

# Sustainability Report

FOR THE YEAR ENDING 31 JULY 2019  
FONTERRA CO-OPERATIVE GROUP LIMITED



Dairy for life



# Working together for tomorrow

We know when we work together we can create goodness.

## OUR PURPOSE:

Our Co-operative is made up of amazing people, our farmer owners, employees, and the people we connect with in our communities.

Our Co-operative is stronger when we work together, in the good times and in the tough times. That's the essence of our purpose:

**Our Co-operative,  
Empowering people  
To create goodness for generations.  
You, me, us together  
Tātou, tātou.**

## OUR VALUES:

Co-operative spirit    Do what's right    Challenge boundaries    Make it happen

*Matt and Kathryn Roberts are both multi-generational dairy farmers from Taranaki, New Zealand, where they live with their three children, Zara, Brianna and Aiden.*

*Starting as sharemilkers enabled them to purchase their first farm in 2006, before moving onto their current farm in 2008 where they are currently milking 260 cows.*

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### About this report

This report covers the activities of Fonterra Co-operative Group Limited and of joint ventures under Fonterra's management control. It covers economic, social and environmental impacts for the year ending 31 July 2019 – 'FY19'. This report sits alongside our 2019 Annual Report which sets out our detailed financial performance.

➔ [www.fonterra.com/annualreport2019](http://www.fonterra.com/annualreport2019)

In certain sections throughout the report, we have included data relating to periods prior to FY19 where such data is relevant to, or useful context for the reader. Where we have done so, we have made it clear which year(s) the data relates to.

This is our third stand-alone sustainability report (our first was in 2017) and we intend to continue this reporting on an annual basis. This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option. We have included an index of disclosures against the GRI standards on page 90.

The GRI Standards are the world's most widely used standards for sustainability reporting, enabling organisations to measure and report their most important sustainability topics.

For more information see:

➔ [www.globalreporting.org](http://www.globalreporting.org)

Independent assurance of the report has been completed by Bureau Veritas. This provides assurance that the report complies with GRI Standards and provides an accurate and fair representation of Fonterra's sustainability performance. Refer to the Assurance Statement on page 92.

We understand the importance of understanding stakeholder perspectives so we'd appreciate your feedback on this report and our performance. Please email us at [sustainability@fonterra.com](mailto:sustainability@fonterra.com)

INTRODUCTION

# Letter from the Board Chair and Chief Executive

## FY19 was a year of significant challenges and change for our Co-op as we continued to fundamentally change the culture and strategy of our organisation.

There's no question about it, it's been a tough year. We always knew it was going to be, and should be pleased with the progress we've made.

That might sound strange, given our performance this year, but we are confident that when we look back at 2019 a few years from now, it will be to mark the beginning of a new period of success for the Co-op.

Our Co-op is almost 150 years old. The decisions and progress made in a number of areas will help to ensure we have a sustainable, intergenerational business for another 150 years.

We started the process for change by looking at our Co-op's purpose. We did a lot of listening to people within the Co-op, to our customers, partners and other stakeholders. They told us that we need to show up differently, but also that this Co-op's intergenerational success was what motivated them.

Our new purpose is already guiding our decision making, culture and behaviour as an organisation.

***Our Co-operative, empowering people to create goodness for generations. You, me, us together. Tātou, tātou.***

Developing our new strategy was a key priority for the Board and senior Management in FY19. We started by thinking about what we have learned from past decisions and agreeing what we want our Co-op to stand for today.

Eighteen months ago, we may have said we're a global dairy giant here to make a difference in the lives of two billion people through a volume ambition of 30 billion litres of milk by 2020.

Today, we stand for value. We're a New Zealand dairy farmers' co-op, doing smart, innovative things with New Zealand milk to create value for our owners, customers, and communities.

This is the right strategy for us, but requires us to make some different choices.

We've looked at the opportunities and risks as a New Zealand dairy co-op today. We've also taken a clinical look at what our strengths and weaknesses really are, not what we've wanted them to be.

We believe people will continue to seek out and pay a premium for products backed by our unique provenance story – our Co-op heritage, pasture-based New Zealand milk, backed by ethical and sustainable farming practices. For that reason, we will prioritise New Zealand milk, complemented by milk components sourced offshore only when required.

Part of putting sustainability at the core of everything we do was the establishment of our Sustainability Advisory Panel this year. They are a group of experts who play the role of our critical friends as we respond to issues facing our Co-op and our industry now and in the future. We welcomed them into our Co-op family with a whakatau at our Fanshawe Street office.

The Panel has told us that our strategy is solid and we are heading in the right direction. Equally, it has challenged us to do more to show leadership in taking the best of New Zealand dairy out to the world.

It's not going to be easy. Consumer habits are changing and they have a growing number of nutritional options, many of which claim to be more sustainable than dairy.

We have an opportunity to take what's special about us – our land, pasture-based farming model, our dairy and our 'New Zealandness', to show the world how dairy is part of the future.



John Monaghan, Board Chair and Miles Hurrell, Chief Executive Officer

Much of the change rests on the shoulders of our farmer owners, who feel the weight of community expectations getting heavier. For our part, the Co-op is already putting more energy and resources into the development of on-farm tools, research and solutions that will help them to run healthy and sustainable businesses.

We know we can't do it alone. Our approach is to apply and share our know-how, and by working with others, deliver technologies and solutions that don't exist today.

Most importantly, we're asking for a clear and consistent science-based approach. That means taking the emotion out of these discussions – from both sides – and working constructively towards the development of realistic policy and solutions.

We will measure the success of our strategy and approach using triple bottom line reporting. We will measure the health of our people, our environment, and our business. Each comes with a number of performance targets, including return on capital, greenhouse gas emissions, and the engagement levels of our farmers and staff.

You will see that this year's report is laid-out across these three reporting lines. It is our third year of producing a standalone Sustainability Report and it continues to be a realistic appraisal of our progress.

We are confident in our Co-op's future, and energised about continuing to evolve our Co-op so that it is here for the benefit of generations to come.

John Monaghan  
Board Chair

Miles Hurrell  
Chief Executive Officer

# 4.9

Injuries at work reduced to 4.9 per million work hours, a world-class level for our industry

# 23%

of New Zealand farms now have a Farm Environment Plan with individually prioritised improvement actions

# \$605m

Net loss after tax

INTRODUCTION

# Letter from the Sustainability Advisory Panel

**It is my pleasure to introduce Fonterra's inaugural Sustainability Advisory Panel, a group of independent experts who have agreed to advise the Board and senior leadership team on the company's roadmap towards a sustainable future.**

Sustainability is an over-used and misunderstood expression. For Fonterra, its sustainability ambitions are linked directly with consumer value on one hand and an intergenerational responsibility for land and what grows on it, on the other. A determination not to exhaust the planet's natural capital, a concept already well understood by Fonterra's farmers.

Today these challenges and opportunities, not constrained by national boundaries, are converging in a confluence of unprecedented velocity. To name a few of them:

- Can we provide healthy nutrition for growing populations in a way which regenerates not depletes, our natural environment?
- Can we continue to farm and operate in New Zealand with the blessing and support, not the ire, of our communities?
- Can the farming sector re-build its reputation for being a revered and esteemed sector of New Zealand society?
- Through deeper engagement with iwi, government, the finance sector and communities can it accelerate change and create enduring, value adding and low carbon businesses?

In a New Zealand context these represent the most complex set of challenges and opportunities a business may ever confront.

## The role of the panel:

The Fonterra Sustainability Advisory Panel was established in 2018, with the first meeting in October 2018. The role of the Panel is to:

1. Review and provide feedback and advice to the Board on Fonterra's strategy, targets and initiatives as they relate to economic, social and environmental sustainability;
2. Provide credible, independent expertise and guidance to the Board to improve performance and outcomes in relation to sustainability; and
3. Present to the Board on advice and/or issues that relate to sustainability and affect Fonterra.

Each Panelist comes with a respected reputation as an independent thought leader. A strong technical background in their respective area of expertise is balanced by a measure of commercial experience that runs through the group. The Panel's diversity enables us to share wide-ranging perspectives across a broad range of topics such as climate change and the environment, social and cultural inclusion, farming, packaging, food and nutrition. The company is midstream in its most profound strategic reset since its inception and pressure on the company to improve financial performance is crucial. At a time of so much change for both company and sector, the Board's decision to establish an independent and unrestricted panel was a bold and innovative approach.

My Panel members and I thought very carefully before accepting this role. More important than its appointment, how seriously would the Panel be engaged? Can we make a difference? Can values of sustainability be fully integrated into commercial objectives and be at the core of Fonterra's future strategy?

In its relatively short history, the Panel has been highly productive. The Fonterra Board, CEO and management team have openly and proactively engaged with the Panel on a regular basis and have sought guidance and fresh insights on the many strategic issues they face. Issues of climate change, and economic, social and environmental sustainability are urgent and command full attention at the most senior levels of every enterprise.

With such open access to Fonterra's decision makers, the Panel has a unique opportunity to work alongside the management team to create value for all stakeholders. We have critiqued the company's targets on several fronts and have brought an international perspective to a number of issues.

For management and the Board, I am hopeful that the Panel will come to be regarded as a "critical friend" to them and the business. This will come over time and through the evolution of a trustworthy relationship based on a belief in Fonterra's success. I thank my fellow Panelists, and I congratulate the work of Fonterra's sustainability team who are doing a great job within the company.



**Rob Fenwick**  
Chair, Fonterra Sustainability Panel



Members - from left to right

### Hugh Logan

Hugh Logan has 40 years' experience in natural resource management. He is chair of Environment Canterbury's regional water management committee and has previously chaired the Land and Water Forum. He was a public service Chief Executive for 11 years heading the Ministry for the Environment and the Department of Conservation. Hugh is also experienced in international environmental affairs, heading New Zealand delegations to the IUCN and Convention on Biological Diversity, and OECD reviews of New Zealand's environmental administration.

### Sir Rob Fenwick, Chair

Sir Rob Fenwick is the first New Zealander knighted for services to both business and conservation. He co-founded the Aotearoa Circle and New Zealand Business Council for Sustainable Development and New Zealand's first commercial composting business, Living Earth. Sir Rob has an honorary doctorate in Natural Resources from Lincoln University. He was 2015 Sir Peter Blake Medallist and 2016 NZ Business Hall of Fame inductee. Sir Rob has sustainability advisory roles for Air NZ, Westpac and Waste Management NZ and is a director of Ngāti Whātua o Ōrākei's commercial holdings and Te Papa. He has had leadership responsibilities in Predator Free New Zealand, the Order of St John, New Zealand Antarctic Research program and Save the Kiwi Trust.

### Bridget Coates

Bridget Coates is a Director of Tegel Group Holdings Ltd. and Chairperson of Real Estate Institute of New Zealand. Until recently, she was a Director of the Reserve Bank of New Zealand. Bridget was the founder of private company, White Cloud Dairy Innovation, which marketed high quality New Zealand dairy and plant proteins and other nutritional products to US consumers. Bridget has also held Board governance roles including with the New Zealand Superannuation Fund, Sky City Limited and Fisher & Paykel Appliances Holdings Ltd., and with New York-based 212 Equity Management LLC, a private equity company. She was formerly CEO of Carter Holt Harvey Plastic Products and Director of Research for CS First Boston NZ Ltd.

### Paul Gilding

Paul Gilding has over 40 years of experience across a range of industries. He is a Fellow at the University of Cambridge's Institute for Sustainability Leadership, where he is exploring the inherent market disruption in transforming the global economy to address system wide sustainability risks. His book "The Great Disruption" has been widely acclaimed. He has been CEO of a range of innovative social enterprises and NGOs including Greenpeace International, Ecos Corporation and Easy Being Green. As a corporate advisor he has worked with the Boards and Executives of many companies including Unilever, BHP Billiton, Royal DSM, DuPont and Ford Motor Company.

### Michelle Pye

Michelle Pye is a Fonterra shareholder and, with her husband Leighton, owns and operates Pye Group, a large scale cross sector agricultural business based in South Canterbury. Within the Pye Group, the dairy business consists of nine dairy farms milking over 9,000 cows. Michelle worked for ten years, predominately for rural-based chartered accountants before working fulltime with Pye Group. Since 2016 Michelle has been the South Canterbury representative on the Fonterra Shareholders' Council.

### Aroha Te Pareake Mead

Aroha Te Pareake Mead (Ngāti Awa, Ngāti Porou) is a Research Associate specialising in mātauranga - Māori/indigenous knowledge, biocultural heritage, and indigenous cultural and intellectual property rights. Aroha is on the Kahui Māori of Genomics Aotearoa and member of Science Leadership Team of the Biological Heritage Science Challenge. Her previous roles include being Director of Māori Business in the Management School of Victoria University of Wellington, Policy Manager and Policy Principal with Te Puni Kōkiri (Cultural Heritage & Indigenous Issues Unit). She has also fulfilled multiple roles for the International Union for Conservation of Nature and served on the Greenpeace New Zealand Board.

# About Fonterra

Fonterra is a New Zealand-based dairy co-operative which brings together farmers to care for people and the land through generations.

Dairying is a big part of New Zealand and has been for almost 150 years. Farming families have made the most of being able to grow grass all year-round, producing delicious, fresh milk.

From our home in New Zealand, we make high-quality dairy ingredients, foodservice and consumer dairy products, which are sold in more than 130 countries.

Our range of dairy ingredients are sold under our NZMP™ brand and can be found in famous food and nutrition brands around the world.

Under our Anchor™ Food Professionals brand we create high quality, fit-for-purpose products and solutions for foodservice professionals in over 50 countries.

We also manufacture, market and distribute our own consumer products. These products include branded dairy products sold direct to consumers, such as milk, milk powders, yoghurt, butter and cheese. Our three global consumer brands are Anchor™, Anlene™ and Annum™.

For more information on our products, please refer to Our Products on page 82.

## Our Brands



Global data	FY18	FY19
Employees (FTE)	22,358	20,685
Manufacturing sites <sup>1</sup>	51	48
Farmgate Milk Price (per kgMS) paid to shareholder farmers	\$6.69	\$6.35
Revenue	\$20.4b	\$20.1b
Net loss after tax	\$196m	\$605m
Normalised EBIT	\$902m	\$819m
Normalised earnings per share	0.24c	0.17c
Normalised operating expenses	\$2,496m	\$2,311m
Capital expenditure	\$861m	\$600m
Return on capital <sup>2</sup>	6.3%	5.8%

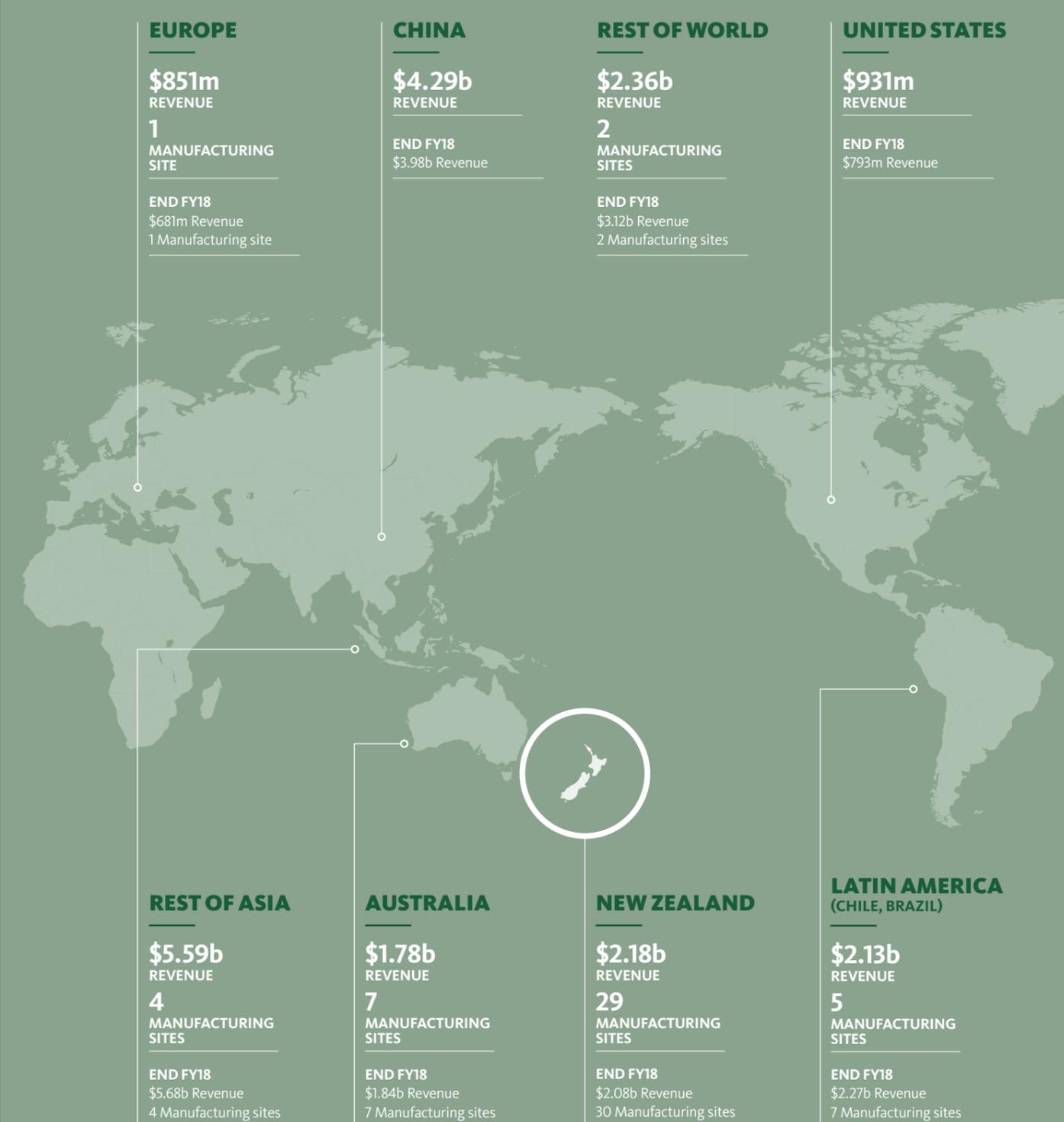
Economic value distributed	FY18 (\$ million)	FY19 (\$ million)
Payment to suppliers (farmers) for NZ-sourced milk	10,115	9,748
Payment to suppliers (farmers) for non-NZ sourced milk	1,245	966
Tax expense <sup>3</sup>	42	177
Profit after tax attributable to shareholders	221 loss (earnings of -\$0.14 per share)	557 loss (earnings of -\$0.35 per share)
Dividend payment to equity holders of the Co-operative	161 (dividend of \$0.10 per share)	0 (no dividend paid)

For our full financial results, please refer to our Annual Report: [www.fonterra.com/annualreport2019](http://www.fonterra.com/annualreport2019)

1 This is the number of manufacturing sites under Fonterra management control at the end of FY19. Down on FY18 due to divestments that occurred during the year.  
 2 Return on capital excluding brands, goodwill and equity-accounted investments was 7.6% (down from 8.0%).  
 3 See [www.fonterra.com/taxprinciples](http://www.fonterra.com/taxprinciples) for details on our approach to tax.

# Global Revenue: \$20.1b

FY18: \$20.4b



# Our approach

**A sustainable future for our Co-operative is core to our new strategy – it's how we create long-term value for future generations.**

Our new strategy integrates sustainability into our thinking and takes a triple-bottom-line approach to our Co-operative way of doing things.

FY19 was a tough year and required tough decisions. Despite this, we have continued to recognise the importance of sustainability. We outline our approach here and our progress towards key targets on the next page. While progress is not as strong as we would like, we are pleased that we have continued to make progress during the year.

We have three overarching goals and this report is structured to reflect these:

## Healthy people:

We are working together to care for people and make a positive social impact.

*He aha te mea nui o te ao.*

*He tāngata, he tāngata, he tāngata.*

*What is the most important thing in the world?  
It is people, it is people, it is people.*

## Healthy environment:

We are working together to achieve a healthy environment for farming and society.

*Tiakina te whenua i tēnei rā, hei oranga tangata  
mō ngā rā e heke mai nei.*

*Caring for the land today, so that the land cares for us tomorrow.*

## Healthy business:

We are working together to deliver a sustainable business.

*Nā tō rourou, nā taku rourou ka ora ai te iwi.*

*With your contribution and my contribution, we'll all thrive together.*



## Healthy People

- ✓ **Address public health challenges** by improving the nutritional profile of our products and promoting healthy diets.
- ✓ **Provide positive employment for our people** by promoting a healthy and safe working environment and developing a diverse, skilled and agile workforce.
- ✓ **Improve the health of our communities** by doing business in the right way, sharing what we do best and playing our part to build resilient, sustainable communities.

### FY19 – Key items

- Injury rate reduced to world class level.
- Health Star Ratings on 92% of our applicable products in New Zealand.
- Gender pay ratio widened 1% in New Zealand but remains well above national average.

### Key global targets

- World-class injury prevention.
- World-class engagement.
- 2019: 100% sites certified to leading food, safety and quality level.
- 2022: 50% female representation in senior leadership.
- 2025: 100% product portfolio meeting endorsed nutrition guidelines.

### Long-term contribution



## Healthy Environment

- ✓ **Improve the health and biodiversity of our land and waters** by having a regenerative mindset, reducing the impacts of farming and manufacturing, and working in partnership with others.
- ✓ **Lead the transition to a low-carbon future** by investing in innovation and infrastructure to remove greenhouse gas emissions from our supply chain.
- ✓ **Meet the growing nutritional demand** through improvements in productivity and minimising waste from farm to consumer.

### FY19 – Key items

- 23% of Fonterra farms in New Zealand now have a Farm Environment Plan (FEP).
- Brightwater site went live co-firing biomass.
- New targets set for water, packaging and solid waste.

### Key global targets

- 2025: All New Zealand farms have an FEP.
- 2025: All packaging recyclable, reusable or compostable.
- 2025: Zero waste to landfill.
- 2030: 30% reduction in GHG emissions for manufacturing operations.
- 2030: 30% reduction in water use at sites in water-stressed regions.

### Long-term contribution



## Healthy Business

- ✓ **Support healthy, sustainable livelihoods for our farmers** by returning the most value from every drop of milk.
- ✓ **Build a strong co-operative** by ensuring our business, including investments, delivers long-term value.
- ✓ **Meet the changing needs of customers and consumers** by leveraging our unique strengths and innovating to create sustainable value for them and us.

### FY19 – Key items

- \$10 billion paid to New Zealand shareholder farmers.
- Financial discipline resulted in lower operating expenditure, reduced capital expenditure, improved cash flow and lower debt.
- Significant one-off adverse items resulting in a net loss of \$605m.

### Key global targets

- 2022: 2.5x – 3.5x Debt/EBITDA.
- 2024: 10% return on capital.
- 2024: 50c earnings per share.
- 2024: \$1,050m free cash flow.

### Long-term contribution



# Our progress

Core Indicators <sup>1</sup>	Target <sup>2</sup>	Performance			See page
		FY17	FY18	FY19	
<b>Healthy People</b> – To care for people and make a positive social impact					
Percentage of everyday and advanced nutrition products that meet endorsed nutritional guidelines. Fonterra consumer branded products	75% by 2020 100% by 2025	–	71%	68%	● Page 24
Total recordable injury frequency rate (TRIFR) per million work hours	World-class (<5)	5.2	6.1	4.9	● Page 34
Employee engagement	World-class (Top quartile)	3.85 2nd lowest quartile	4.00 2nd highest quartile	4.07 2nd highest quartile	● Page 38
Percentage of manufacturing sites certified by an independent third party to leading food safety management system (e.g. FSSC22000)	100% by 2019	81%	90%	92%	● Page 28
Female representation in senior leadership	50% by 2022	30%	30%	29%	● Page 38
Ethnic representation in senior leadership	20% by 2022	–	9%	9%	● Page 38
<b>Healthy Environment</b> – To achieve a healthy environment for farming and society					
Farm Environment Plans (FEPs) (NZ)	100% by 2025	–	12%	23%	● Page 58
Reduction in absolute manufacturing GHG emissions from FY15 baseline	30% reduction by 2030	4.6% reduction on FY15	2.5% reduction on FY15	3.5% reduction on FY15	● Page 65
Net change in GHG emissions from dairy farming since 14/15 (NZ) (Pre-farm gate tCO <sub>2</sub> -e)	Neutral to 2030	397,000 reduction on 14/15	1,174,000 reduction on 14/15	864,000 reduction on 14/15	● Page 64
Manufacturing sites treating wastewater to leading industry standards	100% by 2026	25%	26%	29%	● Page 58
Solid waste to landfill	0 MT by 2025	15,113	16,184	15,901	● Page 71
<b>Healthy Business</b> – To deliver a sustainable business					
Return on capital	8.5% by end FY22 10% by end FY24	8.3%	6.3%	5.8%	● Page 85
Earnings per share	40c by end FY22 50c by end FY24	49c	24c	17c	● Page 85
Free cash flow	\$900m by end FY22 \$1,050m by end FY24	\$670m	\$600m	\$699m	● Page 85
Debt/EBITDA	2.5 - 3.5x by end FY22	3.5x	4.5x	4.3x	● Page 85

<sup>1</sup> All targets are global unless stated otherwise (e.g. NZ). New targets set this year for water use and packaging not included yet.  
<sup>2</sup> All targets are by the end of the calendar year stated.

FY19 performance is evaluated relative to FY18:  
 ● Good progress. ● Some progress or slight delay. ● Off track.  
 ● For Healthy Business indicators FY19 represents a new baseline.

# Our context

## We operate in a challenging global environment where food is at the centre of many sustainability issues.

The world needs to transform the way it produces and consumes food so that people have access to sufficient good nutrition, while regenerating the environment and returning decent livelihoods to farmers in the rural communities.

Our farmer shareholders in New Zealand produce nutrition from the land, which we turn into food that is exported and valued by the world.

This presents us with challenges and opportunities to make a difference to New Zealand and the world.

Sustainable diets will involve different food sources fulfilling different roles and dairy is identified as playing a part in that. Dairy is a source of high-quality nutrition which, if produced efficiently and responsibly, can help improve the management of ecosystems while enhancing rural livelihoods.

### GLOBAL TRENDS

- An ageing and growing population that's expected to reach 8.5 billion by 2030.
- Human activity consuming resources beyond planetary limits.
- Nutritionally poor diets impacting population health.
- Rising incomes, changing lifestyles.
- Increased consumer interest in natural, healthy, plant-based, ethical foods.

### WHAT THE WORLD NEEDS

Transition global food production to provide access to healthy nutrition for people around the world in a way that regenerates the planet and returns decent livelihoods to all those involved in producing it.

### OUR LOCAL CHALLENGES

Help New Zealand meet its commitment to keeping global warming below 1.5 °C and maintain leadership as a climate-efficient dairy producer.

Reverse declining environmental health by playing our part on-farm and in our operations.

Build stakeholder trust by delivering against our triple bottom line commitments.

### OUR OPPORTUNITY

Take a lead in dairy's role in sustainable diets around the world – securing a positive future for our farming families.

Support farmers and communities as we work together to regenerate our natural environment.

Build a strong, sustainable co-op that is a national champion of New Zealand's role in providing sustainable food for the world.



Demand for dairy will remain strong. Changing global trends support this.

Sustainability

Naturalness

Out of Home

Healthy Living

Authenticity & Provenance

We will match our unique strengths to consumer needs

Creating sustainable value from our farmers' New Zealand milk

To enhance lives, and create value for our farmers and customers

WE WILL CONCENTRATE ON THESE CONSUMPTION CATEGORIES:

- CORE DAIRY
- FOODSERVICE
- PAEDIATRICS
- SPORTS & ACTIVE
- MEDICAL & HEALTHY AGEING

# Our strategy

In September 2019 we launched our new Co-operative strategy with sustainability at its heart.

This followed a thorough review into all areas of our business, considering everything in our portfolio and the local and global context we work in.

Our new strategy represents a fundamental change, moving us away from our previous volume ambition to focus on value. It recognises our Co-operative heritage and strengths, our farmers and their families, and the dairy they produce and it will take that goodness to the world.

The world needs dairy, and demand for our New Zealand milk will continue to grow. Global trends are towards more natural foods, and towards consumers wanting to know more about where their food comes from, how it is made, and what impact it has on the environment and communities.

Our Co-op has unique strengths to meet these needs. Our milk provides nutrition around the world, and our New Zealand pasture-based farming systems produce it in a natural, efficient way that is valued by customers and consumers. We have world-leading innovation capability, dairy know-how, and customer relationships which enable us to drive change and show the world how dairy is part of a better future together.

Our new direction is driven by our clear identity as a New Zealand dairy co-op that does amazing things with our farmers' milk, enhancing lives and creating value for customers and farmers.

## Our new strategy

Our strategy is to match our unique strengths to consumer needs. Doing this will create sustainable value from our farmers' New Zealand milk, by connecting what our farmers do on farm, to what our customers value.

Our aim is to continue being globally competitive in Core Dairy (base and advanced ingredients), while growing in the categories of Paediatrics, Sports and Active, Foodservice and Medical and Healthy Ageing. Consumer brands will be a smaller part of our portfolio targeted where we can create superior value.

We will do this by linking our strategy to our purpose and values, changing our behaviours and actions, and differentiating ourselves through:

### Innovation

To create superior value for our customers and our Co-operative.

### Sustainability

To do what is right for the long term good and to meet consumer and community needs.

### Efficiency

To unlock and create greater value from our scale and efficiency.

### Integrating Sustainability

Our objective is to create a successful and sustainable Co-operative that delivers positive social, environmental and economic outcomes. Our new strategy integrates a triple-bottom-line approach into our Co-operative way of doing things and we are clear that our overarching goals are:

## Healthy People:

To care for people and make a positive social impact.

## Healthy Environment:

To achieve a healthy environment for farming and society.

## Healthy Business:

To deliver a sustainable business.

We have been reporting our social and environmental performance for a number of years and this report is our third annual sustainability report independently assured against Global Reporting Initiative (GRI) standards. This year we have structured the report to reflect these overarching goals.

We are taking this approach to measuring performance across our Co-operative, and have built this into our employee objective setting, reward and recognition processes.

# Responding to what's important

## Engaging with our stakeholders

Taking into account the views and perspectives of our stakeholders, and building relationships, is critical to the long-term success of our Co-operative. We consider our stakeholders to be those

individuals or entities that are significantly impacted by our products and the activities required to source, make and distribute these or whose actions affect our ability to deliver our strategy.

<p><b>Farmers:</b> (Our farmer shareholders, sharemilkers, other supplying farmers and their employees)</p>		<p>We engage with our New Zealand farmer shareholders at meetings and roadshows, and through the formal governance processes of our Co-operative. We also engage with farmers, sharemilkers and farm employees on an ongoing basis led by our Area Managers and Sustainable Dairying Advisors or equivalent.</p>
<p><b>Customers and consumers:</b></p>		<p>We engage with our business-to-business customers on an ongoing basis through our account management teams and by sharing information through programmes such as SEDEX and the Carbon Disclosure Project. Our engagement with customers provides us with insight on their consumers and we engage with our own direct consumers through our service teams, email and social media, and consumer research.</p>
<p><b>Employees:</b></p>		<p>We engage with our employees on an ongoing basis through our everyday interactions, regular engagement surveys and engagement with unions.</p>
<p><b>Investors:</b> (Including unit holders, bond holders and banks)</p>		<p>We engage with our investors on a regular basis through updates, formal reporting and meetings coordinated by our Capital Markets team. We also share information through this report and the Carbon Disclosure Project.</p>
<p><b>Central and regional governments:</b></p>		<p>We engage with central and regional governments, through our Government and Stakeholders Affairs team. We also work in partnership on issues such as climate change (<i>Pastoral Greenhouse Gas Research Consortium</i>), NZ Water (<i>Department of Conservation</i>), and children's wellbeing (<i>Ministry of Social Development</i>).</p>
<p><b>NGOs:</b></p>		<p>We engage with other non-governmental organisations (NGOs) through collaboration and consultation on specific topics, (e.g. the New Zealand Nutrition Foundation on nutrition guidelines).</p>
<p><b>Vendors:</b></p>		<p>We engage with our non-milk vendors on an ongoing basis led by our Group Procurement team. For larger vendors the engagement includes regularly meetings managed by the Vendor Manager or Category Manager.</p>

## Our material topics

**Ensuring the *food safety and quality* of the products we deliver.**

See Food safety and quality on *page 28*

**Using *water* responsibly, including water quality and availability.**

See Land and water on *page 56*

***Climate change* mitigation and adaption.**

See Climate change on *page 63*

**Contributing to local economies through meaningful *employment and sustainable income creation*, including the milk price for our farmers.**

See Employment and income creation on *page 84*

**Protecting the *health and safety* of people at work, including their wellbeing.**

See Health, safety and wellbeing on *page 34*

**Contributing to *nutrition and health* through the products and information we deliver, including obesity and under-nutrition.**

See Nutrition and health on *page 24*

***Ethical business practices*, including anti-corruption and fair competition.**

See Ethical business practices in appendix Governance and ethical business<sup>1</sup>

**Protecting the *human rights* of individuals impacted by our business actions.**

See Human rights on *page 40*

**Protecting *animal health and welfare* within our supply chain, including responsible use of antibiotics.**

See Animal health and biosecurity on *page 74*

**Protecting *soil health* which is essential for sustainable food production.**

See Land and water on *page 56*

**Using *responsible procurement* to influence environmental, social and economic performance along our supply chain.**

See Responsible procurement on *page 42*

**Protecting *biodiversity* and the underlying ecosystem services we rely upon, including the impact of deforestation.**

See Land and water on *page 56*, see Responsible procurement on *page 42*

**Protecting the *employment rights* and working conditions of our people, including diversity and inclusion, training and development.**

See Employment rights on *page 36*

**Addressing *biosecurity* risks to animal, plant and human health.**

See Animal health and biosecurity on *page 74*

**Minimising *production waste*, including solid waste to landfill.**

See Packaging and waste on *page 70*

**Minimising *post-consumption waste*, including product packaging and food waste.**

See Packaging and waste on *page 70*

## Determining what's important

This year, we refreshed our materiality assessment. Starting from the results of previous assessments, we researched other potential topics of importance from sources such as industry guidance and reports, customer reports and emerging issues from risk assessments and external communications. This generated a long list of topics which we clustered into a set of topics at a common level of granularity for further analysis.

The relative importance of the topics to our stakeholder groups was determined by a combination of specific surveying, findings of specific engagement workshops and interviewing owners of existing relationships. The findings for each stakeholder group were combined into an overall ordered list of importance, treating all stakeholder groups on an equal basis.

We assessed the significance of our impact on society for each topic by considering both the positive and negative impact of our activities against four criteria: the extent of our impact (i.e. local, regional, global), the magnitude of our impact and the duration of our impact.

Using the combination of importance to stakeholders and the significance of our impact we generated an order list of topics which was discussed with our Sustainability Advisory Panel and approved by the Fonterra Management team.

The table on the left lists the most important topics, in order, and identifies where we cover our response in this report. Further details on the process and results are available:

→ [www.fonterra.com/2019MaterialityAssessmentNotes](http://www.fonterra.com/2019MaterialityAssessmentNotes)

<sup>1</sup> For more information see [www.fonterra.com/2019GovernanceEthicalBusinessNotes](http://www.fonterra.com/2019GovernanceEthicalBusinessNotes)



# Healthy People

We are working together to care for people and make a positive impact on society.

Our products help people eat balanced diets and we're using our scale and know-how to respond to people's changing needs, attitudes and lifestyles.

We're looking after people's safety and wellbeing, providing employees with development opportunities and supporting the communities we live and work in.

It's all part of making sure dairy plays its part in a sustainable food system.

*He aha te mea nui o te ao  
He tāngata, he tāngata, he tāngata.*

*What is the most important thing in the world?  
It is people, it is people, it is people.*

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Supporting communities

HEALTHY PEOPLE

# Healthy People

## Caring for people is at the core of our Co-operative.

We're mindful of the impact our scale and reach can have on people's diets, their livelihoods and society as a whole. From providing safe and healthy nutrition, through the way we care for our farmers and employees throughout our value chain, to the way we support our local communities at home and abroad.

### Caring for farmers

We support farmers by providing sustainable incomes and standing shoulder-to-shoulder with them to support them through changes – offering tools, services, and help to run sustainable farming businesses.

### Caring for employees

We care for our employees by focusing on their health, safety and wellbeing, respecting the strength their diversity brings, and giving them opportunities to develop and progress at work.

### Caring for consumers

We provide consumers with safe and nutritious food – whether that's through our own consumer products, or in partnership with our customers through the ingredients we provide. We support them and their families to have healthy, enjoyable, and sustainable diets now and into the future.

### Caring for communities

We care for our communities through our everyday business activities – doing what's right in the way we operate and providing employment and livelihoods. We also demonstrate this by investing resources and time into activities that make a difference for our local communities, including community and in-school nutrition programmes.



## How Fonterra is making this happen

We are working together to care for people and make a positive impact on society. To do this we will:

- ✓ **Address public health challenges** by improving the nutritional profile of our products and promoting healthy diets
- ✓ **Provide positive employment for our people** by promoting a healthy and safe working environment and developing a diverse, skilled and agile workforce
- ✓ **Improve the health of our communities** by doing business in the right way, sharing what we do best and playing our part to build resilient, sustainable communities.

### KEY ITEMS FROM FY19

- **Healthier nutrition:** We've rolled out Health Star Ratings on 92% of our applicable products in New Zealand – see [page 25](#)
- **Food safety certification:** 92% of our manufacturing sites are independently certified to a leading food safety management system – see [page 28](#)
- **Gender pay:** Gender pay ratio (F/M)<sup>1</sup>: – see [page 38](#)  
New Zealand 0.97 / Australia 0.92 (mean)  
New Zealand 0.95 / Australia 0.95 (median)
- **Health and safety:** Injury rate for staff, contractors and visitors to our sites reduced to world class level (4.9 per million hours worked) – see [page 34](#)
- **Addressing family violence:** Our support package for employees impacted by family violence is already making a difference – see [page 41](#)
- **Sustainable procurement:** 98.7% of our PKE<sup>2</sup> purchases are traceable to mill and we are continuing to transition to certified supply of segregated palm oil products – see [page 43](#)



Fonterra's contribution to the SDGs from a healthy people perspective.



Create positive employment opportunities along our value chain (1.2)



Share our dairy expertise with small-scale producers (2.3)



Responsibly provide products to support wellbeing of mothers and infants (3.1 and 3.2)<sup>3</sup>

Promote healthy and informed consumer choices (3.4)

Continue to improve the nutritional profile of our products (3.4)



Share our dairy expertise with female small-scale producers (5.5)

Ensure equal participation and opportunity for women in our workforce (5.5)



Provide positive and inclusive employment for all groups (8.5)

Address labour and human rights issues in our supply chain (8.7, 8.8)

Provide a safe and secure working environment (8.8)

<sup>1</sup> Ratio of female pay to male pay with 1.0 indicating equity and less than 1.0 indicating females paid less.  
<sup>2</sup> PKE – palm kernel expeller, is a by-product of the palm oil industry. It is used by farmers as a supplemental animal feed.

# Nutrition and health

## Good nutrition is essential for people to lead healthy and fulfilling lives.

Our dairy products can play a valuable role in addressing deficiencies in diets and improving the health and wellbeing of people around the world.

More than 820 million people in the world are still hungry and hunger is rising in Africa, Latin America and Western Asia.

For two billion people, lack of regular access to nutritious food increases their risk of poor health. In the case of pregnant women, this risk passes to their child. In 2015, 20.5 million babies were born with low birthweight, placing them at a higher risk of dying in their first month, suffering from stunted growth and adult-onset chronic conditions including obesity and diabetes.

The trends for overweight and obesity are equally concerning, rising in all regions and contributing to four million deaths globally.

As a food company, we recognise the valuable role dairy products can play in addressing deficiencies in diets and improving health and wellbeing for people around the world. This section covers our global approach to nutrition and its contribution to health and wellbeing.

### Our approach

The Fonterra Group Nutrition Policy sets out our overarching commitments to deliver highly nutritious dairy products to the world and market these in a responsible manner. The policy is supported by detailed guidelines that define nutrition criteria for the composition of products across all branded consumer products and ingredients.

The New Zealand Nutrition Foundation has independently reviewed and endorsed these guidelines as evidence-based, founded in robust nutritional science and reflecting international directives on nutrition and health. These guidelines complement national food standards and regulations, as well as our own education and advocacy activities to raise awareness of the value of dairy nutrition in healthy, balanced diets.

We support the aim and intent of the WHO Code for the Marketing of Breast Milk Substitutes and are committed to complying with the relevant industry codes and legislation in all countries where our products targeting infants and young children are sold.

We have established a Global Nutrition Council which is responsible for governing our nutrition policy, standards and guidelines and overseeing the nutrition performance of our portfolio.

## What we've been doing

### Investing in innovation

The Fonterra Research and Development Centre (FRDC) is one of the largest of its kind in the world, with over 300 scientific and technical experts, including approximately 100 with PhDs. It's here that we invest significantly in innovation, driving scientifically-supported benefits from dairy to meet the nutritional needs and expectations of society. This year we were granted four new patents, including Fonterra's first ever patent in the area of food safety & quality.

The quality of Fonterra's 'Let's Move' health research was recognised at the WCO IOF-ESCEO Congress in Paris in 2019, with the abstract winning one of five awards from the IOF committee. The study involved a nutrient-fortified milk drink and exercise intervention, and the findings saw improved mobility across a range of measures in older women.

### Helping support the health of millions of patients

Our Medical Nutrition team is tasked with pioneering a range of dairy nutrition solutions for people who are recovering from disease and illness at all stages of life, or who want to take preventative actions to help them live longer and healthier lives.

During the last year, the team has been helping our customers formulate products that support elderly people who are malnourished or at risk of malnutrition. Focusing on malnutrition in healthcare helps improve the quality of care, improve patient outcomes, reduce re-admissions and decrease healthcare costs. The team is proud that our ingredients are already being used in medical nutrition products that help millions of patients around the world every year.

### Improving the nutritional profile of our consumer products

We continue to improve the nutritional benefits of our consumer products by formulating to meet consumer nutrition and health needs. See [page 26](#) for examples of activities this year.

We also consider criteria such as minimum levels of dairy protein, calcium, and key vitamins and minimising the addition of sugars, refined carbohydrates and sweeteners. This year, we introduced 525 applicable new or reformulated products, however not enough of these were focused on improving the portion of our portfolio that currently does not meet the guidelines. On a volume sold basis<sup>1</sup>, the percentage of our applicable portfolio meeting our endorsed guidelines went down from 71% to 68%.

<sup>1</sup> Due to the timing of data availability, our assessment of compliant volumes sold in FY18 is reported in FY19.



### Developing affordable nutrition

We started piloting an affordable nutrition product in Ethiopia this year called Anmit™, an abbreviation of Anchor™ and Atmit. Atmit is an Ethiopian grain and dairy mixture like a drinkable porridge that can traditionally take up to a week to prepare, but our Anmit product delivers the goodness in just two minutes. Developed with local stakeholders, including the Ethiopian Food and Nutrition Society, it is fortified with nutrients tailored to local needs and delivered at an affordable price.

### Investigating complementary nutrition

Dairy is a unique source of nutrition: a complex mix of proteins, fats, lactose, minerals and other micronutrients with the flexibility to play an important role in healthy, balanced diets as recognised by governments and health experts around the world. Consumers value the natural goodness of dairy, especially our pasture-based dairy from New Zealand and we are confident they will continue to purchase it as a premium source of nutrition.

We're continuing to investigate the potential of complementary nutrition sources such as plant and fermentation-produced nutrition. This involves working with a wide range of world-leading

organisations, including research institutes and start-ups, and in FY19 we invested in US-based food company Motif™ Ingredients. Over time, these complementary ingredients may play a role in our business alongside our core dairy business, to give more options to customers and consumers, and help meet global demand for food.

### Supporting action on health

We are committed to identifying and contributing solutions that aim to help improve health outcomes for children in New Zealand. This year, we continued to deliver in-school nutrition (see [page 30](#)), and for our everyday products, we've now rolled out Health Star Ratings on 92% of our applicable<sup>2</sup> products.

In Australia, we have published a summary of our nutrition commitments. This includes specific details for our 'everyday' foods which are part of the dairy food group in the Australian Dietary Guidelines. Our commitments cover serving size, sugars, sodium, fat, colours, flavours and sweeteners.

### Compliance with regulations

In the past year, we received no new fines or penalties for breaches of marketing regulations.

## Our performance

### Our targets

Indicator	Target	Performance			Commentary
		FY17	FY18	FY19	
Percentage of everyday and advanced nutrition products that meet endorsed nutritional guidelines <sup>3</sup> . Fonterra consumer branded products (Global)	75% by 2020 100% by 2025	–	71%	68%	Although new products have been launched, the percentage by volumes of product sold in FY18 <sup>1</sup> dropped slightly. Innovation will be required to deliver some of the remaining improvements.

## WHAT'S NEXT

- We will continue to improve the nutritional value of our consumer branded products and minimise added sugars, salt and refined carbohydrates.
- We will continue to invest in research and development and new innovations for our entire product range.

<sup>2</sup> Applicable products are those intended for everyday consumption in New Zealand and where the packaging is not also used for export to regions where the Health Star Rating is not accepted.  
<sup>3</sup> Assessment of existing products is based on protein and calcium criteria only because most of the portfolio predates the guidelines and information on other criteria is not available. All new products are assessed against all guideline criteria. Everyday nutrition products are intended to deliver daily serves of dairy nutrition. Advanced nutrition products are daily dairy nutrition with targeted nutritional fortification based on sound science.

# Nutrition and health CONTINUED

## Contributing to health and wellbeing

Our products can help improve the health and wellbeing of people around the world. Here's a snapshot of how we helped this year.



### Soprole Protein+

Our range of Protein+ products offer higher levels of quality dairy protein and are designed to help consumers spread their protein intake across the day to support optimal muscle health. In Chile, we have continued to expand our range of Soprole Protein+ products this year with four new varieties hitting supermarket shelves. Soprole Protein+ Plain yoghurt was voted by consumers as the Product of the Year for innovation.

### NZMP NutriWhite Dairy-Based Powder

In Africa and South-East Asia it's difficult for low-income families to buy affordable, quality food. Their diets are often lacking in essential micronutrients. That's why we developed NZMP NutriWhite - an affordable, nutritionally-fortified dairy-based powder - which is designed for adding to tea and coffee. It's fortified with Iron, Zinc, Calcium and vitamins A, C and D and also tastes good.



### NZMP Mozzarella Range

We have extended our range of Mozzarella cheeses to meet the needs of different customers. These include a premium variety right through to a cost-effective option and some options that meet specific criteria - such as reduced salt. Salt is a vital ingredient in cheese-making. It adds flavour, helps with ripening and works as a natural preservative. Reducing salt is not easy and requires specific know how but doing so means our customers can offer reduced salt options in their product ranges.



### NZMP SureStart™ MFGM Lipid 70

Our latest innovative paediatric ingredient was launched at Health Ingredients Europe in November 2018. The benefits of MFGM Lipid 70 are backed by science which suggest there is a role supporting infant brain development and cognition, when used in infant formula products. Our ability to manufacture this ingredient at multiple sites gives our customers confidence we can supply the quantities they need.



### NZMP Lifestyle Probiotics

We launched two NZMP probiotics into the sports and active lifestyle market this year. Originally discovered in New Zealand, dairy cultures LactoB 001 (HNO01™) and BifidoB 019 (HNO19™) have been clinically researched and we have commercialised these to help people improve their digestive health and immunity. Our specialised processing techniques mean we can offer customers a longer shelf-life in some applications.

### Anlene™ range extended in Indonesia

In Indonesia this year, we extended our Anlene™ range with new formulations.

Anlene Actifit includes the MoveMax nutrient bundle specially designed to support bones, muscles and joints. It includes dairy protein, Calcium, vitamin C, collagen, vitamin B2, B6, B12, D and E, Magnesium and Zinc.

In addition to MoveMax, Anlene Gold Plus also includes the BeatPlus nutrient bundle specially designed to support heart health. It includes fibre, Potassium and vitamins B9 and B12, and contains no added sugars or refined carbohydrates.



### Annum Assura™ with DR20™

We extended our Annum range with the launch of Assura™ in Hong Kong. Assura is a product for expectant and lactating mothers and this new version contains the probiotic DR20™.

Probiotics are live bacteria and yeasts which are especially good for your digestive system. DR20 is our patented probiotic strain *Lactobacillus rhamnosus* (HNO01™). It has been clinically proven to help reduce the risk of children's eczema by 50% and has given some indications that it can reduce the risk of gestational diabetes by 68%, and the risk of post-natal depression.

DR20 is just one of the many cultures that are currently growing and multiplying at the Microbial Fermentation Unit (MFU), at our Research & Development Centre in Palmerston North.

# Food safety and quality



## Safe food. Safe people. World class quality. It's our promise.

We make a promise to our customers and consumers to make our food to standards of uncompromising food safety and world-class quality. That's why all our food products are assessed for health and food safety impacts prior to initial launch and on an ongoing basis.

### Our approach

At Fonterra, food safety and quality is everyone's responsibility - from our farms all the way to our customers and consumers around the world. Accountability for performance extends from the Board of Directors, through the Fonterra Management Team, to individual managers, workers, contractors working on Fonterra sites and providers of goods and services. To ensure consistency of approach and continuous improvement, the Group Food Safety, Quality and Regulatory (FSQR) organisation and operating model, including the Food Safety and Quality Council, has been embedded across Fonterra.

Our Food Safety and Quality System ensures that, wherever we are in the world, we have a clear, consistent framework to deliver safe, quality products and services. Our Food Safety and Quality System is made up of four key components: our Food Safety Policy, business unit requirements, partner requirements, and our food safety and quality behaviours. It is subject to regular scrutiny from third-party audits by regulators, key account customers and certification bodies.

### What we've been doing

#### Trust in Source

Over the past five years we have been embedding food safety and quality as a cornerstone of our culture. In FY18, we introduced standardised induction programmes that apply to both operational and non-operational employees. This means we start the conversation about food safety with all staff from the moment they join the organisation.

Building on the lessons we have learned from our own sites, this year we have started to share our thinking with some of our third-party manufacturers. We have used the findings of our audits to prioritise which third-party manufacturers we offer our support to first. The support module includes help on risk identification and mitigation for food safety.

This year we have also developed a food safety culture auditing process and piloted its use at selected manufacturing sites around the world. This allows us to assess the current state at a given site and identify opportunities to strengthen their food safety culture.

#### Product traceability

After three and a half years of innovation, design and business transformation, our Traceability Programme has been completed. This significant investment allows us to very efficiently track batches of product, the ingredients that went into them and the primary packaging, from the raw milk we collect and process right through to the consumer.

Over 99% of all New Zealand milk is electronically traceable back to daily farm collection, and 93% of our global supply chain. We can track the origins of nearly any product within minutes, and deliver traceability reports to teams around the Co-operative within three hours.

Having established this underlying technology we are able to provide innovative new services for our consumers, customers and employees.

For example, for our consumers, we have continued to expand the use of QR codes on our Annum™ paediatric and maternal products. These QR codes are unique to the specific item in the consumer's hand. Using their mobile phone consumers can check the item is authentic and find out additional information about its provenance, both before they buy it and thereafter. This year we launched QR code products in Vietnam, Indonesia, Singapore and Thailand.

For our customers, the technology offers the potential to support authenticated claims on their products. This year we entered a collaboration agreement with Nestlé to investigate the use of blockchain technology, through the OpenSC platform, to provide consumer access to independently verifiable sustainability and supply chain data.

Within the business, our employees around the world have access to new traceability information and analysis reports which is helping with responses to customer requests and decision-making.

#### No recalls

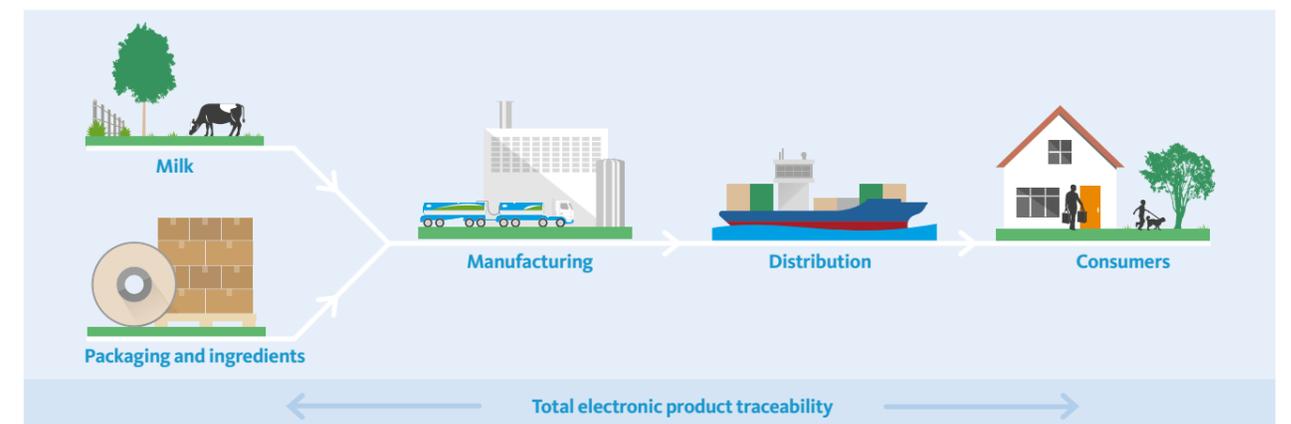
During the year, there were no consumer recalls of product for safety reasons.

<sup>1</sup> FY18 was previously reported as 92% but a plant was omitted from the calculation.



## Our performance

Our targets					
Indicator	Target	Performance			Commentary
		FY17	FY18	FY19	
Percentage of manufacturing sites certified by an independent third party to leading food safety management system (e.g. FSSC22000)	100% by the end of 2019	81%	90%	92%	Divestment of our Venezuelan sites impacted this number favourably. For the few remaining sites our focus was on higher priority milk quality items this year. It is expected that full certification can be achieved by the end of 2020.
Total electronic traceability from finished product back to milk supply	All Fonterra products by the end of 2020	62%	91% <sup>1</sup>	93%	The underlying technology has been delivered globally. However, the final integration steps in a few locations were placed on hold this year for the portfolio review. The cost-benefit of further integration will be reviewed in FY20.



### WHAT'S NEXT

- Complete the independent third-party certification of our manufacturing sites to a leading food safety management system (e.g. FSSC22000, BRC).
- Continue to influence and support the third-party manufacturers who provide services to us by introducing the use of our food safety culture auditing process with key providers.
- To support our food crime response strategy, we will introduce a new internal tool for our staff, allowing them to report and assess suspicious items more efficiently and thereby further protect our products, customers and consumers.

FY19 performance: ● Good progress. ● Some progress or slight delay. ● Off track.

# In-school nutrition

## Fonterra Milk for Schools

Fonterra's Milk for Schools initiative is helping New Zealand children get access to nutritious milk every school day. The initiative is available to all New Zealand schools with kids aged 5-11 and offers a 200ml daily serving of Anchor™ lite (reduced fat) milk to every child, every day.

The initiative has been running for more than six years and during FY19 it was active in almost 1,400 schools with around 140,000 children taking part every school day. The programme is funded by Fonterra and our farmers and it is delivered in partnership with schools. This year Fonterra farmers provided 18 million portions of milk to the children.

To celebrate back to school in 2019, schools were invited to nominate their local community hero. The winners were Rangikura School in Porirua, Mossburn School in Southland and Auckland's Willowbank School, who all received a visit from Fonterra Ambassador and former All Black captain, Richie McCaw.



### Refreshed pack design

This year we also updated our pack design to refresh the educational facts for the children to read while they drink. These appear in both English and te reo Māori.



## KickStart Breakfast

A nutritious breakfast and a nurturing environment can help kids achieve their potential. The KickStart Breakfast programme, is a collaborative initiative which we deliver in partnership with the Ministry of Social Development and Sanitarium.

The clubs not only provide a healthy breakfast to kids who might otherwise miss out, they also help students develop social skills, take on extra responsibilities and connect with their peers, teachers and volunteers from the wider community.

Fonterra and our farmers provide Anchor™ milk, Sanitarium provides Weet-Bix™, and the Government supports the programme through funding. The schools and their local communities are responsible for providing bowls, cutlery, food storage facilities and the volunteers to run the breakfast club.

This year, the initiative grew to over 1,000 clubs with more than 30,000 Kiwi kids participating.



### KickStart Breakfast Clubs

On March 12th, World Champion Shot Putter Tom Walsh and Shirley Primary School helped us celebrate 30 million KickStart breakfasts served since the programme began in 2009.

## 2018 KickStart Breakfast Award winners

- Club of the year - Terrace End School, Palmerston North.
- Student Champion of the Year – Tevita Nusi year 10 student at Gisborne Boys High School.
- Unsung Hero (Volunteer) of the Year – Lynne Richards and Kerry Farrant, Putaruru Primary School, Waikato.

# Trusted Goodness™

Fonterra's strategy is about creating more value for our farmers' milk by connecting what our farmers do on farm to what our customers value. Global trends indicate consumers want to know more about where their food comes from, how it is made, and what impact it has on the environment and communities. Trusted Goodness™ is our promise to deliver quality milk using our distinctive pastoral-based approach to sustainable farming.

In FY17, we launched the Trusted Goodness quality seal and Trusted Goodness on-farm claims as a way to independently demonstrate specific attributes of our products and the good work of our farmers.

Independent certification is an important way to give our customers and consumers confidence. For each specific on-farm claim, our farmers provide information each year. Our Trusted Goodness on-farm claims are certified byASUREQuality, an independent Conformity Assessment Body. ASUREQuality is accredited by JAS-ANZ to certify these on-farm claims against the requirements of our Fonterra Trusted Goodness Scheme.

Trusted Goodness is on products in New Zealand, Australia, Indonesia, Thailand, Malaysia, and the United States, covering products such as Anchor™ fresh milk, whole milk powder, butter and cheese, as well as Annum™ paediatric formula and Anlene™ adult milk powders.

In addition, NZMP™ customers across North America, South America, Europe, Taiwan and South East Asia are leveraging our grass-fed icon and claims on their own brand packaging and marketing activities. Consumer products that carry NZMP grass-fed claims include sport nutrition high-protein beverages and ready-to-mix powders, consumer milk powders and UHT milk drinks.

## Grass and Pasture-Fed Standard

New Zealand's natural, grass-fed advantage and non-GMO status are increasingly valued by our customers and consumers.

To support our grass-fed claim, we developed a Grass and Pasture-Fed Standard that is third-party verified. This standard defines the requirements for our grass-fed claim as:

- Grass Fed - a minimum of 80% grass, grass silage, hay and forage crops (legumes and brassicas).<sup>1</sup>
- Pasture Raised/Fed - cows have access to pasture at least 90% of their time.<sup>2</sup>

These are amongst the highest rates in the world.



## Non-GMO Project Standard

We see value in maintaining optionality around the use of technology and the possibilities offered by new and emerging life science technologies such as gene editing. Such advances could potentially offer significant benefits for sustainable nutrition, animal welfare, human health, biosecurity and the environment.

We also listen carefully to our customers and consumers and recognise the value in New Zealand's global reputation for its genetically modified organism (GMO) status, as supported by the current New Zealand regulatory framework. To date, no genetically modified plants or animals have been released in New Zealand.

The Non-GMO Project is a mission-driven non-profit organisation dedicated to building and protecting a non-GMO food supply in North America. Its Non-GMO Project Standard is one of the fastest growing voluntary labels in the United States retail sector. To become verified, all inputs into an individual product must be evaluated for compliance, including everything from the cows' feed, to the activities at the specific site where the product is manufactured.

We currently have 42 products verified for Non GMO Project manufacture for sale into the North American market. We also have Non-GMO Project verification of our organic milk supply and associated manufacturing sites.

## Cared for Cows Standard

Last year, we launched our Cared for Cows Standard. While we already have high standards of animal health and welfare, by having independent certification against this standard we will be able to reinforce the good work done by our farmers.

The programme involves some extra annual data collection from farmers covering key indicators of animal health and welfare performance and additional verification as part of our on-farm assessment.

For more information see Animal health and biosecurity on page 74.

<sup>1</sup> A grass-fed diet is defined as grass, grass silage, hay and forage crops calculated on a dry matter basis.  
<sup>2</sup> Excluding milking time (defined as the period that dairy cows are walked to and from the milking shed and the time taken to perform milking).

# Our people

## We employ over 20,000 staff and most are full time



## Diversity of our employees

We have more male staff especially in the waged category

	AGE				GENDER <sup>1</sup>	
	<30	30-50	>50	Unknown	Female	Male
Fonterra Board	0%	9%	91%	0%	18%	82%
Management Team (FMT)	0%	43%	57%	0%	29%	71%
Across all employees	14%	57%	25%	4%	27%	73%
Senior Leaders	1%	60%	35%	4%	29%	70%
Managers	5%	70%	22%	3%	38%	62%
Professionals	20%	60%	18%	2%	49%	51%
Waged	15%	50%	32%	3%	16%	84%

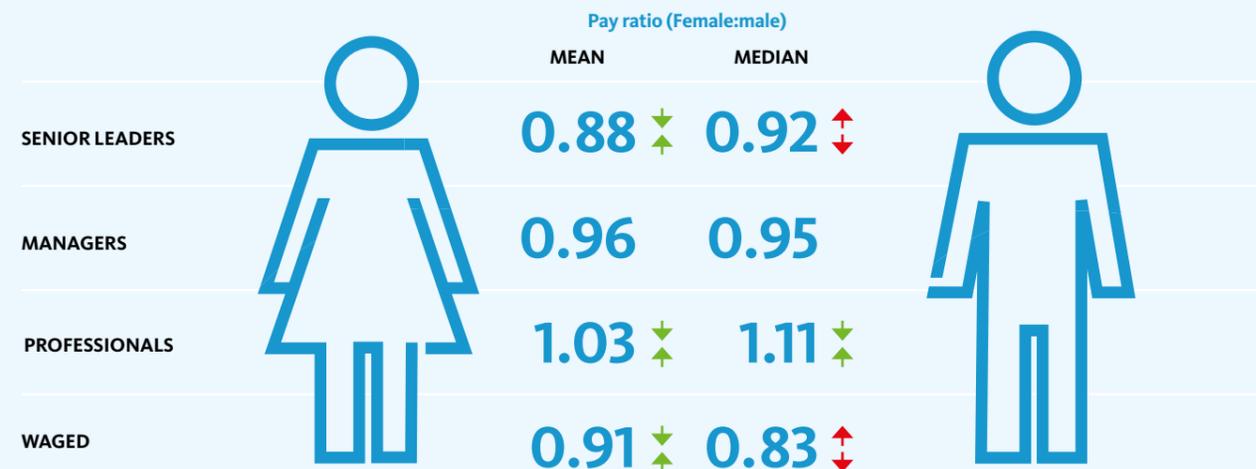
## Turnover (as % of total workforce)



Our employee data is drawn from our global SAP-based employee data systems. The turnover data excludes the employees in our Brazilian joint venture operations. Numbers are generally reported for all fixed-term and permanent employees on a full-time equivalent (FTE) basis. Turnover and new hires is permanent employees and headcount basis. Gender pay gap is permanent employees on headcount basis with pay compared on FTE basis. There are no significant seasonal variations in the employee data reported. Casual staff contracted by Fonterra are excluded from these figures as this represents only a very small proportion of the regular workforce.

## Gender pay gap is closing on an employee category basis

We use a ratio of female:male. We analyse both mean and median to increase our understanding. 1.00 is ideal.



## Gender pay by location



## Other significant locations

Location	GENDER PAY Pay ratio (Female:male)		GENDER DIVERSITY	
	MEAN	MEDIAN	Female	Male
AUSTRALIA	0.92 ↓	0.95 ↓	25%	75%
GREATER CHINA	1.68 ↓	4.18 ↓	34%	66%
CHILE	1.37 ↓	1.30 ↓	16%	84%
BRAZIL	1.35 ↓	1.14 ↓	15%	85%

1 Percentages shown may not sum to 100% due to rounding. Diverse or undeclared gender makes up less than 0.1% of our workforce.



HEALTHY PEOPLE

# Health, safety and wellbeing

We want all Fonterra people to be healthy, to live a balanced life and to go home from work safely every day.

## Our approach

Fonterra operates a global health and safety management system. The Fonterra Group Health, Safety and Wellbeing Policy sets out our requirements for responsible operation and employee safety. Implementation of and compliance with the policy is overseen by our global Director of Food Safety, Health and Regulatory.

We are committed to delivering on our health, safety and wellbeing commitments through:

- People who believe that harm is avoidable and who support a safe and healthy work environment
- Processes that always prioritise safe work practices and proactively identify and manage exposure to risk
- Plant and equipment that considers design, operation, management and maintenance to always prioritise a safe and healthy work environment.

Accountability for performance extends from the Board of Directors, through the Fonterra Management Team, to individual managers, workers and contractors working on Fonterra sites.

## What we've been doing

### Safe home audits

By focusing on areas of vulnerability and identifying improvements to help keep our people safe, we continue to improve our health and safety performance. In addition to self-assessments performed locally, each year we run a global programme of comprehensive Safe Home Assurance Audits. These audits are undertaken by our Internal Audit team, independently of the business unit, and involve a detailed on-site assessment. This year we increased our coverage and completed audits at 35 of our sites. For 10 of these, controls were found to be not as effective as we would like and improvement actions have been identified to address this.



### Employee wellbeing

We established a Global Wellbeing Forum this year with a specific emphasis on mental health. The forum is intended to encourage local ownership of employee wellbeing in an aligned way, sharing best practice to accelerate progress.

To support this, we organised a week long 'Better You' global team challenge. Based on the internationally recognised 'Five Ways to Wellbeing': Give, Be Active, Take Notice, Connect and Keep Learning; teams worked together on a range of up to 19 short-duration activities during the week. Across 19 countries, 1,141 employees took part with participants surveyed at the end. Feedback was very positive and 70% of respondents felt that the challenge helped boost their mental health and physical wellbeing.

Around the world, local business units also organised a range of local wellbeing activities including the use of Good Yarns to talk about mental health, flu vaccinations and the importance of sleep.

### On-farm health and safety

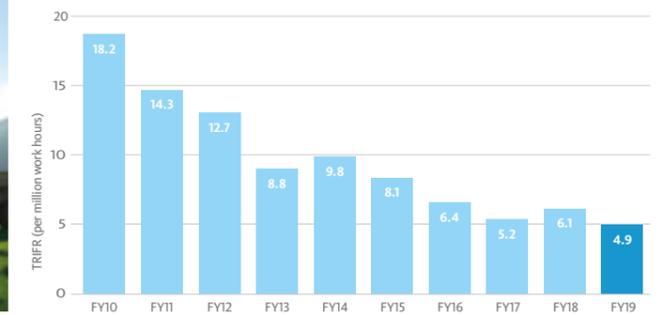
In New Zealand, there are significant numbers of fatalities associated with working in the agricultural industry. In the 2017 calendar year there were four reported fatalities working on dairy farms and six in 2018<sup>1</sup>. We are active members of the Agricultural Leaders Health and Safety Action Group and, working with other organisations, we are seeking ways to help reduce the risk of injury.

This year, some of our on-farm assessments included an extra survey to help with industry research. The research project, led by DairyNZ and supported by WorkSafe New Zealand, has been established to help identify the most common causes of milking related injuries so that potential solutions can be co-developed. Government data for the period of Jan-2014 to Aug-2016 shows there were a total of 22,000 milking related injuries. The research is intended to reduce the frequency, severity and/or the time lost.

On our own Nutrient Management farms in New Zealand, we have implemented the improvement actions arising from our Safe Home Assurance Audits in FY18 and these will be reassessed during FY20.



Total recordable injury frequency rate



## Our performance

### Our targets

Indicator	Target	Performance			Commentary	
		FY17	FY18	FY19		
Work-related fatalities (attributable to Fonterra – staff, contractors, on-site public)	Zero harm	0	0	1	Tragically a member of staff lost their life on one of our China farms.	●
Total recordable injury frequency rate (TRIFR per million work hours)	World class for our industry group (<5)	5.2	6.1	4.9	Representing a 73% reduction from FY10 this year we achieved our target. 222 employees still required medical treatment, restricted work duties or time away from work so we will continue to seek further improvements in both rate and severity.	●
Number of serious harm injuries <sup>2</sup>	Zero harm	17	14	18	Having achieved our lowest recorded level in FY18, this year saw an increase. This is an area where we will continue to focus in FY20.	●
Percentage of staff participation in at least one health and wellness programme per year	Measure and report only	18%	–	13%	This year, we re-established a global wellbeing challenge. We also ran a number of local activities across the year. In some cases, we were unable to accurately track participation therefore we have taken a conservative approach for reporting.	●

Our team in Sri Lanka won the top award for Food and Beverage companies at the National Occupational Safety and Health Excellence (NOSHE) awards. The team has a focus on continuous improvement, not only within the workplace but also sharing its practices with the wider community, including supplying farmers.

Our Susumas site participated for the first time in the Malaysian Society for Occupational Safety & Health (MSOSH) Awards. A stringent audit of the site was undertaken by MSOSH certified

auditors and the team was recognised with a Gold Class I Award for the manufacturing and chemical sectors.

Two of our sites in New Zealand, designated as Lower Tier Major Hazard Facilities, received regulatory notices from WorkSafe New Zealand for improvements. These primarily relate to process safety and Fonterra has an agreed action plan underway to close out the matters raised.

### WHAT'S NEXT

- We continue to seek further improvements in our performance by focusing on the completion of the actions arising from investigations into actual or potential high severity incidents to ensure we eliminate the root causes.
- As part of our focus on staff wellbeing, we will empower our people to talk about mental health by running "Good Yarn" training workshops.

<sup>1</sup> Source: Worksafe New Zealand, workplace fatalities by industry.  
<sup>2</sup> Serious harm injuries are injuries that cause temporary or permanent loss of body function and include those to/involving both employees and contractors.

FY19 performance: ● Good progress. ● Some progress or slight delay. ● Off track.

HEALTHY PEOPLE

# Employment rights

**People are at the heart of our success so it is vital that we respect their employment rights and provide them with a work environment that allows them to perform at their best and develop.**

We're focused on building a diverse and inclusive workforce that is highly-engaged and effective, while also investing in employees to help them respond to the ever-evolving nature of work.

Most of our 20,000+ employees work in processing and distribution. They are supported by employees in corporate roles such as sales, marketing, finance and human resources. This section covers all people who we employ directly and work in sites or offices that are owned or controlled by Fonterra.

## Our approach

We have a customer-driven people strategy to ensure we have the right talent, leadership and engagement.

Our Code of Business Conduct and global policies, including ethical behaviour, diversity and inclusion, set clear expectations for how our people need to act and behave. These policies are supported by local guidance to reflect relevant regulations and norms. An understanding of and connection with local markets is vital to our success. By hiring and developing local talent, we contribute towards the shared success of our Co-operative and the countries where we operate.

We fund an independently administered whistle-blowing hotline (The Way We Work Hotline), facilitated by Deloitte, available to all employees globally to raise concerns related to serious wrongdoing or other behaviour they wish to report. We also provide an Employee Support Programme (EAP) where employees can seek advice and counselling<sup>1</sup>.

Fonterra has a long-standing agreement with the International Union of Food (IUF) and the New Zealand Dairy Workers Union which recognises our commitment to the Conventions of the International Labour Organisation (ILO) for all Fonterra employees. In New Zealand, 62% of all full-time equivalent Fonterra employees are covered by collective bargaining agreements and we have union agreements and relationships in many other markets.

## What we've been doing

### Learning and development

We expect that every employee will embrace the need for lifelong learning to sustain the relevant capabilities for their role, and we expect every leader to support on-going workplace development.

Recognising the changing future of work, we've been working with the New Zealand Government and other Kiwi businesses on an approach to upskill the New Zealand workforce. The Aotearoa New Zealand Skills Pledge, announced by Prime Minister Jacinda Ardern, is a commitment by the Government and businesses to double the number of on-the-job training and reskilling hours we provide by 2025. We'll publicly disclose our investment in on-the-job training and reskilling hours starting in FY20.

Launched in FY18, 'amp' helps employees develop their careers by spending up to 30% of their time on projects outside their normal day jobs. Powered by a web-based application, where people build their profiles and internal projects specify their needs, 'amp' allows projects to quickly tap into existing talent and employees to find development opportunities. This year 'amp' won the innovation and technology award at the New Zealand Human Resources Awards, the Digital Trailblazer award at the SAP Innovation Awards, and has connected 103 people to 92 projects.

THRIVE is an experiential learning programme which helps staff gain a better understanding of Fonterra's end-to-end supply chain with the help of gamification, and earned the Talent Acquisition/ Development & Management Award at this year's New Zealand Human Resources Awards. Over 2,000 people have utilised the programme to expand their knowledge and understand how their role fits into our value chain.

We offer our employees access to qualifications through development programmes such as DAIRYCRAFT. In partnership with the Primary Industry Training Organisation, DAIRYCRAFT currently helps operators in our New Zealand manufacturing sites and distribution centres to develop relevant technical skills and gain a national qualification. To date, 297 employees have completed the 18-month programme and a further 467 are currently enrolled. Among the employees who have completed DAIRYCRAFT, this year we identified 55 who have subsequently transitioned into higher level roles. We've also expanded the programme and offered more streams, including Lactose, Whey and Casein, with coverage across all ingredients sites in New Zealand.

In regional New Zealand, we have 35 staff undertaking mechanical, electrical and heavy automotive apprenticeships – including four women in what have traditionally been considered male trades.



## CASE STUDY

### Women in leadership

We believe a diverse and inclusive workforce will help us to deliver our purpose and enable innovation to flourish.

Women in leadership is an area we identified for action and we started in the business unit responsible for most of our manufacturing activities and most of our New Zealand-based workforce.

With the specific objective of increasing the number of female leaders and achieving our target of gender parity in senior leadership positions, we've been working to understand and remove barriers to gender balance and possible hurdles to women progressing into leadership roles within our operations environments.

We started our first Women's Coaching Circle in 2018 as a forum for women to learn more about how they can develop their careers in operations, and raise any issues they need help with, in a safe and confidential setting. This forum is open to all women, both inside our main manufacturing business unit and beyond, and there's currently a membership of over 170 women. Meetings are facilitated monthly, discussing themes such as how to have better conversations, unconscious bias, mentoring and resilience.

While appointments are always based on merit, our aim is to encourage women to see leadership in operations as a potential career path – and to apply for opportunities. We've implemented a flexible working process to allow some people to work from different locations or at different times and support better work/life balance. We've also put a real focus on diversity in our graduate recruitment programmes.

In the last two years, we've appointed women to key operations leadership roles - two Regional Operations Managers and three Site Operations Manager roles.

We'll continue the Women's Coaching Circles, and hope to extend this so that selected female leaders each sponsor a circle. We're also looking to shift the circles from purely women in leadership, to improving workplace inclusion more widely.

*"The organisation has allowed space and time for women at all levels to talk openly about issues important to them and the flexibility and trust we now have is very empowering. We have some really inspiring women Site Operations Managers and the success and support they get is allowing others to see this as a real career path"*

<sup>1</sup> For more information on our hotline and EAP service please refer to [www.fonterra.com/2019GovernanceEthicalBusinessNotes](http://www.fonterra.com/2019GovernanceEthicalBusinessNotes)

HEALTHY PEOPLE

# Employment rights CONTINUED

## Diversity and Inclusion

We believe a diverse and inclusive workforce will enable us to deliver to our purpose, empowering people to create goodness for generations – You, Me, Us, Together – Tātou, Tātou. Embedding diversity and inclusion in how we think, act and operate will also help innovation flourish.

Our understanding of the diversity of our people is growing but the ethnicity of 29% of our employees remains unknown. This is likely to remain a challenge due to the high proportion of operational workforce with limited access to systems and the need to respect privacy rights. Collection of some information must remain voluntary to respect privacy rights.

This year, our major business units have established specific diversity and inclusion plans, including their women in leadership aspirations. To support this we have rolled out our 'Women@Work' programme – which includes connecting our women quarterly on a global level, the development of an Unconscious Bias training module and improving the way we support parental leave.

We have continued to progress our Rautaki Māori (Māori strategy), building our Te Ao Māori capability and forging stronger relationships with groups representing the interests of the indigenous Māori people of New Zealand. Our Te Mātāpuna app, which makes Māori culture and language more accessible to employees, was part of a suite of initiatives that culminated in Fonterra winning the award for the Business and Corporate category at the National Māori Language week. We continue to host Māori language learning through Te Wānanga o Aotearoa for our second cohort of employees and staff from other businesses. For our manufacturing staff we arranged Noho Marae sessions (time spent on a Marae) to more deeply understand the culture particularly the importance of positive relationships with tangata whenua (local host tribe). We're also integrating aspects of Te Ao Māori into our daily business including increased use of Whakatu (welcome ceremonies).

We are also working together with other organisations to help progress diversity and inclusion in our own organisation and more widely. For example, Global Women, Champions for Change, TupuToa and First Foundation in New Zealand, Workplace Gender Equity in Australia and the local government in Saudi Arabia.

## Closing our gender pay gap

Our approach is that there should be no unexplainable gender pay gap for any employees, considering factors such as tenure, qualification levels or experience. For waged employees, this principle is embedded in our collective employment agreements. For salaried employees, Fonterra regularly monitors gender pay and uses a range of independent and external third-party pay market data to benchmark our competitive pay position and to ensure internal consistency. This year we are reporting both mean and median calculations (see page 33).

Our overall gender pay ratio is 1.09 using mean and 0.95 using median. On a mean basis, it improved from 1.10 and on a median basis it widened from 0.97. This demonstrates the value of considering both calculations. In both cases and as in past years, overseas countries where the highest proportion of men work in lower paid roles such as operators, technicians, and farm workers, and the highest proportion of women are in more senior roles do influence the results.

In New Zealand, the female to male base salary is 0.97, meaning the gap has increased since last year (0.98) but is still better than in FY17 (0.96). On a median basis FY19 is 0.95 which compares well with the national median of 0.915. Our analysis of changes this year has highlighted the sensitivity of this single metric to organisational change (e.g. divestment of a business). We are therefore increasing our attention on the pay ratios within the different employment categories (i.e. senior leaders, managers, professionals and waged). On a mean basis, globally our gap in each category closed slightly this year. Australia remains the location where we have the most significant negative gender pay ratio. Unfortunately, this has remained static at 0.92 on a mean basis and the improvement from 0.945 to 0.954 on a median basis does not show after rounding.

## Employee engagement

Employment engagement is integral to our performance. We can only deliver high quality products and services with motivated people who are proud to work for Fonterra.

We measure employee engagement in our annual MySay survey, independently administered by Gallup. The survey, completed in late August/early September 2019 was completed by 86% of employees and showed an increase from 4.00 to 4.07 (out of 5).



## Our performance

Our targets					
Indicator	Target	Performance			Commentary
		FY17	FY18	FY19	
Employee engagement	World-class (Top quartile)	3.85 (2nd lowest quartile)	4.00 (2nd highest quartile)	4.07 (2nd highest quartile)	The engagement survey for FY19 was completed in early FY20 with 86% of employees participating. A score of 4.11 is considered top quartile in FY19. ●
Female representation in senior leadership	50% by 2022	30%	30%	29%	We have made good progress in establishing direction and developing a talent feeder pipeline. The opportunity to progress into senior leadership roles has been limited and divestment of businesses has impacted this indicator unfavorably. ●
Ethnic representation in senior leadership	20% by 2022	–	9%	9%	Privacy concerns and the voluntary nature of reporting ethnicity information has limited our understanding and ability to improve. We continue to encourage our people to self-report which will in turn help us to make progress. ●

This year, Fonterra was accredited with the Gender Tick, which is awarded to New Zealand employers committed to gender equality and we were ranked 82<sup>nd</sup> in the Equileap Gender Equality Global Ranking. Equileap ranked over 3,500 publicly listed companies against 19 gender equality criteria. We're one of four NZ companies in the Top 100 globally. We rate well, but we know there is still more to be done to ensure that gender equality is

imbedded in our organisation. We were also a finalist in the Equal Pay Awards for New Zealand.

We also changed the way we recruit our graduate talent to ensure we are attracting and selecting balanced diversity and achieved our aspiration of 50/50 gender representation for graduates this year.

## WHAT'S NEXT

- Over the coming year, we'll work with leadership groups in each country to increase the proportion of women and ethnic minorities within senior leadership levels, in line with our diversity targets.
- We're also working to get the Rainbow Tick, awarded to New Zealand workplaces that are inclusive and welcoming for people of diverse sexuality and gender identity.
- We're prioritising learning for leadership across front-line, mid-level and executive leaders. We'll commence the rollout of our updated Front Line Leaders programme during FY20.
- To encourage regional youth into a dairy processing career we are developing a managed apprenticeship programme. This new Dairy Processing Apprenticeship will be piloted in FY20 with 6 apprentices, who will complete a L4 Dairy Processing qualification over a two-year period.
- DAIRYCRAFT will expand its learning streams to cover new streams including ethanol, UHT, powder blending and consumer cheese.

FY19 performance: ● Good progress. ● Some progress or slight delay. ● Off track.

<sup>1</sup> In December 2018, Statistics New Zealand published measurement and analysis guidelines for gender pay gaps. By publishing both mean and median we will allow comparison with others. For our own progress, we will continue to use both help us manage improvements over time.

# Human rights

**As a large-scale employer, working in many countries around the world, it is our responsibility to care for the rights of people directly and indirectly impacted by our operations and decisions.**

## Our approach

Since adopting ISO26000 in 2014 we have been improving our visibility of and accountability for human rights issues. Our approach has its foundations in our values and is built on the UN Guiding Principles on Business and Human Rights.

Respect for human rights is embedded in “Our People” Group Policy, and expectations are articulated throughout our people standards, and our code of conduct, “The Way We Work”. Two members of our FMT, the MD Co-operative Affairs and MD People and Culture, are responsible for the governance of human rights within our business and our sphere of influence. Human rights due diligence is undertaken across our value chain.

## What we've been doing

### Human rights due diligence

Human Rights ‘due diligence’ is a process to identify and prioritise actual and potential human rights issues in an organisation’s direct and indirect sphere of influence. In 2017, our workforce evaluation across New Zealand, Australia, Brazil and Chile, covering approximately three-quarters of our employees, identified some concerns about bullying and harassment, long working hours and the potential for human rights risks in our non-milk supply chain. This year we have been responding to these concerns within our workforce (see Addressing bullying below), and in our supply chain.

Within our non-milk supply chain, our process identified a higher human rights risk associated with some of our non-milk ingredients. This year, we specifically included an assessment of human rights as part of the quarterly vendor review meetings with nine key ingredients vendors and increased coverage of human rights in staff training and vendor assessment (See our Responsible procurement section on [page 42](#)).

We had intended to extend our due diligence process to our workforce in other regions but we postponed this due to the strategic review process. We did commence a more detailed review of human rights risks on farm.

### Addressing bullying

New Zealand has high rates of bullying, and this spills over into workplaces, affecting around one in five working people. It’s not just an issue in New Zealand, it impacts workplaces globally and can seriously impact mental health and wellbeing.

At Fonterra, we believe that everyone has the right to work in a safe and inclusive environment free from any form of bullying or harassment. We do not tolerate these harmful behaviours in our workplace and are taking steps to empower our people to speak up, stand together and stop them from occurring. We have committed to a number of initiatives designed to create a ‘culture of care’.

In FY18, we developed new online and face-to-face bullying and harassment training for employees, called “Culture for Care”, and piloted at our Te Rapa site. This year we extended the pilot to five other sites, and then commenced the rollout of e-learning and face-to-face training to key NZ business units. To date, over 1,600 employees have received the training.

### Our performance

We have been selected as a finalist for the Sustainable Business Network Awards in the Partnering for Good category. This is in recognition of the collaborative work with other organisations to develop a family violence support toolkit. The toolkit provides a starting point for other businesses and has had over 5,500 unique visits since it was publicly launched.

➔ [www.businessworkingtoendfamilyviolence.nz](http://www.businessworkingtoendfamilyviolence.nz)

### WHAT'S NEXT

- We will extend our due diligence process and continue with our assessment and response to any issues identified in our on-farm and non-milk supply chains.
- We will train more staff as family violence first responders – those people that our staff and managers can go to have a first conversation about a family violence situation.
- We will prepare for the publication of our first modern slavery report by January 2021 to satisfy the requirements of the Australian Modern Slavery Act.



IN 2018 POLICE RECORDED:  
**133,022**  
UP FROM 118,910 IN 2016



**FAMILY VIOLENCE INVESTIGATIONS  
- ONE EVERY 4 MINUTES**

New Zealand statistics. Source: nzfvc.org.nz

### CASE STUDY

## Addressing family violence in New Zealand and Australia

*“I would probably still be in a violent relationship”*

In FY18, we launched a new initiative for New Zealand and Australian employees impacted by family violence. We wanted to ensure we have a caring and sensitive environment where people can talk about family violence and know how to get confidential support if they need it.

In New Zealand, we joined Shine and Women’s Refuge to launch a programme to raise awareness about family violence and provide support services for employees who may need help. Within the Co-op more than 50 staff have been trained as family violence first responders. This means, those staff in need, who will always remain anonymous, have someone to go to for a first conversation as they seek the necessary support.

**It’s not easy to confront the fact that your relationship might be abusive.**

For those who need it, the programme has been hugely successful. The following is anonymous feedback from one employee.

*“From the first time talking about family violence and my situation with the first responder, it was frightening. They reassured me that everything would be confidential. They assisted me through the rough times.”*

*“If it wasn’t for the help Fonterra offered within work time, I would probably still be in a violent relationship. It’s not easy by any means as I was in a violent relationship for 20 years so breaking that cycle of habit was very challenging to say the least. I was in a very dark place and the first responder was there for me every step of the way for doctor visits and counselling etc.”*

*“I would like to thank Fonterra, especially my first responder, for all that they have done and continue to do for me. It’s a long journey that is not fixed overnight so the responder’s patience has been a virtue for me and my children.”*

# Responsible procurement

## Our business has considerable scale and with that comes the opportunity to influence for good.

In terms of procurement, this means working to source goods and services produced in an environmentally and socially responsible way that positively influences behaviours in our supply chain.

By far the largest single input to our business is raw milk, collected directly from farmers. For more information on how we work with our farmers, in New Zealand and around the world, see [page 52](#).

This section covers our non-milk supply chain, including capital projects.

### Our approach

Our Group Procurement Policy and Procurement Standard set out our requirements for the procurement of non-milk goods and services, including capital projects. This includes key principles such as assuring the health, safety and wellbeing of people, food safety and quality, environmental sustainability and social practices. The requirements apply for all purchasing, but for significant items our specialist procurement team must be involved in the purchasing decisions and ongoing management of the vendors.

The Group Policy is approved by the Board of Directors and the CFO is accountable for ensuring the Group Standard is fully implemented across the organisation. All staff are responsible for complying with the standard.

The Fonterra Supplier Sustainability Code of Practice sets our expectations of vendors including upholding standards related to human rights, fair working conditions and environmental protection.

→ [www.fonterra.com/sustainabilitycop](http://www.fonterra.com/sustainabilitycop)

We select vendors based on a balanced set of criteria and some vendors we select may have aspects of social or environmental performance that requires improvement. We believe we make a positive contribution to society by working with and influencing vendors who show a willingness to improve. As part of our regular assessment of vendors, we specifically consider social and environmental risks.

## What we've been doing

### Staff Training and Development

Buyers within our procurement teams play a critical role in assessing and managing the sustainability performance of our vendors. This year we ran company-specific training on sustainability, including social and environmental issues faced in our supply chain, for our Group Procurement team. This specifically included training on human rights risks to assist with our preparation to report on Modern Slavery.

### Vendor assessments

Assessing and managing the risk of environmental and social issues within our supply chain is a core part of responsible procurement. This year, we assessed our top 400 non-milk suppliers globally (accounting for 75% of spend) and we extended the coverage of this assessment to also cover our Farm Source™ retail business. For Farm Source retail, over 200 vendors were assessed for human rights and environmental risk, specifically investigating country of origin of goods and including the top 45 vendors by spend.

We also conducted on-site environmental audits for 22 vendor sites. Based on the audit score, the vendor is allocated a risk rating and a re-audit date. The one vendor site that was identified as high risk has agreed corrective actions and will be revisited within 12 months.

### Social procurement

In New Zealand, we joined other leading organisations as founding members of the country's first social procurement buyer group. Established by the Ākina Foundation, the Fwd: platform connects procurement teams with social enterprises that have a positive impact on society as they deliver various goods and services. It gives us another way to do good through our business activities.

### Forest products

Palm products are one of the highest-profile raw materials in our supply chain. The production of palm products is often linked to unsustainable practices, including deforestation, habitat destruction and poor human rights practices. We therefore have a specific focus on this area but we also consider the risk of deforestation in our supply chain more widely and we completed our second response to CDP on Forests this year.



In calendar year 2018, we used 26,143 tonnes of palm-related products as an ingredient and, via Farm Source™ stores, we retailed 511,000 tonnes of Palm Kernel Expeller (PKE), a by-product of palm oil production, used as a supplementary feed for cows. Approximately 30% of PKE imports into New Zealand are procured and distributed by Agrifeeds, a joint venture between Fonterra and Wilmar.

We have been a member of the Roundtable for Sustainable Palm Oil (RSPO) since 2010 and since 2015, all our palm oil purchases have been certified by RSPO. In 2016, we launched our Palm Product Standard. This requires palm product vendors within our supply chain to publicly commit to “No Deforestation, No Peatland Development, and No Exploitation” and have processes to meet these commitments. We had planned to update this standard this year but that has been delayed into FY20.

As reported last year, while our supplier Wilmar continues to conservatively track and report on traceability of PKE to plantation (19% approximately), traceability to mill is their main focus. Knowing the source mill is a good indicator of the approximate location of its suppliers and they have almost reached 100% for the specific countries where we source.

Wilmar, our largest supplier, and Agrifeeds both make detailed traceability information available on their websites:

→ [www.wilmar-international.com/sustainability/progress/traceability](http://www.wilmar-international.com/sustainability/progress/traceability)

→ [www.agrifeeds.co.nz/sustainability](http://www.agrifeeds.co.nz/sustainability)

## Our performance

Our targets					
Indicator	Target	Performance			Commentary
		FY17 (CY2016)	FY18 (CY2017)	FY19 (CY2018)	
Sourcing 'segregated supply' palm oil from credible organisations.	100% by end of CY2018	2.7%	7%	23%	We made good progress during CY2018 and FY19. We missed our original target date but at the end of FY19, by volume, 95.6% of all palm oil being purchased from New Zealand and Australia is certified as segregated supply and over 70% on a global basis. Achieving the remaining small percentage will be challenging but we hope to achieve this by end CY2020. <span style="color: red;">●</span>
PKE traceable to mill	100% by end of CY2018	96.7%	93.9%	98.7%	Traceability to mill has continued to improve. AgriFeeds source all PKE via Wilmar from Indonesia and Malaysia where it has achieved 98.5% and 99.4% traceability to mill, respectively. <span style="color: green;">●</span>

## WHAT'S NEXT

- We will continue to expand our engagement with specific vendors in high risk areas to ensure they better understand our expectations, and we better understand the practices in their supply chains.
- We will update our Sustainability Code of Practice and our Palm Products Standard.
- We will continue to work with suppliers of direct and indirect palm oil ingredients to work towards 100% certified segregated supply.

FY19 performance: ● Good progress. ● Some progress or slight delay. ● Off track.

HEALTHY PEOPLE

# Supporting our communities

## Dairy development

Through our dairy development activities, we support local dairy farmers in key markets to help build thriving communities. By working together with local stakeholders and sharing our expertise and the lessons we continue to learn, we contribute to wider sustainable development.

### Sri Lanka

In Sri Lanka, to help develop the capability of local dairy farmers, we established our demonstration and training farm at Pannala. This year we have been transitioning this farm to a new operating model through a partnership approach and therefore less farmer training has occurred there. In milk sourcing and supplier relations, our supplier relationship officers have continued to engage with farmers to improve milk quality and animal welfare, and increase adoption of best practices to ensure a sustainable supply of milk.

### China

Encouraging the development of young Chinese talent in agriculture is an important aspect of our dairy development work. More than 90% of employees on our China Farms are locally recruited and trained. We have also provided financial support to a further 200 agriculture and food science students from 10 Chinese universities. This takes our total to over 1,200 since the Fonterra Scholarship programme launched in 2010. This year the Scholarship programme received a “CSR China Top 100 Award” from the volunteer platform “Share the Care” with the guidance of the Central School Department of China Communist Youth League.

We have also been working with local authorities and research teams in China and New Zealand to build a circular economy solution. Treated wastewater, manure and biogas residue from our China Farms is used as a restorative fertiliser to improve soil health on arable land, including an organic fruit company. In January 2019, we were awarded “2018 annual sustainable company” by Pengpai, a well-known media organisation in China in recognition of the work.

### Indonesia

In FY18, working in partnership with the local Mersi Dairy Co-operative and supported by local government, we launched the Fonterra Dairy Cluster Partnership in West Sumatra. We have been training about 70 farmers and monitoring their progress. During FY19 the focus has been on practices to improve milk quality and we have seen significant improvements, from 6-8 million CFU/ml in June 2018 to an average close to 100 CFU/ml in September 2019.

Training and monitoring during the year has progressed from milk quality to also consider environmental and animal welfare aspects too. Environmental improvements have focused on effluent management and its usage. Animal welfare improvements have focused on suitable bedding and access to adequate water.

Production has now grown to an average of over 1,200 litres of milk per day and, in addition to local sales, about 600 litres of milk is sold from the farms direct to businesses in nearby cities. To help establish markets for the product, education has been provided on the use of milk as a nutritional ingredient for local cuisine.

During the year, local schools, kindergarten and university students have visited farms to increase their understanding of dairy farming and some of the schools have started their own milk in school programs. One Junior High School has started a nutritional breakfast initiative which uses pasteurised milk from a farmer who completed the Fonterra Dairy Scholarship Program in 2014.

### Chile

In FY17, working with our Chilean subsidiary Prolesur, we established an exchange scheme to give young Chilean farmers the opportunity to learn from leading farmers in New Zealand. During FY19, 14 young farmers completed their full year in New Zealand and our third group of 10 young farmers have now arrived in New Zealand.

Through paid, hands-on work experience with our New Zealand farmers, the young farmers learn pastoral dairy farming skills. The young farmers come from Southern Chile, where pastoral dairy farming is also the main farming system, so when they return home, they can contribute to the dairy development potential there.

1 Most of reduction for FY19 was due to New Zealand only holding one funding round as we review our approach.  
2 A portion is 200ml of milk for Fonterra Milk for Schools and an estimated 140ml of milk for KickStart Breakfast.

## Community investment

We invest in our local communities in a wide range of ways, including in-school nutrition, foodbanks, dairy development and supporting community events. In addition, the Fonterra Grass Roots Fund financially supports initiatives that help to strengthen our communities, bringing them together, caring for the environment and promoting safe and healthy lifestyles.

Launched in 2007, it is now active in New Zealand, Australia and Sri Lanka, with decision-making distributed regionally.

### FY17

**\$750k** distributed to 696 initiatives

### FY18

**\$770k** distributed to 696 initiatives

### FY19

**\$382k** distributed to 205 initiatives<sup>1</sup>



In Australia, as well as donating meals and milk to Foodbank, some of our staff also volunteered their time (see page 71)



**\$7.4m** | 22.6m portions<sup>2</sup> | We also provide dairy nutrition through our in-school programmes - see page 30



### Australia

As part of the Boomerang movement, a group of volunteers meet in the Yinnar and District Community Hall to recycle fabric into reusable fabric bags. The bags are donated to local businesses to give to their customers as an alternative to single-use plastic bags. Funding from the Grass Roots Fund allowed the group to buy enough fabric to make over 100 bags.

Sixty children attending Wydinia Kindergarten and Early Learning Centre in western Victoria enjoyed the Henny Penny Hatching program thanks to funding from the Grass Roots Fund. The program teaches children about caring for animals and the circle of life, by watching the hatching process, looking after the chicks, through to them becoming laying hens.



As part of our exchange scheme with Prolesur, young farmers from Chile learn practical skills on farm in New Zealand.

### Sri Lanka

We supported the ‘Gift A Smile’ project which is building three rural school libraries in our Bingiriya dairy community. Local Fonterra staff donated around 200 valuable books and the Grass Roots fund provided school exercise books. This project benefited over 500 under-privileged kids attending the schools.

We also participated in a national tree planting campaign organised the Sri Lankan Army. Local Fonterra staff donated 1,500 plants and the Grass Roots fund provided two solar powered water pumps.

# Healthy Environment

We are working together to achieve a healthy environment for farming and society.

By looking after land, water and animals, and using resources wisely, we are finding a path to regenerate the environment. It's all part of our transition to a more sustainable way of dairying.

*Tiakina te whenua i tēnei rā, hei oranga tangata mō ngā rā e heke mai nei.*

*Caring for the land today, so that the land cares for us tomorrow.*

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HEALTHY ENVIRONMENT

# Healthy Environment

## We need to protect, enhance and regenerate our environment to safeguard opportunities for future generations.

A strong healthy environment supports healthy and enjoyable lives, and improves the resilience of the planet. It is also the foundation for sustainable, profitable dairy businesses.

Dairying is a big part of New Zealand and has been for almost 150 years. Farming families have made the most of being able to grow grass all year-round, producing delicious, fresh milk. Globally, food production systems are facing a transformational challenge to meet the demands of a growing population within environmental limits.

New Zealand farmers lead the world in many aspects of sustainable dairying, with high productivity, year-round pasture grazing and lower use of supplementary feeds. However, the scale of the industry in New Zealand means that our environmental footprint is of national significance.

To achieve positive environmental outcomes requires working together to deliver improvements at scale. Working collaboratively on our environmental challenges will help build social cohesion and accelerate progress on environmental outcomes.

The challenges faced are significant and the changes required will take time, but we want to play our part. We are working in our sites, with our farmers and with our communities to face those challenges and improve our environmental performance, so our farmers will be able to farm for generations to come.



### How Fonterra is making this happen:

We are working together to achieve a healthy environment for farming and society. To do this we will:

- ✔ **Improve the health and biodiversity of our land and waters** by having a regenerative mindset, reducing the impacts of farming and manufacturing and working in partnership with others
- ✔ **Lead the transition to a low-carbon future** by investing in innovation and infrastructure to remove greenhouse gas (GHG) emissions from our supply chain
- ✔ **Meet the growing nutritional demand** through improvements in productivity and minimising waste from farm to consumer.

### KEY ITEMS FROM FY19

- **Farm Environment Plans:** 23% of our farms in New Zealand have Farm Environment Plans tailored to their specific farm – see [page 58](#)
- **GHG emissions:** Our global GHG emissions from manufacturing were reduced by 26,345 tCO<sub>2</sub>-e from FY18 but estimated global GHG emissions from farming were up 758,856 tCO<sub>2</sub>-e – see [page 68](#)
- **Transitioning from coal:** Our Brightwater site went live co-firing biomass and we trialled wood pellets at Te Awamutu – see [page 67](#)
- **New targets set:** We have set new global targets for recyclable packaging and solid waste to landfill – see [page 70](#)



Fonterra's contribution to the SDGs from a healthy environmental perspective.



Share our dairy expertise with small-scale producers (2.3)

Increase productivity through sustainable practices (2.4)



Reduce the impact of farming and manufacturing on water quality (6.3)

Increase water efficiency in areas of constrained supply (6.4)

Protect and restore freshwater ecosystems (6.6)

Reduce impact of farming and manufacturing on marine ecosystems (14.1)



Manage and use natural resources efficiently (12.2)

Reduce food waste throughout our supply chain (12.3)

Reduce waste generation through our operations and product packaging (12.5)



Reduce emissions across our supply chain

Support farmers to build resilience to climate change (13.1)

Reduce impact of farming and manufacturing on freshwater ecosystems (15.1)

Promote the sustainable management of forests and support afforestation (15.2)



# Our farming and manufacturing activities

We are a New Zealand co-operative – it's where our shareholder farmers are based and where we source most of our milk. We also have operations around the world to help us create the most value for that New Zealand milk.

This map shows the location of the manufacturing sites we manage and that we report on in this section. The litres of raw milk collected refers to the total raw milk that we collected from farms in the region during FY19.

We directly manage a small number of farms around the world. There are 29 farms in New Zealand to help our manufacturing sites manage excess nutrients, seven farms in China producing fresh milk, one training farm in Chile and one in Sri Lanka. These are not shown.



**LATIN AMERICA**  
(CHILE, BRAZIL, VENEZUELA)

**5**  
MANUFACTURING SITES<sup>1</sup>

**510m LITRES**  
RAW MILK COLLECTED



**NETHERLANDS**

**1**  
MANUFACTURING SITE

**SAUDI ARABIA**

**1**  
MANUFACTURING SITE

**SRI LANKA**

**1**  
MANUFACTURING SITE  
**13m LITRES**  
RAW MILK COLLECTED

**CHINA**

**279m LITRES**  
RAW MILK COLLECTED

**AUSTRALIA**

**7**  
MANUFACTURING SITES  
**1,583m LITRES**  
RAW MILK COLLECTED

**NEW ZEALAND**

**29**  
MANUFACTURING SITES<sup>1</sup>  
**17,162m LITRES**  
RAW MILK COLLECTED

**ETHIOPIA**

**1**  
MANUFACTURING SITE

**MALAYSIA**

**2**  
MANUFACTURING SITES

**INDONESIA**

**1**  
MANUFACTURING SITE

<sup>1</sup> During FY19 we divested of our Inlaca business in Venezuela and our Tip Top business in New Zealand. This map shows the status as at the end of FY19 but the raw milk collected and environmental data on subsequent pages includes the contribution from businesses under our operational control (i.e. part year for those businesses divested).

HEALTHY ENVIRONMENT

# Working with farmers



## We see a healthy environment as the foundation for a strong economy and a sustainable dairy industry.

Our farmers are at the heart of our Co-operative and we will support them to keep innovating so that they can continue to farm for generations to come.

Today, more than 85% of our milk comes from the farmers in New Zealand who own Fonterra. We also source some milk in other countries so we can meet the needs of our customers and generate the most value from our New Zealand milk (see map on page 50).

In this section, we cover farming practices on all farms directly supplying milk to Fonterra's manufacturing sites globally.

### Farms we manage

We directly manage a small number of farms around the world. In New Zealand, we manage 29 farms which neighbour our manufacturing sites. We use these farms to manage excess water and nutrients from our manufacturing sites. The water and nutrients improve soil health and support pasture growth, which allows us to grow and supply supplementary animal feeds to our farmers.

In China, we operate seven large-scale dairy farms and produce raw milk for use in local products. This complements the dairy products we export to China from New Zealand and Australia. These farms use a housed farming system rather than the pasture-based model most commonly found on the farms which supply us with milk. We also directly manage farms for training and demonstration purposes – one in Sri Lanka and one in Chile.

### Expectations for supplying farms

We encourage and support farmers to adopt good management practices and to continuously improve profitability, environmental efficiency and resilience. We have a set of policies and standards that support sustainable dairy farming. Our Terms of Supply and Farmer Handbooks set expectations for farmers when it comes to people, the environment, animal health and welfare, biosecurity, and food safety and quality.

Our Raw Milk Harvesting Standard sets out the minimum requirements that all farmers must meet. It applies across all markets we source milk from and forms the basis of the on-farm audits that we conduct.

Through a combination of our own staff and third parties, we regularly assess supplying farms around the world:

- In New Zealand, every supplying farm is visited each year by an independent farm assessor. In addition, a more-detailed assessment is completed for each farm, once every five years approximately. This year we completed 1,889 of these detailed audits (20% of supplying farms) and 1.4% of farms were referred for follow-up.
- In Australia, farms are visited multiple times each year by our own staff and independent assessments are scheduled based on prior compliance levels. Every farm is assessed at least once every two years and in FY19, 57% of farmers were assessed. Of the farms where we arranged assessment, 21% were referred for follow-up due to a critical or major non-compliance<sup>1</sup>.
- In Latin America, each farm is assessed by a combination of our own staff and third parties. In addition, our New Zealand based team audits a random selection of farms once every three years.
- In China, our farms are under our direct control. These farms are subject to assessments by our New Zealand Milk Sourcing team and Internal Audit team. These farms have also been independently assessed to the benchmark food safety and quality standard for farms called SQF.

On farms where it is identified that requirements are not being met, our Sustainable Dairying Advisors (SDAs), or equivalent, develop an action plan with the farmer which includes target dates for completion. We may also suspend the collection of milk until we are satisfied that all minimum requirements are being met and that any actions required to avoid a repeat of the issue have been completed. Milk collection suspension notices were issued for 51 farms in New Zealand. The main reasons for suspension notices were related to fencing waterways and effluent management. The majority of farms addressed the issues identified and are supplying milk. The remainder no longer supply Fonterra.

<sup>1</sup> This figure is calculated excluding farms in Tasmania, where the audits are undertaken by the local authority and we do not currently have visibility of non-compliance details.



- 1 Supporting our farmers underpins everything we do. In person, in digital, in partnership.
- 2 Well defined Terms of Supply to protect the Co-operative here and now.
- 3 Recognition for farmers who are moving beyond the Terms of Supply.
- 4 All on-farm activities aligned across five focus areas.
- 5 Clear guidance on future direction based on emerging customer and community trends.

### Working together with farmers

We have farmer engagement and support programmes in every country where we collect raw milk from farms. These help us to build relationships with farmers, communicate our requirements with them and support them to improve their farming practices. We tailor these programmes to reflect the priority farming issues in the country and to encourage performance that goes beyond the minimum requirements.

This year we launched The Co-operative Difference in New Zealand. It is a straight-forward way of bringing together what our farmers need to know today, and what they need to prepare for in the future. It also celebrates farmers who go the extra mile to make our Co-operative more sustainable.

We want to make it easier for farmers to know what needs to be done and why it matters. Farming is complicated enough these days and we believe there are ways we can work better together. The Co-operative Difference covers financial tools; environmental topics; animal welfare and biosecurity; people and community; and milk quality topics.

#### The Co-operative Difference:

- Brings together existing on-farm requirements and makes them easier to understand.
- Recognises farmers who go above these requirements.
- Gives farmers clear guidance on likely future requirements and trends.
- Saves farmers time by removing duplication and streamlining reporting requirements.
- Helps our Co-op protect its market position, strengthen our sustainability claims, and drive demand for our products.
- Supports farmers with on-farm practices by working together and providing industry-leading assistance and using our industry partnerships where possible.
- Clarifies what will happen when requirements aren't met, supports those who are struggling, and takes a firm line with those who refuse to change.

### Providing support and services

Our farmers can make the most of the Co-op's knowledge, expertise and services in managing their farms. Our sustainable dairying, milk quality and animal welfare specialists are in every region and in New Zealand and Australia our 24-hour Service Centre team is only ever a phone call away.

In New Zealand we operate a network of 68 Farm Source™ stores, offering local knowledge, product advice and expertise. These stores operate as retail farm supply stores for the farming community and wider public while also offering specific support services for our supplying shareholders. Farm Source is a wholly owned subsidiary covered by the same management systems and policies as our other operations. It provides seasonal deals for everything from fencing to calf feed and offers eligible farmers benefits such as 90 day interest free purchases and the ability to earn Farm Source Reward Dollars on every dollar spent in our stores. From June 2019, eligible farmers can also spread payments or defer them for six months on all Farm Source store purchases over \$500.

In Australia, we do not have retail stores but by leveraging our scale, we are able to provide special deals and services for farmers supplying us in Australia through our Farm Source™ Partners service. We also provided a free electricity tariff comparison service for 118 Australian farms.

# Managing operations



## We are committed to taking a leading industry approach to environmental management for our manufacturing operations.

Our manufacturing sites, farmers and local communities share the same environment, with interconnected environmental challenges. Some aspects must be considered globally such as climate change (see page 63) and packaging waste (see page 70), but we must also consider the localised potential environmental impacts of our sites, particularly on freshwater quality and biodiversity (see page 56).

Over 95% of our processing by raw milk supply happens in New Zealand or Australia, but we also manage several other sites around the world.

The Fonterra Group Environmental Policy, updated in FY19, defines our approach to the management of all environmental aspects relevant to our activities including, but not limited to, water, climate and energy, waste and pollution prevention across our global value chain. This includes assessing and managing environmental risks, taking a precautionary approach to decision-making to prevent damage to the environment or human health where serious threats may exist and implementing best-practice environmental management systems. The policy is published on our web site.

→ [www.fonterra.com/environmentalpolicy](http://www.fonterra.com/environmentalpolicy)

All sites have a manager specifically responsible for environmental compliance. At most sites, this is a dedicated environmental manager and they are often supported by a site Environmental Management team. Their focus is on managing site-wide environmental performance and compliance with local environmental requirements.

We share some manufacturing sites, which are operated by joint-venture partners and we make use of some third-party manufacturing. These sites are excluded from our performance reporting.

## Independent evaluation and certification of sites

Our manufacturing sites are subject to regular internal and third-party audits. Internal audits are conducted by staff independent of the site and are used to identify areas for improvement. Third-party audits give regulatory authorities and our customers independent assessments of our performance.

For example, independent audits against the Sedex Member Ethical Trade Audit (SMETA) standard for labour practices, environment, health and safety and business practices are required by some of our customers. Other customers require us to undertake an annual assessment by EcoVadis.

Other third-party audits are part of independent certification of site Environmental Management Systems (EMS) to international standards, such as ISO14001. Independent certification to ISO14001, or an equivalent such as EnviroMark Diamond, provides a third-party evaluation of the performance of our EMS. This year our Heerenveen site was certified to ISO14001 and, with divestments, at the end of FY19, more than 67% of our manufacturing sites are certified to this level or equivalent.

## Environmental compliance

In the past year, our operational sites had twelve incidents of non-compliance with environmental regulations which resulted in fines or non-monetary sanctions. Ten of these occurred in New Zealand, with seven incurring fines, penalties or cost recoveries totalling \$4,814 and two incurring abatement notices only.

In Australia, our Dennington site incurred a fine of A\$13,350 (\$14,500) from the Water Authority for a discharge of wastewater to the local municipal treatment plant that did not meet the acceptance criteria of the trade waste agreement. No clarification was provided by the Authority on the specific criteria breached. Our Dennington team has reviewed the event and the robustness of our biological wastewater treatment plant to further improve treatment processes on site until all manufacturing operations cease in November 2019.

Our China Farms received one fine related to an environmental non-compliance. At Ying Cowbell farm, an EPA<sup>1</sup>-approved vendor, who was contracted to transport effluent pond sludge for application to land, did not apply the sludge according to the defined rules. The EPA concluded that Ying Cowbell had a “non-delegable” duty regarding the handling of the farm effluent and therefore Fonterra was fined RMB400,000 (\$86,000). However, the vendor admitted that they had not been working in line with the contract and paid RMB 400,000 to Fonterra to reimburse it for the fine paid.

In addition to the non-compliances listed above, there were some minor non-compliances, which did not result in any monetary or non-monetary sanctions.

In all cases we have taken action to improve processes and minimise the risk of further non-compliances.

## Significant spills

This year in New Zealand, there were 15 significant spills associated with tanker events either on farm or on a highway and totalling about 62,000 litres of milk. The events ranged from 500 litres to 16,000 litres. The 16,000 litre event was an accident involving a contractor’s tanker, which resulted in an environmental non-compliance and fine (covered in Environment compliance to left). At our Whareroa site, 2,000 litres of nitric acid and 1,500 litres of cream were spilled to drains. The spill of nitric acid occurred when a bund failed. The procedures for hose connections were subsequently reviewed with all drivers at the site.

<sup>1</sup> EPA – Environmental protection agency

HEALTHY ENVIRONMENT

# Land and water



**Healthy freshwater, soil and ecosystems are essential to the long-term success of our business, and to the communities where we live, work and farm.**

There are limited resources and impacts to them are experienced locally. We believe protecting and restoring the environment is critical to safeguard opportunities for future generations, and this regenerative mindset must become embedded through our global value chain. That's why we are committed to working proactively with local stakeholders on catchment-wide solutions.

This section covers our impact on land and water arising from the manufacturing operations that we manage globally and in relation to the farmers from whom we collect milk.

### Our approach

Our manufacturing sites withdraw water from a range of sources and discharge wastewater. Due to the evaporation of water from raw milk to make our products, most of our sites are net providers of water. Sites measure their water use and monitor water quality and, as we upgrade or build new plants, we make use of resource-efficient technologies and aim to adopt leading industry standards. We also seek process improvements and behaviour changes which can deliver further improvements.

We are working with farmers to identify their environmental impact risks and prioritise improvement actions specific to their situation. Most of our farmers operate pasture-based farming systems and rely on rainfall as their main water source. We encourage and support farmers to adopt Good Farming Practices related to water, soil health and biodiversity including exclusion of stock from waterways, riparian management, nutrient management and low-till to no-till land management.

Please refer to "Working with farmers" on page 52 and "Managing operations" on page 54 for more information on our general approach to improving our environmental performance.

### What we've been doing

#### Sustainable catchments

Achieving sustainable water catchments in the regions where we operate means working with others to help protect and regenerate the waterways. We want to connect and empower farmers, manufacturing sites and local communities so they get involved and can accelerate progress towards local community environmental aspirations.

Our Living Water partnership with the New Zealand Department of Conservation is focused on five catchments to identify game-changing and scalable solutions that demonstrate dairying and freshwater can thrive together. So far, 31 trials of different tools and approaches to improve freshwater have been started and seven solutions have been scaled or are being used by others.

For example, in Waituna, a new approach to mapping physiographical factors – such as slope, drainage, soil type – has been developed. It can be used to optimise the design and placement of water quality improvements in a catchment. Based on the success of the Waituna work, a data set for all New Zealand has been generated and made available for use by everybody, in all regions. At Pukorokoro-Miranda, we have developed and successfully trialled a prioritisation tool which our partners, Western Firth Catchment Group, will now use in other catchments to make sure they are taking the right environmental improvement actions in the right place.

Beyond the five Living Water catchments we've been working alongside local stakeholders such as regional councils, the Department of Conservation, iwi, farming leaders and other industry members in catchments across New Zealand. Our aim is to build on existing community efforts and work with other land users and businesses to help achieve the community's priorities. In many cases, these include not just water quality and freshwater biodiversity, but also predator management and related terrestrial biodiversity (see opposite page for examples).

### Collective action on catchments

Our Living Water partnership with the New Zealand Department of Conservation is focused on five catchments. The lessons learned from this partnership are being used to support farmer and community action in other catchments across New Zealand.

#### SOUTHLAND

In the Waituna Creek, manuka bundles and logs have been installed to slow water flows and provide habitat for native fish such as the giant kokopu. Four Living Water projects have integrated Mātauranga Māori<sup>1</sup> alongside western science. For example, our work at Waituna is all based on a co-governance approach with seven other organisations and Mātauranga Māori is woven into all work streams. See Whakamana te Waituna at:

→ [www.waituna.org.nz](http://www.waituna.org.nz)



#### NORTHLAND

In the Ruakaka catchment we have funded the Mountains to Sea Conservation Trust to deliver their *Whitebait Connection* education programme into schools and to increase community understanding of the water quality and ecological health issues in the catchment.



#### HAWKES BAY

In the Tukipo catchment a project is underway to construct a treatment wetland to improve water quality.



#### WAIKATO

We have expanded our hydroseeding trial to create a biodiversity corridor along a farm drain between Lake Rotopiko and Lake Rotumanuka. Hydroseeding is a new efficient spray-on approach for native planting.

#### CANTERBURY

In Upper Selwyn, habitat is being restored and an electric barrier has been installed to protect the endangered kōwaro (mudfish) from predators.

- Living Water catchments
- Community catchments

#### Living Water Catchments

- 1 Wairua River in Northland
- 2 Pūkorokoro-Miranda in Hauraki
- 3 Lakes Areare, Ruatuna, Rotomānuka in Waikato
- 4 Ararira-LII River in Canterbury
- 5 Waituna Lagoon in Southland

<sup>1</sup> An indigenous Māori world view and knowledge perspective.

HEALTHY ENVIRONMENT

# Land and water

CONTINUED

## Prioritising on-farm improvements with Farm Environment Plans

On farm in New Zealand, our top priority is helping farmers establish Farm Environment Plans (FEPs). A farmer's FEP is unique to their farm and includes a detailed map of their farm identifying areas of existing strength and prioritised improvement areas for action.

The FEPs consider land and water aspects such as the risk of sediment or faecal matter transfer into waterways, the risk of nutrient losses to water bodies, maintaining soil structure, protecting biodiversity and, where applicable, the management of irrigation systems to minimise the amount of water used to meet production objectives.

With stock on dairy farms already excluded from more than 99% of permanent waterways and more than 12,500 km of additional small, intermittent waterways, FEPs now focus on the potential environmental impacts across the farm, from nutrient management to land and soil management. 37% of farms now have a documented riparian management plan which not only helps improve water quality and biodiversity but also helps improve terrestrial biodiversity. With adoption rate of our nutrient management programme already over 96%, this year we have launched a new nitrogen risk management scorecard. Nitrogen loss risk is calculated across six farm management practices to help farmers further reduce the risk of nitrogen loss and minimise the risk of excess nutrients moving from their soil into waterways.

Supporting farmers to achieve Good Farming Practice through FEPs is how we can make the biggest difference to areas such as soil health. Additionally, we are working with industry partners to help increase the adoption of farming practices which reduce soil compaction, such as the appropriate use of stand-off infrastructure during periods of soil saturation.

Understanding soil moisture and soil temperature can help farmers further improve their management practices. This includes reducing water use but also improving fertiliser and effluent application. By considering the existing moisture and temperature before application, grass growth can be improved and nutrient losses minimised. This year in Australia, we commenced a trial of soil moisture monitoring on 12 farms in Northern Victoria. We also arranged and launched a special deal for our farmers in New Zealand to buy soil moisture probes via our Farm Source™ stores.

## Improving water quality and reducing use at factories

Our Nutrient Management team has continued to improve the way we treat excess nutrients retrieved from wastewater treatment at some of our sites. The nutrients, which originally came from collected milk, are used to improve soil health on our farms to grow grass and maize silage. This means we can 'close the loop' back and use the silage to help cows produce quality milk. All nine dairy farms managed by the Nutrient Management team now have Farm Environment Plans and a further 2.9 ha of riparian planting was completed this year.

For water efficiency, we have replaced our New Zealand only target with a new global target aligned with best-practice thinking. We will reduce water used at sites in water-stressed regions by 30%. Rather than having a target which applies regardless of water availability, the new target prioritises improvements where water is potentially constrained but we are also still committed to ongoing improvements in water efficiency at all other sites. In FY19, six New Zealand sites: Edendale, Clandeboye, Darfield, Brightwater, Lichfield, and Maungaturoto; and one Australian site: Stanhope, were identified as in water-stressed regions<sup>1</sup>.

At our Whareroa site, work has been completed to reuse water evaporators and reverse osmosis plants in our boiler and cooling towers. This is expected to save over 300 million litres of water per year from FY20. See the case studies on the next page for some further examples.

<sup>1</sup> We determine whether a site is in a water-stressed region using a combination of independent water-stress information (e.g. WRI Aqueduct) and local information (e.g. water allocation).

Water is a precious resource. We want to look after it and use it wisely.

All our manufacturing sites look for ways they can reduce or reuse water but here, we explain how two sites have achieved big improvements in completely different ways.

### ▶ CASE STUDY

## Doing our bit at Edendale

At Edendale this year, we implemented a system to capture the water extracted from milk as we turn it into powder. Using a filtration process called reverse osmosis, the water is treated so we can reuse it in the factory instead of using fresh water.

We estimate this initiative saved between 700-750m<sup>3</sup> of water per day when it went live in February, and can save about 1,000m<sup>3</sup> water per day in optimal operating conditions. This means we draw less water from the local aquifer and we can do our part to help ensure it remains a sustainable resource for the local community. Following two exceptionally dry winters, monitoring of the aquifer level has shown a downward trend but, this year there are positive signs of recovery.



### ◀ CASE STUDY

## Teamwork at Hautapu

Rather than making one single large change, the whole Hautapu site has been working together to make a lot of small changes that add up to a big improvement. The first step was understanding the usage of water in greater detail across the site. This focus began in FY18 and involved mapping the water use and installing some extra metering. It was then up to the entire team to make the difference. Departments had targets for savings and took responsibility for investigating excess usage and they continue to do so.

For example, improvements were gained by improving the efficiency of cleaning-in-place processes and returning the water condensed from steam for use in the boilers. The rewards have been reaped in FY19, using 161 million litres less than FY18. That's enough water to fill more than 64 Olympic-sized swimming pools. The efforts not only reduced water use, they also improved energy efficiency and saved wastewater treatment costs too.

# Land and water CONTINUED

## Our Performance

On-farm New Zealand					
Indicator	Target	Performance			Commentary
		FY17	FY18	FY19	
Farms with Farm Environment Plans (FEPs)	100% by end 2025	–	12% <sup>1</sup>	23%	Our goal for FY19 was for a further 1,000 farms to have completed an FEP and this has been achieved. We expect at least a further 1,000 to be completed during FY20 and we are exploring options for more FEPs to be delivered each year.
Farms participating in nutrient management reporting and benchmarking	100% by 30 Nov 2015	95%	97%	96%	The effort to achieve this target was initially underestimated and so it has taken longer than expected to reach what is considered full adoption and completion of this target. This year we have launched a new Nitrogen Risk Scorecard (see page 58).
Farms with waterways have documented riparian management plan	100% by 31 May 2025	4%	25%	37%	This is now being progressed with Farm Environment Plans (see above) but due to prior work completed, overall progress is more advanced.
Farms with water meters on significant water intakes	85% by 2020	51%	53%	54%	Through FEP's we are focusing on driving efficient water use by all farms, whether for freshwater irrigation, shed water uses or stock water supply. FEP's ensure the water use mitigations are suitable and applicable for the individual farm and will drive the best outcome. We will continue to monitor the presence of water meters but we are no longer pursuing this target.

Manufacturing					
Improvement in water efficiency (water used per cubic metre of milk processed)	20% reduction by 2020 from FY15 baseline for NZ	1.3% reduction from FY15	2.4% reduction from FY15	6.5% reduction from FY15	We made significant progress this year and it would have been a greater decrease if the benefits from improvements at Darfield had not been delayed for extra safety checks. This New Zealand target has now been superseded by a global target focused on absolute reduction at sites in water-stressed regions.
Improvement in water efficiency (water used per cubic metre of milk processed)	Measure and report (global)	–	–	0.4% improvement from FY18	Our water reduction target is now focused on sites in water-stressed regions but we will continue to monitor water efficiency across all our sites.
Manufacturing sites are treating wastewater to leading industry standards	100% of sites by 2026 (global)	25%	26%	29%	Due to improved management of irrigation at Studholme the site met the required standard this year. Combined with the divestment of our Venezuelan business, this gave 3% improvement.

FY19 performance: ● Good progress. ● Some progress or slight delay. ● Off track.

Water withdrawn by source	FY19	
	Volume (000 m <sup>3</sup> )	Percentage
Surface water (including water from wetlands, rivers, lakes and oceans)	25,842 ▲	49%
Groundwater	17,427 ▼	33%
Municipal water supplies or other public or private water utilities	9,473 ▼	18%
Other (e.g. rainwater collection)	0	0%
<b>Grand Total</b>	<b>52,742 ▼</b>	

Globally our absolute water usage has reduced this year by 2.4% and we remain a net producer of water due to the water collected when we turn milk into powders. A contribution to the reduction this year is the divestment of three manufacturing sites.

Water discharge	FY19	
	Volume (000 m <sup>3</sup> )	Quality (COD <sup>2</sup> mg/L)
Discharged to irrigation	17,762 ▲	1,221 ▼
Discharged to river	25,092 <sup>3</sup> ▼	72 ▼
Discharged to ocean	13,241 ▼	2,105 ▲
Discharged to municipal	5,217 ▼	1,874 ▲
Discharged to other	0	0
<b>Grand Total</b>	<b>61,311 ▲</b>	

Water withdrawn and discharged figures include the contribution of these sites for the part of the year that they were under our management control. Excluding those sites from the entire year the global reduction in water used was 1.9%.

## WHAT'S NEXT

### On farm

- We will continue to support our New Zealand farmers as they establish Farm Environment Plans (FEP), focusing on the specific priorities for their farm.
- We will use this approach to drive improvements that positively impact water quality, water use, soil health and biodiversity.
- We will investigate applying our approach to tailored farm environment planning in other countries where we source milk, and aim to set new targets that cover our global on-farm activities around water.

### Manufacturing

- We will continue to focus on operational improvements within our manufacturing sites, sharing lessons from sites that successfully improve water efficiency with our other sites around the world.
- We will continue to progress a prioritised sequence of such investments to reduce our water usage and upgrade our wastewater treatment to leading standards.

<sup>1</sup> Since reporting last year we have revised our approach for recognising those FEPs delivered to our farmers by other organisations. This has resulted in an increase for FY18 from 10% to 12%.

<sup>2</sup> Chemical Oxygen Demand – an indicator of water quality measuring chemicals in water that can be oxidised.

<sup>3</sup> In FY18, the discharged to river volume was understated by 3.9 million m<sup>3</sup> due to two omitted cooling water outflows.

HEALTHY ENVIRONMENT

CASE STUDY  
Farmer Focus

Andrew and Vicky Booth are 50:50 sharemilkers on Andrew's parents' dairy farm at Titoki in Northland. Andrew grew up on the farm before heading off to Lincoln University to study and where he met Vicky. After getting experience working on some other farms, Andrew and Vicky returned to the family farm in 2010.

Gradually, building on the work his father started, they made improvements to the farm, fencing off native bush blocks and waterways and over the last few years they have planted large riparian areas in native plants. Working with the Integrated Kaipara Harbour Management Group to source native plants and local schools for some planting help, the Booths have established more than 11,000 natives. But planting is just the start. Andrew has found that manual weeding, especially in the first year is vital to stop the native plants being overrun.

In October 2018, the Booths got a Farm Environment Plan (FEP). Having already tackled the big obvious jobs, Andrew finds the FEP useful to record what has been done and, working with the Sustainable Dairy Advisor, the framework helps prioritise the next improvement actions to get the best return to the environment for the effort and cost.

When DairyNZ was running its climate change information sessions back in 2018, the science was all quite new to Andrew but it interested him and he wanted to know more. He volunteered to be a climate change ambassador so he could learn and share what farmers can do to play their part.

What he found was farmers are already taking steps to reduce their footprint without knowing how their improvement is connected to greenhouse gas (GHG) emissions. For now, the biggest reductions are still from good management such as being efficient with feed, optimising stock numbers and reducing replacement rates. Andrew was involved in the pilot of the farm-specific GHG report which Fonterra is now rolling out to all farmers. He finds it a useful tool to get a clearer picture of the where the emissions are coming from, what changes will help and looking at the trend over time.

Andrew and Vicky were the only farmers amongst the eight finalists in the Cawthron Institute's New Zealand River Awards this year which recognise those who are working to improve river health.



*"I wanted to demystify climate change, make it more real and more achievable for farmers"*

Andrew Booth.

# Climate change

## Agriculture and associated land use change account for about 24% of global greenhouse gas (GHG) emissions.

Agricultural production is already facing significant disruption from changes to climate and increased variability in weather patterns. All food producers must therefore reduce GHG emissions and adapt to the effects a changing climate has on agricultural production.

New Zealand's emissions profile is unique as nearly half of our greenhouse gases come from the agriculture sector. While most developed nations face the challenge of transitioning industrial processes and moving to renewable energy, we must find a way to manage our animals' natural emissions while also addressing the use of fossil fuels in transport and manufacturing.

We are committed to limiting global average temperature increase to 1.5 degrees Celsius above pre-industrial levels, and we see the introduction of climate legislation in New Zealand as a critical step to achieving this.

To move to a sustainable future, we need food that is nutritious and as emissions efficient as possible. However, there is a huge variance between the most and least efficient producers of each food type. New Zealand farmers are already some of the most carbon efficient in the world, due to our less-intensive efficient pasture system.

The New Zealand Biological Emissions Reference Group identified that total biological emissions in New Zealand could reduce by 10% to 21% by 2030 (from a 2017 base) and by 22% to 48% by 2050. However, to achieve these reductions the agriculture sector will need to deploy a comprehensive package of breakthrough mitigation activities, including some that are not yet technically and commercially viable.

For Fonterra and its farmer owners, this challenge is significant. Our business represents approximately 20% of New Zealand's gross GHG emissions, with 90% of those emissions from farms; 9% per cent from manufacturing and 1% from distribution to markets across the world.



All scientific projections show that the effect of global warming will continue to increase for decades to come, irrespective of efforts by the global community to start to reduce emissions. We therefore support the development of national adaptation plans. Based on climate change projections, food production in many parts of the world is expected to experience negative impacts from resulting changes in natural resources. However, a large proportion of Fonterra's existing supply base is in regions where impacts may be less severe than elsewhere, and there is a good opportunity for New Zealand to continue to produce safe, world-class quality food products.

This section covers our impact on, and our response to climate change from the manufacturing operations that we manage globally and in relation to the farmers from whom we collect milk.

### Our Approach

The GHG emissions associated with dairy products primarily come from the cows on the farms. The largest component of this is the methane the cows produce while digesting feed, emitted mainly through belching (see page 69 for a breakdown for New Zealand farming).

Within our own operations, the majority of our GHG emissions arise from the energy we use. Using heat to pasteurise milk and dry it into powders is great for food safety, and for turning a short shelf-life, seasonal product into long-life valuable nutrition which is very efficient to transport. But it does require significant amounts of reliable energy.

The GHG emissions from the distribution of our finished products to our customers around the world only account for about 1% of our total GHG emissions.

We have set specific targets for GHG emissions arising from our farming and manufacturing operations and we have initiatives underway to help achieve these.

Please refer to "Working with farmers" on page 52 and "Managing operations" on page 54 for further details of our approach.

HEALTHY ENVIRONMENT

# Climate change CONTINUED



**What we've been doing**

**On-farm life cycle assessments**

To help us understand the full carbon life cycle to the farm gate for our main milk supply regions, and identify areas for improvement, we commission regular independent analysis. This allows us to estimate our absolute GHG emissions related to farming (see graphs on page 68).

In New Zealand, for the 2017/18 season milk, the estimated cradle-to-farm-gate carbon intensity, including land use change (LUC) is 0.91<sup>1</sup> kilograms of carbon dioxide equivalent per kilogram of fat-and-protein-corrected milk (kg CO<sub>2</sub>-e/kg FPCM). Excluding land use change this is 0.78 kg CO<sub>2</sub>-e/kg FPCM, which is up slightly on our 2014/15 baseline season (0.77 kg CO<sub>2</sub>-e/kg FPCM) and our highest since 2012/13 season. The rise is primarily due to increased brought-in feed, mostly PKE<sup>2</sup>, due to drought in some regions.

This year we undertook our first assessment for farming in Chile. For the 2016/17 season we estimate that farms supplying our Soprole subsidiary in Northern Chile had an average of 1.34<sup>1</sup> CO<sub>2</sub>-e/kg FPCM and those supplying our Prolesur subsidiary in Southern Chile had an average of 2.33<sup>1</sup> CO<sub>2</sub>-e/kg FPCM.

Our most recent assessment for our milk collection regions in Australia was for 2015/16 season at 0.98 kg CO<sub>2</sub>-e/kg FPCM, and for China the 2016/17 season was 1.40 kg CO<sub>2</sub>-e/kg FPCM<sup>3</sup>.

**Improving on-farm performance**

Over the last 25 years, by improving the efficiency of their farming operations, New Zealand farmers have reduced on-farm emissions intensity by about 20%<sup>4</sup> with the strongest improvements from 2007 to 2016.

Over the last two years, Owl Farm, a demonstration farm<sup>5</sup> near Hamilton that supplies Fonterra, has reduced GHG emissions by 8% and lifted operating profit by 14% through improved management practices. Achieving this is challenging and relies on highly-skilled farm management and high-quality data to

support decision-making. To support our farmers, we have been working on a trial of farm-specific GHG reporting. The report provides the farmers with a breakdown of their estimated on-farm GHG emissions by the source of those emissions to help them with decision-making.

Our goal is for all our New Zealand farmers to have a report by the end of 2020. The pilot process has also established a group of GHG ambassadors, farmers who understand the sources of GHG emissions and the management changes which can reduce these and they are sharing their learnings with other farmers.

**Engaging on proposed legislation**

In New Zealand this year a Zero-Carbon Amendment Bill has been subject to consultation and Fonterra supports this legislation. We support the establishment of the Climate Change Commission, the development of a national adaptation plan and the split gas approach which recognises the differences between short-lived and long-lived gases.

We support the 2030 methane target and consider that the 2050 target should be provisionally set at up to 24% net reduction from 2017, with reviews of the targets based on scientific and economic analysis. It is very clear that both the 2030 and 2050 methane targets are very ambitious and further research and development is needed to achieve them.

**Investing in breakthrough technologies**

We invest in cutting-edge technologies to reduce agricultural emissions through the Pastoral Greenhouse Gas Research Consortium (PGgRC). This year we also started work with New Zealander, Dr Ian Hunter at the Massachusetts Institute of Technology and started work with DSM to investigate the use of their methane inhibitors with pasture-based farming.

We want to identify breakthrough technologies which can provide a step reduction in the biological emissions produced by cows and promote such solutions widely so they have an impact wider than the regions where we farm.

While there are some promising ideas, such as cow breeding, feeds and inhibitors, we also face some dilemmas. For example, to maximise the effectiveness of inhibitors administered through supplementary feed, the cows would need to spend more time in sheds or on feed pads being fed the special feed. This not only increases the farming costs<sup>4</sup>, it is at odds with the growing consumer interest in pasture-based cows. This means our focus is on inhibitors that can be fed at milking time, and then reduce emissions while the cow is back out on the pasture.

**Improving manufacturing energy efficiency**

Improving energy efficiency in our manufacturing operations has been our long-term strategy and it remains a priority. It reduces emissions, makes commercial sense and will help our transition to lower carbon fuel sources. Lower energy requirements potentially means less capital and less additional operating costs for new fuels and, it is more likely that viable alternatives will be available.

Our long-running focus on energy efficiency in New Zealand manufacturing has delivered 19.5% reduction in energy intensity since 2003, up slightly on FY18 and on target to deliver 20% by 2020. Specific projects this year have included multiple heat recovery projects at our Whareroa site, and installation of condensing economisers at Kauri, Reporoa and Hautapu. If we had not delivered this 19.5% energy efficiency improvement, this year we would be using an extra 5.8 petajoules. That's equivalent to almost one million barrels of oil, or enough energy to power over 226,000 New Zealand households for the year.

Around the world, and excluding divestments during the year, our manufacturing energy efficiency improved in seven countries this year and declined in three, giving an overall improvement of 0.8% to 7.32 GJ/tonne of finished goods. There was a similar pattern for emissions intensity giving an overall improvement of 0.6% to 0.53 tonnes of carbon dioxide equivalent per tonne of finished goods.

The predicted impact of climate change means that some parts of the world, such as New Zealand, will be better placed to grow sustainable nutrition. Therefore, although only about 1% of our total emissions arise from distribution, we continue to seek opportunities to improve efficiency in logistics. This year, Kotahi, our ocean freight partner has achieved a reduction in emissions by moving more containers on larger, well utilised networks. The carriers Kotahi works with have also been participating in the International Maritime Organisation's global ocean freight emissions reductions initiative. This requires all carriers to have either switched to lower emitting fuel types, or implemented CO<sub>2</sub> reduction systems by 2020.

**Transitioning to low-carbon energy sources**

Finding viable alternatives to coal is our first priority. Our coal use now only occurs in New Zealand, where a third of our sites still rely on it, primarily in the South Island. The scale of our coal use and the lack of economically viable alternatives means that we will remain reliant on coal for longer than we would like. However, this year, we have committed to not installing any new coal boilers and not increasing our capacity to burn coal at any of our manufacturing sites. Our emissions from coal this year remained essentially the same as FY18, despite processing more milk. Fluctuations in milk volumes in different regions, and the need to retain a secure supply of energy, means our usage of coal will continue to change a bit from season to season.

In the North Island, we are looking at options to transition our coal sites, including to natural gas. However, we recognise that transitioning directly to renewable sources of energy is a better option.

In the South Island, where natural gas is not available, we are progressing a combination of wood biomass and increased use of electricity.

The challenge with adopting wood biomass in New Zealand and Australia is the security of supply and obtaining sufficient volumes within a reasonable distance of the sites to allow full displacement of fossil fuel. However, this year we completed the conversion of our Brightwater site to co-fire wood biomass with coal and completed a trial of wood pellets at our Te Awamutu site (see Case Study on page 67).

Based on the feasibility study on electrification that we completed in FY18, this year we have progressed our planning to electrify our Stirling site. This will be a multi-year project installing a set of different technologies including a mechanical vapor recompressor (MVR) which operates on very low energy usage, a heat pump and either an electrode boiler or a biomass boiler.

We have a roadmap of proposed projects to deliver our targeted reduction in GHG emissions. The capital investment will be staged with each project involving several years of design and planning before implementation. We also continue to investigate emerging technologies which could help the transition for some sites further down the track.

<sup>1</sup> In previous reporting for on-farm emissions we had aligned with New Zealand government reporting and used IPCC Assessment Report 4 (AR4) global warming potential (GWP) factors. This year, to allow easier comparison with other geographies, we have adopted IPCC AR5, with GWP factors of CO<sub>2</sub> = 1, N<sub>2</sub>O = 265 and CH<sub>4</sub> = 28. We have recalculated prior years. This change results in an increase of about 5%.  
<sup>2</sup> PKE is palm kernel expeller. See responsible procurement on page 42.  
<sup>3</sup> Figures for Australia and China have also been re-calculated to make use AR5 GWP factors.  
<sup>4</sup> Interim Climate Change Committee (2019). Action on Agricultural Emissions (p26).  
<sup>5</sup> Owl Farm is a demonstration farm and DairyNZ climate change partnership farm.

HEALTHY ENVIRONMENT

# Climate change CONTINUED

Our Performance

Indicator	Target	Performance (cumulative change)			Commentary
		FY17	FY18	FY19	
Reduction in manufacturing energy intensity (energy per tonne of production)	20% reduction by 2020 from FY03 baseline (NZ)	17.8% reduction	19.3% reduction	19.5% reduction	There was a further improvement in FY19 and we remain on track to deliver this target. ●
Reduction in absolute manufacturing emissions <sup>1</sup>	30% reduction by 2030 from FY15 baseline (Global)	4.6% reduction	2.5% reduction	3.5% reduction	We have reduced absolute emissions by 3.5% from baseline and our overall manufacturing emissions intensity improved slightly compared to FY18. We have a roadmap to deliver the target and capital investment will be staged. ●
Net change in GHG emissions from dairy farming since 14/15 (NZ) (Pre-farm gate tCO <sub>2</sub> -e) <sup>2</sup>	Neutral to 2030	397,000 reduction on 14/15	1,174,000 reduction on 14/15	864,000 reduction on 14/15	Our estimated absolute GHG emissions continues to be well below the baseline season. There was an increase compared to FY18 due to increased milk production without improved emissions intensity. Underlying emissions intensity on farm is 2.0% higher than 14/15 baseline (1.0% higher excluding land use change component). ●

WHAT'S NEXT

- We will deliver farm-specific GHG reporting to all farmers in New Zealand.
- We will continue to invest in research and development to investigate breakthrough mitigation technologies for animal emissions.
- We will continue to progress our energy efficiency improvements at manufacturing sites.
- We will continue our transition to low-carbon energy sources at manufacturing sites.

<sup>1</sup> We have recalculated our baseline and performance to exclude the businesses we divested of during FY19 so the underlying trend can be determined (without this FY19 was 3.9% reduction on baseline). FY18 manufacturing emissions were also updated to reflect finalisation of FY18 actual data including electricity grid emission factor and coal emission factor.  
<sup>2</sup> Baseline and prior reporting years have been recalculated for this report to make use of IPCC Assessment Report 5 global warming potential factors.  
<sup>3</sup> Equivalent number of cars calculated using factor from New Zealand Energy Efficiency and Conservation Authority (EECA).

FY19 performance: ● Good progress. ● Some progress or slight delay. ● Off track.



CASE STUDY

## Using wood biomass

As we transition our manufacturing operations to alternative low-emissions fuel sources, we must maintain a secure supply of energy. It takes a lot of energy to run our manufacturing sites, particularly those that turn the highly-perishable milk into long-lasting nutritious powders. At the peak of the season in New Zealand our sites are processing over 80 million litres of milk per day. Without continuously available energy, we risk wasting valuable nutrition and impacting the environment by disposing of it.

In New Zealand, wood biomass is a by-product of forest harvesting and processing, making it a good low-carbon alternative to coal. However, it needs to be available close to our manufacturing sites to avoid the GHG emissions from transportation and it needs to be available in large volumes on a reliable and cost-effective basis.

We chose Brightwater, one of our smaller sites, as our prototype. We converted the boiler so it can co-fire wood biomass with coal. Taking a co-firing approach for our first biomass site ensured we had resilience in case we had any problems with supply or operational performance. It went live in November 2018, reducing GHG emissions by about 480 tonnes CO<sub>2</sub>-e during FY19 and it is estimated it will save about 2,400 tonnes CO<sub>2</sub>-e per year.

Building on the lessons learned at Brightwater, this year we also completed a successful trial at Te Awamutu. We temporarily ran the coal boiler exclusively on wood pellets and tested it under different conditions for three days.

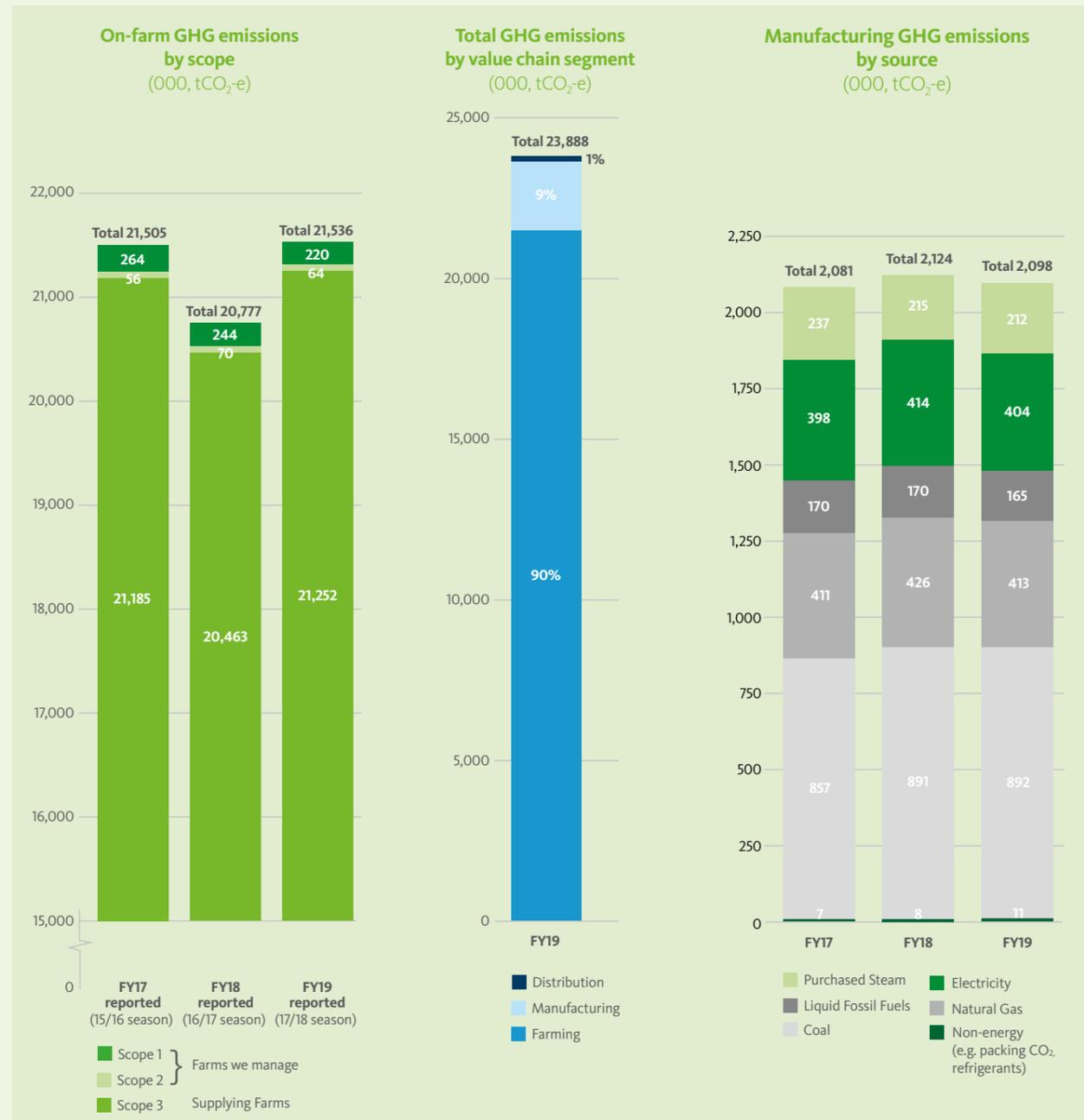
While it highlighted some practical issues which would need to be managed, we are now working to ensure security and quality of the wood pellet supply on a cost-effective basis. If full conversion proceeds, it is estimated the site could reduce carbon emissions by around 84,000 tonnes per year, equivalent to taking more than 32,000<sup>3</sup> cars off the road.



# Climate change

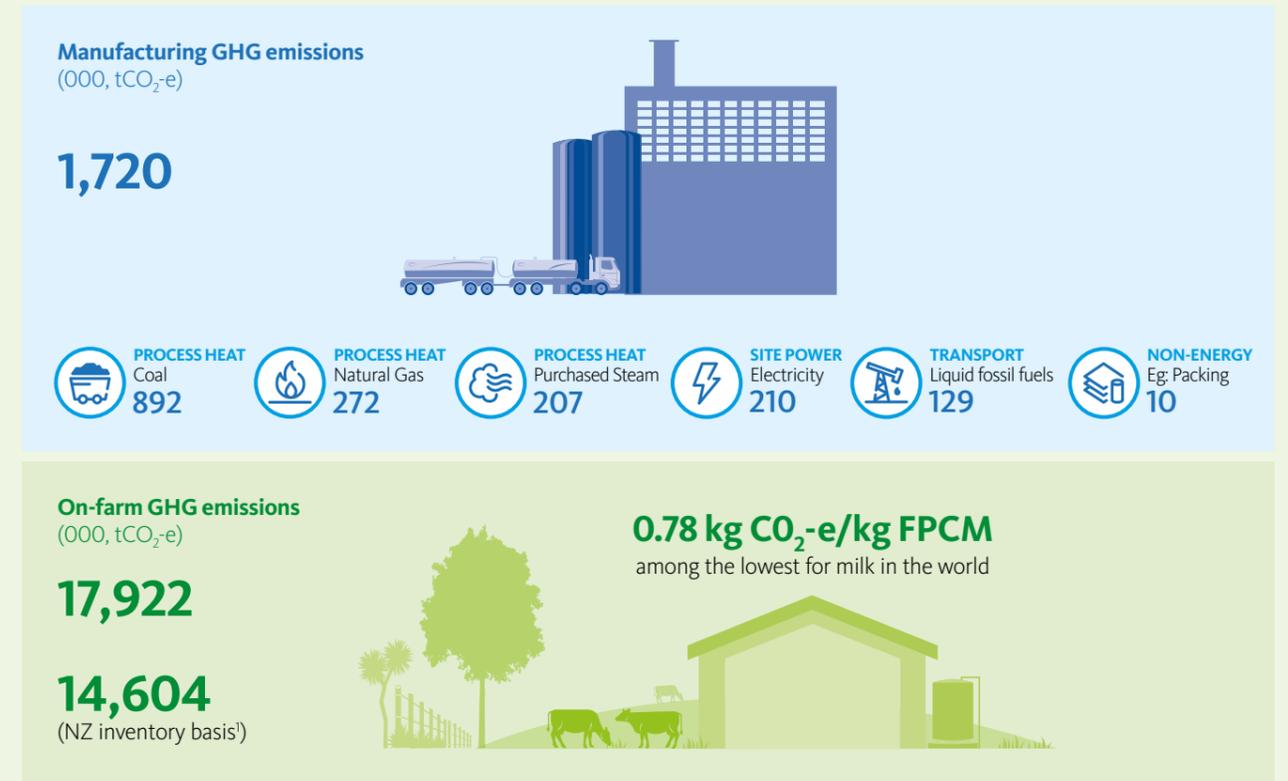
CONTINUED

## Global GHG emissions



For detailed information on the scope, methodology and assumptions used in reporting these emissions, including corrections to prior reporting, see [www.fonterra.com/2019EnvironmentalDataReportingNotes](http://www.fonterra.com/2019EnvironmentalDataReportingNotes). Summing of individual numbers from breakdowns may not add up to the totals due to rounding. Emissions from biofuels are not shown as protocol excludes them from the total. Biofuels emissions in FY19 were 4,619 tCO<sub>2</sub>-e.

## New Zealand GHG emissions



**Emissions footprint**  
For an average New Zealand Dairy Farm

Category	Percentage
Methane	75%
Nitrous Oxide	16%
Carbon Dioxide	9%
Enteric methane <i>Methane created in the digestive processes of rumen.</i>	98%
Excreta <i>Nitrous oxide caused by dung and urine on pasture.</i>	73%
Nitrogen Fertiliser <i>Carbon dioxide from Nitrogen fertiliser production.</i>	56%
Dung and Urine <i>Methane released from dung and effluent on pasture.</i>	2%
Nitrogen fertiliser <i>Nitrous oxide caused by Nitrogen fertiliser.</i>	23%
Other Fertilisers <i>Carbon dioxide from the production of fertilisers such as lime.</i>	20%
Greenhouse Gases: Emissions on farm are created from the natural digestion processes of dairy cattle, and are also caused by the use of farm inputs such as fertilisers. Reducing the emissions footprint of milk production requires maximising the percentage of farm dry matter used for milk production while minimising the use of other farm inputs.	
Crop Residues <i>Emission from material left on pasture.</i>	3%
Electricity <i>Carbon dioxide from farm energy use.</i>	17%
Effluent <i>Nitrous oxide from effluent captured in the farm's effluent management system.</i>	1%
Fuel <i>Carbon dioxide from farm vehicle emissions.</i>	7%

<sup>1</sup> To allow better comparison to other New Zealand reporting this excludes land use change and overseas feed components.

# Packaging and waste

## Packaging is vital for delivering safe and quality nutrition, and is also a large component of our direct and indirect waste.

As we refreshed our materiality assessment this year we explicitly analysed waste arising from our direct operations separately from the indirect waste that arises from our packaging after use. Our assessment concluded that these two topics are of very similar importance. Furthermore, addressing the recyclability of our packaging will help reduce both our own solid waste to landfill and that which occurs post consumption.

The majority of our finished goods are ingredients for use by business customers; but we also produce packaged goods for foodservice and consumers.

This section covers the packaging used for all finished goods manufactured at the sites we manage and at third-party manufacturing sites who make finished goods for us. It also covers the solid waste related to all sites that we manage, including manufacturing sites, offices, retail stores and farms.

### Our approach

We want to maximise the nutritional value delivered from every drop of milk by minimising food loss across our supply chain, from the farm to the consumer. This not only helps us deliver the maximum return to our farmers, it also delivers better outcomes for people and the environment.

Through our Group Environment Policy and supporting standards, we require all our sites to: manage hazardous substances responsibly; reduce waste, including packaging; maximise manufacturing yield and support local waste solutions. Backing this, we have packaging design guidelines and a cross-functional group of experts to set direction and support progress.

Our aim is to deliver products right-first-time and capture by-products that were previously considered waste, such as whey, to make them into new valuable products. You can call this minimising waste or maximising yield. We regularly monitor this and a specialist centralised team provides support to manufacturing sites where the performance is falling behind the best.

## What we've been doing

### Setting new targets

We aspire to play our part in achieving the concept of 'zero waste' and this year we set specific global targets to guide our efforts.

- 100% recyclable, reusable or compostable by 2025.
- Zero solid waste to landfill by 2025.

For Australia we had already committed to the Australian Packaging Covenant, but this year we also joined the New Zealand Plastic Packaging Declaration and the Chilean Plastics Pact.

In Australia, there is already an industry support tool available to independently assess the recyclability of consumer packaging. Using this tool we have determined that over 90% of our finished goods packaging designed for the Australian market is considered recyclable.

For the rest of the world such tools do not exist so we are undertaking a detailed assessment of the packaging materials we use, how these are combined into finished goods and the typical recycling infrastructure available in the main markets where we sell these products. We also think it is important to track our progress on packaging by the tonnes of finished goods packaging sold because that better represents our impact on society.

Bulk ingredients products (e.g. pallets of 25kg bags of powder) are a large part of our product portfolio and, at this stage, we already know that in most markets where we sell, several of our most used packaging formats are readily recyclable:

- Paper and cardboard
- Metal cans and drums
- Wooden pallets.

We also know that we have a range of formats, used in lower volumes, where the ability to recycle varies significantly:

- Multi-layer mixed material cartons used for liquid products (e.g. Tetrapak)
- Laminated and co-extruded films (e.g. cheese bags)
- Foil-based films and papers (e.g. powder sachets).

Led by our Fonterra Research and Development Centre, we have established a programme to identify and evaluate alternative sustainable packaging materials and solutions. The assessment is considering a range of performance attributes including food safety.



### Collaborating on waste reduction

To eliminate waste, it is important for businesses and other organisations to work together. For example, waste streams from some companies can become value streams for others; and the combined waste from multiple organisations can reach a scale that makes new innovations viable. To support this we host an annual Recycling Forum to facilitate new relationships and encourage innovation.

Working with Adhesifs, the supplier of labels for some of our large volume products, we are now able to recycle the plastic backings from the labels which were a large part of our waste to landfill from our Takanini site in New Zealand. The backings are turned into tissue paper which is used in shirts and shoe boxes. The tissue paper can thereafter be put in the normal recycling stream for paper. This solution is currently overseas but it is a good approach until we upgrade our labelling equipment in the future.

In FY18, we completed trials in collaboration with a Kiwi start-up called Future Post which turns waste plastic into fence posts for use on farms. This year they won an innovation award at the New Zealand Field Days and we retail the posts through our Farm Source™ stores (see case study on page 73).

### Collaborating on packaging

We have worked with Oji Fibre Solutions in New Zealand to design a bulk bin suitable for storing and transporting large volumes of milk powder. Historically we have imported these bins from an overseas provider, but working with Oji Fibre Solutions we now have a locally sourced, food-grade solution which is reusable multiple times and recyclable at the end of its life. It is also collapsible and stackable, so it is efficient to store and transport when not in use. We are now working on a similar design for liquid products.

In Australia, in collaboration with one of our customers, we have changed from octo-bins to bulk bags for one specific powder product, with an annual saving of 72 tonnes of material.

We are also working with vendors looking at options for changing the packaging materials we use, including the inclusion of some recycled plastic content (e.g. rPET). This needs careful evaluation to validate the food safety aspects, and to assess the options to make the approach circular and local.

### Using less materials

When designing new packaging, we seek to reduce the amount of materials to an optimal level. This not only reduces the materials used and saves cost, it also means less materials to be recycled, reused or disposed of after consumption. However, we must ensure that packaging is robust enough to protect our products and avoid wasted food.

In Australia, we eliminated a label from the back of a range of milk. This only saves 1g per item but when you sell 78 million per year that corresponds to 78 tonnes less material per year.

We have also eliminated the foil layer from the outer layer of a number of products. By eliminating this foil layer, which has been used to provide colourful information to the consumer, we not only reduce the quantity of materials used, it generally makes the underlying packaging easier to recycle too.

### Supporting our farmers

In New Zealand, as part of developing a Farm Environment Plan, our Sustainable Dairy Advisors assess on-farm waste management with our farmers and assign actions towards best practice.

Our Farm Source™ store network supports industry initiatives such as the plastic container and waste chemical recovery services provided by AgRecovery by acting as a drop-off location, and plastic wrap recycling via Plasback, where farmers can order a collection through our stores.

This year we also sponsored Trish Rankin's study investigating rural waste practices by New Zealand dairy farmers.

### Supporting food banks

Around the world, we support a number of food bank initiatives. This helps us reduce food waste and provides good nutrition for those who need it most. In New Zealand, we donated more than 80 tonnes of food to a number of charities including the Salvation Army, the Auckland City Mission and Kiwi Harvest. In Australia, we continued to support Foodbank, Australia's largest hunger relief organisation, donating over 74,000 meals and 828,000 Foodbank serves of fresh milk in 2018. In the USA our team volunteered time to help the charity Feed My Starving Children by packing boxes of nutritional meals that are sent to malnourished children around the world. Our team packed 121 boxes of food which is enough to provide over 26,000 meals for children or feed 71 children – for a year. In Chile, we continued to support Red Alimentos.

HEALTHY ENVIRONMENT

# Packaging and waste

CONTINUED

Our Performance

Our targets					
Indicator	Target	Performance			Commentary
		FY17	FY18	FY19	
Solid waste sent to landfill (tonnes) (New Zealand)	20% reduction by 2020 from FY15 baseline (NZ)	5,295 7% up on FY15	5,663 14% up on FY15	4,877 2% <sup>1</sup> down on FY15	During FY17 we transitioned to a new waste provider and this makes it difficult to meaningfully compare against our FY15 baseline. However, we have made significant progress in FY19, reducing solid waste to landfill by 785 tonnes, equivalent to a 14% reduction since FY18. We are now focussing on our new global target. ●
Solid waste sent to landfill (tonnes) (Global)	Zero by 2025	15,113	16,184 <sup>2</sup> 7% increase	15,901 1.7% decrease	This is a new global target set this year and we have achieved a 1.7% reduction since FY18. The 785 tonne reduction achieved by our New Zealand business (above) was negated by increases in other countries around the world, most significantly in Chile. ●

WHAT'S NEXT

- We will continue to reduce the quantities of materials we use and increase yield by minimising waste across our full value chain.
- We will continue to reduce the amount of solid waste we send to landfill from all our operational sites.
- We will continue to transition our finished goods into packaging which is more readily recyclable.

DEFINITION

Zero waste:  
Is where products and processes are designed to minimise resource use, seeking to conserve and recover resources rather than burn or bury them, and influencing people to change their lifestyle to better emulate natural cycles.

<sup>1</sup> Absolute figures reflect totals to landfill for operations managed during the year. Progress against baseline has been recalculated for all years to exclude divested businesses so underlying trend can be viewed.  
<sup>2</sup> FY18 has been restated to include 753 tonnes of building construction waste omitted from last year's reporting.

FY19 performance: ● Good progress. ● Some progress or slight delay. ● Off track.

▶ CASE STUDY  
Australian Soft Plastics

In Australia we became a REDcycle Partner. REDcycle collect soft plastics such as cheese wrappers from special bins located in major supermarkets and send them to Victorian manufacturer Replas, who see plastic as a resource that can be turned into items such as the bench seat shown here.

Nitin, Essam, Eric and Jenny from our Australian packaging team are passionate about recycling and using the Australian assessment tool, they have determined that over 90% of our finished goods packaging designed for the Australian market is now considered recyclable.

(L-R) Nitin Raichurkar, Essam Elkhishin, Eric Taing, Jenny Phillips



◀ CASE STUDY  
Waitoa site reducing solid waste

Already operating at low levels of solid waste, achieving further reductions at sites like Waitoa needs everyone's help.

Personal protection items, such as paper hats and beard masks, are essential for food safety and these can only be recycled if they are carefully separated. This means collection points in changing rooms and all staff avoiding contamination with non-recyclable items such as ear plugs.

The different plastic types used, and in some cases different colours, must be kept separate to make it worthwhile recycling. This means lots of bins and everyone placing the right stuff, and only the right stuff, in each bin. Working together at site can make a real difference.



▶ CASE STUDY  
Future Post

In FY18, working together with Kiwi start-up Future Post, we completed trials which turn waste plastic into fence posts. This year Future Post won an innovation award at the New Zealand Field Days.

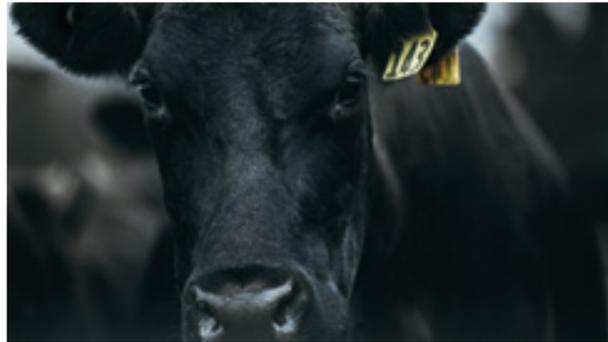
Anchor milk bottles are sourced from our manufacturing sites and our bottle back system. Each post is made up of milk bottles and soft plastics. It takes approximately 208 milk bottles to make a 1.8m post.

The posts are manufactured in New Zealand, available through our Farm Source™ stores and, at the end of their life, they can be recycled into a new post.



HEALTHY ENVIRONMENT

# Animal health and biosecurity



## Cows are the heart of every dairy farm, and their health and welfare is of paramount importance to us.

We work with our farmers to meet globally recognised standards as set by the World Organisation for Animal Health, and eliminate practices that contravene the Five Freedoms.

This section covers animal health and welfare and biosecurity for farms we manage and farms that supply us with raw milk around the world.

### Our approach

Our farmers are required to uphold high standards of animal welfare and comply fully with the latest regulations and codes of welfare. These requirements are set out in Fonterra's Terms of Supply, and are guided by our overarching Group Animal Welfare and Biosecurity Policy and supporting standards.

We support our farmers to continuously improve animal health and welfare outcomes. We work with industry bodies and training organisations to ensure farmers have access to high-quality information that sets out expected best practice, relevant regulatory requirements and access to training where required. We work with industry partners such as meat processors, transportation companies and regulators to ensure best practice controls are in place.

The development of strategy, policy and standards for the global management of farm animal welfare is the responsibility of Fonterra's General Manager – Veterinary, Technical and Risk Management. The management and implementation of Fonterra's animal welfare policies and strategies are undertaken at a local level, supported by our centralised veterinary and risk team.

Globally, our International Milk Quality team assesses animal welfare as part of its milk quality audits in all markets outside of New Zealand where we source milk. This enables Fonterra to identify any issues and recommend improvements to farmers. Many markets also have local veterinary and milk quality support teams to manage this work.

## What we've been doing

### Co-operative Difference and Cared for Cows

As part of the Co-operative Difference (see page 53) farmers are being encouraged to establish animal health plans with their vets that go beyond compliance with law. The requirements for these health plans have been developed in collaboration with dairy cattle vets and include a set of metrics that must be collected and reported on an annual basis.

Building on the existing data collection, farm assessment and monitoring activities we already had in place, this year we started collecting additional information related to animal health and welfare, including details on mastitis occurrences and lameness. This extra information is required to support our "Cared for Cows" programme which launched in New Zealand in June 2018. By having independent certification against this standard we will be able to reinforce the good work done by our farmers.

### Antimicrobial resistance (AMR)

The prudent use of antimicrobials, particularly those identified as critically important for the treatment of human disease, will help to ensure that antibiotics remain effective for disease treatment in the future. Our policy is that, where antibiotics are to be used, it must be for the treatment of known infections under veterinary advice. Our milk testing regime includes specific testing for inhibitory substances such as antibiotics and there are financial penalties for farmers associated with non-compliance.

In New Zealand, we are working with regulators and the wider livestock sector to implement improvements for the management of AMR. In Australia, the dairy industry is aligning with the Australian Animal Sector National AMR Plan 2018 and taking a whole-of-industry approach to best-practice management and prevention of over-use.

Fonterra has representation on the New Zealand National Mastitis Advisory Committee, and supports the New Zealand Veterinary Association's aspirational goal that "By 2030 New Zealand Inc. will not need antibiotics for the maintenance of animal health and wellness."



## Supporting industry initiatives

A focus in New Zealand this year was winter grazing practices. Intensive grazing during wet winter periods and the grazing of fodder crops requires the adoption of good practices to avoid negative impacts to animal health and welfare and the environment. During FY19 we supported DairyNZ, other industry groups, and both local and national government bodies to promote the adoption of good practices and to prepare for next winter.

In Australia the recent focus has been supporting the industry efforts to eliminate painful procedures. In 2018/19 Fonterra trialled the mandatory use, and auditing, of pain relief for calf disbudding on 42 farms. In June 2019, we also introduced proactive farm visits to assess animal condition and support suppliers facing issues such as drought or feed gaps.

## Responding to biosecurity incursion

Since July 2017, when *Mycoplasma bovis* (*M. bovis*) was detected for the first time in New Zealand, we have worked with the Government, sector groups and other dairy companies to minimise the implications to both animal and farmer welfare, and support efforts to eradicate the disease.

The *M. bovis* bacterium has significant implications for disease management, animal welfare and milk production, however, it poses no risk to milk quality or food safety. Our Farm Source™ team and tanker operators have helped develop and coordinate multiple rounds of special milk testing to help the government track the incursion. We are also consulting with government and supporting their review of the Biosecurity Act (1993).

As of 23<sup>rd</sup> October 2019, 1,006,866 tests have identified 201 properties as having *M. bovis* and with 54 of them dairy farms. 185 of those properties have completed eradication procedures and are now considered clear of the disease.

## Our Performance

### Somatic cell counts

Somatic cell count (SCC) is not only an indicator of milk quality, a low SCC also gives an indication of good animal husbandry. Farmers have delivered excellent results in this area this year, with reductions in all regions except China which increased slightly from its great result in FY18.

Somatic cell counts by location			
	2016/17	2017/18	2018/19
	Average (mean) 000 cells/ml	Average (mean) 000 cells/ml	Average (mean) 000 cells/ml
New Zealand	177	180	168
Australia	186	178	171
China	167	168	183
Chile	260	319	312
Brazil	Not available	533	467
Sri Lanka	676	634	599
<b>Global weighted average (by volume)</b>	<b>180</b>	<b>184</b>	<b>173</b>

The European Union import/export standard of 400,000 cells/ml is a widely quoted standard and the results shown above indicate we are significantly less than this for nearly all countries and we will continue to work towards lower counts.

## Growth hormones

Due to animal welfare concerns, we do not support the use of hormonal growth promoting substances (HGPs) or substances stimulating increased milk production, such as rBST.

Neither of these substances are used by farmers in our supply chain, except in Chile, where there continues to be some isolated usage of rBST.

## Lifespan

Cows in New Zealand have long and productive lives. The latest available information indicates cows average 4.5 lactations (6.5 – 7 years) with a calving interval of 370.9 days<sup>1</sup>. These measures jointly reflect high reproductive performance, which can only be achieved under conditions of good animal management.

## Genetically Modified Animals

The use of cloned or genetically modified cows is not permitted by any Fonterra supplier.

## WHAT'S NEXT

- We will continue to work with farmers, veterinarians and regulators to support strong biosecurity and promote good animal health and welfare practices.
- We will continue to encourage the adoption of animal health plans as part of the Co-operative Difference framework.
- We will continue to stay abreast of international developments to ensure we maintain leading standards in the sphere of animal welfare.

<sup>1</sup> DairyNZ, New Zealand Dairy Statistics, 2017-18.

# Healthy Business

We are working together to deliver a sustainable business.

Through science and innovation we can respond to people's changing needs, attitudes and lifestyles to deliver a strong and stable payout to our farmers and a good return on capital for our investors. It's all part of ensuring our Co-operative is here for generations to come.

*Nā tō rourou, nā taku rourou  
ka ora ai te iwi.*

*With your contribution and my contribution,  
we'll all thrive together.*

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Creating value

# Healthy business

## As a co-operative, our business is about supporting our shareholder farmers' businesses.

That includes paying them the best price for their milk, providing them with a sustainable income, supporting the health of their businesses and the wellbeing of their families and employees.

The past few years have presented some challenges in our performance, which has led to us resetting our strategy and direction. This has refocused on our core role as a co-operative.

For Fonterra and our farmer shareholders a healthy business means a strong, sustainable co-operative that creates goodness for current generations and for generations to come. That means Healthy People and a Healthy Environment too. But we cannot make a difference to people and the environment if we don't have a strong, healthy business to provide a sustainable income and provide a stable platform for investment in the future.

We believe we have some unique strengths as a large-scale New Zealand co-operative that means we can lead the way in sustainable dairy products making a positive difference to the health of people and the environment. Making the most of this opportunity is the key to the long-term health of our business.



## How Fonterra is making this happen:

We are working together to deliver a sustainable business. To do this we will:

- ✓ **Support healthy, sustainable livelihoods for our farmers** by returning the most value from every drop of milk
- ✓ **Build a strong co-operative** by ensuring our business, including investments, delivers long-term value
- ✓ **Meet the changing needs of customers and consumers** by leveraging our unique strengths and innovating to create sustainable value for them and us.

### KEY POINTS FROM FY19

- **Farmer payments:** \$10 billion paid to New Zealand farmers for 2018/19 season and \$1 billion paid farmers for milk sourced in other countries – see [page 84](#)
- **Return on capital:** Our return on capital is 5.8%, down from 6.3% but we reduced capital spend by 30% to \$600 million – see [page 85](#)
- **Fixed milk price:** We introduced our 8th financial tool for farmers. The fixed milk price tool helps farmers reduce some of the risk arising from global milk price volatility – see [page 84](#)
- **Reduced electricity bills:** Working with Genesis Energy in New Zealand we launched a new electricity plan which can save farmers up to 25% off their milk shed electricity bill – see [page 84](#)



Fonterra's contribution to the SDGs from a healthy business perspective.



Create positive employment opportunities along our value chain (1.2)



Lift dairy productivity to meet growing nutritional needs (2.4)



Provide positive and inclusive employment for all groups (8.5)

# Group overview

## New Zealand Ingredients and our Foodservice business improved on last year but were offset by challenges in some markets, and significant impairments and one-off items, resulting in a net loss.

Cash flow improved significantly and solid progress was made on reducing expenditure and decreasing debt.

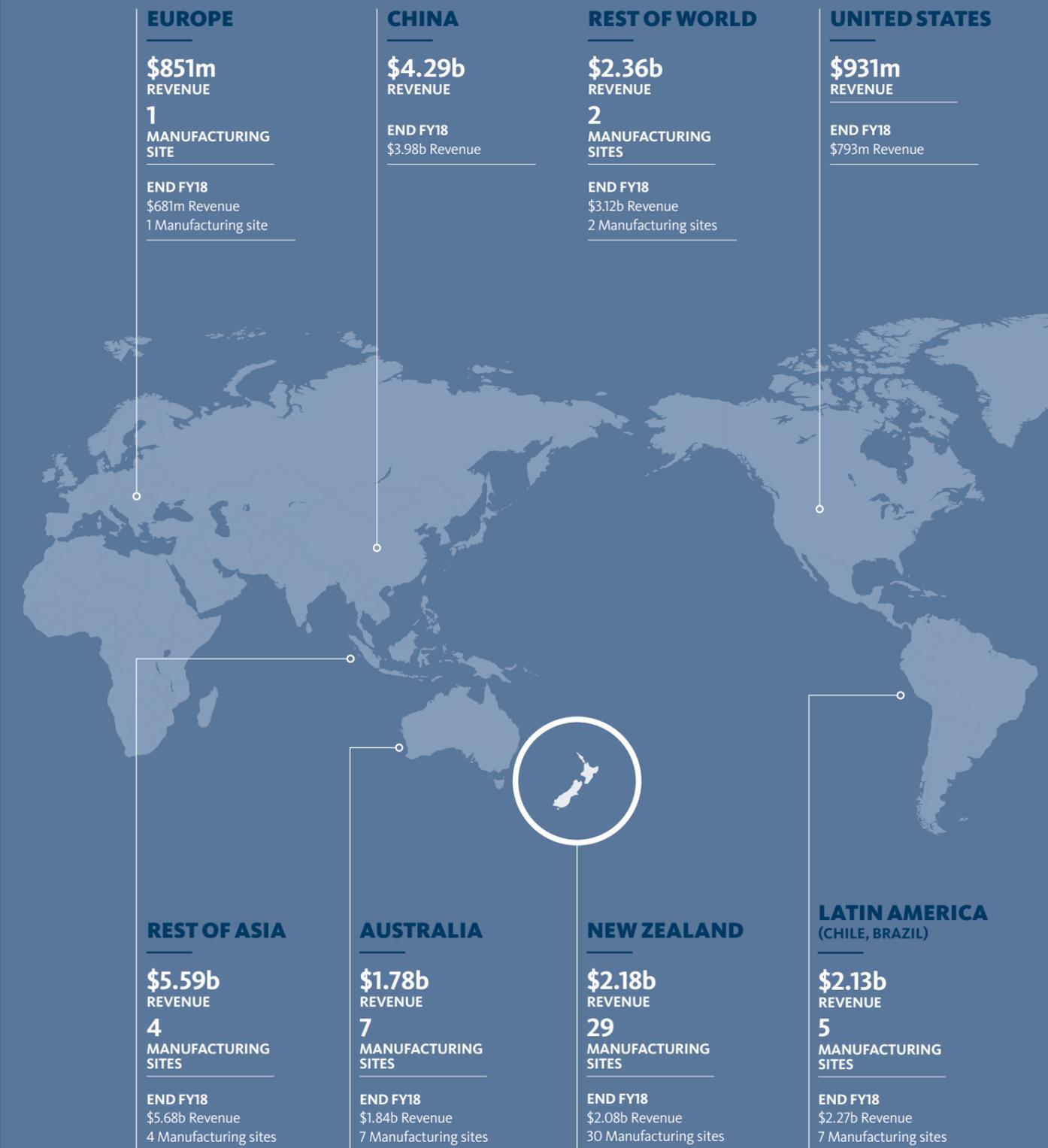
The performance of the largest part of our business, New Zealand Ingredients, improved on last year with increased sales and lower operating expenses contributing to higher normalised earnings before interest and tax (EBIT). Our global Foodservice business also improved on last year with normalised gross margin up 10%. This was despite lower sales volumes, following a slow start to butter sales in Greater China and Asia. Key areas of challenge in the business included Australia Ingredients, the ingredients and consumer businesses in Latin America and the consumer businesses in Sri Lanka, Hong Kong and New Zealand. These challenges were the main reasons our normalised gross margin was down \$137 million, or 4%, on the previous year, but were largely offset by normalised operating expenses decreasing by \$185 million. 'Other income' declined due to lower one-off gains than the previous year, and as a result our normalised EBIT declined 9% to \$819 million, from \$902 million the previous year.

There were also some significant one-off items. These totalled \$829 million before tax, and increasing to \$885 million after tax. Of this amount, \$59 million was attributable to non-controlling interests and the net amount attributable to equity holders is \$826 million. This included impairing the carrying values of some assets and other one-off accounting adjustments, the most significant being DPA Brazil, our Venezuelan consumer business, China Farms and our New Zealand consumer business. While they do not impact the day to day operations of the business, they are reported in the Income Statement and as a result we have reported a Net Loss After Tax of \$605 million. After adjusting for non-controlling interests, this represented 35 cents per share. Our continued focus on financial discipline has resulted in a reduction in normalised operating expenses of \$185 million, or 7%, and capital expenditure reducing by \$261 million to \$600 million. Combined with improved trade working capital and divestments, our free cash flow improved significantly and debt reduced by \$469 million. While good progress has been made on improving cash flow and reducing debt, given the disappointing earnings and significant one-off items we decided not to pay a dividend this year.

NZD MILLION	FOR THE YEAR ENDED		
	31 JULY 2019	31 JULY 2018	CHANGE <sup>1</sup>
Volume ('000 MT)	4,139	4,123	0%
Sales revenue	20,114	20,438	(2)%
Normalised gross margin <sup>2</sup>	3,015	3,152	(4)%
Normalised gross margin percentage	15.0%	15.4%	-
Other income and other <sup>3</sup>	115	246	(53)%
Reported operating expenses	(2,905)	(3,097)	6%
Normalised operating expenses <sup>2</sup>	(2,311)	(2,496)	7%
Reported EBIT	(10)	262	(104)%
Normalised EBIT <sup>2</sup>	819	902	(9)%
Net finance costs	(418)	(416)	(1)%
Reported tax expense	(177)	(42)	(321)%
Net loss after tax	(605)	(196)	(210)%
Reported earnings per share (cents)	(0.35)	(0.14)	(153)%
Normalised earnings per share <sup>2</sup> (cents)	0.17	0.24	(29)%
Dividend per share (cents)	-	10	-
Adjusted debt to EBITDA <sup>4</sup> (ratio)	4.3x	4.5x	
Gearing ratio <sup>5</sup>	48.2%	48.4%	
Return on capital <sup>6</sup>	5.8%	6.3%	
Free cash flow <sup>7</sup>	1,095	600	83%
Capital expenditure	(600)	(861)	30%

1 Percentages as shown in tables may not align to the calculation based on numbers in the tables due to rounding.  
 2 Refer to note 2 of the Notes to the Financial Statements.  
 3 Includes other operating income, net foreign exchange gain/(loss) and share of equity accounted investees.  
 4 Debt payback ratio is economic net interest bearing debt divided by earnings before interest, tax, depreciation and amortisation (known as Debt/EBITDA). Both Debt and EBITDA are adjusted, from reported amounts, for the impact of operating leases, certain normalisations and non-cash amounts.  
 5 Gearing ratio is economic net interest bearing debt divided by total capital. Total capital is equity excluding the hedge reserves, plus economic net interest bearing debt.  
 6 Return on capital is calculated as normalised EBIT, less a notional tax charge divided by capital employed including brands, goodwill and equity-accounted investments. Return on capital, excluding brands, goodwill and equity-accounted investments was 7.6% (31 July 2018: 8.0%).  
 7 Includes asset divestments.

For our full financial results, please refer to our Annual Report:  
[www.fonterra.com/annualreport2019](http://www.fonterra.com/annualreport2019)



# Our products

## Global ingredients

Our range of dairy ingredients are sold under our NZMP™ brand in more than 130 countries worldwide and can be found at the heart of some of the world's most famous food and nutrition brands.

We offer one of the broadest ranges of ingredients in the dairy industry, providing hundreds of solutions to meet the needs of customers every day. Backed by Fonterra's New Zealand grass-fed farming heritage, world-class processing, leading quality standards and our passion for innovation, our NZMP ingredients are trusted for their high performance and exceptional quality.

Our range includes powders, proteins, butter, creams and dairy fats, cheeses and other speciality ingredients that support applications such as sports and lifestyle nutrition, infant nutrition, medical nutrition and healthy ageing, beverages, yoghurts and cultured products.

## Foodservice

Foodservice is one of the largest industries in the world and encompasses food and beverages that are consumed out of the home such as in restaurants, cafés and bakeries. Under our Anchor™ Food Professionals brand we create high quality, fit-for-purpose products and solutions for foodservice professionals in over 50 countries.

We understand dairy and the role that it can play in delivering great taste, texture and appearance in the signature dishes and offerings that our customers serve to millions of consumers every day.

As well as providing ingredients we provide services through our Anchor Food Professionals, who work alongside our customers, in their businesses, sharing new ideas and ways of doing things. We work with our customers to improve their products and to grow their business including solutions that improve productivity, increase yield, reduce wastage and enhance taste.

## Consumer

We also manufacture, market and distribute our own consumer products. These products include branded dairy products sold direct to consumers, such as milk, milk powders, yoghurt, butter and cheese. Our three global brands are Anchor™, Anlene™ and Annum™.

Ingredients			
Million	FY18	FY19	Δ% <sup>1</sup>
Revenue (\$)	16,306	17,035	4%
Normalised gross margin (\$)	1,472	1,427	(3%)
Normalised gross margin <sup>1</sup> (%)	9.0%	8.4%	

Foodservice			
Million	FY18	FY19	Δ% <sup>1</sup>
Revenue (\$)	2,479	2,369	(4%)
Normalised gross margin (\$)	388	426	10%
Normalised gross margin <sup>1</sup> (%)	15.7%	18.0%	

Consumer			
Million	FY18	FY19	Δ% <sup>1</sup>
Revenue (\$)	4,643	4,642	0%
Normalised gross margin (\$)	1,295	1,195	(8%)
Normalised gross margin <sup>1</sup> (%)	27.9%	25.7%	

<sup>1</sup> Percentages as shown in table may not align to the calculation of percentages based on numbers in the table due to rounding of reported figures.

## GREATER CHINA

### FOODSERVICE

**223**  
Volume ('000 tonnes)  
**\$1,122m**  
Revenue  
**\$203m**  
Normalised gross margin

### CONSUMER

**76**  
Volume ('000 tonnes)  
**\$361m**  
Revenue  
**\$145m**  
Normalised gross margin

## LATIN AMERICA

### FOODSERVICE

**32**  
Volume ('000 tonnes)  
**\$143m**  
Revenue  
**\$33m**  
Normalised gross margin

### CONSUMER

**527**  
Volume ('000 tonnes)  
**\$1,364m**  
Revenue  
**\$367m**  
Normalised gross margin

## ASIA

### FOODSERVICE

**93**  
Volume ('000 tonnes)  
**\$586m**  
Revenue  
**\$93m**  
Normalised gross margin

### CONSUMER

**204**  
Volume ('000 tonnes)  
**\$1,276m**  
Revenue  
**\$359m**  
Normalised gross margin

## OCEANIA

### FOODSERVICE

**104**  
Volume ('000 tonnes)  
**\$518m**  
Revenue  
**\$98m**  
Normalised gross margin

### CONSUMER

**524**  
Volume ('000 tonnes)  
**\$1,641m**  
Revenue  
**\$324m**  
Normalised gross margin

## OUR BRANDS



# Employment and income creation

## Our Co-operative supports the livelihoods of many thousands of people.

At the heart of our Co-op are our farmer shareholders, who rely on Fonterra to use their capital wisely to create a sustainable return from their milk. By supporting the success of their farming businesses, the people they employ and the vendors they rely on, we contribute significantly to regional economic development.

We also support the livelihoods of our employees. On a full-time equivalent basis, Fonterra directly employs 20,685 people (see Our People on page 32 for more information on the makeup of our global workforce).

In New Zealand, industry-wide figures<sup>1</sup> show that the dairy sector accounts for 20% of total exports (goods and services). The sector employs 38,700 people directly – 26,500 on farm and 12,200 in dairy processing, with thousands of others employed in jobs supporting the local industry.

### Our approach

Creating a sustainable income from the land is the founding purpose of a farmer-owned Co-operative. Through our Co-operative structure we maintain farmer ownership and control over collection, processing, marketing and distribution, with the aim of delivering healthy, sustainable returns. In the past year, 71% of our milk was produced by farming families running a single farm.

Maintaining a strong national dairy Co-operative supports all dairy farmers by setting a Farmgate Milk Price. New Zealand is unique in that 95% of milk production is exported and Fonterra collects a large proportion of the milk. As a result, there is no 'market price' set through competition for supply.

We calculate a Farmgate Milk Price using an independently approved methodology<sup>2</sup>. This enables total returns to be allocated between payments for milk and returns on the share capital invested by farmer shareholders and unit holders in the Co-operative.

Unlike some agricultural products, milk production provides a regular income. Fonterra pays its farmers monthly for the milk collected. In New Zealand, the price paid is based on an advanced rate determined by the projected Farmgate Milk Price for the season. This advanced rate is adjusted during the season and any shortfall in payment against a higher final milk price is paid at the end of the season.

For our direct workforce, we take a 'total remuneration' approach for our salaried employees which means we generally aim to pay at the median rate in the markets in which we operate. For roles that are deemed critical or that have a significant impact on business performance we may choose to benchmark at the upper quartile rate.

Many of our waged employees are covered by collective agreements. New Zealand industry data<sup>1</sup> shows that the average dairy processing wage of \$85,510, is well above all other forms of food product manufacturing.

### What we've been doing

#### Fixed Milk Price

This year we introduced Fixed Milk Price. It's our eighth financial tool for farmers and offers ten opportunities a season to fix a price for up to 50% of their estimated milk supply.

This helps farmers reduce some of the risk from global milk price volatility and gives them more confidence in making business decisions as they know that some of their fixed costs are covered. We can also provide customers with longer contracts at a guaranteed price. Customers value this certainty and it can bring additional value back to our Co-operative.

#### Helping to lower farm operating costs through Farm Source

Through our Farm Source™ stores, we provide seasonal deals and offer eligible farmers benefits such as 90-day interest free purchases and the ability to earn Farm Source Reward Dollars. In FY19, farmers received \$40.8m in Farm Source Reward Dollars, store discounts on everyday farming supplies and partnership deals. From June 2019, eligible farmers can also spread payments or defer them for six months on all Farm Source store purchases over \$500.

We also maximise our collective scale to deliver competitive prices. In a first for New Zealand, Genesis Energy has launched a new electricity plan for Dairy. It's offered exclusively by Farm Source and can save farmers between 5 and 25% off their milking shed electricity bill.

If the average-sized Co-operative farm purchased all their farm supplies from Farm Source, they would get approximately 10 cents per kgMS in savings and rewards.

Economic value distributed	FY18	FY19
Payment to suppliers (farmers) for NZ-sourced milk	\$10,115 million	\$9,748 million
New Zealand Farmgate Milk Price	\$6.69 per kgMS	\$6.35 per kgMS
Payment to suppliers (farmers) for non-NZ sourced milk	\$1,245 million	\$966 million
Profit after tax attributable to shareholders	\$221 million loss (earnings of -\$0.14 per share)	\$557 million loss (earnings of -\$0.35 per share)
Dividend payment to equity holders of the Co-operative	\$161 million (dividend of \$0.10 per share)	\$0 (No dividend paid)
Employees (FTE)	22,358	20,685

### Our Performance

Detailed commentary on our financial performance is included in our detailed Annual Report,

→ [www.fonterra.com/annualreport2019](http://www.fonterra.com/annualreport2019)

This year, our employee numbers fell by 1,673. This figure is global full-time equivalent employees, including permanent and fixed-term. Much of this fall is attributed to our divestment of businesses such as Tip Top, meaning the people employed by these businesses are no longer counted in our reporting.

### Our targets

Indicator	Target <sup>3</sup>	FY17	FY18	FY19	Commentary
Return on capital <sup>4</sup>	8.5% by end FY22 10% by end FY24	8.3%	6.3%	5.8%	Reduction reflects a decline in normalised earnings (EBIT) due to challenges in the ingredients businesses in Australia and Latin America, and the consumer businesses in New Zealand, Sri Lanka, Hong Kong and Latin America. The capital base remained largely stable.
Earnings per share (cents per share)	40c by end FY22 50c by end FY24	49c	24c	17c	Reduction due to the decline in normalised earnings (EBIT) compared to prior year (see commentary above).
Free cash flow <sup>5</sup>	\$900m by end FY22 \$1,050m by end FY24	\$670m	\$600m	\$699m	Financial discipline resulted in lower operating expenditure, reduced capital expenditure, improved cash flow and lower debt.
Debt/EBITDA <sup>6</sup>	2.5-3.5x by end FY22	3.5x	4.5x	4.3x	A decline in normalised earnings (EBIT) due to challenges listed above was offset by decreased debt.

### WHAT'S NEXT

- We will build a great team by successfully shifting to a new customer-led operating model, where we live our purpose and values through our actions and with a culture that empowers our people.
- We will continue to support regional New Zealand by injecting \$10 billion into rural communities by paying a competitive milk price to farmers.
- We will continue to work on our three-point plan, with financial targets for FY20 of:
  - Debt no more than 3.75x earnings;
  - Capital expenditure no more than \$500 million;
  - Gross margin more than \$3 billion;
  - Earnings guidance 15-25 cents per share.

<sup>1</sup> Source: How does the dairy sector share its growth. NZIER report to DCANZ October 2018. Data from 2017.

<sup>2</sup> More information on the Farmgate Milk Price calculation and Milk Price Statements is available on the Fonterra website.

<sup>3</sup> There can be no certainty of outcome in relation to the matters to which these plans or forward-looking statements relate. They involve risks, uncertainties, assumptions and other important factors (some of which may be out of Fonterra's control) that could cause the actual outcomes to be materially different from the results expressed or implied. No assurance or guarantee is given as to the likelihood of fulfilment of any such statement or projection.

<sup>4</sup> Based on normalised earnings, and capital employed includes brands, goodwill, and equity accounted investments.

<sup>5</sup> For comparative purposes divestments proceeds have been excluded from cash flow.

<sup>6</sup> Debt payback ratio is economic net interest bearing debt divided by earnings before interest, tax, depreciation and amortisation. Both Debt and EBITDA are adjusted, from reported amounts, for the impact of operating leases, certain normalisations and non-cash amounts.

# Creating value

## Inputs - Our dependencies

### Social capital

We rely on the social capital of our Co-operative as nearly **10,000 New Zealand farmer shareholders** working together. We rely on positive relationships with governments to enable trade and collaboration with others, to efficiently and effectively deliver nutritional products to the world.

### Intellectual capital

We rely on the know-how, systems and intellectual property that more than **170 years of dairying** experience in New Zealand and more than 90 years of investment in research and development has generated.

- **100 PhDs** work at our research centre
- **50+ families of patents** held in force.

### Financial capital

We rely on a strong financial base to operate and invest in infrastructure for the future. We employed capital of **\$9,668 million** from our farmer shareholders, unit holders and from debt during FY19.

### Physical capital

We rely on the property, plant and equipment that allow us to collect milk, and make and distribute our products to the world. With a total net book value of \$6,512 million at the end of FY19 this included:

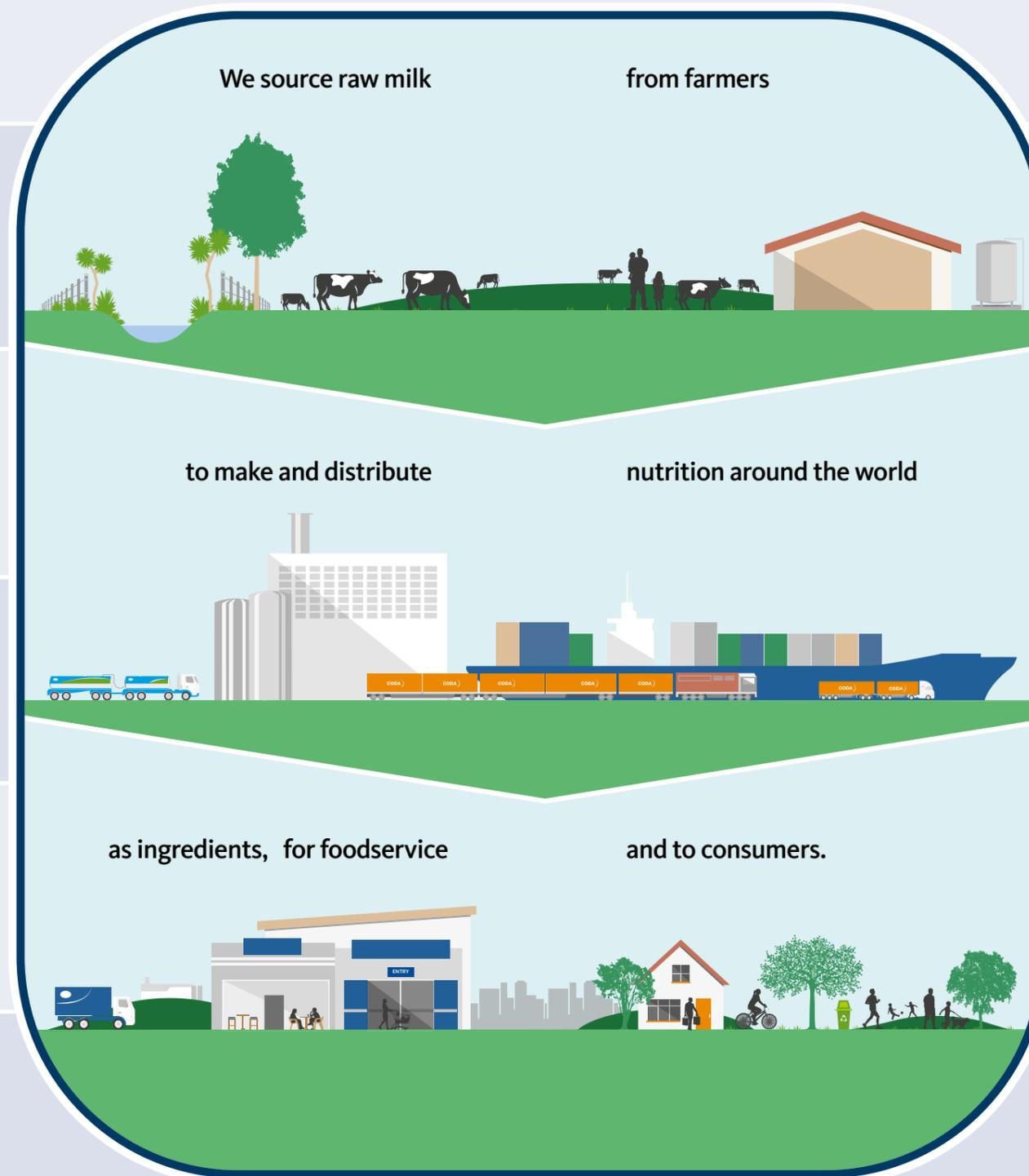
- **500+ milk collection tankers**
- **48 manufacturing sites.**

### Human capital

Over **20,000 talented employees** directly contribute around the world. Over **30,000 farmers and farm workers** use their skills to provide us with milk. And thousands of people in our supply chain are vital to the provision of the goods and services we procure.

### Natural capital

Our farmers and their **4.3 million milking cows** rely on **1.6 million hectares of pastoral land** where rain, sunlight and soil grows natural grass. Some additional inputs include fertiliser, irrigated water and animal nutrition. Manufacturing processes farmers' milk, combining it with other ingredients and materials to make our products. This includes **29PJ of energy** and **53 million cubic metres of fresh water.**



## Outcomes - Our value creation

### Social capital

We export to over 130 countries and we are working to encourage international trade and increase common understanding through stakeholder engagement. We partner with others to achieve positive social impact at scale through programmes such as Fonterra Milk for Schools, KickStart Breakfast, Living Water, Sustainable Catchments and Fonterra Grass Roots Fund.

### Intellectual capital

Our people, processes and systems mean:

- **92%** of our manufacturing sites are **certified** to leading food safety standards
- **93%** of our products can be **electronically traced** back to milk supply
- **4** new patents granted this year.
- **16** journal articles published this year.

We are working to deliver further innovations such as farming practices, methane reduction, improved nutrition and efficient manufacturing.

### Financial capital

We create financial value for our investors and farmers by generating demand for their milk in higher-value products (down 1% to 46% in FY19).

- Return on capital was **5.8%**
- **\$9,748 million** paid to farmers for New Zealand-sourced milk
- **\$0 million** paid as dividend.

We are working to deliver a respectable return on capital and a strong payout to our farmers.

### Physical capital

We manufactured **4 million tonnes of finished goods** and commissioned new infrastructure including:

- A new cheese plant in New Zealand

We are upgrading our assets to be more resource-efficient, lower our environmental footprint and meet the changing demands of our customers.

### Human capital

We are working to improve health and wellbeing through the products and services we deliver. We provide a workplace that delivers:

- A safe environment (TRIFR = 4.9 per million hrs)
- High staff engagement (MySay = 4.07)
- Good development opportunities.

We are working to increase our positive impact by developing a diverse and inclusive workforce and providing support services to our farmers.

### Natural capital

Our supplying farms emit **21.5 million tonnes of CO<sub>2</sub>-e** and can impact local water quality. We are working with our farmers to achieve a healthy environment for farming and for society. Our manufacturing sites emit **2.1 million tonnes of CO<sub>2</sub>-e** and **discharge 61 million cubic metres of water**, which can impact local water quality. We are investing to improve resource efficiency, transition to renewable energy and achieve leading standards of wastewater treatment.

APPENDICES

# Our contribution to United Nations Sustainable Development Goals



Fonterra supports the United Nations Sustainable Development Goals (SDGs) and we are committed to playing our part, by working collaboratively to deliver change at scale.

The Dairy Declaration of Rotterdam<sup>1</sup>, recognises the SDGs as the overarching framework for achieving sustainable development to 2030 and the critical contribution the dairy sector will play.

We understand that the SDGs and their underlying targets can help us refine our sustainability approach, not only to reduce risks, but also to identify opportunities for growth that contribute positively to their achievement.

We have analysed our business activities, material issues and value chain against the SDGs and their underlying 169 targets. Here we identify the specific goals where we can make the most material contribution, the objectives we have prioritised for specific indicators and where this occurs in our value chain.

We are also implementing members of the Dairy Sustainability Framework.

The dairy sector's global approach to sustainable development is represented by the Dairy Sustainability Framework (DSF). Fonterra is a founding and implementing member of the DSF. We are committed to addressing all 11 DSF criteria within our supply chain, through a process of continuous improvement prioritised in conjunction with our material topics. For more information, see:

→ [www.dairysustainabilityframework.org](http://www.dairysustainabilityframework.org)

<sup>1</sup> A joint declaration of the UN Food and Agriculture Organization and the International Dairy Federation signed in 2016.

Sustainable Development Goals	Our contribution	Indicator	On-Farm	Manufacturing	Consumption
<b>1 NO POVERTY</b> End poverty in all its forms everywhere	Create positive employment opportunities along our value chain	1.2	●	●	
<b>2 ZERO HUNGER</b> End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Provide access to safe, affordable nutrition	2.1			●
	Address malnutrition through products tailored to specific health needs	2.2			●
	Share our dairy expertise with small-scale producers	2.3	●		
	Lift dairy productivity to meet growing nutritional needs	2.4	●	●	●
<b>3 GOOD HEALTH AND WELL-BEING</b> Ensure healthy lives and promote well-being for all at all ages	Responsibly provide products to support wellbeing of mothers and infants	3.1 3.2			●
	Continue to improve the nutritional profile of our products	3.4			●
	Promote healthy and informed consumer choices	3.4			●
<b>5 GENDER EQUALITY</b> Achieve gender equality and empower all women and girls	Ensure equal participation and opportunities for women in the workforce	5.5	●	●	
	Share our dairy expertise with female small-scale producers	5.5	●		
<b>6 CLEAN WATER AND SANITATION</b> Ensure access to sanitation and water for all	Reduce the impact of farming and manufacturing on water quality and ecosystems	6.3	●	●	
		14.1			
		15.1			
		15.2			
<b>14 LIFE BELOW WATER</b> Conserve and sustainably use the oceans, seas and marine resources	Increase water efficiency in areas of constrained supply	6.4	●	●	
<b>15 LIFE ON LAND</b> Sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss	Protect and restore freshwater ecosystems	6.6	●	●	
<b>8 DECENT WORK AND ECONOMIC GROWTH</b> Promote inclusive and sustainable economic growth, employment and decent work for all	Provide positive and inclusive employment for all groups	8.5	●	●	
	Address labour and human rights issues in our supply chain	8.7 8.8	●	●	
	Provide a safe and secure working environment	8.8	●	●	
<b>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</b> Ensure sustainable consumption and production patterns	Manage and use natural resources efficiently	12.2	●	●	●
	Reduce food waste throughout our supply chain	12.3	●	●	●
	Reduce waste generation through our operations and product packaging	12.5		●	●
<b>13 CLIMATE ACTION</b> Take urgent action to combat climate change and its impacts	Support farmers to build resilience to climate change	13.1	●		
	Reduce emissions across our supply chain		●	●	

APPENDICES

# Global Reporting Initiative Standards

This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option.

To achieve 'Core' compliance with the GRI standards we must report against at least one disclosure for each material topic. For more information: [www.globalreporting.org](http://www.globalreporting.org)

REF	TOPIC TITLE	REFERENCE	
<b>GENERAL DISCLOSURES</b>			
102-1	Name of the organisation	Fonterra Co-operative Group Limited	●
102-2	Activities, brands, products, and services	About Fonterra. See page 8. Our products. See page 82	●
102-3	Location of headquarters	See page 94	●
102-4	Location of operations	Our farming and manufacturing activities. See page 50	●
102-5	Ownership and legal form	About Fonterra. See page 8	●
102-6	Markets served	Our Products. See page 82	●
102-7	Scale of the organisation	About Fonterra. See page 8	●
102-8	Information on employees and other workers	Our people. See page 32 <sup>1</sup>	●
102-9	Supply chain	Creating value. See page 86	●
102-10	Significant changes to the organisation and its supply chain	We divested of our Inlaca subsidiary in Venezuela and our Tip Top ice cream business in New Zealand.	●
102-11	Precautionary principle or approach	Managing operations. See page 54	●
102-12	External initiatives	Associations, endorsements and memberships. See page 94	●
102-13	Membership of associations	Associations, endorsements and memberships. See page 94	●
102-14	Statement from senior decision-maker	Letter from the Board Chair and Chief Executive. See page 4	●
102-16	Values, principles, standards, and norms of behaviour	Our Values. See page 7. Details on our Code of Ethics are published on page 63 of the Fonterra Annual Report 2019	●
102-17	Mechanisms for advice and concerns about ethics	The Way We Work Hotline is described on page 63 of the Fonterra Annual Report 2019	●
102-18	Governance structure	A full list of Board Committees is published on page 66 of the Fonterra Annual Report 2019	●
102-20	Executive-level responsibility for economic, environmental, and social topics	Accountability for sustainability in Governance and Ethical Business <sup>2</sup>	●
102-40	List of stakeholder groups	Responding to what's important. page 18	●
102-42	Identifying and selecting stakeholders	Our stakeholders in Materiality assessment notes <sup>3</sup>	●
102-43	Approach to stakeholder engagement		●
102-44	Key topics and concerns raised		●
102-41	Collective bargaining agreements	Employment Rights. See page 36	●
102-45	Entities included in the consolidated financial statements	A list of entities is included on page 67 of Fonterra's Annual Financial Results 2019. The same entities apply to this Sustainability Report, except where explicitly excluded.	●
102-46	Defining report content and topic boundaries	Responding to what's important. See page 18 Global Reporting Initiative Standards. See page 2	●
102-47	List of material topics	Responding to what's important. See page 18	●
102-48	Restatements of information	Refer to Environmental Data Reporting Notes <sup>4</sup> for details	●
102-49	Changes in reporting	No significant changes other than improved data coverage and quality	●
102-50	Reporting period	About This Report. See page 2 (Period is 1 August 2018 – 31 July 2019)	●
102-51	Date of most recent report	November 2018 for period 1 August 2017 – 31 July 2018	●
102-52	Reporting cycle	About This Report. See page 2 (Annual reporting cycle)	●

102-53	Contact point for questions regarding the report	About this report. See page 2 (Email: sustainability@fonterra.com)	●
102-54	Claims of reporting in accordance with the GRI Standards	Global Reporting Initiative Standards. See page 90	●
102-55	GRI content index	Global Reporting Initiative Standards. See page 90	●
102-56	External assurance	Bureau Veritas Assurance Statement. See page 92	●
<b>ECONOMIC TOPIC DISCLOSURES</b>			
201-1	Direct economic value generated and distributed	About Fonterra. See page 8. Employment and income creation. See page 84. Community. See page 44. Refer to Remuneration on page 69 of Annual Report 2019	●
202-2	Proportion of senior management hired from the local community	Refer to Hiring from Local Communities in Additional employee data <sup>1</sup> .	●
205-3	Confirmed incidents of corruption and actions taken	Refer to Anti-corruption in Governance and ethical business <sup>2</sup>	●
206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	Legal compliance in Governance and ethical business <sup>2</sup>	●
<b>ENVIRONMENTAL TOPIC DISCLOSURES</b>			
302-1	Energy consumption within the organisation	Climate change – Our performance. See page 65 <sup>4</sup>	●
302-3	Energy intensity	Climate change – Our performance. See page 65	●
302-4	Reduction of energy consumption	Climate change. See page 65	●
303-1	Water withdrawal by source	Water withdrawn by source. See page 61	●
305-1	Direct (Scope 1) GHG emissions	Climate change – Our performance. See page 68	●
305-2	Energy indirect (Scope 2) GHG emissions	Climate change – On-farm lifecycle assessments. See page 64	●
305-3	Other indirect (Scope 3) GHG emissions		●
305-4	GHG emissions intensity		●
306-1	Water discharge by quality and destination	Water discharge. See page 61	●
306-3	Significant spills	Significant spills. See page 54	●
307-1	Non-compliance with environmental laws and regulations	Environmental compliance. See page 54	●
308-2	Negative environmental impacts in the supply chain and actions taken	Working with farmers. See page 52	●
<b>SOCIAL TOPIC DISCLOSURES</b>			
401-1	New employee hires and employee turnover	Our People. See page 33	●
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	Health, safety and wellbeing. See page 34	●
404-2	Programmes for upgrading employee skills and transition assistance programmes	Learning and development. See page 36. Employee Assistance Programme in Governance and ethical business <sup>2</sup>	●
405-1	Diversity of governance bodies and employees	Our People. See page 33	●
405-2	Ratio of basic salary and remuneration of women to men	Gender pay. See page 38. Our People. See page 33	●
406-1	Incidents of discrimination and corrective actions taken	The way we work hotline in Governance and ethical business <sup>2</sup>	●
412-1	Operations that have been subject to human rights reviews or impact assessments	Human Rights. See page 40	●
415-1	Political contributions	Responsible political involvement in Governance and ethical business <sup>2</sup>	●
416-1	Assessment of the health and safety impacts of product and service categories	Improving the nutritional profile of our products. See page 24 Food safety and quality. See page 28	●
417-2	Incidents of non-compliance concerning product and service information and labelling	Compliance with regulation. See page 25	●
417-3	Incidents of non-compliance concerning marketing communications	Compliance with regulation. See page 25	●
419-1	Non-compliance with laws and regulations in the social and economic area	Legal compliance in Governance and ethical business <sup>2</sup>	●

1 For more information, see: [www.fonterra.com/2019AdditionalEmployeeData](http://www.fonterra.com/2019AdditionalEmployeeData)

2 For more information, see: [www.fonterra.com/2019GovernanceEthicalBusinessNotes](http://www.fonterra.com/2019GovernanceEthicalBusinessNotes)

3 For more information, see: [www.fonterra.com/2019MaterialityAssessmentNotes](http://www.fonterra.com/2019MaterialityAssessmentNotes)

4 For more information, see: [www.fonterra.com/2019EnvironmentalDataReportingNotes](http://www.fonterra.com/2019EnvironmentalDataReportingNotes)

● Within scope of assurance.

# Assurance statement

## INDEPENDENT ASSURANCE STATEMENT



To: The Stakeholders of Fonterra Co-operative Group Limited

### Introduction and objectives of work

Bureau Veritas New-Zealand Ltd ("Bureau Veritas") was engaged by Fonterra Co-operative Group Limited ("Fonterra") to provide independent limited assurance of its 2019 Sustainability Report ("the Report"). This Assurance Statement applies to the related information included within the scope of assurance described below.

This information and its presentation in the Report are the sole responsibility of the management of Fonterra. Bureau Veritas was not involved in the drafting of the Report. Our sole responsibility was to provide independent assurance of the accuracy of information included. This is the third year in which we have provided limited assurance over the Fonterra Sustainability Report.

### Scope of Assurance

Fonterra requested Bureau Veritas to verify the accuracy and assure the material disclosures, both qualitative and quantitative, presented in the Report. The Report was prepared in accordance with the GRI Standards Core option. The complete list of assured elements is referred to within the GRI Index of the Report.

The scope of work was limited to the data and information related to sites and operations under which Fonterra has operational control for the period of 1<sup>st</sup> August 2018 to 31<sup>st</sup> July 2019.

### Methodology

As part of its independent limited assurance, Bureau Veritas undertook the following activities:

- Interviews and follow-up communication with relevant personnel;
- Review of documentary evidence produced by Fonterra representatives;
- Audit of performance data and factual information including source verification; and
- Review of Fonterra's processes for identification, aggregation and analysis of relevant information, report content and performance data.

Our work was planned and executed in a manner designed to produce a limited level of assurance and to provide a sound basis for our conclusions.

Our assurance process is aligned with and informed by Bureau Veritas' standard procedures and guidelines for external verification of sustainability reports, the GRI Standards and the International Standard for Assurance Engagements (ISAE) 3000.

### Our findings

On the basis of our methodology and the activities described above, we provide limited assurance that:

- Nothing has come to our attention to indicate that the reviewed statements within the scope of our verification are inaccurate and the information included therein is not fairly stated; and
- It is our opinion that Fonterra has established systems for the collection, aggregation and analysis of relevant information and quantitative data.



### Evaluation against the Global Reporting Initiative Standards (GRI Standards)

The Report was prepared in accordance with the GRI Standards Core Option, including appropriate considerations of the reporting principles, profile disclosures, management approach disclosures and performance indicators.

Bureau Veritas' evaluation of the Report included cross checking the GRI Index against referenced documents.

### Limitations and Exclusions

Excluded from the scope of our work is any assurance of information relating to:

- Activities outside the defined reporting period;
- Statements of commitment to, or intention to undertake future actions by Fonterra;
- Statements of position, opinion, belief and/or aspiration by Fonterra;
- Financial data audited by an external third party; and
- Other sites and activities not included in the scope.

This independent assurance statement should not be relied upon to detect all errors, omissions or misstatements that may exist within the Report.

### Statement of independence, impartiality and competence

Bureau Veritas is an independent professional services company that specialises in Quality, Health, Safety, Social and Environmental management with almost 200 years history in providing independent assurance services.

Bureau Veritas has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day to day business activities. We are particularly vigilant in the prevention of conflicts of interest.

No member of the assurance team has a business relationship with Fonterra, its Directors or Managers beyond that required of this assignment. We have conducted this assurance independently, and there has been no conflict of interest.

The independent assurance team has extensive experience in conducting assurance over environmental, social, security, safety, health and ethical information, systems and processes, and through its combined experience in this field, an excellent understanding of good practices in sustainability reporting and assurance.

Bureau Veritas New-Zealand Ltd  
11<sup>th</sup> November 2019

Jeremy Leu  
General Manager – Certification, Sustainability, Building & Infrastructure



APPENDICES

# Associations, endorsements and memberships



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## Disclaimer

This report contains some forward-looking statements and projections. There can be no certainty of outcome in relation to the matters to which the forward-looking statements and projections relate. These forward-looking statements and projections involve known and unknown risks, uncertainties, assumptions and other important factors that could cause the actual outcomes to be materially different from the events or results expressed or implied by such statements and projections. Those risks, uncertainties, assumptions and other important factors are not all within the control of Fonterra Co-operative Group Limited (Fonterra) and its subsidiaries (the Fonterra Group) and cannot be predicted by the Fonterra Group.

While all reasonable care has been taken in the preparation of this report none of Fonterra or any of its respective subsidiaries, affiliates and associated companies (or any of their respective officers, employees or agents) (Relevant Persons) makes any representation, assurance or guarantee as to the accuracy or completeness of any information in this report or likelihood of fulfilment of any forward-looking statement or projection or any outcomes expressed or implied in any forward-looking statement or projection. The forward-looking statements and projections in this report reflect views held only at the date of this report.

Statements about past performance are not necessarily indicative of future performance. Except as required by applicable law or any applicable Listing Rules, the Relevant Persons disclaim any obligation or undertaking to update any information in this report.

This report does not constitute investment advice, or an inducement, recommendation or offer to buy or sell any securities in Fonterra or the Fonterra Shareholders' Fund.





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