

Future of Food

Milking it

What more can
dairy achieve?



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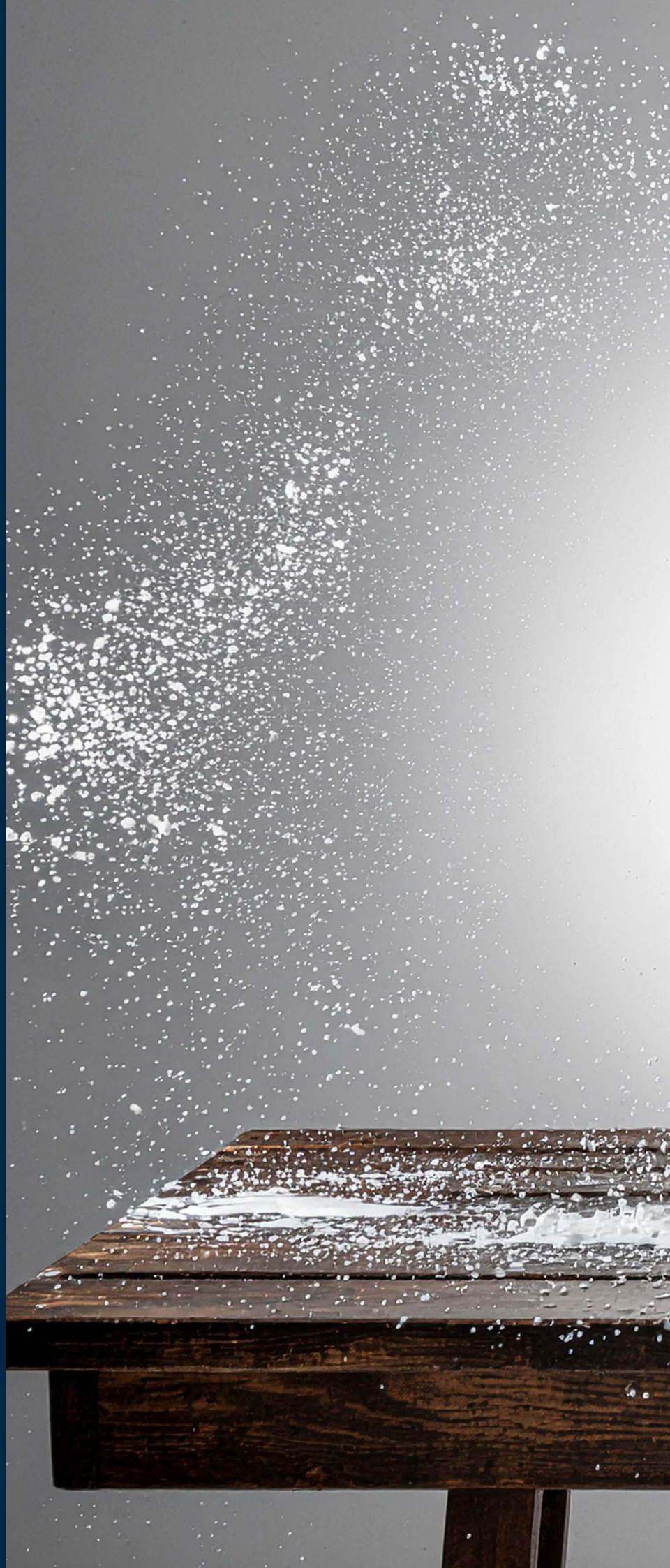
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Milking it

What more can
dairy achieve?



It's already New Zealand's biggest industry—what more can it do? If New Zealand is to double the value of exports by 2035, dairy must surely do a lot of the heavy lifting. But how much more growth and innovation can we expect to see? With so much pressure facing the sector from both home and abroad, where does sustainable growth come from? And without dairy, can New Zealand do it?

Opportunity: With an expected global dairy deficit of 30 million tonnes by 2030, there is enough demand to see dairy value at least double, but it will require innovation across the entire value chain, from farm to plate. This can help establish a compelling 'One New Zealand Dairy' narrative emphasising the nutrient intensity of milk, enhancing its global appeal and market position.

Threat: New Zealand's economic growth relies on dairy. Dairy risks underinvesting in innovation while commodity prices are high. There are mounting environmental concerns which may impact its social licence to operate. Intensified competition within the industry hampers how we show up in the market. While dairy is doing well, we are not entertaining the idea that there may be other high-growth sectors we can be developing.

Key points:



Dairy is unparalleled by any other sector, growing almost 10-fold in 30 years.



Growth is in volume *and* value; and forecasts suggest more to come.¹



New threats are emerging from dairy alternatives, climate change, methane liability and a shifting China market.



Old threats remain: fractured supply chains, trade barriers, land-use change, and environmental concerns.



To grow, dairy must innovate along the entire value chain. But this requires new skills, attitudes, and technologies.



Fonterra, the largest operator, is re-setting its strategy with a focus on added value and innovation.



Others must follow its lead.

Sometimes you can't see the wood for the trees.

And sometimes, when you're living with so much dairy land, dairy cows and dairy news it's hard to remember just how exceptional and important dairy is for New Zealand; as an exporter, employer, wealth creator, and industrial player.

Some numbers to jog your memory:

- At \$27 billion² dairy is New Zealand's largest sector and represents 25-30% of our exports
- It accounts for 3% of GDP and, in some regions, as high as 10% of all economic activity
- The sector employs 55,000 people and contributes \$3.6 billion in wages.
- It's also the biggest contributor to our greenhouse gas emissions and nitrate runoff
- New Zealand accounts for less than 3% of global cow milk production but over 25% of global dairy trade

Norway does salmon. Australia does minerals. Saudi Arabia does oil. New Zealand does dairy.

It wasn't always this way. Dairy's rise has happened in our children's lifetime. In the early 1990s, dairy exports were just \$3b per year, lower than red meat at \$4b. By 2025, dairy was edging toward \$27b and meat just \$11.3b. The almost 10-fold growth has been both a volume game with 60% more cows, and a production or value gain (milk powder grew about seven-fold): meaning the *value per cow* has risen exponentially. Our white gold is found in foods all around the globe and has been New Zealand's mainstay through the Global Financial Crisis, Covid and three Rugby World Cup failures.

We're so used to these numbers that it feels glib saying it: dairy matters. It's a common complaint that dairy is *just* a commodity business. Milk powder dominates the export figures. But there's another success story: the growth of value-added ingredients and food service. Take infant formula which saw significant growth for two decades, and while that growth has slowed significantly it is still tracking upwards at a rate of 3% CAGR.³ Liquid milk, yoghurt and creams have grown 16% and cheese 5%.

There's also been an explosion of new, entrepreneurial brands in ice cream, protein powders, sports drinks, health products, snack bars and aged-care foods derived from dairy.

Market research firm Coriolis identifies around 30 dairy nutraceutical manufacturers supplying 200-300 sales and marketing-focused firms, as well as international customers. They're often under the radar and in niche, almost personalised, markets.⁴

Milk protein is also playing a significant role in the beauty and personal care industry.

"Most New Zealanders have no conception of the river of dairy-productivity improvements that flowed through the industry in the first 15-year period of this 21st Century. Alas, in the last ten years we have come across natural resource and biological limits that have made current and future progress much more constraining," writes Keith Woodford, former Professor of Farm Management and Agribusiness at Lincoln University.⁵

So, when the government announced last year an ambition to double the value of exports by 2035, dairy must have been considered to do much of the heavy lifting. Just do the math. Food and fibre represent 62% of our exports, so doubling export value means primary sector exports will need to grow from \$54.3b to somewhere north of \$100b, with a compound annual growth rate (CAGR) of 7.2%.

“...the obvious answer is more cows, more milk, more dairy exports. But is it?”

While there is no expectation that the Primary Sector needs to do any heavy lifting (as other sectors are expected to see significant economic growth), if we can double the value from dairy, it would be great.

At first blush, it seems tough.

But there's precedent. In 2013, primary sector export growth was targeted to reach \$64 billion by 2025. The current forecast is \$59.9 billion, not quite double, but a solid 70% growth, and CAGR of 6.1%.

And dairy provided the boost, more than doubling in the last decade, and 45% in the last five. There is no doubt that New Zealand produces the best dairy in the world.

Globally, demand for dairy continues. Bloomberg has forecasted a global dairy drought by 2030.⁶ Overall, dairy is growing about 2% in volume but the appetite for dairy protein sits at 4% as growing middle classes in Asia, Middle East and Africa reach for protein shakes, snack bars and bubble teas. And the forecasts look good. According to the Situation and Outlook for Primary Industries (SOPI) dairy export revenue is expected to increase 16% this year: note that this is driven by a strong lift in global dairy demand, higher prices rather than just more or better production.

“The expected strong lift in export revenue comes off the back of weak export earnings in 2023/24 and is likely to be the highest on record.”

To double exports by 2035, the obvious answer is more cows, more milk, more dairy exports. But is it?

If only it was so simple.

What are the challenges?

Just like the fine print says on your KiwiSaver, past performance is no guarantee of future results. Dairy faces some challenging times ahead. Let's consider three.

Geopolitics

First, there's geopolitics. Jim Bolger was right all those years ago when he said, “we're all Asian now”. Since 1990, Asia has exploded as a destination for New Zealand dairy. China has been our biggest friend, growing from almost nothing in 1990 to being the largest customer, importing about a third of all New Zealand's production: after a decade of high growth in demand for infant formula. The Middle East and North Africa and southeast Asia are currently the fastest growing.

Some 95% of New Zealand's dairy is exported and Asia represents 60%–70% of our total dairy exports and 75% of milk powder exports.

Our traditional markets remain important too. The US is the second largest, followed by Australia and Japan. A new agreement with Canada will add \$100m in exports.

All of which highlights how vulnerable New Zealand is to trade turmoil.

Dairy is one of the most protected sectors globally, only 9% is traded internationally. This was tested during Covid when emerging markets in Qatar and North Africa pivoted from importing dairy to growing their own for food security reasons, albeit in large inefficient, environmentally harmful sheds. A single company supplies 95% of Qatar's dairy needs and the tiny desert country is on the cusp of being a food exporter.⁷

“...we may need more than just more cows.”

Whatever happens with Donald Trump’s tariff wars, whatever happens with the actual war in Ukraine and simmering trouble in Taiwan and Korea, or if there is another pandemic, a ship gone sideways in the Suez, a banking crisis in China, a biosecurity breach of our borders, a collapse in the Atlantic ocean currents, or more severe and frequent storms, New Zealand is uniquely vulnerable through its exposure to export trade, including dairy.

Peak cow

Second, some believe that New Zealand may have reached peak cow. At 4.7m cows, we are 2% below the five-year average, and well down on the 6.7m cows in 2014.⁸ A flurry of conversions in Canterbury this year has some wondering if the trend was reversing, but it’s unlikely.⁹ We’re moving to fewer, larger, more productive farms.

If it’s growth we’re wanting, will it really come from more cattle?

In 2021 Fonterra’s then chief financial officer Marc Rivers told the RNZ he couldn’t see the volume of milk increasing again. “We don’t see any more land conversions going into dairy - that’s quite a change from before,” he said. As a result, he predicted the volume of milk produced in New Zealand would flatten or decline. “We’re at peak milk.”

If that’s true (and not everyone agrees, see more below), dairy may not provide what the government is seeking. To move beyond a fluctuating commodity price to seriously double the value of dairy’s exports, the sector will need to add more milk or find more value, and preferably both. That’s a hard sell. According to Coriolis in the last eight years, overall milk production

has stalled. It is only thanks to increased value, such as more milk per cow (higher milk solids and greater efficiency) that our milk output is rising. “Future milk supply growth depends on ongoing productivity gains, not expansion of cow numbers”.¹⁰

And the social license for more dairy farms may not exist. Environmental impacts bedevil the sector. Run-off into waterways,¹¹ animal welfare concerns¹² and high levels of nitrate in dairy-intensive districts challenge the public and customer tolerance of dairy farming:¹³ even if the science is challenged.¹⁴ And then there’s ruminant methane. Livestock farming is responsible for 11% of global emissions and just under half of New Zealand’s. There are significant investments underway with the hope of finding the silver bullet for pasture grazed animals. These are high-profile problems and easy grist for the anti-dairy mill.

If dairy is to grow again, we may need more than just more cows.

Alt dairy

The third challenge is dairy alternatives. For 2024–2025, the average global growth rate for plant milk is forecast at approximately 6.6–8.6% per year by sales value, and about 6–7.5% per year by volume.¹⁵ The most rapid growth is in China and India, reflecting emerging consumer health trends and dietary innovation. The plant-based milk sector in New Zealand has been growing steadily, driven by increasing consumer demand for health, environmental, and ethical products.

This comes at the expense of dairy: despite research by SNI (Sustainable Nutrition Initiative)¹⁶ indicating that plant milk is not a like-for-like replacement due to variations in nutritional composition.¹⁷

Protein is so very hot right now.

The world loves dairy

Protein is so very hot right now. And dairy's front and centre. Overall, dairy is growing about 2% in volume but dairy *protein* is growing at 4%. Auckland-based Sustainable Nutrition Initiative (SNI), led by the Riddet Institute, estimates the world needs to produce 60% more food by 2050. The challenge is making it nutritious, affordable, and sustainable. The growing "protein gap" is being driven by population growth, rising incomes, and dietary shifts.

SNI says dairy is a key source of high-quality protein and essential amino acids and nutrients.

Dairy is one of the most effective and efficient natural sources of essential amino acids such as leucine. For populations with access to dairy and no allergy/intolerance issues, it's a strategic dietary inclusion—especially when nutrient density, affordability, and bioavailability matter.

Source	Complete Protein	High EAA Content	Digestibility
Dairy	✓ Yes	✓ High	✓ Excellent
Meat	✓ Yes	✓ High	✓ Excellent
Soy	✓ Yes (borderline)	✓ Moderate	⚠ Moderate
Pea	✗ No (low methionine)	⚠ Lower	⚠ Lower
Grains	✗ No	✗ Low	⚠ Low

“Some believe the cow is being disrupted.”

Globally almond milk is the biggest seller by value and volume – with 35% of the plant milk market share. Oat milk is growing in popularity especially in Europe and the USA.¹⁸

That said, at a total of US\$21.1b globally,¹⁹ alt-milk is small beans compared to dairy US\$871b. Especially when dairy demand continues to grow at about 2% volume a year. Coriolis estimates the world is adding a new New Zealand-sized dairy production every 14 months.

A material threat to dairy is not plant-based but bacteria-based. Precision fermentation (PF) is the production of animal proteins by Genetically Modified Organisms (GMO) in a process like brewing beer. It's ancient, proven technology. Insulin is produced this way, and the promise is that it will deliver animal protein with less water, land, emissions, run-off and animal suffering.

The PF race to scale, achieve price parity (which is a long way off), taste, and public perception) is real. Auckland's Daisy Lab, a start-up is using PF to make whey at pre-commercial scale. Worldwide, PF products are on the shelf. Nestlé uses PF to produce whey protein for its Orgain protein powder labelled 'Better Whey'. Mars is on track to create ingredients with PF. Fonterra co-founded a startup called Vivici that, within one-year, commercialised PF whey protein as a B2B ingredient.

A bioreactor was recently sent into space, and Joe Biden gave an executive order to advance biomaterials and food manufacture.

Hard on PF's heels is plant molecular farming,²⁰ using Gene Edited (GE) plants to express animal proteins. New Zealand's [Miruku](#) is one of a clutch of companies globally chasing the promise of plants that will be

grown as normal in fields or hothouses for harvesting dairy and egg proteins as ingredients, medicines and nutraceuticals.

Some believe the cow is being disrupted.

Anna Benny is a dairy farmer and food scientist watching the growth of the tech with alarm. “The casein that's produced by this technology is never going to be on the cheese boards of France. But that's not really what we turn the bulk of our New Zealand milk into. We make milk powder for use in highly processed food like Kit Kats or cheeses in frozen pizzas. And the quality is less important than it would be in a Michelin star restaurant.”

Benny believes the new technology will produce good enough analogues that consumers won't care and manufacturers will love. “Our biggest customers are Nestlé and Mars, and they have an imperative to reduce their emissions, particularly scope three. So, they will be the ones driving this. But as farmers and as a nation we don't like to think the gorgeous milk that we are producing can be synthesised. I love drinking the milk from our farm and feeding it to my kids, but that's not how the vast majority of New Zealand milk is consumed.”

Benny is worried the country and sector is underestimating the threat. “I talk to people to see that I'm just a farmer, and that I do have a lot to lose. It opens people's minds. But the reality is we're in a sticky situation. It's going to take a collective approach. And unless we're discussing it in the rooms where those sorts of decisions get made, I don't think we're going to get there.”

“The answer is to do better with less.”

Mark Malone, Fonterra’s General Manager of Science and Technology, disagrees. He says far from fearing new technology, Fonterra is leaning in. “The discussion you hear in the media is very much that dairy’s going to get displaced by these things or vice versa. Our projection is that they will work together, can complement each other for the benefit of Fonterra and our customers.” In 2021, Fonterra formed Vivici, a PF start-up with Dutch giant DSM. It’s now partnering with Liberation Labs in the USA who are investing in a factory to manufacture a PF whey health product, ‘Vivitein’.²¹

The opportunity

Dairy’s challenge is really New Zealand’s challenge. Get this right and we solve a big chunk of our problems, economically, environmentally and socially.

Dr Jacqueline Rowarth, a scientist and former DairyNZ director, is a passionate advocate for dairy. “We must get this right for New Zealand,” she says. “No other sector has the scale and the opportunity.”

“And we can get it right. Assuming that we are using the latest in precision technologies and sustainable farming practices, New Zealand can sustain more intensive dairy. It all comes back to the four R’s: right source, right time, right rate and right place.”

The answer is to do better with less.

“You look at what the world needs and our obligations under the Paris Agreement, which says, do everything you can without affecting food production. New Zealand should not be giving up, we need to do more, better and with a lower footprint and fewer inputs.”

This sentiment is echoed worldwide. Current media reports are suggesting that countries who can grow

dairy have a moral obligation to do so, but to do so more sustainably.

A recent Bloomberg²² article stated that there is a moral imperative to feed ~170 million children under four years old, who suffer from stunted growth, and dairy products are the magic sauce for their development. The article was quite clear though, we need “to reduce milk’s carbon footprint, we’re going to need to produce it more efficiently, rather than hoping the problem will just go away.”

Better farming

It all starts at the farm.

Research by Motu and the Ministry for Primary Industries (MPI) in 2015²³ showed dairy was underachieving on both efficiency and innovation. While dairy farms delivered two to three times more output per worker or hectare than sheep and beef operations, their multifactor productivity growth had stagnated.

Motu’s analysis showed that up to 96% of variation in dairy farm output could be explained by inputs such as land, capital, and labour, rather than superior management or technological edge.

In better news, modelling using the Overseer tool shows that adopting best-practice techniques could lift nitrogen-use efficiency by up to 30% and reduce greenhouse gas emissions by around 15%. These are low-cost, high-value improvements, but uptake across the sector remains limited.

MPI, DairyNZ and Fonterra, launched the Transforming the Dairy Value Chain (TDVC) programme under the Primary Growth Partnership in 2011. With an investment of \$170 million, the programme aimed to deliver \$2.7 billion in annual economic, social, and environmental

“If you look at the Māori economy, it’s doubled in the last five years.”

value by 2020 through improvements across the dairy system. In its final report in 2018, MPI TDVC is “on track” to deliver but not until 2025. Let’s wait to see what the results are.

The precision use of fertiliser, water and feed are important, but so is location. Rowarth argues Canterbury Plains, South Canterbury, north Otago and parts of the Rangitiki could sustain more dairy without environmental damage.

“But we won’t see conversion in dumb areas, again. I think we’re past that. Precision agriculture will provide much greater productivity gains.”

Kaitiaki and value chains

Another contributor could be a premium through origin. It’s a well-worked argument: New Zealand as an ethical, sustainable, low-emissions source of whole foods. We see it working in other sectors such as kiwifruit, wine and infant formula which have captured a premium and retained that premium through value chains (as described in the Value Project by Our Land, Our Water).²⁴ It’s also what’s driving Silver Fern Farms to double down on its Net Carbon Zero by Nature platform.

New Zealand dairy already has a reputation for creamy mouthfeel and can claim increased omega-3 by being grass-fed.²⁵

Dairy company Miraka,²⁶ recently acquired by Open Country, is banking on its origin and sustainability credentials as a key differentiator for customers and suppliers. An alliance of Māori Trusts and Incorporations, Miraka is unique within the dairy industry not just for its indigenous ownership but also for its use of renewable geothermal energy. Biogenic methane aside, its emissions are 90% lower than other dairy companies.

For Miraka, it starts with the whenua and tangata - the land and the people. Brendan Haigh is Kaitiaki (Head of Sustainability). “The business was not set up for dairy per se. It was more a question of how we use the land in a way which benefits our people, the land and creates future choices. Talking to our shareholders, they’re also wanting to understand what future land use will be like. And it may not necessarily be dairy and it’s probably not more cows. It could be other things that already have very highly integrated businesses like forestry, kiwifruit, tourism, energy and they are also quite willing to change over time as to what that land will be used for.”

That said, Miraka is investing in secondary processing. Seven years ago, it built an Ultra High Temperature (UHT) milk processing facility.²⁷ It’s also recently added frozen milk concentrate which has a long shelf life but when reconstituted tastes like fresh milk.

“So, for the Asian market what we have seen as they become more sophisticated, they’re moving towards more fresher formats. The market is moving to milk drinks and coffees and bubble teas. Because we’ve only got a hundred farms and quite a small area, we’ve got good milk quality, and we’re looking for ways that we can get more of that great tasting milk into consumers around the world.”

Quality, authenticity and uniqueness sit at the heart of the Miraka offer - and Māori business in general. “If you look at the Māori economy, it’s doubled in the last five years, and we strongly identify ourselves as being part of that. So, we’ll keep growing the value of our exports but not by increasing the number of cows. It will be by adding value from the high-quality milk that we collect and returning the proceeds to the owners of the land.”

“We haven’t proven that all these things are going to work, but we’re placing bets on some.”

Ingredients and beyond

The most exciting leaps in value creation will come from downstream processing.

Fonterra divides it into buckets: ingredients (like milk powder, protein and advanced ingredients), food service (like mozzarella cheese and UHT creams) and future tech (like precision fermentation). Ingredients, if you include milk powder, make up 80% of Fonterra’s exports, contributing \$17.4 billion in revenue and \$2.6b in gross profit. It has a return on capital of 16%. Foodservice represented about 13% at \$3.9b in revenue last financial year with a return on capital of 15.7%. The growth of Fonterra’s foodservice business is notable. It’s doubled since 2017.

That growth is one of the reasons for Fonterra’s “step change”²⁸ in direction - notably the proposed sale of its Fonterra Brands business. The move surprised many New Zealanders whose only real connection to Fonterra is through Anchor, Mainland or Tip Top (already sold). According to corporate advisers Northington Partners: “Fonterra Brands are not living up to their potential under Fonterra ownership. We also note that a value-add strategy can readily be pursued through the Ingredients and Foodservice channels on a B2B basis.”²⁹

The heroes, according to Chief Executive Miles Hurrell, are products like a UHT whipping cream developed by the Fonterra’s Research and Development Centre (FRDC) in Palmerston North. “This product alone is used in about 400 million beverages and 260 million cakes in Chinese bakery stores each year and we’ve seen a continued increase in demand since 2014.” Recent plans to expand distribution of the UHT product across more Chinese cities were unveiled by Fonterra during a trip to China by Prime Minister Chris Luxon earlier this year.

Dr. Pierre Venter, Director of Research and Development at the FRDC, says the demand is being driven by burgeoning middle classes of Asia and the Middle East. Ingredients such as functional proteins tap into the rapidly growing health and wellness market, targeting the areas of physical, patient, digestive and mental wellness, plus immunity.

At the heart of the revised Fonterra strategy are business customers, like Nestlé and Mars, which specialise in consumer brands. Jeremy Hill, Chief Science and Technical Officer says this is Fonterra’s historic strength. “Fonterra and its predecessors had a similar model for product development, which is not to develop an ingredient and throw it over the fence, but to really understand the applications in which it is used. One way is to identify what we think could support multiple customers in multiple applications. Or we can work directly with customers who come to us. But it’s always with a view to that finished application in mind.”

Asking Hill to provide an example is like “asking me to choose my favourite child - there are hundreds. In the food service space, we contribute to composite foods like pizza. A cake might be part of a meal with our cream in it, which has extra whipping properties.

Or a cream-based sauce, we develop products for all these applications.”

Stretchy stuff

Mozzarella has been a triumph for Fonterra; it’s the southern hemisphere’s largest manufacturer. But it’s not the only stretch on the agenda. Mark Malone says the company is partnering around the world with hi-tech start-ups. “Now, we haven’t proven that all these things are going to work, but we’re placing bets on some.

“Dairy volume has reached a plateau.”

Where we believe there is a synergy with dairy to be had.”

“We will carry on developing our portfolio of protein ingredients. I think that’s one area that I think is still going to be exciting. I think Fonterra will continue leading the world in this.”

For example?

“I can’t go into specifics but think about protein functionality in health, nutrition, ageing, muscle development and so on. We have a strong record in caseinates, whey, and lactoferrin.

“There’s a major protein trend in food and for medical applications. Also, and this is important, we know about the physiochemistry of them - about taste and texture and how they work in a manufacturing context.”

It’s one thing to make a protein powder, it’s another to make it delicious.

The FRDC in Palmerston North is part of the FoodHQ partnership (with the BSI, Massey University, AGMARDT, Palmerston North City Council and the Riddet Institute), New Zealand’s largest hub of food and production specialists in New Zealand (about 3,200). The FRDC is uniquely surrounded by other leading food and food production science, innovation and education organisations. The talent and capability that exist within 3 square kilometres in Palmerston North is ‘special’ says FoodHQ CEO Dr Victoria Hatton and it provides a platform for a certain kind of conversation to take place.

Equally exciting are the partnerships around the world. Pierre Venter: “I think it is a bit of a misconception that Fonterra’s innovation only happens in Palmerston North. We have an investment team based in the US

and in Europe who are intimately linked to our science capabilities. Fonterra also operates six application centres in China. These centres are in Beijing, Shanghai, Guangzhou, Chengdu, Shenzhen, and Wuhan. We’ve got hundreds of people at the FRDC and even more in our global network that can bring a lot of knowledge. And that’s business knowledge as well as science and technology knowledge.

“And then in the last five to ten years we have invested in these external research partnerships with the likes of DSM or AgriZeroNZ.”

The role of the new Bioeconomy Science Institute will have a material effect too, says Venter. “It will be a very big research entity and doesn’t matter how you argue it; the majority of the food innovation is likely to happen within the partner organisations in Palmerston.”

Conclusion

In a country dominated by small businesses and attitudes so parochial we still ask people if they like it here, dairy is refreshingly big, global and complex. That comes with challenges. Big brings inertia, bureaucracy and complacency. And dairy has a unique set of problems with freshwater management, emissions and animal welfare, all of which challenge its social licence.

But big also brings opportunities. When the dial shifts for dairy, it affects the country.

Dairy volume has reached a plateau. After 30-odd years of stellar growth and innovation, it must ask what next? ‘More from less’ is the obvious answer but that’s easy to say. Science, innovation, talent and vision must come together if dairy is to lead the mission to double our exports. What a challenge.

To succeed, we need to be relentless.

Playing where we can win

Komal Mistry-Mehta, is leading Fonterra's innovation and brand strategy. She outlined Fonterra's approach to innovation at E Tipu: New Zealand's Future Food and Fibre Summit hosted by FoodHQ in May 2025. Here is a snapshot of her presentation.

Fonterra can win in innovation when it finds the sweet spot between customer needs, enabling technologies and internal capability.

For example, Fonterra has strong capability in 'next generation dairy solutions', such as producing dairy proteins in high concentrations, and high volumes, for inclusion as ingredients. Looking at customer needs, we know globally we have an ageing population with concerns about wellness and health that is creating a demand for muscle and cognition maintenance, for which protein is a critical ingredient. As it happens, dairy is the best source of protein and essential amino acids for muscle health.

And then if you add enabling technologies as the third lens, we have a strategic advantage in our ability to transform the supply chain, from the sourcing of great products (from our grass-fed farms or our precision fermentation start-up Vivici) to manufacturing and processing, to global distribution. Fonterra excels in all parts of this value chain and the application of new technology only improves it.

To succeed, we need to be relentless under each domain.

We have many great examples of this framework in action. Two of my favourites are Easy Bakery Cream and High Protein Ready-to-Drinks (RTDs) - both launched in China in the last two years.



How do we invest in the platforms that create change?

Easy Bakery Cream

This product was launched in 2024 to serve the mid-tier bakery market, which was largely untapped by Fonterra. There are 160 million bakeries in China, so it's big. Easy Bakery Cream is a full dairy cream with incredible properties - easy to fold, whip, spread, and pipe - produced at an affordable price.

The product is the result of a 2011 Primary Growth Partnership, seven years in development with MPI and Fonterra. It was a fundamental piece of research that laid the foundation for an innovation that, in just 7 months, has gained 400 customers and shows enormous promise.

What else can we achieve when we join up our research and market capabilities?

High Protein RTD in China

This is quite a different product and a different way of innovating. We know that the protein market is US\$2b and growing at 4% per annum. Looking at trends in the US we can see the growth of high-value protein products like RTDs. The China market is comparatively immature but the same macro factors apply.

Rather than take all the risk us we partnered with a smaller operator to launch just one product in 2023. It worked well and the partner has now launched 10 altogether.

Global and open for change

Overall, we know that our impact will come from leveraging the global ecosystem - customers, researchers and producers. It's why Fonterra have six application centres³⁰ in China; collaborations with researchers, such as the Microbiome Research Centre in Ireland and the University of Cork;³¹ and new partnerships such as Vivici, our Joint Venture with DSM for precision fermentation.

The Ki Tua Fund, a dedicated innovation investment fund, will greatly accelerate our ability to fund these innovations.

The FRDC will be 100 years old in 2027. What will the next 100 years look like? We don't know exactly but we do know that disruptive technologies will create new possibilities. AI is one of those platforms. We must lean into AI. The second platform is gene technology. We must do it safely and protect what we already have.

When I think about where we have as a nation had success, it's when we've collaborated at a national level: dairy, wine, kiwifruit. What's required for success in the 21st century? How do we have nationwide and global collaborations? How do we invest in the platforms that create change?

- ¹ https://www.bloomberg.com/opinion/articles/2025-07-20/a-looming-dairy-drought-will-stunt-the-world-s-growth?utm_source=website&utm_medium=share&utm_campaign=linkedin&embedded-checkout=true
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