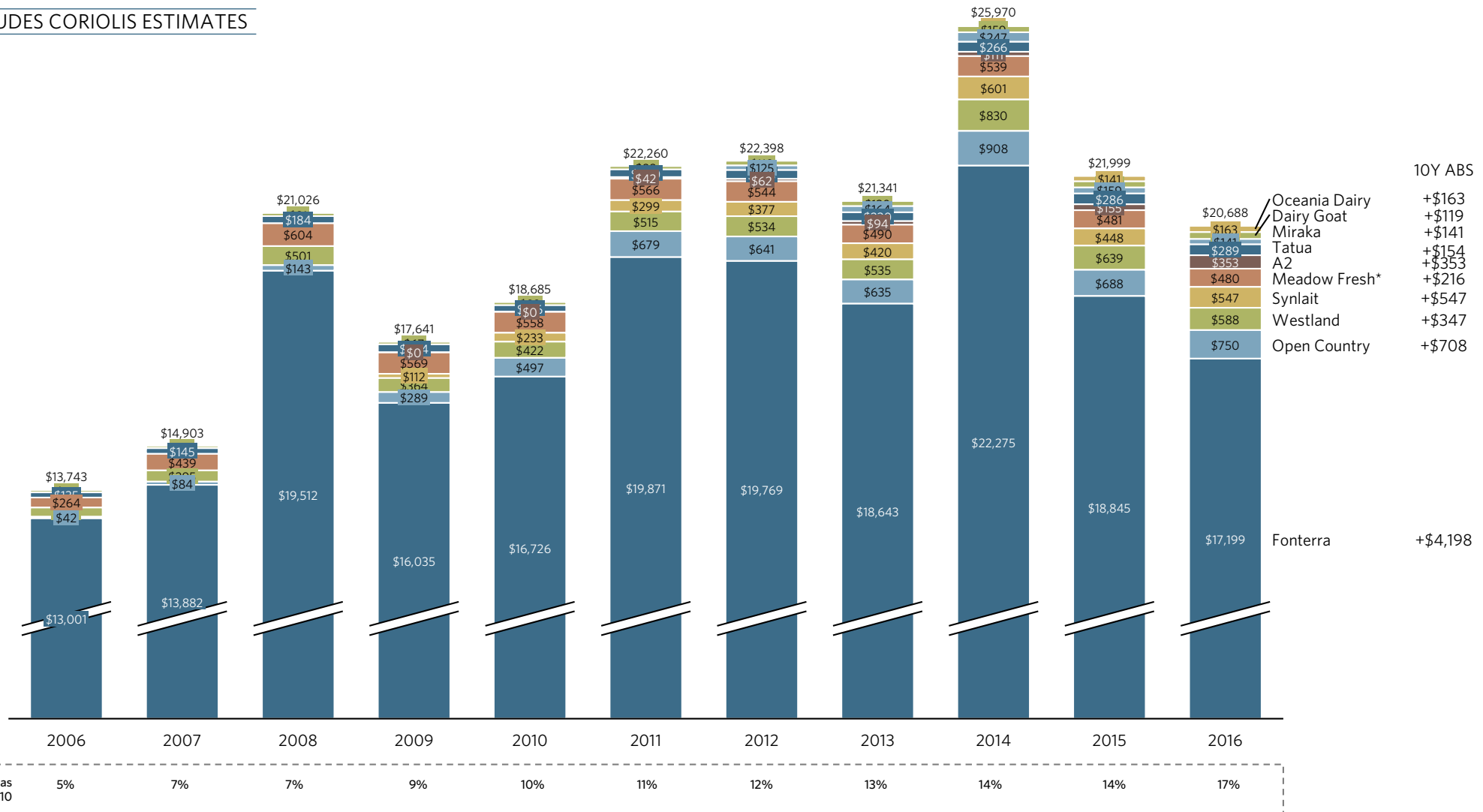
NOTE: Open Country uses AR 2015; EBITDA is calculated as OPBIT + depreciation; treat as directional; Source: various company annual reports; FT data; NZCO; Coriolis analysis

# Ten year growth of the current top ten, highlights the rapid growth of new entrants

## 10Y TURNOVER OF CURRENT TOP 10 NEW ZEALAND DAIRY FIRMS

NZ\$; m; FY2006-FY2016

INCLUDES CORIOLIS ESTIMATES



\*Estimate. Source: various company annual reports; NZCO; Coriolis estimates and analysis

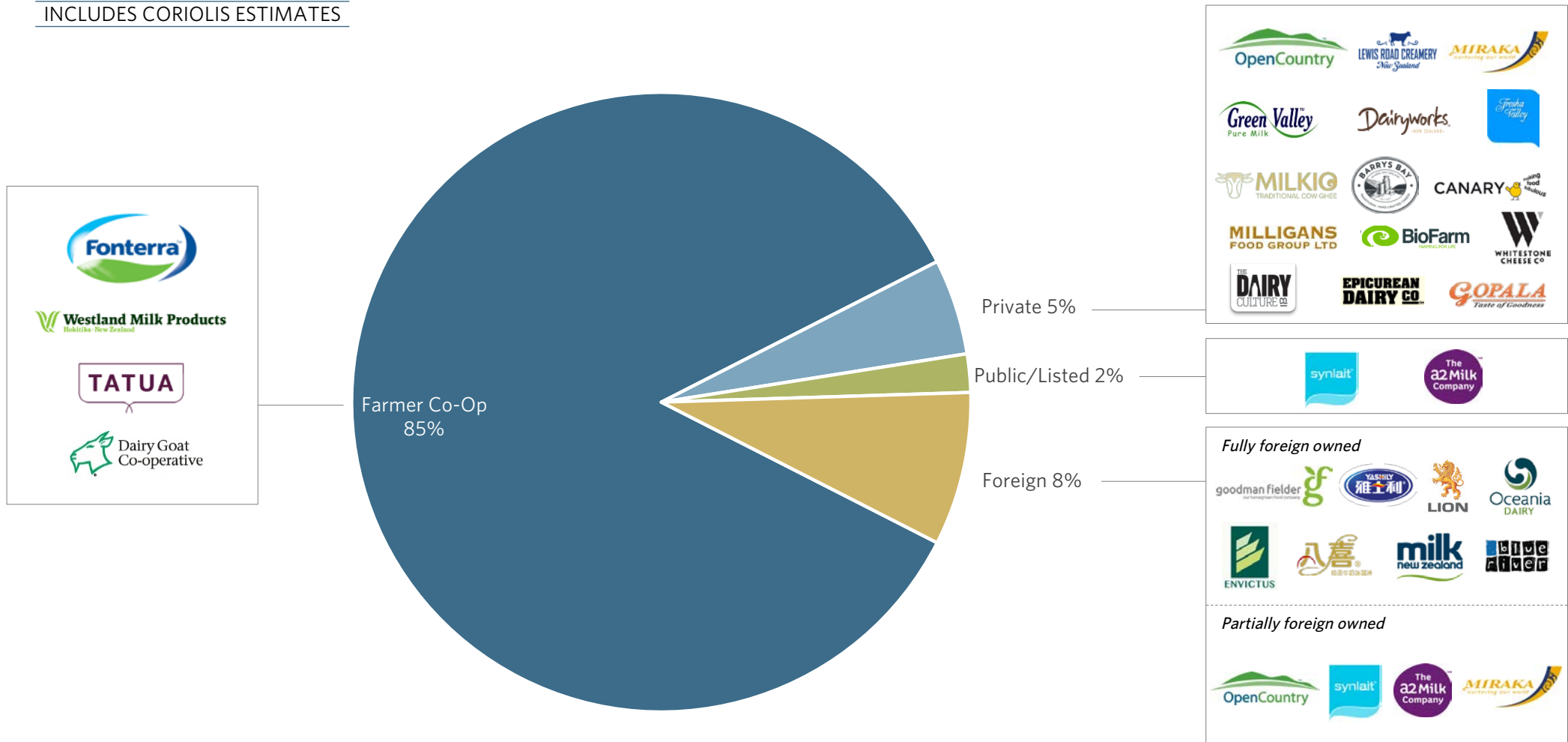


While the New Zealand dairy industry has a range of owners, ~85% of the industry is still owned by farmers

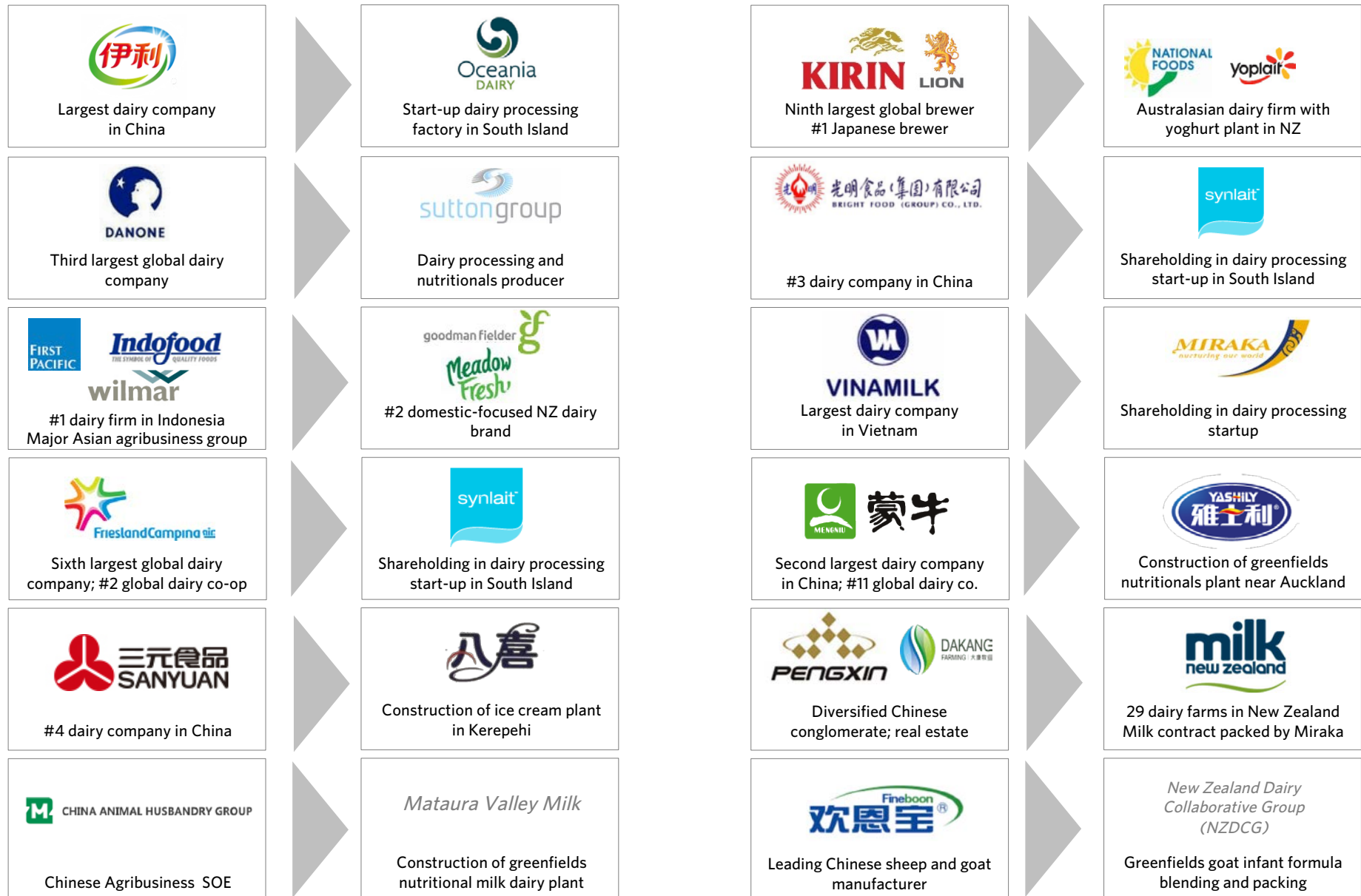
### ESTIMATED SHARE OF TOTAL INDUSTRY TURNOVER BY OWNERSHIP

% of turnover/sales; 2016

INCLUDES CORIOLIS ESTIMATES



# The New Zealand dairy industry has attracted international investment from a wide range of sources



# New firms continue to invest in the New Zealand dairy industry

2011 and earlier



2012-2014



2015+

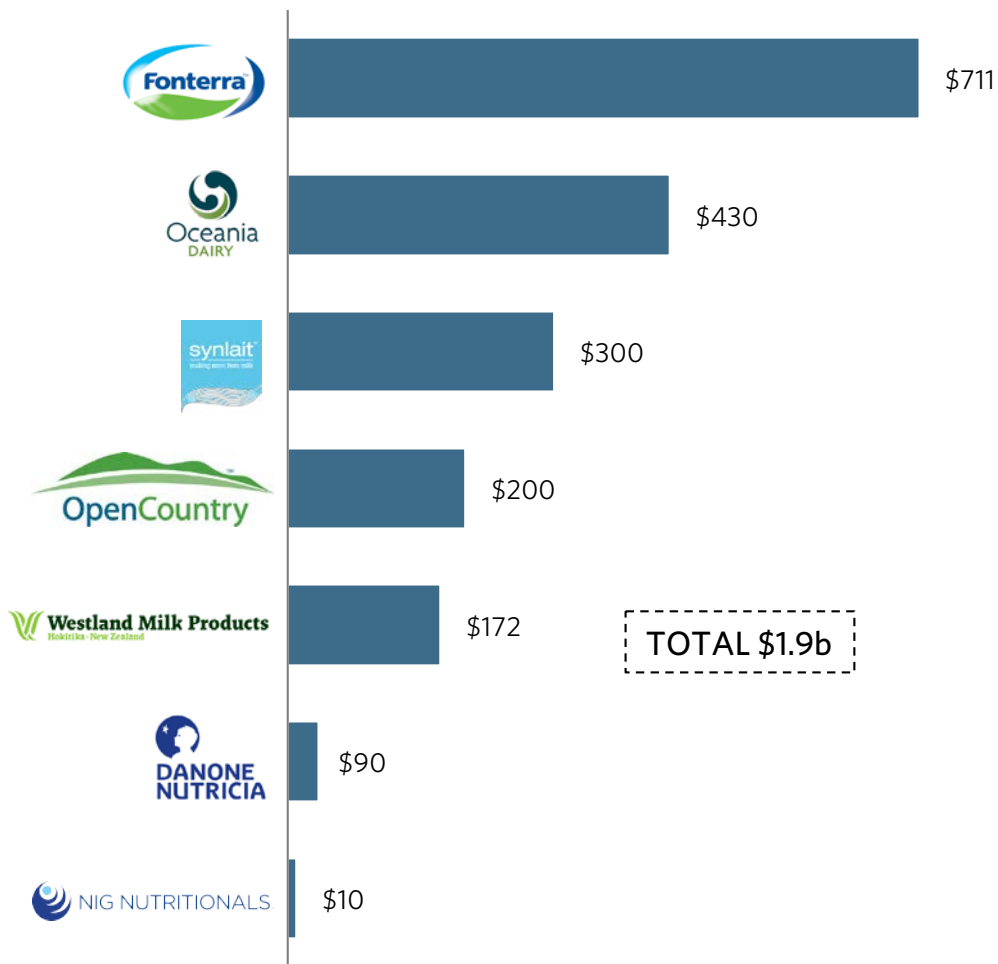


# Existing and new firms are investing in the New Zealand dairy industry, with new plant and equipment

ALSO SEE PROCESSED FOODS REPORT

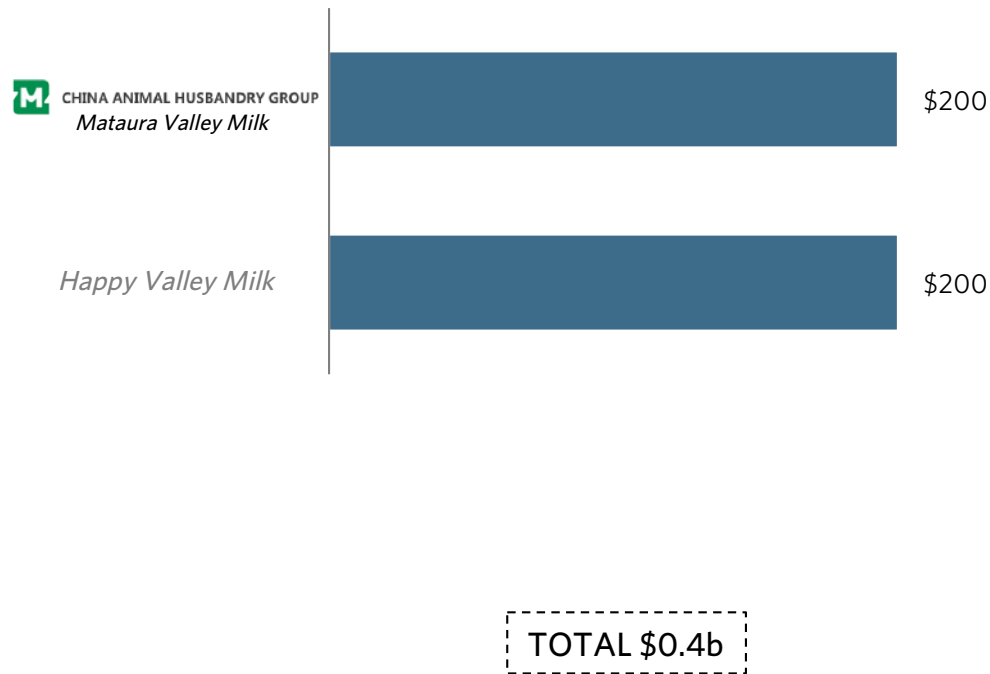
## EXISTING: DAIRY INVESTMENT IN PLANT AND EQUIPMENT

Identified; announced; NZ\$m; 2015-2017



## NEW: GREENFIELDS DAIRY INVESTMENT IN PROGRESS

Identified; in-progress; NZ\$m; 2015-2017



Source: Coriolis from a wide range of published articles, annual reports and other sources

# Three key drivers support the ongoing investments in the New Zealand dairy industry

## 1. EXTENDING VALUE ADDED CATEGORIES



- \$240m - Investment in new mozzarella plant (#3) at site; IQF
- \$157m - Milk protein concentrate plant, reverse osmosis and AMF plant
- \$11m - Lactoferrin plant expanded to double production



- \$300m - Plan to invest additional funds for UHT milk products, infant formula canning, lactoferrin



- \$300m - Expanded plant, consumer packaging, cream



- \$40m - New plant for UHT processing
- \$32m - Plan to build and run blending and canning plant (form JV "Pure Nutrition" with Ausnutria (China))

## 2. INCREASING SCALE & EFFICIENCY



- \$235m - Plant upgrade and new dryer
- \$38m - Plant external overhaul and new water treatment
- \$30m - Plant upgrade complete - cheese slices



- \$130m - Expanded plant



- \$102m - New infant formula drier



- \$200m - Expanded processing capability, milkpowder and cheese processing at factory



- \$10m - Expand manufacturing capability - new goat spray dryer at existing plant

## 3. SECURING SUPPLY

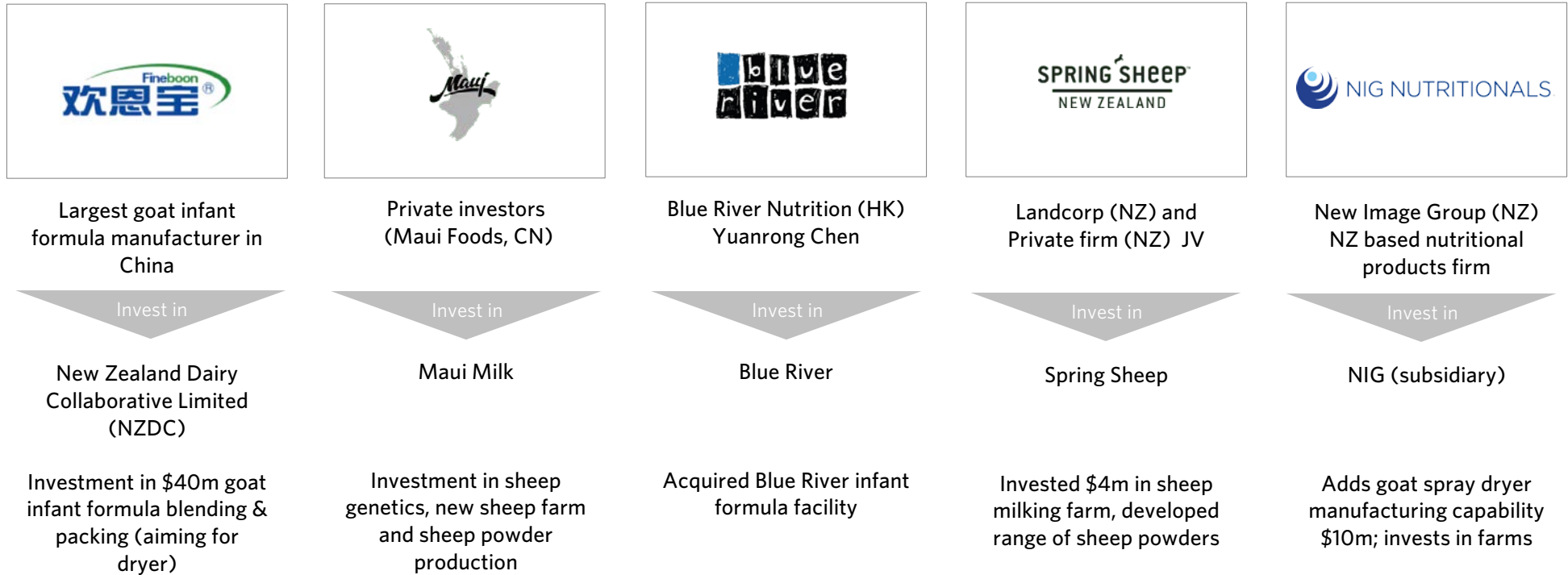


- \$200m - Matura Valley Milk constructing new nutritional milk plant



- \$25m - Invested in new blending and packaging "Mega-facility" including new canning line
- \$15m - Built new spray dryer at plant at recently acquired site

# New Zealand is building capability across the supply chain in niche dairy, with significant investment in both goat and sheep industries



*NOTE: New Zealand Dairy Products/Carilac Dairy currently looking for \$100m investment for a new vertically integrated goat and sheep milk facility*

# New Zealand dairy firms are also investing in new and improved marketing

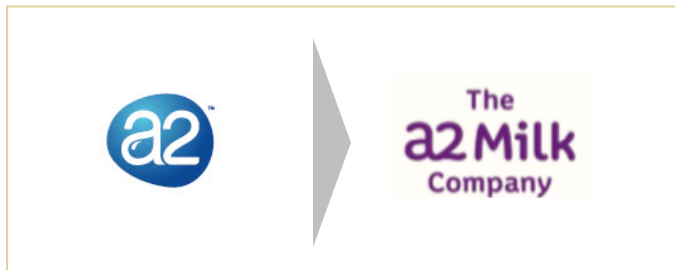
## Rebranding



## New Packaging



## Advertising & Promotion



New leadership continues to enter the industry or be promoted from within

NEW INDUSTRY LEADERS IN LAST FEW YEARS



Brendhan Greaney  
CEO  
Tatua Co-operative Dairy









Toni Brendish  
CEO  
Westland Milk Products













# New Zealand Dairy Firm Profiles

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05

<p><b>BLUE RIVER DAIRY</b></p>  <p>Robert Boekhout General Manager</p> 	<p><b>CANARY ENTERPRISES</b></p>  <p>Nic Wetere General Manager</p> 	<p><b>DAIRY GOAT CO-OPERATIVE</b></p>  <p>Tony Giles Chief Executive Officer</p> 	<p><b>DAIRYWORKS NEW ZEALAND</b></p>  <p>Peter Cross General Manager</p>
<p><b>DESCRIPTION:</b> Manufacturer of sheep milk products; 80% of milk powder exported; exclusively supplied by largest flock of milking ewes in NZ, owned by Antara Ag Farms; New Zealand Sheep Milk Co brand for domestic market; only manufacturer to make cow, sheep and goat IF</p>	<p><b>DESCRIPTION:</b> Manufacturers of value added butter products, cheese, sauces and selected non-dairy supplied to foodservice, products are halal certified. Based in Waikato, 80% of products are exported to Australia, Asia and Middle East; also contract manufacturers.</p>	<p><b>DESCRIPTION:</b> World's biggest manufacturer of goat milk infant formula and other dairy goat milk based nutritionals; exports to 25 countries; 4 plants at one site; 45m L/year supply from 73 supplying shareholders; JV in Taiwan with Orient Europharma with KARIHOME brand</p>	<p><b>DESCRIPTION:</b> Manufacturer of cheese, butter, milk powder, ice cream; retail, contract packaging, food service from site in Christchurch; Dairyworks, Rolling Meadow, Alpine, Deep South brands</p>
<p><b>KEY PRODUCTS:</b> Cheese, milk powder, cow, sheep and goat infant formula; Blue River, New Zealand Sheep Milk Co, Mualps, Spring Goat brands</p>	<p><b>KEY PRODUCTS:</b> Butter portions, cheese portions, individual quick frozen sauces, fillings, garnishes</p>	<p><b>KEY PRODUCTS:</b> Goat milk nutritional powder products</p>	<p><b>KEY PRODUCTS:</b> Cheese, butter, ice cream, milk powder</p>
<p><b>OWNERSHIP:</b> China; Private (Chen) via Blue River Nutrition HK</p>	<p><b>OWNERSHIP:</b> NZ; Private (Gray, Bartosh, Scott, others)</p>	<p><b>OWNERSHIP:</b> NZ; Co-operative (73 farmers)</p>	<p><b>OWNERSHIP:</b> NZ; Private (Cross)</p>
<p><b>COMPANY NUMBER:</b> 4583083</p>	<p><b>COMPANY NUMBER:</b> 1116438</p>	<p><b>COMPANY NUMBER:</b> 421398</p>	<p><b>COMPANY NUMBER:</b> 1224382</p>
<p><b>ADDRESS:</b> 111 Nith Street, Invercargill</p>	<p><b>ADDRESS:</b> 33 Kaimiro Street, Te Rapa, Hamilton</p>	<p><b>ADDRESS:</b> 18 Gallagher Drive, Hamilton</p>	<p><b>ADDRESS:</b> 719 Halswell Junction Road, Hornby, Christchurch</p>
<p><b>PHONE:</b> +64 3 211 5150</p>	<p><b>PHONE:</b> +64 7 849 5043</p>	<p><b>PHONE:</b> +64 7 839 2919</p>	<p><b>PHONE:</b> +64 3 344 5801</p>
<p><b>WEBSITE:</b> www.blueriverdairy.co.nz; infantformula.nzsheepmilk.co.nz</p>	<p><b>WEBSITE:</b> www.canaryfoods.co.nz</p>	<p><b>WEBSITE:</b> www.dgc.co.nz</p>	<p><b>WEBSITE:</b> www.dairyworks.co.nz</p>
<p><b>YEAR FORMED:</b> 2004/2013</p>	<p><b>YEAR FORMED:</b> 2001</p>	<p><b>YEAR FORMED:</b> 1984</p>	<p><b>YEAR FORMED:</b> 2002</p>
<p><b>STAFF EMPLOYED:</b> 47</p>	<p><b>STAFF EMPLOYED:</b> 40</p>	<p><b>STAFF EMPLOYED:</b> 215</p>	<p><b>STAFF EMPLOYED:</b> 150</p>
<p><b>REVENUE:</b> \$10-15m (FY16)</p>	<p><b>REVENUE:</b> \$25-35m (FY16)</p>	<p><b>REVENUE:</b> \$178m (FY16)</p>	<p><b>REVENUE:</b> \$140-180m (FY16)</p>
<p><b>COMPANY HIGHLIGHTS:</b> Blue River manufacturing and brand acquired '15 by Yuanrong Chen (CN); investment of \$40m for second dryer planned at time of sale in '15; exported 300,000 cans in FY16, forecasting 3x that in '17 and 2m cans in 2 years; sheep milk infant formula wins Export Innovation Award in '16; upgrade of canning plant, addition of dry blending facility in '16</p>	<p><b>COMPANY HIGHLIGHTS:</b> Canary is number 1 supplier to airline caterers of butter portions for first and business class passengers in Australasia, Asia and Middle East. In 2012 awarded QBE Exporter of the Year under NZD 35M. Due to the growth of company in 2016; a new production line has been introduced to increase capacity.</p>	<p><b>COMPANY HIGHLIGHTS:</b> Built second dryer with 4x capacity for \$67m in '14; looking to expand into EU in '14; partners with University of Auckland for \$3.63m, 3 year research grant from MBIE to increase goat productivity in '15</p>	<p><b>COMPANY HIGHLIGHTS:</b> Winner of New Zealand Champion Cheese, Caspak Packaging Awards in '14 and '15; started producing ice cream in Invercargill in Jan '15; closed Invercargill factory and invested in new Christchurch site; acquired Deep South ice cream brand in '16</p>

\* Estimate; Source: various companies annual financial statements (NZ Companies Office or company website); various press releases and news articles; Coriolis analysis








<p>EPICUREAN DAIRY</p>   <p>Angus Allan Director</p>	<p>FONTERRA CO-OPERATIVE GP</p>   <p>Theo Spierings Chief Executive Officer</p>	<p>FRESHA VALLEY PROCESSORS</p>   <p>Paul Jensen Owner</p>	<p>GOODMAN FIELDER NZ LTD</p>     <p>Tim Deane Managing Director GFNZ</p>
<p>DESCRIPTION: Yoghurt and haloumi manufacturer over two Auckland sites; exports to UK, Asia, Pacific, Middle East; manufacturing in NZ and UK; #4 yoghurt manufacturer</p>	<p>DESCRIPTION: Fourth largest dairy company in the world by turnover, first by milk intake; total of 53 sites globally (33 in NZ); 100+ countries supplied; 84% of NZ raw milk supply; 20b litres of milk collected annually in NZ, 1.8b in AU, 500m in China</p>	<p>DESCRIPTION: Largest independent dairy company in NZ; manufacturing milk for Signature Range, Home Brand, a2 and Fresha Valley labels for North Island Countdown supermarkets, foodservice</p>	<p>DESCRIPTION: Manufacture, market and distribute dairy, baking and grocery products in NZ, Australia and Asia-Pacific; 14 NZ manufacturing sites; brands incl. Meadow Fresh, Tararua, Puhoi Valley, Ornelle, Vogel's, Molenberg, Freya's, Quality Bakers, Meadowlea, Olivani, Edmonds, Ernest Adams, etc.</p>
<p>KEY PRODUCTS: Yoghurt, kids yoghurt, haloumi</p>	<p>KEY PRODUCTS: Milk powder, butter, cheese, yoghurt, formulas and other dairy products</p>	<p>KEY PRODUCTS: Fresh milk, A2 milk, cream</p>	<p>KEY PRODUCTS: Dairy, baking, sweet baking, pies, spreads and oils, mayonnaise and dressings, in home baking ingredients</p>
<p>OWNERSHIP: Israel; Private (Shenhav 62%); NZ; Private (Allan, others)</p>	<p>OWNERSHIP: NZ; Co-operative (10,700 farmers)</p>	<p>OWNERSHIP: NZ; Private (Jensen, Stodart)</p>	<p>OWNERSHIP: Singapore; Public (Wilmar Intl (SGX:F34) 50%); Hong Kong; Public (First Pacific Co. Ltd. (HKE:142) 50%)</p>
<p>COMPANY NUMBER: 3734658</p>	<p>COMPANY NUMBER: 1166320</p>	<p>COMPANY NUMBER: 530434</p>	<p>COMPANY NUMBER: 1508360</p>
<p>ADDRESS: 119 Lansford Crescent, Avondale, Auckland</p>	<p>ADDRESS: 109 Fanshawe Street, Auckland Central, Auckland</p>	<p>ADDRESS: 50 St Marys Road, Waipu, Northland</p>	<p>ADDRESS: 2/8 Nelson Street, Auckland</p>
<p>PHONE: +64 9 820 5555</p>	<p>PHONE: +64 9 374 9000</p>	<p>PHONE: +64 9 432 0142</p>	<p>PHONE: +64 9 301 6000</p>
<p>WEBSITE: <a href="http://www.thecollective.kiwi">www.thecollective.kiwi</a></p>	<p>WEBSITE: <a href="http://www.fonterra.com">www.fonterra.com</a></p>	<p>WEBSITE: <a href="http://www.freshavalley.co.nz">www.freshavalley.co.nz</a></p>	<p>WEBSITE: <a href="http://www.goodmanfielder.co.nz">www.goodmanfielder.co.nz</a></p>
<p>YEAR FORMED: 2009</p>	<p>YEAR FORMED: 2001</p>	<p>YEAR FORMED: 1988</p>	<p>YEAR FORMED: 1968/1986</p>
<p>STAFF EMPLOYED: 142 (NZ &amp; UK)</p>	<p>STAFF EMPLOYED: 22,000 (~12,000 NZ)</p>	<p>STAFF EMPLOYED: N/A</p>	<p>STAFF EMPLOYED: 2,000</p>
<p>REVENUE: \$45m</p>	<p>REVENUE: \$17,199m (FY16)</p>	<p>REVENUE: N/A</p>	<p>REVENUE: \$871m (FY16)</p>
<p>COMPANY HIGHLIGHTS: Epicurean Dairy on Deloitte Fast 50 in '11,'12, '14, '15; Countdown '16 Delicatessen &amp; Perishables Supplier of the Year; May '16 launched export into China</p>	<p>COMPANY HIGHLIGHTS: Strategy refresh in '15, focus on growing volume and derive more value; invested \$1.5b since '12 in increasing manufacturing capacity in NZ; new ingredients research for paediatric nutrition, 'Annum' and sports nutrition drinks and bars ingredients; developed premium UHT drinks "Up" range in '16; aim to be #1 dairy player in CN; \$240m mozzarella plant started in '16</p>	<p>COMPANY HIGHLIGHTS: Rebuilt factory in '10; non exclusive license to supply A2 fresh milk in NZ expires in May '17</p>	<p>COMPANY HIGHLIGHTS: Sold meats business to Hellers, \$12.1m, pizza business to Mommas Foods Ltd, \$700,000 in '14; Wilmar &amp; First Pacific 100% takeover for A\$1.3b in '15; rebranded Meadow Fresh milk, Ernest Adams in '16, new edition of Edmonds Cookery Book; announced restructure of baking business in AU in Jan '17, part of \$650m investment across all markets from '16-'19</p>

<p>GREEN VALLEY DAIRIES</p>  <p>Corrie den Haring General Manager</p>	<p>KEYTONE ENTERPRISES</p>  <p>James Gong Director</p>		<p>LEWIS ROAD CREAMERY LTD</p>  <p>Peter Cullinane Chief Executive Officer</p>	<p>MATAURA VALLEY MILK LTD</p>  <p>Aaron Moody Director</p>
<p>DESCRIPTION: Independent milk company with on farm factory; over 200,000L per day capacity; specialises in organic dairy products; partners with Lewis Road Creamery; exports to China; Marphona Farms also owned by Pulman family</p>	<p>DESCRIPTION: Manufacturer and exporter of nutritional and dairy ingredients and health products; contract packing and own brand; dairy packing and blending facility in Christchurch; exports to Asia</p>		<p>DESCRIPTION: Producer of gourmet dairy products; milk suppliers Green Valley Dairies and Organic Dairy Hub; partners with Whittaker's for chocolate flavoured products</p>	<p>DESCRIPTION: Southland based dairy processing company; building \$200m plant north of Gore to manufacturer infant formula, milk powder; planned supply to sister companies BODCO in Hamilton and Nouriz; planned export 50% to China via BODCO, Nouriz, 50% rest of world</p>
<p>KEY PRODUCTS: Fresh milk, organic milk, fortified milk, cream, flavoured milk, yoghurt, organic butter</p>	<p>KEY PRODUCTS: Milk powder, sheep milk powder, kiwifruit milk powder, lactoferrin, colostrum; Key Dairy and KeyHealth brands</p>		<p>KEY PRODUCTS: Flavoured milk, organic cream, custard, chocolate butter, fresh milk, ice cream, bread, chocolate cream liqueur</p>	<p>KEY PRODUCTS: Infant formula, milk powder</p>
<p>OWNERSHIP: NZ; Private (Pulman)</p>	<p>OWNERSHIP: NZ; Private (Cheung, Gong)</p>		<p>OWNERSHIP: NZ; Private (Cullinane 64%, others)</p>	<p>OWNERSHIP: China; SOE (China Animal Husbandry Group ~88%); others</p>
<p>COMPANY NUMBER: 1280111</p>	<p>COMPANY NUMBER: 3346491</p>		<p>COMPANY NUMBER: 3308611</p>	<p>COMPANY NUMBER: 2094638</p>
<p>ADDRESS: 206 Bell Road, Mangatawhiri, Pokeno</p>	<p>ADDRESS: 7 Paragon Place, Sockburn, Christchurch</p>		<p>ADDRESS: Suite #304, 8 Commerce Street, Auckland</p>	<p>ADDRESS: P.O Box 42, Gore</p>
<p>PHONE: +64 9 296 8207</p>	<p>PHONE: +64 3 961 8088</p>		<p>PHONE: +64 800 800 553</p>	<p>PHONE: +64 3 203 9150</p>
<p>WEBSITE: www.gvd.co.nz; www.marphona.co.nz</p>	<p>WEBSITE: www.keytone.co.nz</p>		<p>WEBSITE: www.lewisroadcreamery.co.nz</p>	<p>WEBSITE: www.cahg.com.cn * Mataura website soon</p>
<p>YEAR FORMED: 2003</p>	<p>YEAR FORMED: 2011</p>		<p>YEAR FORMED: 2011</p>	<p>YEAR FORMED: 2008</p>
<p>STAFF EMPLOYED: 120</p>	<p>STAFF EMPLOYED: 10</p>		<p>STAFF EMPLOYED: 15</p>	<p>STAFF EMPLOYED: 65 planned Aug '18</p>
<p>REVENUE: \$50-\$70m ('16)</p>	<p>REVENUE: \$3m (FY16)</p>		<p>REVENUE: \$40-50m*</p>	<p>REVENUE: N/A</p>
<p>COMPANY HIGHLIGHTS: Built new production line, doubling capacity in '15</p>	<p>COMPANY HIGHLIGHTS: Built state of art dairy packing and blending facility in Sockburn in 2013 with two fully automated lines, producing 3,000 t of different products a year; second new plant to be built in Rolleston, Christchurch in 2017</p>		<p>COMPANY HIGHLIGHTS: Increased retail sales by 340% to \$40m in '15, half of domestic organic dairy market; investigating exporting fresh organic milk to China, AU, UK, USA in '16; trials of Lewis Road Bakery products in '16; launched chocolate butter using Whittaker's 72% Dark Ghana Chocolate in '16; launched a new cream liqueur in '17, a blend of cream, spirits and chocolate</p>	<p>COMPANY HIGHLIGHTS: Construction on plant started in Aug '16, due Aug '18 using German firm GEA; dryer capacity of 8t/hr of WMP or 6t/hr of nutritionals</p>







\* Estimate; Source: various companies annual financial statements (NZ Companies Office or company website); various press releases and news articles; Coriolis analysis

<p><b>MAUI MILK LIMITED</b></p>  <p>Peter Gatley General Manager</p>	<p><b>MILK NEW ZEALAND</b></p>   <p>Terry Lee Managing Director</p>	<p><b>MIRAKA LTD</b></p>   <p>Richard Wyeth Chief Executive Officer</p>	<p><b>MILLIGANS FOOD GROUP</b></p>   <p>Bruce Paton Managing Director</p>
<p><b>DESCRIPTION:</b> Manufacturer of sheep milk powder; sheep farm near Lake Taupo milking since '07; 3,000 milking ewes; genetic improvement programme partnership with shareholder Super Organic (CN), Southern Cross Dairy Farm Technology; processing all product at FoodWaikato</p>	<p><b>DESCRIPTION:</b> Total 29 farms, Theland Tahi Farm Group in NI (ex Crafar Farms) via Dakang; milk processed into UHT by Miraka for export to China and "New Milk" process powder; total 10m kg milk solids, 120m litres; Purata Farming in SI (ex Synlait Farms) owned via Shanghai Pengxin supplies Synlait</p>	<p><b>DESCRIPTION:</b> New Zealand dairy processing plant processing 251m litres of milk pa from 111 suppliers; manufacturing products for export to over 23 countries</p>	<p><b>DESCRIPTION:</b> Manufacturer and distributor of food ingredients, consumer food and animal nutrition products; offices, storage warehouses and manufacturing plants in Oamaru, which services the South Island and international markets; Auckland distribution facility serves North Island</p>
<p><b>KEY PRODUCTS:</b> Sheep milk powder</p>	<p><b>KEY PRODUCTS:</b> "Theland" brand: UHT milk, milk powder, fresh milk, manuka honey milk powder, "Manuka World" brand manuka honey</p>	<p><b>KEY PRODUCTS:</b> Ingredient milk powders, consumer milk powders, UHT products, branded products</p>	<p><b>KEY PRODUCTS:</b> Milk powder, butter, amf, cheese, whey protein, milk protein, dairy nutritionals, soft serve</p>
<p><b>OWNERSHIP:</b> China; Private (Maui Food 60%); NZ; Iwi (Waituhi Kuratau Trust 40%)</p>	<p><b>OWNERSHIP:</b> China; Private (Shanghai Pengxin Group); China; Public (Dakang International Food and Agriculture (Shanghai Pengxin 55%)</p>	<p><b>OWNERSHIP:</b> NZ; Iwi (Wairarapa Moana Incorp 33%; Tuaropaki Kaitiaki 33%); Vietnam; Public (Vinamilk Vietnam Dairy Prod (VN:VNM) 23%)</p>	<p><b>OWNERSHIP:</b> NZ; Private (Paton)</p>
<p><b>COMPANY NUMBER:</b> 5542847</p>	<p><b>COMPANY NUMBER:</b> 3883536</p>	<p><b>COMPANY NUMBER:</b> 2244299</p>	<p><b>COMPANY NUMBER:</b> 565193</p>
<p><b>ADDRESS:</b> HW 32, Lake Taupo 120 Whareroa Rod, Kuratau (new site)</p>	<p><b>ADDRESS:</b> Level 34, Vero Centre, 48 Shortland St, Auckland</p>	<p><b>ADDRESS:</b> 108 Tuwharetoa Street, Taupo</p>	<p><b>ADDRESS:</b> 1 Chelmer Street, Oamaru</p>
<p><b>PHONE:</b> +64 9 377 8776</p>	<p><b>PHONE:</b> +64 9 377 8776</p>	<p><b>PHONE:</b> +64 7 376 0075</p>	<p><b>PHONE:</b> +64 3 434 1113</p>
<p><b>WEBSITE:</b> www.mauimilk.co.nz</p>	<p><b>WEBSITE:</b> www.milknewzealand.com; www.puratafarming.nz</p>	<p><b>WEBSITE:</b> www.miraka.co.nz</p>	<p><b>WEBSITE:</b> www.milligans.co.nz</p>
<p><b>YEAR FORMED:</b> 2005/2014</p>	<p><b>YEAR FORMED:</b> 2011</p>	<p><b>YEAR FORMED:</b> 2009</p>	<p><b>YEAR FORMED:</b> 1896</p>
<p><b>STAFF EMPLOYED:</b> N/A</p>	<p><b>STAFF EMPLOYED:</b> 13</p>	<p><b>STAFF EMPLOYED:</b> 119</p>	<p><b>STAFF EMPLOYED:</b> 40</p>
<p><b>REVENUE:</b> \$5-\$10m*</p>	<p><b>REVENUE:</b> \$11m (FY16)</p>	<p><b>REVENUE:</b> \$141m (FY16)</p>	<p><b>REVENUE:</b> \$75m ('16)</p>
<p><b>COMPANY HIGHLIGHTS:</b> Acquired 770ha Waikino farm near Lake Taupo; Maui Foods originally sourcing from Blue River prior to Chinese sale, lost supply; acquired 490ha in Kuratau for \$1.2m from Waithi Kuratau Trust to develop sheep dairy farm in '16; product sold in Shanghai by partners</p>	<p><b>COMPANY HIGHLIGHTS:</b> "Theland" (Dakang's brand) launched into China in Mar '15; Theland carried in 1,150 stores in 13 provinces in China Shanghai Pengxin Group gains 100% of Purata Farms in Feb '16; exported over 1,900 containers of UHT and other dairy to China in '16; Landcorp announced end of sharemilking contract in May '17</p>	<p><b>COMPANY HIGHLIGHTS:</b> New \$25m UHT plant built to process Shanghai Pengxin milk; Vinamilk increased share in '15, investing US\$3.5m; granted \$1m for 3 year AgResearch project developing products that minimize allergies in children in '16; launched direct to consumer products '17; received Matariki Te Tupu-A-Nuku Award for Maori Business and Innovation in '16</p>	<p><b>COMPANY HIGHLIGHTS:</b> Invested in land for new storage shed at North Oamaru Business Park in '16; spending \$15m on new buildings and processing facilities</p>

\* Estimate; Source: various companies annual financial statements (NZ Companies Office or company website); various press releases and news articles; Coriolis analysis

<p>NEW ZEALAND DAIRY COLLABORATIVE LIMITED (NZDC)</p>  <p>Solomon Ling Managing Director</p>	<p>NEW ZEALAND DAIRY PRODUCTS/CARILAC DAIRY</p>   <p>Chris Berryman Managing Director</p>	<p>OCEANIA DAIRY LIMITED</p>   <p>Roger Leslie Usmar General Manager</p>	<p>OPEN COUNTRY DAIRY LTD</p>   <p>Steven Koekemoer Chief Executive Officer</p>
<p>DESCRIPTION: Manufacturer of goat milk powder; blending and packaging plant in Ashburton, capacity of 3,000 cans of formula/hr for export to China; Fineboon Inc. is China's largest goat infant formula company; 28 t/month milk powder currently sourced from Manawatu, dried at Ruakura</p>	<p>DESCRIPTION: Planned vertically integrated goat farmer and manufacturer of goat and sheep milk powder including infant formula; currently sourcing funds to start building</p>	<p>DESCRIPTION: Manufacturer of milk powder; exporting to China; Stage 2 expansion included UHT, milk processing plant, dry store, blending and canning facilities</p>	<p>DESCRIPTION: Manufacturer of dairy ingredients at three plants; second largest dairy processor in NZ; second largest WMP exporter globally; sites in Waharoa, Wanganui, Awarua; processing 1.5b litres a year; 845 farmer suppliers; exports to Middle East, Africa, Asia, Pacific</p>
<p>KEY PRODUCTS: Goat based milk powders</p>	<p>KEY PRODUCTS: Goat and sheep milk powder, infant formula, seniors, prenatal; Carilac brand</p>	<p>KEY PRODUCTS: Milk powder</p>	<p>KEY PRODUCTS: Milk powder, milk proteins, milk fats, cheese</p>
<p>OWNERSHIP: China; Private (Shaanxi Fineboon Dairy Incorporated 75%); NZ; Private (Huang 15%, Ling 10%)</p>	<p>OWNERSHIP: NZ; Private (Berryman 64%, Yanfang Zhang 30%, others (NZ, China))</p>	<p>OWNERSHIP: China; Public (Inner Mongolia Yili Industrial Group (SHA: 600887))</p>	<p>OWNERSHIP: NZ; Private (Talleys Group 76%, others); Singapore; Public (Olam International (SGX:O32) 15%)</p>
<p>COMPANY NUMBER: 5501972</p>	<p>COMPANY NUMBER: 5807762</p>	<p>COMPANY NUMBER: 2199178</p>	<p>COMPANY NUMBER: 1911063</p>
<p>ADDRESS: 12 Longbeach Road, Rd 3, Willowby, Ashburton, 7773, New Zealand</p>	<p>ADDRESS: 1041 Tikokino Road, Waipawa</p>	<p>ADDRESS: Cnr Cooneys Road &amp; SH1, Glenavy, South Canterbury</p>	<p>ADDRESS: 52 Highbrook Drive, East Tamaki, Auckland</p>
<p>WEBSITE: www.fineboon.com</p>	<p>PHONE: +64 9 889 1602</p>	<p>PHONE: +64 3 686 6403</p>	<p>PHONE: +64 9 5891372</p>
<p>WEBSITE: www.fineboon.com</p>	<p>WEBSITE: www.nzdp.nz; www.carilac.com</p>	<p>WEBSITE: www.oceaniadairy.co.nz</p>	<p>WEBSITE: www.opencountry.co.nz; www.talleys.co.nz; www.olamgroup.com</p>
<p>YEAR FORMED: 2014</p>	<p>YEAR FORMED: 2015</p>	<p>YEAR FORMED: 2008</p>	<p>YEAR FORMED: 2004</p>
<p>STAFF EMPLOYED: 50 (initially)</p>	<p>STAFF EMPLOYED: 1</p>	<p>STAFF EMPLOYED: 185</p>	<p>STAFF EMPLOYED: 310</p>
<p>REVENUE: N/A</p>	<p>REVENUE: nil (not trading FY16)</p>	<p>REVENUE: \$163m (FY16)</p>	<p>REVENUE: \$819m (FY16)</p>
<p>COMPANY HIGHLIGHTS: Apr '15 announced investing in new, 4,500m<sup>2</sup> \$40m infant formula plant, initially blending and packaging, drying plant added when local production increases; completion scheduled for Oct '16</p>	<p>COMPANY HIGHLIGHTS: Purchased 247ha farm in Waipawa, Hawkes Bay for goat farm and new formula plant; sourcing funding, 18 months to plant commissioned; require \$100m for facility, 220 jobs expected</p>	<p>COMPANY HIGHLIGHTS: Construction on \$200m factory begun Apr '13; second stage of 5 year project announced in '14, commissioned Apr '17, bringing total investment to over \$400m; once stage 3 completed in '17, factory will handle over 630m litres of milk annually</p>	<p>COMPANY HIGHLIGHTS: 17% revenue growth in a difficult trading environment; -\$260m invested at OCD in '15</p>



<p>SPRING SHEEP DAIRY</p>  <p>Scottie Chapman Chief Executive</p> 	<p>SYNLAIT MILK LIMITED</p>  <p>John Penno Managing Director and Chief Executive Officer</p> 	<p>TATUA CO-OPERATIVE DAIRY</p>  <p>Brendhan Greaney Chief Executive Officer</p> 	<p>THE A2 MILK CO LTD</p>  <p>Geoff Babidge Managing Director &amp; Chief Executive Officer</p> 
<p>DESCRIPTION: Sheep milk producer and marketer; 4,000 milking ewes; outsourcing manufacturing to FoodWaikato; initial focus on Taiwan and Korea</p>	<p>DESCRIPTION: Canterbury based dairy manufacturer of value added dairy for health and nutrition companies; 173 suppliers; supplies 8 infant formula brands for 5 of top global infant formula companies; 25% stake in New Hope Nutritional Foods; processed 57.7m kg milk solids in '16</p>	<p>DESCRIPTION: Specialist dairy ingredients and food products manufacturer, 200m+ L of milk pa; exports 94% of its products to 60+ countries; sales offices in Japan, USA, China</p>	<p>DESCRIPTION: A multinational company building a portfolio of dairy-based nutritional products centred on the unique strengths of the A1-protein-free proposition; well-established businesses in Australia, New Zealand and China; developing positions in the United Kingdom and United States</p>
<p>KEY PRODUCTS: Sheep milk powder, probiotic milk drink powder, calcium chewable tablets, gelato</p>	<p>KEY PRODUCTS: Infant and adult nutritional formulations, milk powders (WMP, SMP), functional food ingredients, specialised products</p>	<p>KEY PRODUCTS: Caseinate, hydrolysates, whey proteins, AMF, lactoferrin, peptones, dairy whip, cream, cheese sauce, natural dairy flavours</p>	<p>KEY PRODUCTS: Milk, infant formula, milk powder</p>
<p>OWNERSHIP: NZ; Private (Landcorp 50%, SLC Ventures LP 50%)</p>	<p>OWNERSHIP: NZ; Public (NZX:SML, ASX:SM1) (Bright (China; SOE) 39%, a2 Milk Co (AU; Public) 8%, Mitsui &amp; Co (Japan; Public) 8%, others)</p>	<p>OWNERSHIP: NZ; Co-operative (113 farms)</p>	<p>OWNERSHIP: NZ; Public (NZX:ATM; ASX:A2M)</p>
<p>COMPANY NUMBER: 5716331</p>	<p>COMPANY NUMBER: 1600872</p>	<p>COMPANY NUMBER: 173822</p>	<p>COMPANY NUMBER: 1014105</p>
<p>ADDRESS: 38 Wyndham Street, Auckland</p>	<p>ADDRESS: 1028 Heselton Road, Rakaia</p>	<p>ADDRESS: 3434 State Highway 26, Tatuanui, Morrinsville</p>	<p>ADDRESS: 88 Shortland Street, Newmarket, Auckland</p>
<p>PHONE: +64 27 491 1334</p>	<p>PHONE: +64 3 373 3000</p>	<p>PHONE: +64 7 889 3999</p>	<p>PHONE: +64 9 922 9802</p>
<p>WEBSITE: <a href="http://www.springsheepnz.com">www.springsheepnz.com</a></p>	<p>WEBSITE: <a href="http://www.synlait.com">www.synlait.com</a></p>	<p>WEBSITE: <a href="http://www.tatua.com">www.tatua.com</a></p>	<p>WEBSITE: <a href="http://www.thea2milkcompany.com">www.thea2milkcompany.com</a></p>
<p>YEAR FORMED: 2015</p>	<p>YEAR FORMED: 2005</p>	<p>YEAR FORMED: 1914</p>	<p>YEAR FORMED: 2000</p>
<p>STAFF EMPLOYED: 30</p>	<p>STAFF EMPLOYED: 436</p>	<p>STAFF EMPLOYED: 370</p>	<p>STAFF EMPLOYED: 111 (Group)</p>
<p>REVENUE: \$2-5m (FY16)</p>	<p>REVENUE: \$547m (FY16)</p>	<p>REVENUE: \$289m (FY16)</p>	<p>REVENUE: \$353m (FY16)</p>
<p>COMPANY HIGHLIGHTS: Invested \$3.9m to develop sheep milking farm in '15; partnered with MPI in PGP Sheep Horizon Three programme in '16, aims to generate between \$200-700m revenue for sheep milk industry by '30, total investment +\$20m; launched gelato in NZ in late '16</p>	<p>COMPANY HIGHLIGHTS: Synlait exclusive manufacturer of New Hope Akarola infant formula for China; supply relationship with Munchkin Inc. announced in '15; \$133m 3<sup>rd</sup> dryer and \$11.5m on-site quality testing laboratory brought online in '16; increase of canning volumes to 16,000t in '16; investment of \$34m in second wet mix kitchen in '17; part of \$300m planned investment from '17-'20</p>	<p>COMPANY HIGHLIGHTS: Commissioned new speciality products drier in '15; opened offices in Shanghai and USA in '15; sales: Japan 19%, China 12%, USA 10%, rest SE Asia/Other 40%, AU/NZ 19%; new CEO in '16</p>	<p>COMPANY HIGHLIGHTS: Continued growth in AU fresh milk, 25% share in H1 '17; significant sales growth of a2 Platinum infant formula AU and China; USA focus on fresh milk market, expansion of market footprint; UK transition from fresh milk to broader portfolio, with increased brand awareness and sales; acquired 8.17% share of Synlait from FrieslandCampina for \$47.9m in '17</p>

\* Estimate; Source: various companies annual financial statements (NZ Companies Office or company website); various press releases and news articles; Coriolis analysis

<p>WESTLAND DAIRY PRODUCTS</p>   <p>Toni Brendish Chief Executive Officer</p>	<p>WHITESTONE CHEESE</p>   <p>Simon Berry Chief Executive Officer</p>	<p>YASHILI NZ DAIRY</p>   <p>William Zhao General Manager NZ</p>
<p>DESCRIPTION: Dairy co-operative based on West Coast and in Canterbury; 430 suppliers; 743m L collected; processes 3% of NZ milk supply; Westgold, Westpro Nutrition, EasiYo brands</p>	<p>DESCRIPTION: Artisan cheese producer based in Oamaru; over 20 different cheeses, named after local places</p>	<p>DESCRIPTION: Infant formula manufacturer for export to China; \$220m world leading, 30,000m<sup>2</sup> manufacturing facility in Pokeno; production capacity of 52,000t of infant formula annually</p>
<p>KEY PRODUCTS: Butter, UHT milks and creams, infant and toddler nutrition ingredients, milk powders, proteins, bio actives, "EasiYo" powders</p>	<p>KEY PRODUCTS: Blue cheese, brie, feta, camembert, hard cheeses, goat cheese, butter</p>	<p>KEY PRODUCTS: Infant formula; finished product in tins and 25kg bulk base powder</p>
<p>OWNERSHIP: NZ; Co-operative (430 farmers)</p>	<p>OWNERSHIP: NZ; Private (Berry)</p>	<p>OWNERSHIP: China; Public (Mengniu 51%); France; Public (Danone 25%) via Yashili International Holdings (HK)</p>
<p>COMPANY NUMBER: 153032</p>	<p>COMPANY NUMBER: 147247</p>	<p>COMPANY NUMBER: 3922659</p>
<p>ADDRESS: 56 Livingstone Street, Hokitika</p>	<p>ADDRESS: 3 Torridge Street, Oamaru</p>	<p>ADDRESS: 1 Yashili Drive, Pokeno</p>
<p>PHONE: +64 3 756 9800</p>	<p>PHONE: +64 3 434 8098</p>	<p>PHONE: +64 9 600 5800</p>
<p>WEBSITE: <a href="http://www.westland.co.nz">www.westland.co.nz</a>; <a href="http://www.easiyo.com">www.easiyo.com</a></p>	<p>WEBSITE: <a href="http://www.whitestonecheese.com">www.whitestonecheese.com</a></p>	<p>WEBSITE: <a href="http://www.yashili.co.nz">www.yashili.co.nz</a>; <a href="http://www.yashili.hk">www.yashili.hk</a>; <a href="http://www.mengniu.com">www.mengniu.com</a></p>
<p>YEAR FORMED: 1937</p>	<p>YEAR FORMED: 1987</p>	<p>YEAR FORMED: 2012</p>
<p>STAFF EMPLOYED: 550</p>	<p>STAFF EMPLOYED: 75</p>	<p>STAFF EMPLOYED: 96</p>
<p>REVENUE: \$588m (FY16)</p>	<p>REVENUE: \$5-10m ('16)</p>	<p>REVENUE: \$0.7m (FY15)</p>
<p>COMPANY HIGHLIGHTS: Opened first offshore office in Shanghai in '14; new \$40m UHT facility at Rolleston in '15; new infant nutrition plant (dryer 7) in Hokitika, \$114m; new CEO in '16; 40% JV with largest nutritional powders customer Ausnutria to blend and can nutritional products at Rolleston in '16; Westgold Unsalted Butter won Food for Chefs Champion Butter Award in '16</p>	<p>COMPANY HIGHLIGHTS: Awarded silver medal at 2016 World Championship Cheese Contest in USA for Vintage Windsor Blue cheese; acquired adjacent property to double production, 1100m<sup>2</sup> floor space, build tourist facility, complete Jul '17</p>	<p>COMPANY HIGHLIGHTS: \$220m plant opened in Nov '15; agreement to supply up to \$18.7m base powder dairy products to Danone in '16; Super α-Golden Stage formula launched in NZ in '16</p>

\* Estimate; Source: various companies annual financial statements (NZ Companies Office or company website); various press releases and news articles; Coriolis analysis



# Appendices

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- + Industry bodies
- + Trade codes
- + Glossary of terms

06

## INDUSTRY ORGANISATIONS

As a major dairy producer, New Zealand has a strong range of dairy industry organisations



- Represent dairy farmers
- Funding from levies and other sources
- Govt co-funded research program
- Merger of Dairy InSight and Dexcel
  
- [www.dairynz.co.nz](http://www.dairynz.co.nz)



- Represent dairy processors and exporters
- Funding from membership fees
  
- [www.dcanz.com](http://www.dcanz.com)



- Represent all New Zealand farmers
- Funding from membership fees
  
- [www.fedfarm.org.nz](http://www.fedfarm.org.nz)



- Represent all New Zealand food & beverage manufacturers and suppliers
- Funding from membership and conference fees
  
- [www.fgc.org.nz](http://www.fgc.org.nz)

# TRADE CODES

## GLOBAL HARMONISED SYSTEM (HS) TRADE CODES DEFINED AS DAIRY

### HS2002

HS Code	Short Description	Longer official description
040110	Low fat fluid milk	Milk not concentrated nor sweetened < 1% fat
040120	UHT milk, other whole fluid	Milk not concentrated nor sweetened 1-6% fat
040130	High fat fluid milk	Milk and cream not concentrated nor sweetened < 6% fat
040210	SMP (skim milk powder)	Milk in powder/granules/other solid form, fat content by wt. not >1.5%
040221	WMP (whole milk powder)	Milk in powder/granules/other solid form, unsweetened, fat content by wt. >1.5%
040229	Bulk IF (infant formula); other sweet WMP	Milk in powder/granules/other solid form, sweetened, fat content by wt. >1.5%
040291	Unsweetened condensed	Milk & cream, concentrated (excl. in powder), unsweetened
040299	Sweetened condensed	Milk & cream, concentrated (excl. in powder), sweetened
040310	Yoghurt	Yoghurt [excludes frozen yoghurt products and novelties/bars]
040390	Buttermilk powder, other fermented	Buttermilk/curdled milk & cream/kephir & other ferm./acidified milk & cream, whether or not conc./sweetened/flavoured/cont. fruit/nuts/cocoa
040410	Whey & modified whey	Whey & modified whey, whether or not concentrated/sweetened
040490	Natural milk constituent nes	Milk prods. of nat. milk constituents, whether or not sweetened, n.e.s.
040510	Butter	Butter
040520	Dairy spreads	Dairy spreads
040590	Other milk fats and oils	Fats & oils derived from milk, other than butter & dairy spreads
040610	Fresh cheese	Fresh (unripened/uncured) cheese, incl. whey cheese, & curd
040620	Grated or powdered cheese	Grated/powdered cheese, of all kinds
040630	Processed cheese	Processed cheese, not grated/powdered
040640	Blue-veined cheese	Blue-veined cheese
040690	Cheese, cheddar, etc.	Cheese (excl. of 0406.10-0406.40)
170211	Lactose 99%	Lactose & lactose syrup, cont. by wt. 99%/more lactose, expressed as anhydrous lactose, calc. on the dry matter
170219	Lactose, other	Lactose & lactose syrup, cont. by wt. >95% but <99% lactose, expressed as anhydrous lactose, calc. on the dry matter
350110	Casein	Casein
350190	Caseinates /other derivatives	Caseinates & other casein derivatives.; casein glues
350220	Milk albumins 80% two proteins	Milk albumins, 80%+ whey, two proteins
350290	Milk albumins 80% other	Milk albumins, 80%+ whey, other

# GLOSSARY OF TERMS

A\$/AUD	Australian dollar	n/a	Not available/not applicable
ABS	Absolute change	NA/ME/CA	North Africa / Middle East / Central Asia
ANZSIC	AU/NZ Standard Industry Classification	N. America	North America (USA, Canada)
AU	Australia	Nec/nes	Not elsewhere classified/not elsewhere specified
Australasia	Australia and New Zealand	N/C	Not calculable
b	Billion	N.H	Northern Hemisphere
CAGR	Compound Annual Growth Rate	NZ	New Zealand
CN	China	NZ\$/NZD	New Zealand dollar
C/S America	Central & South America (Latin America)	R&D	Research and Development
CRI	Crown Research Institute	S Asia	South Asia (Indian Subcontinent)
CY	Calendar year (ending Dec 21)	SE Asia	South East Asia
E Asia	East Asia	S.H	Southern Hemisphere
EBITDA	Earnings before interest, tax, depreciation and amortization	SS Africa	Sub-Saharan Africa
FAO	Food and Agriculture Organisation of the United Nations	T/O	Turnover
FOB	Free on Board	UHT	Ultra-high temperature
FY	Financial year (of firm in question)	US/USA	United States of America
GBP	British pounds	US\$/USD	United States dollar
HK	Hong Kong	UK	United Kingdom
IQF	Individually quick frozen	YE	Year ending
JV	Joint venture	YTD	Year to date
m	Million		

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Coriolis is the leading Australasian management consulting firm specialising in the wider food value chain. We work on projects in agriculture, food and beverages, consumer packaged goods, retailing & foodservice. In other words, things you put in your mouth and places that sell them.

## **WHERE WE WORK**

We focus on the Asia Pacific region, but look at problems with a global point-of-view. We have strong understanding of, and experience in, markets and systems in Australia, China, Japan, Malaysia, New Zealand, Singapore, South Korea, Thailand, the United Kingdom and the U.S.

## **WHAT WE DO**

We help our clients assemble the facts needed to guide their big decisions. We develop practical, fact-based insights grounded in the real world that guide our clients decisions and actions. We make practical recommendations. We work with clients to make change happen. We assume leadership positions to implement change as necessary.

## **HOW WE DO IT**

All of our team have worked across one-or-more parts of the wider food value chain, from farm-to-plate. As a result, our work is grounded in the real world. Our style is practical and down-to-earth. We try to put ourselves in our clients' shoes and focus on actions. We listen hard, but we are suspicious of the consensus. We provide an external, objective perspective.

## **WHO WE WORK WITH**

We only work with a select group of clients we trust. We build long term relationships with our clients and more than 80% of our work comes from existing clients. Our clients trust our experience, advice and integrity.

Coriolis advises clients on growth strategy, mergers and acquisitions, operational improvement and organisational change. Typical assignments for clients include...

## **FIRM STRATEGY & OPERATIONS**

We help clients develop their own strategy for growing sales and profits. We have a strong bias towards growth driven by new products, new channels and new markets.

## **MARKET ENTRY**

We help clients identify which countries are the most attractive – from a consumer, competition and channel point-of-view. Following this we assist in market entry planning & growth.

## **VALUE CREATION**

We help clients create value through revenue growth and cost reduction.

## **TARGET IDENTIFICATION**

We help clients identify high potential acquisition targets by profiling industries, screening companies and devising a plan to approach targets.

## **DUE DILIGENCE**

We help organisations make better decisions by performing consumer and market-focused due diligence and assessing performance improvement opportunities.

## **EXPERT WITNESS**

We provide expert witness support to clients in legal cases and insurance claims. We assist with applications under competition/fair trade laws and regulations.

