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Foreword



Hon Damien O'Connor
Minister of Agriculture
Minister for Biosecurity
Minister for Rural Communities
Minister for Trade and Export Growth

Tēnā koutou katoa

I'm delighted to present this report about our work with the food and fibre sector in delivering the *Fit for a Better World* roadmap.

Despite the situation presented by the COVID-19 Delta and Omicron outbreaks, our sector continues to show its ability to adapt and deal with constraints.

The latest Situation and Outlook for Primary the Industries shows a record

return of \$52.2 billion in the year to 30 June 2022, demonstrating our continued ability to provide top-quality food and fibre to Kiwi and overseas consumers. The sector is leading New Zealand's economic recovery from COVID-19 and the investment we're making together as part of Fit for a Better World will help us well into the future.

It's been my pleasure to launch a range of projects in partnership with sector businesses and groups over the past year. From supporting the medicinal cannabis industry to beef genetics to iwi-based ventures and maximising the sustainable use of whenua around New Zealand, our Sustainable Food and Fibre Futures fund has now been involved in projects worth \$436 million. And there are plenty of more exciting investments to come over the next year.

The Government's Budget committed large investments to help the sector reduce agricultural emissions and boost integrated advisory support for farmers and foresters on the ground. These investments will help meet our environmental goals and enable value growth as overseas consumers demand higher sustainability credentials from the food and fibre they buy. Trade is a vital part of the *Fit for a Better World* roadmap and the signing of the UK Free Trade Agreement will help our food and fibre sector enter a high-value market.

At its heart, the *Fit for a Better World* roadmap and our work with the sector is about ensuring a strong future for farmers, growers, foresters and fishers. I know my colleagues Ministers Parker, Nash, Verrall and Whaitiri are keen for that work to continue over the coming year. I look forward to continue working with Māori, businesses, and rural communities on some exciting projects to build a more productive, sustainable and inclusive food and fibre sector.

Hon Damien O'Connor



Hon David ParkerMinister for Oceans and Fisheries



Hon Stuart Nash Minister of Forestry



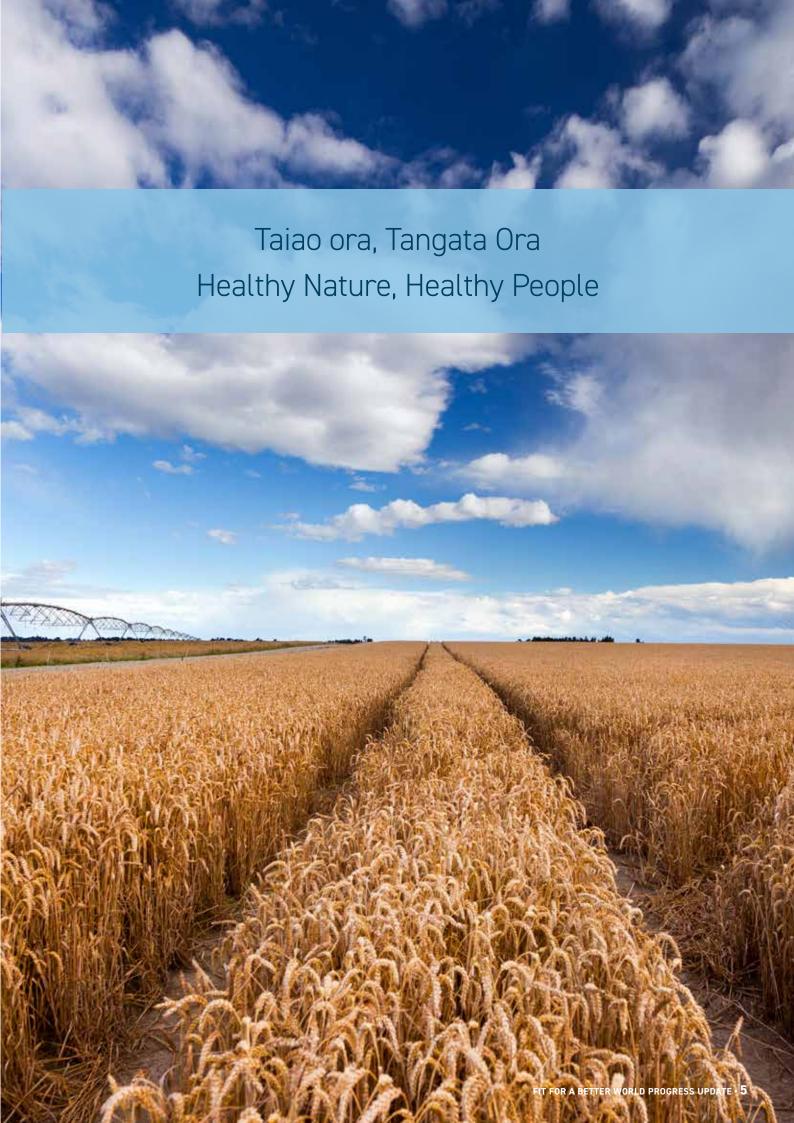
Hon Dr Ayesha Verrrall Minister for Food Safety



Hon Meka WhaitiriAssociate Minister of
Agriculture (Animal Welfare)



Hon Rino Tirikatene
Parliamentary Under-Secretary
to the Minister for Oceans and
Fisheries



Who we are: Partnership in practice

As New Zealand reopens its frontiers to the world this year, the food and fibre sector is ready with a vision to back the country's recovery from COVID-19. The sector is transforming and is well on its way to delivering millions in value-add to its exports, employing thousands of Kiwis in good jobs, and protecting the country's Te Taiao. The Food and Fibre Partnership Group is working to ensure the *Fit for a Better World* roadmap is delivering, is ambitious and is fit-for-purpose by bringing together Chairs and Chief Executives, and Māori agribusiness leaders from across our sector and government. It's a group effort and together we are ensuring the sector continues to thrive.

Mike Petersen

Chair - Food and Fibre Partnership Group

The Food and Fibre Partnership Group



Global food supply is being affected by disruptive change and New Zealanders must protect what is valuable to us. At the same time, we need to grow future opportunities to become a more resilient and prosperous food producing nation. The Te Puna Whakaaronui think tank has just released: WELL_NZ - reframing New Zealand's food sector opportunities. It advocates for urgent action to reframe our food production systems with the wellbeing of our people, land and water, as central tenets. Te Puna Whakaaronui is working to further the conversation around the most significant issues facing food production in New Zealand. Research, insights and analysis from Te Puna Whakaaronui will support the food and fibre sector to make well-informed decisions as it actions the Fit for a Better World roadmap.

Lain Jager

Chair - Te Puna Whakaaronui - Food and Fibre Sector Thinktank



Te Puna Whakaaronui Food and Fibre Sector Thinktank

Ngā Pouwhiro Taimatua Māori Primary Sector Forum



Ahuwhenua Māori, Māori-owned agribusinesses are significant producers of food and fibre for Aotearoa. Our whakapapa shows our people are innovative, smart and committed to growing the wealth and prosperity of our whānau. We continue to champion better outcomes for our whenua, our taiao and our people by supporting Māori to make the most of their primary sector assets which in turn will assist whanau to meet their needs and aspirations for their whenua and taiao. Ngā Pouwhiro Taimatua was established to strengthen partnerships between Māori and government, and to provide strategic advice to government through Fit for a Better World. The work of Ngā Pouwhiro Taimatua will advise the formation of the Manatū Ahu Matua MPI Māori primary sector economic strategy. This strategy will be released in 2022 with an accompanying action plan that will set out MPI's annual delivery priorities. Together, we are ambitious for what the future can hold for Māori and Aotearoa.

Traci Houpapa

Chair - Ngā Pouwhiro Taimatua - Māori Primary Sector Forum



Ministry for Primary Industries

On behalf of my Government colleagues, I'm proud of the hard work under way with our food and fibre sector partners to deliver the Fit for a Better World roadmap and back the sectors to thrive. I want to thank everyone for their contribution over the past year, which has provided many highlights despite the challenges presented by the COVID-19 pandemic. MPI's Opportunity Grows Here campaign has continued to attract people to the sector and has helped to lift the profile of the careers on offer. We're supporting almost 190 farmer-led catchment groups around the country, and boosting investment in farm advisers to support skills in the sector. Our Sustainable Food and Fibre Futures fund has invested in projects big and small aimed at helping drive value growth and improve environmental outcomes. From trialling peanut crops in the Far North to testing the efficacy of plantain to reduce nitrate leaching, there is a lot of work under way that will provide invaluable tools for us as we strive to reduce our environmental footprint and drive value growth. The sector's record export earnings over the past year show that together we are delivering and I'm excited about the year ahead.

Ray Smith

Director-General of MPI

On the journey

Customers across the globe increasingly demand transparent, ethical, and environmental stewardship, as well as safe, high-quality products from food and fibre producers.

Meanwhile, producers are dealing with multiple factors including the global pandemic, the war in Ukraine, increasing extreme weather events, labour constraints, farm input cost changes, supply chain blockages and disruptive technologies.

Recognising this, we know that we can structure our food and fibre sector to build on our strengths of responding and adapting to our markets. In doing so, we can be successful in developing new and emerging markets, extending our leadership in existing industries, and sustainably growing and exporting our products and technologies. There are opportunities to be maximised and created.

While having complexities to deal with, the sector has performed extraordinarily well over the past year. Export revenue is forecast to climb to \$52.2 billion, as rising commodity prices outweigh COVID-19 related disruptions. Strong prices for key commodity exports across the dairy, meat, and forestry sectors along with increased apple and kiwifruit production is driving revenue growth. How these trends shift will affect the food and fibre sector.

Through the Sustainable Food and Fibre Futures and Kānoa funds, we are investing in a range of initiatives including high-value uses for strong wool, asparagopsis seaweed to tackle methane emissions, and regenerative agriculture. New Zealand has signed international deals including a free trade agreement with the United Kingdom, upgraded our existing one with China, and signed the Regional Comprehensive Economic Partnership, all of which make trade simpler and reduce compliance costs for exporters.

The Fit for a Better World roadmap sets a clear direction and articulates targets to reach by 2030. The roadmap is built on three pillars – productivity, inclusivity, and sustainability. It is

grounded in meaningful government-industry partnerships and embraces the principles of Te Taiao – a deep relationship of respect and reciprocity with the natural world.

Being "Fit for a Better World" is not a single action. It's thousands of them. Every farmer, grower, fisher, forester, processor and producer is making choices and acting every day in a way that has an impact on our inclusivity, productivity and sustainability.

Fit for a Better World is tracking 23 programmes and 54 initiatives across government and the sectors, which are the building blocks toward a more sustainable, productive and inclusive primary sector.

This progress report provides an update across all 23 programmes and a more in-depth look at nine key areas of impact: investment, export, the Māori primary sector, science, agritech, low emissions ambition, regenerative agriculture, workforce, and support at the grassroots.

This Fit for a Better World Progress Update identifies some of the key achievements over the past year and recognises the contribution of the sectors and the Government. We are two years into a ten-year plan. As such, this journey is at an early stage. Our goals are ambitious, but we are making measurable progress and impact. We are developing new, innovative products and systems, adapting practices, enhancing workforce experiences, and reducing environmental impacts.

The New Zealand food and fibre sector is world leading, hardworking and motivated. We know continued progress is possible if we act collectively, with our vision in mind. Because if our vision for a sustainable, prosperous and inclusive food and fibre sector succeeds, then Aotearoa New Zealand succeeds.



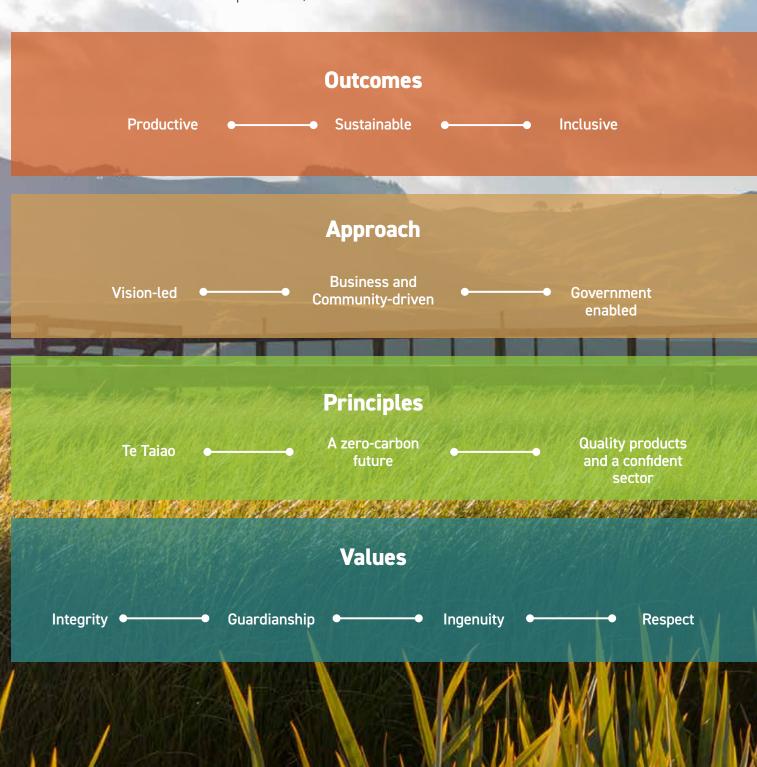
Jenny Cameron
Chief Transformation Officer
- Fit For a Better World

Jenny Cameron was appointed to the role of Chief Transformation Officer for *Fit For a Better World* in February 2022. Prior to joining MPI, Jenny was the General Manager for Responsible Dairy at DairyNZ, the inaugural Chief Executive of the Electricity Retailers' Association of New Zealand, Director of External Relations for the Brewers' Association of Australia and New Zealand, and spent ten years with the Ministry of Foreign Affairs and Trade.



Fit for a Better World Vision

We aspire to an enriched future by providing the world's most discerning customers with outstanding, ethically-produced food, natural fibres, drinks, co- and bioproducts, all sourced from our land and oceans.



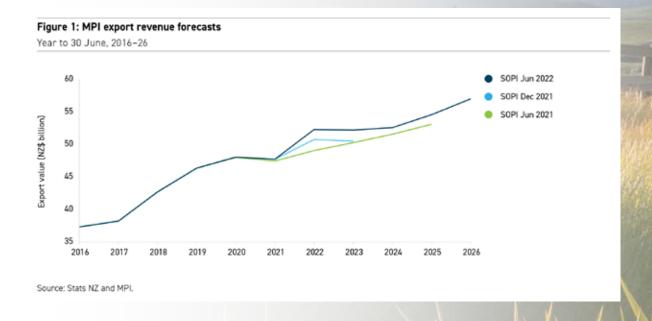
10 • FIT FOR A BETTER WORLD PROGRESS UPDATE

In July 2020 the Government released the food and fibre sector roadmap, *Fit for a Better World* – Accelerating our Economic Potential. The roadmap sets out three ambitious targets to achieve a more productive, sustainable, and inclusive economy within the next decade.

Whaihua | Productivity:

Target: Adding \$44 billion in export earnings over the next decade through a focus on creating value.

Progress: The 2022 *Situation Outlook for Primary Industries* (SOPI) shows record exports for the sector of \$52.2 billion, rising to \$56.8 billion in the year to June 2026. We are on course to achieve annualised export earnings of \$67 billion by 2030 which will secure the target.



Kauneke Tauwhiro | Sustainability:

Target: Reducing biogenic methane emissions to 24-47 percent below 2017 levels by 2050 and 10 percent below by 2030. Plus, restoring New Zealand's freshwater environments to a healthy state within a generation.

Progress: SOPI estimates total agricultural emissions will **reduce 2.8 percent** by 2025.

More than 61 percent of farms hold a documented annual total of on-farm greenhouse gas emissions. He Waka Eka Noa - the Primary Sector Climate Action Partnership will deliver a world first Agriculture Emissions pricing scheme for government consideration to incentivise emissions reductions.

Budget 2022 committed **\$338 million for research to develop tools to help reduce agricultural emissions**. The initiative includes a joint venture with key sector businesses and the creation of a new Centre for Climate Action on Agricultural Emissions.

Almost 190 farmer catchment groups, with more than 5000 farmers, around the country are being supported to help share knowledge and improve practices.

We're investing \$118 million to build integrated farm and forestry advisory services, alongside the sector, to ensure people get the right on-the-ground information to adapt.



Whakaurutia | Inclusivity:

Target: Employing 10 percent more New Zealanders by 2030, and 10,000 more New Zealanders in the food and fibre sector workforce over the next four years.

Progress: More than **11,500 New Zealanders** have been attracted to jobs in the food and fibre sector sectors since July 2020, supported by the Opportunity Grows Here campaign.

32 projects, worth \$8.56 million, are being supported as part of the Māori agribusiness extension programme (MABx).

23 rural community hubs are receiving funding to ensure people in isolated communities are connected.

Three key principles underpin the roadmap

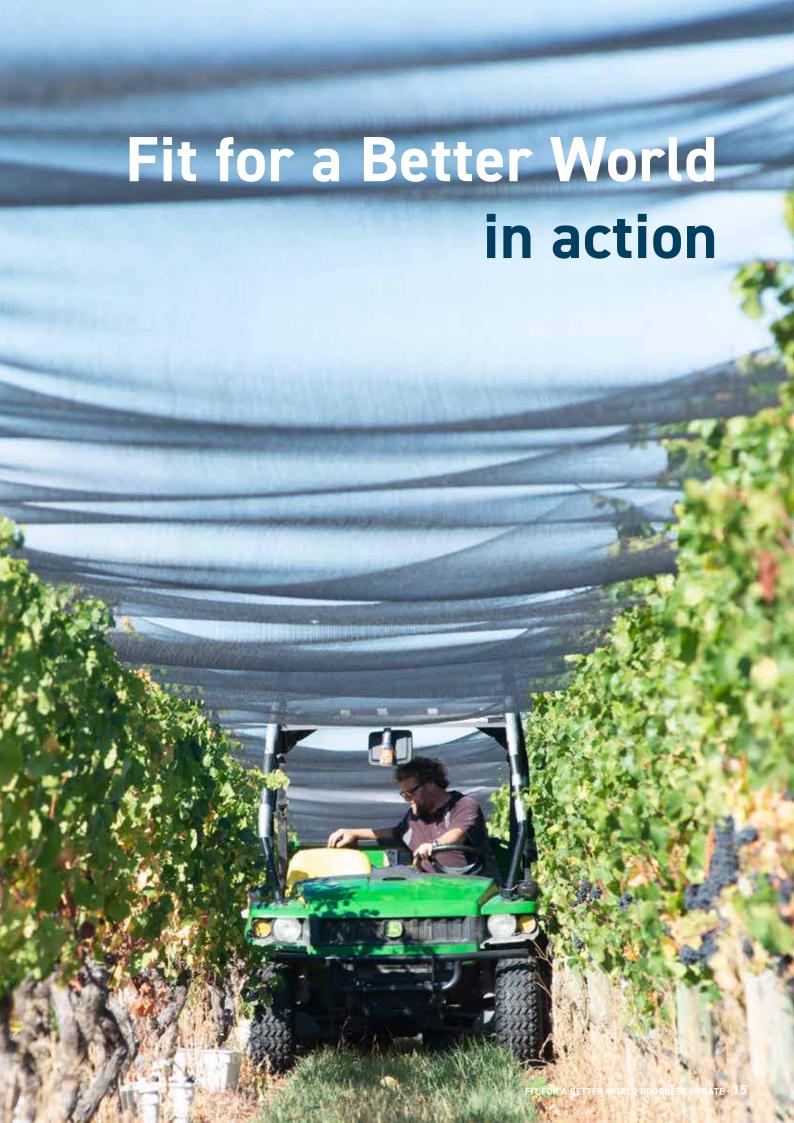
Te Taiao: Our food and fibre sector is grounded in Te Taiao, a deep relationship of respect and reciprocity with the natural world that will ensure the long-term viability of our sectors and wellbeing of future generations.

A zero-carbon future: We will help address climate change by moving to a zero-carbon society. Together we will restore the health of our freshwater and environments and reverse the decline in biodiversity.

Quality products and a confident sector: We will support our food and fibre sector to meet increasing consumer demand for a secure supply of safe and healthy food, and for products that are produced and packaged ethically and sustainably.







Sustainable Food and Fibre Futures

by the numbers

With a budget of approximately \$40 million a year, Sustainable Food and Fibre Futures provides a single gateway for entities to apply for investment in a range of projects that deliver economic, environmental and social benefits.

Total dollar value of projects contracted since Sustainable Food and Fibre Futures launch

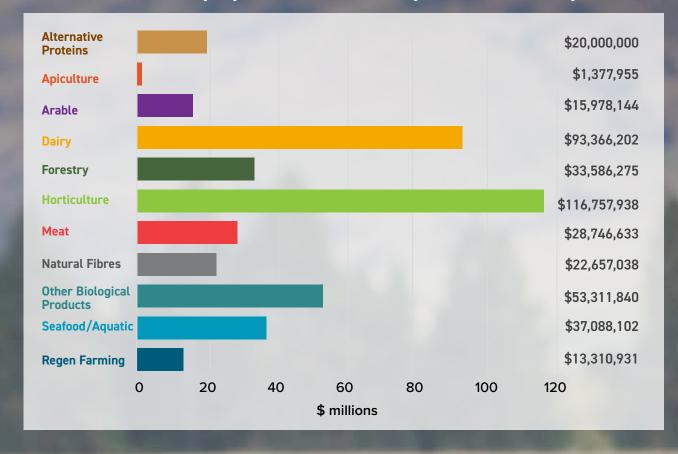
MPI Funding

\$207,450,171

Food & Fibre sector Funding \$228,730,887



Total investment in projects (MPI + industry) June 2018-May 2022



Sustainable investment progress

Why this matters

To deliver on the *Fit for a Better World* goals, significant investment is required to champion enhanced production, yield sustainable profitability, and enable businesses to seize new opportunities.

A vibrant investment market is important to accelerate innovation.

In addition to capital, investment brings increased knowledge and market access, which enables the reinvigoration of traditional industries, helps sectors to grow their export potential, and supports emerging industries. Access to investment can also support sustainable and inclusive growth.

Debt finance has remained the predominant source of financial capital for the food and fibre sector, especially in farming. New models such as farm syndication are increasing in popularity, and equity capital is becoming more available. That is particularly important for small to mid-sized firms seeking to expand and invest in innovation.

What is being delivered

- A new cross-agency Fit for a Better World investment acceleration team (FIAT) is delivering targeted investment support for food and fibre companies. The team includes MPI, New Zealand Trade and Enterprise (NZTE), and the Ministry of Business, Innovation and Employment's (MBIE) Kānoa Regional Economic Development and Investment Unit (Kānoa-RDU) and is focused on attracting investment. 18 companies are in the pipeline.
- A new Investment Ready programme between MPI and The Factory (a business development, training and innovation hub located in Palmerston North) prepares growth stage primary industry businesses for capital raising. This involves sectors such as agritech, viticulture and value-added food production. In its first year, businesses are pitching for over \$50 million.
- Industry and government are working together to increase investment opportunities and make these more visible through showcases such as Fieldays. Intensive work is taking place with sub-sectors such as pet food, added-value dairy, alternative proteins, and aquaculture.
- MPI's Sustainable Food and Fibre Futures fund has supported 195 projects worth over \$436 million since it was established in 2018, partnering with sector organisations to stimulate innovation, research and development.



Agriculture/Horticulture

100 projects/\$126.5 million

Wood Processing

16 projects/\$60.8 million

Aquaculture

16 projects/\$47.1 million

Manufacturing/engineering projects that support agriculture/horticulture 7 projects/\$11.02 million



Plant-based protein start-up Leaft Foods raised private investment through a US\$15 million Series A funding round in April 2022, with investors including Silicon Valley's Khosla Ventures, NBA player Steven Adams, Ngāi Tahu Holdings via their New Economy Mandate and ACC's Climate Change Impact Fund. MPI invested \$8 million through the Sustainable Food and Fibre Futures fund in a \$20 million five-year programme, providing initial support to develop the technology that extracts edible protein from New Zealand grown green leafy crops. NZTE investment supported Leaft with investment preparation support and connections to relevant investors, including Khosla Ventures.



Te Huata Mussel Spat Hatchery received investment from Kānoa-RDU to ensure supply can meet the Government's aquaculture strategy goal of \$3 billion in annual sales by 2035.

Up to 85 percent of our mussel industry relies on wild caught and beach cast spat, which cannot guarantee sufficient supply as it is increasingly unreliable in terms of quantity and quality, compared to selective breed hatchery spat. The Regional Strategic Partnership Fund will invest \$6 million alongside support and funding from other parties and ministries to enable Te Whānau-ā-Apanui to progress the Te Huata Mussel Spat Hatchery build in Te Kaha.



Asparagus is a popular crop, but is dependent on arduous manual harvesting. Robotics Plus, the New Zealand Asparagus Council, and MPI are developing and commercialising a driverless robotic harvester to address ongoing labour shortages and enable asparagus growers to be more competitive. The \$5.83 million project has \$2.6 million of investment from the Sustainable Food and Fibre Futures fund. Discussions about the technology are under way with Global Growers, who could become customers, leading to international investment in the development programme. Not only is this a game-changer for the asparagus industry, it may also boost export earnings from the global commercialisation of this Kiwi-made technology.

Export: It's about trust

Why this matters

Trade is a critical part of the New Zealand economy. But trade in food and fibre products is complex and requires our trading partners to trust our production and processing systems. MPI plays a critical role in ensuring our systems are world class and by advocating for them in export markets.

The food and fibre sector accounted for about 82 percent of merchandise exports and 11 percent of GDP in the year to December 2021. This ratio has increased steadily, with primary industry export growth exceeding that of non-primary industries for the past nine years.

Trade barriers cost our primary sector up to \$15 billion a year. MPI, MFAT and NZTE work together with the sector to negotiate better outcomes and add value to our exports.

MPI advocates internationally for science, risk and evidencebased approaches. International rules can support enhanced market access and primary sector value creation, including through development of health and sustainability-related claims in existing and new products.

What is being delivered

Maintaining excellent market access conditions requires constant work. COVID-19, supply chain disruption, production and processing delays, workforce impacts, and additional technical requirements have all affected exporting. Despite this, we are making progress.

Some examples are:

- Post-Brexit trade with the UK is flowing smoothly.
 New Zealand's recent Free Trade Agreement with the UK is comprehensive, creating meaningful opportunities for the food and fibre sector.
- Market access has been maintained despite COVID-19 through companies and government working together to ensure processes remained manageable while satisfying receiving country authorities.
- Māori leadership has been highlighted at the United Nations Food Systems Summit.

- Climate change mitigation was included in the United Nations Framework Convention on Climate Change (UNFCCC) agriculture text for the first time.
- New Zealand was elected vice chair of international food standards organisation Codex Alimentarius.
- Delivery issues were resolved in a number of export destinations during the height of the COVID-19 pandemic through the increased use of electronic certification.
- The export of organic products to China was facilitated.

The work ahead

MPI, MFAT, NZTE and MBIE's work sits alongside sector efforts to create export opportunities. MFAT is the lead agency for trade negotiations and MBIE is instrumental in the primary sector's industry transformation. Meanwhile, NZTE supports food and fibre companies through the knowledge, tools and case studies available on its 'myNZTE' digital platform. The NZTE global marketing campaign "Made with Care" is gathering momentum and successfully targeting high-value consumers in markets such as Australia, China, Japan, the United States and the United Kingdom.

International priorities include:

- Protecting and growing New Zealand's existing market access.
- Participating in free trade negotiations, including with the European Union.
- Ensuring improvements in primary sector sustainability are recognised internationally.
- Extracting more value from existing FTAs by ensuring trade is as easy as possible, including through effective implementation of the New Zealand-United Kingdom agreement.
- Supporting multilateral institutions to ensure these continue to operate effectively and deliver outcomes that align with New Zealand's interests, especially to remove global subsidies with harmful economic and environmental effects.
- Ensuring trade outcomes benefit all New Zealanders, including Māori, women, rural communities, and small and medium-sized enterprises.
- Supporting trade delegations to key markets including Australia, the United States, the EU, the UK, Japan and Singapore.



Held over six months the Dubai World Expo had 24 million visitors, making it the largest global event since the start of the pandemic. There were 1.24 million visitors who specifically came to the New Zealand pavilion and experienced the "Care for People and Place" theme. Seventy New Zealand-based companies came to the Expo to expand and strengthen trade opportunities. More than 200 companies took part in NZTE's business and trade programmes virtually or in person, including many from the primary sector. MPI and NZTE collaborated to deliver several primary sector-focused events during the 'Food Agriculture and Livelihoods' week in February.



MPI and MFAT worked closely together to ensure strong outcomes for Aotearoa's food and fibre trade following the UK's exit from the EU. This included the UK-NZ Veterinarian Agreement, which facilitates our trade in animal products, and a free trade agreement was negotiated alongside ongoing negotiations with the EU.

Under the NZ-UK FTA 99.5 percent of current New Zealand goods will enter the UK tariff-free from entry into force. It has the potential to boost New Zealand's GDP by between \$700 million and \$1 billion, and exporters can save approximately \$37 million per year on tariff elimination. Investment opportunities will be strengthened, and the FTA includes a Māori Trade and Economic Cooperation chapter. The FTA features the most

far-reaching trade and environment provisions New Zealand has ever negotiated, including commitments to eliminate fisheries subsidies, to take steps toward eliminating fossil fuel subsidies, and to promote sustainable agriculture.



The second bilateral agriculture dialogue with Vietnam took place in April. New Zealand exported NZ\$968 million to Vietnam in dairy products, fruit, forestry and education services. Two-way trade topped US\$1.56 billion in 2021, and the shared goal is to achieve two-way trade worth US\$2 billion by 2024. Vietnam will host, through the New Zealand-funded Global Research Alliance on Agricultural Greenhouse Gases, a regional hub for the ASEAN region on increasing support in greenhouse gas inventories, research on mitigation of climate change impacts, climate and smart agriculture. This partnership will build regional capability to address climate change and enable positive engagement on a high profile, strategic priority for both countries.

Made with Care

Made with Care is a global marketing campaign telling the story of New Zealand's premium Food and Beverage. Led by NZTE, and part of NZ Inc's response to COVID-19, it has been developed with extensive input from the industry, to drive awareness, preference and demand amongst global consumers and trade audiences. Targeting the key export markets of Australia, China, Japan, USA and the UK, and is supported with activations in numerous secondary markets.

Driven by consumer insights and backed by significant investment, as part of the Government's Covid Recovery Strategy, the campaign was launched in October 2020 and continues to build momentum across the globe.

Research commissioned by NZTE with Kantar and Dynata in September 2021 showed that the Made with Care messaging around the quality of New Zealand's natural resources, underpinned by values of manaakitanga, kaitiakatanga and ingenuity is resonating strongly with global consumers. A second wave of this research commissioned in April 2022 showed that the campaign delivered significant uplift across key metrics of awareness, appeal, consideration, preference and purchase. It also found that New Zealand is leading on perceptions as an ethical and sustainable food producer, but has work to do on improving perceptions around taste, premium quality and trust which have a high impact on preference and consumer willingness to spend more.

Amongst those who recognised the campaign, there was a 5 percent increase in awareness of New Zealand producing quality food and beverages, and amongst those that were aware, purchase of New Zealand food and beverages in the previous 3 months increased by **25 percent.** (results from April 2022 survey)

The research also highlighted that New Zealand is well perceived as an ethical and sustainable food producer, with this being a key purchase driver for a growing number of consumers willing to spend more on premium food and beverage products driving greater value for the sector.

The Made with Care toolkit, located on the New Zealand Story website, has been well utilised by over 750 food and beverage exporters and industry associations to date. It not only provides creative assets, messaging and marketing tools for sub-sectors such as dairy, meat, seafood, honey, wine and produce but also ensures a collective and consistent narrative for selling our premium food and beverages to consumers and buyers across the globe.





Māori food and fibre sector thriving

Why this matters

Māori are vital players in the primary sector and are set to play an increasingly significant role as the potential of both whenua Māori and tāngata Māori is realised through strategic investment.

The Māori economy has been growing steadily by more than 5 percent per annum. That is expected to continue with Māori assets potentially growing from \$50 billion to \$100 billion by 2030.

Māori businesses exported about \$755 million worth of goods last year, almost half were to China.

Māori enterprises account for 40 percent of the country's forestry, 50 percent of its fishing quota, 30 percent of sheep and beef production, 10 percent of dairy production, and about 1 percent of horticulture.

Although the larger proportion of Māori assets are concentrated in the food and fibre sector, there is increasing diversification into other areas such as geothermal, digital services, education, tourism and more recently, housing.

What is being delivered

 Ngā Pouwhiro Taimatua was established last year to advise the Government on how it can best grow the Māori primary sector economy. This group of Māori sector leaders provides strategic guidance on the opportunities and challenges Māori experience in the primary sector. It has identified several priorities that will form the foundation of an MPI Māori primary sector economic strategy being released this year.

- MPI's Agriculture and Investment Services continues to host regular Te Tapuwae Ahuwhenua Māori primary sector forums on sector opportunity and connectivity.
- Māori landowners have had access to expert advice and guidance to build on the potential of their food and fibre sector assets. MABx, the Māori agribusiness extension programme launched in 2019, now has 32 projects under way worth \$8.56 million, reaching more than 200 Māori land trusts. MABx supports the trusts to collaborate as it facilitates asking questions, sharing ideas, and sharing experiences.
- The Māori Agribusiness Pathway to Increased Productivity (MAPIP) has funded 20 trusts, enabling access to expert advice for the development of whenua. Furthermore, 11 Māori organisations were funded to explore the development of training options for Māori in the food and fibre sector – nine of these projects are now delivering training programmes.
- NZTE is partnering with Māori to enable investment in productive land and water space use. The partnership is making use of the hyperfarm tool, which enables Māori organisations to make decisions about what their properties could achieve as a result of any land use changes. The tool uses data to understand how changes would affect water quality, carbon emissions, finances, and which crop or forest types may be most suitable for their specific location. To date, seven iwi have completed land-use assessments using hyperfarm and are working with the AgResearch team. Four further iwi users are in line to do the same.
- Industry bodies Beef+LambNZ and DairyNZ partner with Māori to deliver specialised extension programmes.



The Pukenga Mahi project is an "earn while you learn" cadetship pilot programme. It combines paid horticultural work with learning and achieving NZQA-accredited qualifications. As a result of MPI funding, the programme will now be rolled out in the Bay of Plenty and is expected to train 1000 cadets over a three to five-year period, including Te Tai Tokerau and Te Tairawhiti regions.



An ambitious horticulture project is under way to lift the productivity of Māori-owned land in northern Hawke's Bay, MABx supported the establishment of the Wairoa Horticultural Hub with \$440,000 of funding. The hub consists of representatives from more than 20 blocks of land covering 460 hectares, the majority Māori-owned. The investment enables landowners to get on-the-ground support to identify suitable parcels of land to be sustainably developed into horticulture. It's part of a long-term vision to harness the full benefits of Wairoa's soils, water and climate. A key driver for the project is to convert enough land to justify the establishment of post-harvest cool store and processing facilities. This will provide muchneeded employment opportunities and increase social and economic outcomes for the district.



"Noou te rourou, naaku te rourou ka ora ai te iwi" – "With my food basket and your food basket our community will prosper." Hana Rawhiti Maipi-Clarke

The Matawhaanui Trust and Waahi Whaanui Trust recognised the requirement to support the Raahui Pookeka (Huntly) community through the development of a māra kai, to provide kai and mahi to the local people while ensuring kaitiakitanga objectives are met. The proposed mixed enterprise system will provide kai, income, educational opportunities and onsite work experience, which could lead to further agricultural and employment opportunities for local community members. The Matawhaanui Trust has received funding through Māori Agribusiness Pathway to Increased Productivity (MAPIP). MAPIP enabled the trust to gain the confidence to grow a large Maara kai of about 4 hectares - soon to be 8 hectares. The Trust is now looking to further explore through MABx and share its knowledge by utilising a Tuakana-Teina model of learning with the other trusts.



The MPI-supported Māori Agribusiness Sheep Milk Collective is exploring sustainable production at scale to create jobs and expand the emerging export market. Global demand for sheep milk and associated products is booming. The collective aims to milk 25,000 sheep and employ more than 100 people by 2030. It is made up of 20 Māori land trusts and incorporations that own more than 24,000 hectares of land stretching from the western shore of Lake Taupō to the Hauraki Plains. It was set up through MABx to provide farmer-to-farmer support to Māori landowners and trustees.

Science solutions are vital

Why this matters

Research, science, innovation, and mātauranga Māori are critical factors to lift the sustainability, inclusivity, and productivity of the food and fibre sectors. Science and research are fundamental to delivering tools, evidence, and knowledge to our farmers, growers, fishers, and foresters, which they need to understand problems and evaluate solutions. Beyond the research, it is important to ensure there are adequate development opportunities and commercial pathways.

New Zealand has the opportunity to lead the world on science, especially as we grapple with protecting water quality, reducing biogenic emissions, and balancing prosperity gains with environmental impacts. This work plays a key role in increasing value across the food and fibre sectors – not just in helping solve challenges, but creating new opportunities.

What is being delivered

A key focus has been to identify what science and mātauranga research and development activity needs to be accelerated to support the delivery of *Fit for a Better World* goals. The Accelerator Programme was established in late 2020, and eight key areas were identified:

- Biological Emissions Reduction
- Horticulture
- Diversifying Proteins
- Aquaculture
- Dairy-Beef Integration

- Land Use Decision-Making
- A Net Zero Carbon Primary Sector
- Enabling People Through Change

Science and mātauranga plans are being developed for each area together with government, Māori, industry, and science. Plans are being completed and implemented in a staged approach, with the top four Accelerators listed progressing first. A cross-agency Te Ao Māori Group has been established to help ensure the Accelerators deliver for Māori. This group is providing critical systems thinking to support connectivity across the plans so that the whole of the Accelerator portfolio is greater than the sum of its parts.

MPI directly invests in science related to climate change and sustainable land use through a variety of funding programmes. Additionally, the Sustainable Food and Fibre Futures fund invests about \$40 million each year, partnering industry to create multiple benefits for the primary sector in New Zealand from research.

Budget 2022 allocated \$338 million over four years to accelerate research and development into new tools and practices farmers can use to reduce emissions.

This funding will be used to establish a Centre for Climate Action on Agricultural Emissions, which will include a joint venture with industry with a strong commercial focus.





We need sustainable packaging alternatives for our seafood industry (and other primary producers), which use Expanded Polystyrene (EPS). Bio-based commercial packaging Zealafoam is a product made by BiopolymerNetwork (BPN) a New Zealand based company formed in 2005 to exploit specific niche areas of bio-research to create new bio-based chemicals, biopolymers and applications. BPN is a small but agile company able to draw upon the skills of a large pool of talented research scientists sub-contracted from their shareholders AgResearch, Plant & Food Research Ltd and Scion. The company received \$472.500 from the Sustainable Food and Fibre Futures fund as part of a \$1.17 million project to fast-track the production of the packaging for the seafood industry.



New Zealand Apples and Pears is aiming to become spray-free with no detectable pests or diseases by 2050. The Sustainable Food and Fibre Futures fund is contributing \$7.44 million to the \$14.77 million research programme. The scientific solutions needed to achieve this goal will help the industry to prepare for, and be more resilient to, changes in pests and diseases from climate change while maintaining international market access and advantage. By 2030, the aim is to have halved pesticide application by using targeted and smart technology. Achieving a spray-free status by 2050 would result in a reduction of industry greenhouse gas emissions by 35 percent. If achieved, we will protect New Zealand's existing high-value market share and future growth prospects.



The goal is to restore New Zealand's freshwater environments within a generation. MPI has invested over \$14 million in 12 research projects, implemented over four years, to study freshwater mitigation technologies in the New Zealand setting. Key focus areas are nitrates, phosphates, sediment and E. coli contamination on farms. Technologies and mitigations being tested include: quantifying the effects of salt supplementation of livestock on reduction in nitrogen losses; the potential benefit of utilising urine-N herd testing technology to identify and manage cows based on their individual urinary-N loss potential; quantifying the effectiveness of combined sediment traps and wetlands for reducing nitrate, phosphate, sediment and *E. coli* losses; and, assessing the farm scale impacts land use and management changes made

in Manga-o-tama Catchment 20 years ago, have had on freshwater stage and carbon stocks. The data generated by these 12 projects will be used to enhance decision support tools. This complements the work being undertaken by the Ministry for the Environment.

Agritech to take on the world

Why this matters

Agritech has been one of the most successful markets in New Zealand's technology sector. Innovations in this space support farmers, growers, foresters, beekeepers, fishers and our producers and processors to create more value and achieve greater sustainability both here and abroad.

With revenues of more than \$1.5 billion and exports of about \$1.2 billion in 2021, agritech is a highly valuable part of our economy, and one that has strong potential for growth.

What is being achieved

 An Agritech Industry Transformation Plan (ITP) was established in 2020 to expand industry and produce higher-value exports, and help develop a cluster of agritech firms to take on the world. The ITP incorporates a taskforce led by MPI and MBIE including NZTE, Callaghan Innovation and AgriTech New Zealand and will soon be broadened to include additional industry and Maori participation. It is intended to accelerate the sector's growth, attract investment, increase commercialisation of our IP and increase exports. The ITP is coming to the end of its initial two-year cycle but in partnership with iwi, industry and workers, we are refreshing it to capitalise on the foundations put in place and continue growing the sector.

- The \$40 million Finistere New Zealand venture capital investment fund has been launched. In partnership with NZ Growth Capital Partners, the fund is run from research and development incubation cluster The Factory in Palmerston North.
- To support export-focused entities, digital resources such as images, case studies and statistics have been developed under the Agritech Story, Powered by Place Campaign toolkit.
- Regular Technology Investment Network Agritech
 Insights Reports are being published, a sector taxonomy
 has been developed, and about 800 agritech firms are
 being surveyed to expand data interoperability and
 enhance understanding of the sector.

AgriTechNZ acknowledges the *Fit for a Better World* identified pathways for science, innovation and mātauranga and looks forward to unleashing the role of innovators in the transformation of our food and fibre sector and the creation of high value jobs for New Zealanders. The Agritech Industry Transformation Plan is enabling the shared goals of productivity and sustainability improvements for our food and fibre sector as well as expanding our nation's contribution to the world through the development of globally competitive businesses.

Brendan O'Connell, AgriTechNZ Chief Executive



Orchard technology business Hectre creates simple-to-use orchard management and mobile fruit sizing apps. It won the global AgTech Breakthrough Awards last year. Hectre digitises orchard management processes, saving time and money, and getting more of the fruit to market. Fruit packers can increase their early size sample rates by up to 3000 percent, gaining access to sizing data as soon as the fruit is picked. This means better decision making and reduced costs.



"Accelerating the pace at which new technologies are proven and brought to market is vital for addressing the challenge of climate change."
Bridgit Hawkins,
Chief Sustainability
Officer, CropX

Disruptive nutrient tech

Farm2050 is a global research initiative involving researchers, farmers, entrepreneurs, manufacturers and distributors to identify and test disruptive technologies in nutrients. Three of the five companies selected to be a part of this are NZ-based – CropX, Eko360, and Pastoral Robotics. The first field trials started early this year focused on grazing, high value horticultural and row crops.



An important pillar of the ITP is to develop and formalise international partnerships and pathways to optimise commercial opportunities for Kiwi agritech in target markets. NZTE is running two accelerator programmes with selected international partners to support this; one in a specific region (Latin America) and one in a specific sector (aquaculture-technology). Partners were selected based on their competency at working with SMEs and affinity with the challenges New Zealand firms face in their market - AgTech Garage in Latin America and Hatch, a global aquaculture innovation agency. Nine agritech companies with pastoral

farming and horticulture applications were accepted into the Latin American accelerator, and included very small to large New Zealand firms – all with a desire to build into this developing agritech market. Four companies succeeded in an intensive selection process to enter the Hatch aquaculture-tech accelerator, all with a specialist focus on technology deployable into this sector. In both accelerators the focus has been on building robust value propositions that are then used with the international partner to enable validation of solutions and connecting into business growth opportunities. Both programmes are in progress and outcomes will be assessed in mid-2022.



Low emissions "robo-tractor"

Blenheim-based company Smart Machine is developing a driverless, low emissions tractor with funding support from MPI's Sustainable Food and Fibre Futures fund. The robo-tractor has been successfully tested in vineyards and is set to transform the productivity of trellised orchards while reducing carbon emissions. MPI director of Investment Programmes, Steve Penno, says the tractor will be able to perform several tasks, including canopy spraying, mulching, mowing, trimming, and leaf defoliation.

As well as lowering carbon emissions, we could expect to see reduced spray drift, and improved soil and tree health.

Steve Penno, MPI director.



The forestry industry, led by Forest Growers Research Limited (FGR), with support from the Sustainable Food and Fibre Futures fund, has launched a seven-year programme to transform the forestry industry with Precision Silviculture. The programme will focus on developing mechanisation, automation, digital technology and robotics in the silviculture value chain (nurseries, planting, pruning and thinning). Advancements in mechanisation and precision automation will make the recovery of forest waste more financially viable. This will unlock potential to use biomass waste in new manufacturing chains. This could include biofuels and biodegradable alternatives to plastic products, such as disposable cups and packaging. It's estimated that in total the programme has the potential to deliver \$530 million of value to the plantation forestry sector and \$190 million worth of innovative technology sales between now and 2035.



Net-zero carbon emissions

Why this matters

New Zealand is playing its part in tackling climate change. Temperatures and sea levels are rising, and adverse events, including floods and droughts, are more frequent. Our food and fibre sector is already adapting to the impact of climate change. Urgent action is needed to protect, restore and sustain our environment, enhance our wellbeing, and protect future generations. This aligns strongly with kaitiakitanga and mātauranga Māori principles. We all share this responsibility.

Because the food and fibre sector is a biological system, changes need to be holistic, and initiatives must enable farmers, growers and businesses to adapt to changing practices and mindsets. It will require continued commitment for research and development from both public and private sources. New Zealand is one of the most sustainable and low-emissions food and fibre producers in the world. To continue to maintain that position means staying on top of customer preferences, practice changes, and research and development, and communicating these efforts back to the market.

What is being delivered

- MPI has funded research involving Massey University, AgResearch, Plant & Food Research and Agrilink into the carbon footprint of our primary exports to China and Europe. The dairy sector has one of the lowest carbon footprints for milk production in the world and emissions from kiwifruit and apple production are very low. Those findings affirm New Zealand's sustainable farming systems.
- The work under the He Waka Eke Noa Primary Sector Climate Action Commitment since 2019 has been designed to enable and support change through its six work programmes that support the measurement, management and reduction of emissions on farm, farm planning, emissions reporting, on-farm sequestration, emissions pricing, te aukaha (the Māori agri-business workstream), and effective extension programmes. The world-leading programme of work is supported by significant efforts across the sector and government.
- He Waka Eke Noa has looked at alternative pricing approaches to agricultural emissions. Decisions on changes to the pricing mechanism will be made by the end of 2022 to enable implementation by 2025.

- In December last year, New Zealand became the first country in the world to make climate-related disclosures mandatory for all banks, credit unions and building societies with total assets of more than \$1 billion – about 200 organisations.
- New Zealand is world leading in developing the Sustainable Agriculture Finance Initiative (SAFI), a definition for good sustainable agriculture practices in New Zealand for use by the finance sector. This provides the finance sector with open-source information on sustainable farming and growing practices that are suitable for the New Zealand environment but also meet the growing environmental, social and governance (ESG) requirements of international capital providers.
- The Agricultural Compounds and Veterinary Medicines (ACVM) Act is instrumental in how safely and quickly we can get new technologies to market, in a manner that does not also impact our competitiveness. Large change in agricultural emissions is dependent on these new technologies. Legislative changes to the ACVM will progress through the system so it can adapt.
- The Emissions Trading Scheme is being reformed to consider the balance of incentives between exotic and native trees, and other mechanisms to recognise biodiversity benefits. Government and industry want to encourage the right tree in the right place for the right reason.
- Climate-focused extension and advisory services across businesses, industry bodies, and government will continue to grow and support whole-of-system farming change, as well as helping producers navigate an increasingly dynamic economic, regulatory and environmental ecosystem.

In Budget 2022 \$710 million was allocated to lower agricultural emissions, including to create a new Centre for Climate Action on Agricultural Emissions and expand the contribution of forestry to reduce carbon emissions.



Silver Fern Farms launched its first carbon zero angus beef in the US market in March. This was another step toward becoming climate positive and regenerative by 2030. The company began the journey towards carbon neutral red meat in June last year, with support from the Sustainable Food and Fibre Futures fund, by working with farmers to capture carbon, increase biodiversity and create nature-positive food production.

In May, Prime Minister Jacinda Ardern was joined by the visiting New Zealand trade mission, media and Silver Fern Farms leaders at an event in New York City to celebrate the successful introduction of "Net Carbon Zero by Nature" Angus Beef to the US market. The 100% grass-fed product is being sold in supermarkets in the New York Tri-state area, the Midwest, and California.



Under He Waka Eke Noa - the Primary Sector Climate Action Partnership, every farmer is expected to know their carbon footprint by the end of the year. Eleven tools have been assessed as meeting He Waka Eke Noa requirements for calculating greenhouse gas emissions for awareness raising - Alltech, Beef+Lamb NZ GHG Calculator, E2M, Farmax, Farm emanage (Toitū), Fonterra, HortNZ, Mylmprint Farm, Ministry for the Environment, Overseer and ProductionWise (FAR). This provides world-leading tools across the food and fibre sectors to understand their GHG footprint. Bay of Plenty sheep and beef farmer Rick Burke says the calculator he uses from Beef+Lamb is a great tool to inform where their farm is now and what actions they may need to take, "It's a great first step for farmers to get a feel for their number."



The commercial scale production and establishment of indigenous tree species is becoming a reality. New Zealand's native trees play a valuable role in sequestering carbon, improving biodiversity, erosion control, and improving water quality. Native seedlings are slower to grow than many exotic species, and the quality varies. A project led by Scion and funded by Te Uru Rākau - New Zealand Forest Service and Bay of Plenty Regional Council, involving Tipu Wai Trust, Treeline Native Nursery Minginui Nursery, Ngati Whare Holdings, Ellepot Denmark, and Rotorua Lakes District Council explores new ways to ramp up seedling production.



In December 2021 the wine industry commenced its Sauvignon Blanc Grapevine Improvement Programme, a major research programme to protect and enhance its reputation. The aim is to make the industry more resilient and sustainable by identifying grapes with traits such as resistance to drought, frost, pests and diseases. The Bragato Research Institute (BRI) will apply the latest genome sequencing technology to create up to 20,000 entirely new variants of contemporary Sauvignon Blanc. The variants will then be screened to identify plants that exhibit the most useful traits. This work is co-funded by New Zealand Winegrowers, MPI, more than 20 wine sector companies, and involves Plant & Food Research.



Decarbonisation efforts are being undertaken in many industries, including the horticulture, dairy and meat sectors. In the horticultural space, Meadow Mushrooms aims to be carbon zero by 2025 and is replacing a diesel boiler with a 2.5MW electric resistive one at its main growing and packing site. Southern Paprika is retrofitting high efficiency energy screens in its glasshouses to reduce heat loss. In dairy, A2 Mataura Valley is installing the country's first high-pressure electrode boiler to replace all its coal-fired heat duties, while Fonterra is launching the first electric milk tanker. Meat processing company AFFCO is incorporating high temperature heat recovery in its hot water system, and Alliance Group is replacing coal with renewable electricity.



Auckland Council, EnviroStrat, MPI's Sustainable Food and Fibre Futures fund, BayTrust, Foundation North, and The Tindall Foundation have begun a three year project to pilot end-to-end commercial seaweed farming using a community model. This will be a first step towards sustainable seaweed farming in New Zealand, and the creation of a blue carbon and nitrogen market. The model was developed by GreenWave in the United States, and the pilot will take place in the Hauraki Gulf and Bay of Plenty. It will include hatchery production, on-water farming, seaweed processing, and training programmes for seaweed farmers. Ngāi Tai ki Tāmaki is supporting the project by providing access to recently consented marine farming space and sharing knowledge of traditional Māori values to enhance the project's success. The University of Waikato will lead the research and trial designs, and Premium Seas Limited and AgriSea will contribute their production, market and processing expertise.



He Waka Eke Noa – Primary Sector Climate Action Partnership

by the numbers

He Waka Eke Noa is a partnership between iwi/Māori, government, and primary industry involving thirteen partners: Apiculture NZ, Beef + Lamb New Zealand, Dairy Companies Association of NZ, DairyNZ, Deer Industry NZ, Federated Farmers of New Zealand, Federation of Māori Authorities, Foundation for Arable Research, Horticulture NZ, Irrigation NZ, Meat Industry Association, Ministry for Primary Industries and Ministry for the Environment.

These partners are supported by other contributing organisations including AgResearch, Department of Conservation, Fertiliser Association, Manaaki Whenua, NZ Agricultural Greenhouse Gas Research Centre, Pastoral Greenhouse Gas Research Consortium and Scion.

The Partnership has completed two years of the five-year project and continues to work together to implement a framework by 2025 to collectively reduce agricultural greenhouse gas emissions and build the agriculture sector's resilience to climate change. The Partnership is committed to finding the best outcomes for Aotearoa New Zealand and farmers and growers.



5 0 7 1 (as at 1 January 2022)

(21 percent) of farms hold a written plan to measure and manage their greenhouse gas emissions. On track to reach 100 percent by 1 January 2025.

GHG calculators specifically for the food and fibre sector

have been assessed as meeting He Waka Eke Noa requirements for calculating greenhouse gas emissions for the purpose of raising awareness.

- Alltech
- B+LNZ GHG calculator
- F2M
- Farmax
- Farm emanage (Toitū)
- Fonterra

- HortNZ
- Mylmprint Farm
- Ministry for the Environment
- Overseer
- ProductionWise (FAR).

The scope of work for a farm-level accounting and reporting system has been completed. Recommendations for pricing farm emissions have been delivered to Ministers.

Regenerative agriculture: A high-value proposition

Why this matters

Already among the most efficient in the world, our food and fibre producers are always enhancing their approach and methods. This is in keeping with the shift to a low-emission, sustainable economy, and changing consumer preferences. Regenerative agriculture is analogous to the concept of Te Taiao – a deep relationship of respect and reciprocity with the natural world, in which the health of the climate, land, water, and living systems comes first.

Regenerative agriculture may be an opportunity for New Zealand to appeal to consumers, both domestically and internationally, who seek to understand the impact of their product purchases on the environment, animal welfare, and social wellbeing.

What has been achieved

- MPI set up a technical advisory group on regenerative agriculture in September 2020 with more than 25 members representing Māori, science, farming, and business interests. The group is guiding the definition of regenerative agriculture in New Zealand.
- In December 2020, MPI called for proposals to test the application of regenerative agriculture practices in our New Zealand soils, climates and farming systems.

- To date, over \$13 million has been committed by MPI and industry partners through the Sustainable Food and Fibre Futures fund to six projects, ranging from market opportunity exploration to on-farm trials. They encompass dairy, beef, sheep, arable and horticulture sectors, and Mātauranga Māori principles.
- Beef+Lamb NZ, the Bragato Research Institute, New Zealand Winegrowers, Sustainable Food and Fibre Futures fund and Alpha Food Labs released a regenerative agriculture Market Scan Report examining the trends, challenges and opportunities in the United States, United Kingdom and Germany.
- MPI has funded farmer peer-to-peer learning on regenerative agriculture practices through the Quorum Sense network. MPI's Māori Agribusiness team has worked with Māori farmers to explore how to implement regenerative farming practices alongside traditional Māori practices.

The work ahead

MPI will continue to publish and communicate the findings from the research projects regularly, so farmers and growers are well-informed about regenerative farming practices. Initial research indicates some international consumers are willing to pay a premium for regeneratively produced products. A second Market Scan Report will focus on this. MPI is also exploring the possibility of co-investing with the private sector to boost investor confidence.



On-Farm Research, AgFirst, Hawke's Bay Regional Council, Barenburg New Zealand, Poukawa Research Foundation, with support from MPI's Sustainable Food and Fibre Futures fund, started a project in June 2021 to scientifically test and incorporate new forage management practices and principles of regenerative farming into a dryland sheep and cattle farming system in Hawke's Bay. Practices like utilising compost, diverse seed mixtures, longer feed residuals, and deferred grazing will be compared against conventional farming practices within a dryland system over four years. The project will also focus on improving farmer resilience and decision making.



AgResearch is investigating soil health, with funding from Synlait Milk, Danone and Sustainable Food and Fibre Futures. The five-year, \$3.85 million project seeks to understand how to measure and manage soil health to boost environmental and economic performance. It is being conducted across 10 commercial dairy farms in Canterbury, Otago and Waikato. In each region, the farms have been paired for comparison based on location, soil type and farm performance. Each farm will have one paddock managed conventionally and another using some regenerative farming practices.



Working with several industry partners, Plant & Food Research is examining the relationship between specific native plants and insects to find out which ones increase pollination and tackle pests most effectively. The fiveyear, \$3.21 million project involves 45 Canterbury farms. Local native plants proven to support and maintain beneficial insect life will be planted on underutilised land such as fence lines, road verges and watercourses. By increasing the number of pollinating insects, the project team expects increased yields across the farms, which will lead to improved economic and environmental outcomes for the farmers involved. Increasing the number of predator insects to tackle pests could also reduce the use of pesticides and insecticides.

Workforce expansion, diversification and up-skilling

Why this matters

To maintain New Zealand's vital food and fibre sector our workforce needs to diversify, upskill and incorporate more technology. Government-industry collaboration is required to develop a cohesive action plan as the population ages and urbanises, consumer preferences shift, and the focus on sustainability intensifies.

The food and fibre sector employs 367,000 people – 13.4 percent of the New Zealand workforce, equivalent to one in seven. In some regional communities, one in four of the workforce are employed in this sector.

Māori are strongly represented as workers and asset owners, with nearly one in five workers in the sector identifying as Māori.

What is being delivered

One of the *Fit for a Better World* objectives is to employ 10 percent more Kiwis in the primary industries by 2030. Another, more immediate goal, is to get 10,000 more over the next four years. To achieve this, government and industry have rolled out a variety of measures including:

 Skills training such as the Tane Mahuta silviculture programme, Pukenga Mahi in the kiwifruit sector, and on-farm dairy training led by Pirinihi Ki Te Waitotara in Taranaki.

- Partnerships with agricultural education providers
 Telford in Balclutha and Taratahi in Wairarapa.
- Launching a regional workforce liaison service alongside MSD and industry groups to support redeployment of Kiwis into food and fibre sector jobs.
- Sponsoring industry awards such as Dairy Business 360, Young Famer of the Year, and the Primary Industries Good Employer Awards.
- MPI's attraction campaign Opportunity Grows Here, which commenced in July 2020, has had over 800,000 website views. The campaign has improved the appeal of working in the sector, market research shows. And, it has supported the likes of Summerfruit New Zealand, New Zealand Kiwifruit Growers, Seafood New Zealand and Forestry Industry Contractors with recruitment campaigns.
- Supporting Māori agribusinesses to develop workforce opportunities and to access greater skills to create sustainable employment that will increase productivity of their food and fibre sector assets.
- Industry and government working in partnership to address longer term workforce issues such as improving employer capability, encouraging more inclusive employment practices, looking at what pastoral care and support will be necessary to retain workers in rural areas, and scoping solutions to create year-round work from seasonal jobs.





Seafood New Zealand, in partnership with MPI and Deloitte are developing a seafood sector workforce transition plan to reduce the reliance on migrant labour. Education is vital to this. In schools, we need to work with careers advisers and explore curriculum opportunities to raise awareness of the seafood sector. Improvements are required to vocational training to ensure it is fit for purpose, including an expansion of the seafood apprenticeships to include marine engineering and maritime qualifications. We need to focus on the industry's commitment to sustainability, minimising environmental impact, and producing high quality, nutritious food, as part of a perception strategy.



DairyNZ, in partnership with MPI, is developing the Great Futures in Dairying Plan 2022-2032. We want to attract more people to dairy farming careers and foster pride in the sector. It includes a range of critical actions necessary to reduce reliance on people, broaden the talent pool, and to become more competitive with other roles and industries. This is a significant milestone on the path to building the depth and resilience of the dairy workforce.



A Ngā Karahipi Uru Rākau is a Forestry Scholarship led by Te Uru Rākau – New Zealand Forest Service to build diversity in the workforce, across forestry and wood processing. There are nine scholarships for students who begin study in the 2023 academic year. The scholarships aim to increase the number and diversity of people studying forestry, particularly Māori women. This is to ensure there are highly trained people entering the forestry and wood processing sector, future proofing the success of the industry. Since the scheme began, 31 scholarships have been awarded.



To address the shortage of skilled machinery operators due to COVID-19 restrictions, Rural Contractors NZ, HanzonJobs and MPI established a mentoring programme in October 2021. The programme supports people into operating agricultural machinery. From gaining this on-the-job experience, they then grow it into a verified record of industry learning, skills and achievement. To date, 109 people have completed the programme and been placed in employment in the agricultural contracting sector.



New Zealand's meat processing and exporting sector has launched a campaign to help address the industry's chronic shortage of employees. The "Meat your career" website highlights the wide range of opportunities available in the sector and seeks to shift historic perceptions of what working in the industry is like. The website includes videos of people talking about their roles in the sector, descriptions of the types of positions available, and guidance on remuneration and opportunities. The campaign backed the global Meat Business Women's "She looks like me" campaign.



PickNZ is an initiative spearheaded by Horticulture New Zealand with support from the Opportunity Grows Here campaign, to promote the great range of seasonal work opportunities in the fruit, vegetable and wine industries. PickNZ provides exposure to the diverse employment opportunities that are available throughout New Zealand, from field, to packhouse and beyond.



Launched in March 2022 the Akongoue: Pasifika Horticulture Programme introduces Pacific youth to the wide range of career options across the horticulture sector supply chain. The programme is a collaboration between MPI, MBIE, the Ministry for Pacific Peoples, Tongan Youth Trust and the training organisation New Zealand Sports Turf Institute (NZSTI). It introduces Pacific youth to different horticulture roles and the programme contributes up to 43 NCEA Level 2 and 3 credits, as well as teaching important skills such as first aid and health and safety.



Toi Kai Rawa is a partnership between Zespri, New Zealand Kiwifruit Growers Inc, Māori Kiwifruit Growers Inc, Apata, Port of Tauranga, Matū, PlantTech, Te Awanui Huka Pak, Kiwi Leaders, Bay of Connections and MPI. Towards the end of last year, Toi Kai Rawa launched its first Māori kiwifruit internship programme. Located in the Bay of Plenty, it aims to increase the participation of Māori in higher skilled and higher paid positions. The interns complete an 8 to 10-week work placement in a professional role. Pastoral support is offered to both students and employers during the internship. Students get a chance to network and participate in Priority One's Summer Open Labs. The interns are enhancing their career prospects, developing skills, gaining a sense of belonging and fostering self-belief to succeed in the professional world.

Opportunity Grows Here

by the numbers

Opportunity Grows Here is an attraction campaign to get New Zealanders into jobs and to consider long term careers in the primary sector.

The campaign, developed in partnership with the sector, was launched in July 2020. It brings information about training, careers and job listings within the food and fibre sector into one place at **opportunitygrowshere.nz**.

11.545

New Zealanders placed into primary sector jobs, since July 2020, based on collective efforts across industry and government

Over

800,000 website page views

Research conducted in July 2021 showed that the appeal of working in the primary industries had increased for

percent of the non-primary industry workforce

> 90 percent of people who have seen the campaign said they had "thought" or "done something different"

Opportunity Grows Here campaign reaching urban areas

million campaign **impressions**

million campaign video views

5%

Hamilton

Location non-defined 19%

International 9%

> Wellington 9%

Tauranga 3%

> **Auckland** 40%

Christchurch 15%

Opportunity grows here

FIT FOR A BETTER WORLD PROGRESS UPDATE • 45

Support at the grassroots

Why this matters

New Zealand producers have a special connection to the land and sea; a relationship founded on care, respect and an inherent understanding that when nature thrives, we all thrive. Hence, our collective focus to improve on-farm performance to achieve sustainability, inclusivity, and productivity goals. This means focusing on outcomes, empowering communities and tangata whenua, and fostering a positive environment in which producers learn, grow and support each other.

What is being delivered

An Integrated Farm Planning (IFP)
Accelerator is working to develop an approach to streamline farm planning requirements, ease compliance, and reduce duplication and costs. The IFP Accelerator Fund was launched in April 2022 with \$14.4 million to invest over four years in initiatives that help farmers, growers, and whenua Māori owners adopt an integrated approach to their farm planning.

Map key:

Launch regions
Final coverage footprint

NELSON/
MARLBOROUGH
/TASMAN
Whakatū-Wairau

SOUTHLAND
Murihiku

 MPI launched a career pathway scheme in April 2022, with support from NZIPIM, to expand and strengthen the primary industry advisory sector. The investment of more than \$10.9 million will include funding new and early career advisers and focus on increasing diversity and inclusion.

The number of rural community hubs is increasing to combat isolation, enhance connectedness, and improve access to services and support. In total, 23 hubs have been set up since 2019, the most recent of which are located in Waikato, Otago and the West Coast.

- A new tool to enhance drought forecasting, jointly funded by NIWA and MPI will be available by June 2023. The New Zealand Drought Index will help farmers, growers and councils prepare for dry conditions through daily 35-day drought forecasts.
- NZIER will support MPI to engage six communities to identify their needs and implement rural resilience initiatives.
- Catchment groups provide a valuable platform to share knowledge, networks, and practical experiences to promote improved on-farm practices and sustainable land management. They also encourage positive collective environmental outcomes. More than 5000 farmers have been assisted with on-the-ground support, in over 190 groups nationwide. \$31 million has been invested in catchment groups through MPI's Extension Services and Jobs for Nature programmes.
- \$118 million has been committed over the next four years towards boosting advisory services for farmers, growers and whenua Māori owners, including a new on-farm support team and forestry advisory service.





New Zealand Winegrowers, with financial support from MPI, have hosted nine *Go You!* workshops around the country. The initiative, designed to enhance mental wellbeing and post-lockdown motivation, has drawn 250 participants. Their response has been overwhelmingly positive.





The rural community hubs have a programme of activities designed to increase community connection, draw on local knowledge and make use of existing resources. After an initial focus on bringing people together and setting up communications channels, the collective is now running and planning a variety of activities. Two initiatives under way are the Waitaki Valley Biodiversity Education Project, and Hakataramea River Weed Control and Protection. A farm safety/emergency event targeting young and migrant farm staff is planned to provide an opportunity to get off farm and connect with the community.

Mental health workshops



Mates4Life Hawke's Bay Trust is working to build a culture of mental health awareness and self-harm prevention. The aim is for everyone in a workspace to have a shared understanding of what the signs are when someone needs help, and how to connect them to the right support. Local facilitators deliver a structured training package. Businesses are invited to join the programme and all employees receive awareness on-site in a packhouse, shearing shed or an office. The programme was developed by Auckland-based A-OK NZ. a suicide prevention programme provider but the trust is proud to say the programme is created by, and for, Hawke's Bay people. The official launch was in October 2021.



A two-day training programme was designed by AWDT with support from MPI to help people navigate their farming businesses through change. The Agri-Women's Development Trust researched, developed and piloted the programme to support farmers, reduce risk, and build resilience. Evaluation of the pilot has fed into a second round of training that will commence this year.



The landowners of the Lower Waikato and Waikato-Tainui (Te Whakakitenga o Waikato) are undertaking river and catchment management projects in the Lower Waikato River Catchment, with a specific focus on those that flow into significant lakes and wetlands. The work started as a "shovel ready project" funded by MBIE, Waikato Regional Council, Waikato River Authority and Te Uru Rākau - the New Zealand Forest Service. Landowners are being supported to undertake approved riparian fencing and planting, reduce and prevent stream bank erosion, retire areas for native revegetation, and other measures to reduce sediment inputs into the lakes and wetlands. The catchment management projects also provide job opportunities and contract work for local nurseries, fencers, planters and weed contractors.

To date:

- 33,450 mixed native plants have been planted on retired land;
- 9.14 hectares has been retired from grazing and planted in native plants;
- 16km of stream, lake and wetland margins have been fenced;
- 37km of new fencing has been constructed, retiring a total of 121.77 hectares of land with high erosion risk or indigenous forest;
- 43,000 pine/manuka and poplar/willow poles have been planted to stabilise land with high erosion risk;
- 129 erosion control structures have been constructed to stabilise streams/rivers with erodible banks.



Whaihua | Productivity: the year ahead

Programme

Water Availability and Security	We will establish a partnership group with government, sector, iwi/Māori to develop and implement a plan of action.
	We will publish papers assessing the state of water availability and security at a national level.
Accelerate Aquaculture	An effective open ocean aquaculture management framework will be introduced through the Resource Management Act reforms.
	The Accelerate Aquaculture Investment Roadmap will be finalised and implemented.
	Alongside Māori and Iwi we will explore open ocean aquaculture opportunities.
	An agreed plan for spatial planning for open ocean aquaculture in Te Waipounamu will be developed.
Horticulture Development	The Horticulture Action Plan will be finalised. An investment plan will be developed and implemented.
	We will complete the business case for the Plant Health lab site, and undertake concept design.
	We will continue the seven-year Sauvignon Blanc Grapevine Improvement Programme managed by Bragato Research Institute, in collaboration with New Zealand Winegrowers and more than 20 wine sector companies.
	Variety and rootstock trials and breeding programmes will continue for crops such as berries, kiwifruits, apples, summer fruit and some vegetables.
Research, Science, Innovation and Mātauranga Māori	Science Accelerator Plans will be delivered for Biological Emissions, Horticulture, and Diversified Proteins.
	The Food and Beverage Industry Transformation Plan will be finalised, and the Agritech Industry Transformation Plan refreshed.
	We will continue to leverage New Zealand participation and networks in the Global Research Alliance to accelerate GHG mitigation options and capability.
New product development and revitalising the Strong Wool Sector	The strategic roadmap for strong wool will be implemented and we will establish Wool Impact as a long-term industry organisation for strong wool.
	We will continue to co-invest in new projects.
Capital and Funding	The <i>Fit for a Better World</i> cross-agency investment acceleration team between MPI, NZTE and MBIE will focus on attracting investment for companies.
	Sustainable Food and Fibre Futures and Kānoa-RDU will continue funding projects with industry to help drive productivity and sustainability.
New Bodies to Drive Transformation	A Māori food and fibre sector economic strategic plan will be published, and actions implemented.
	New insights reports will support change in key areas across the food and fibre sector.

Market Access and Development	We will continue to negotiate preferential or equal market access conditions, and facilitate access for new products, claims, and technologies into new and existing markets.
	Improvements to electronic certification, and developing e-commerce opportunities will help the sector.
	The Horticulture Action Plan will be published and delivered.
	Beef+Lamb NZ and the Meat Industry Association will carry out research into the benefits of consuming grass-fed New Zealand red meat on health and wellbeing markers.
	New Zealand Winegrowers will continue global campaigns and capability building, including 'Pour yourself a glass of NZ'.
International Trade	We will prepare research reports to support New Zealand's WTO negotiating position.
	There will be entry into force of the UK FTA, and on-going negotiations for the EU FTA.
	We will continue to strengthen international relationships through agricultural cooperation.
	NZTE will confirm digital commerce strategies and resources for six priority regions (UK, China, Australia, USA, Japan & Singapore), and has activated partnerships with leading online shopping platforms, and is building capability and accelerating the growth of 1400 high growth potential exporting companies, including 100+ Māori entities.
	Key regulatory work will include developing policy for export legislation, and overhauling the Biosecurity Act.
Flexible Regulatory Systems	Priority animal welfare codes have been strengthened to help boost our reputation for strong practices, and we will establish an emerging risks system and readiness and response function for New Zealand Food Safety.
Māori Agribusiness	There will be on-going monitoring and evaluation of Māori cluster performance, and support for capability development.
	Beef+Lamb NZ and DairyNZ are continuing to co-design extension for Māori farmers.
	We will identify clusters of land blocks and implement a monitoring and evaluation framework.

Kauneke Tauwhiro | Sustainability: the year ahead

Programme	e
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Transform the forestry sector	A Forestry Industry Transformation Plan will be finalised and introduced.
	We will progress manufacturing clusters, and the Timber Design Centre to foster innovation.
	The work programme for biofuels and materials will continue, including actions following the release of the Wood Fibre Futures Report.
Supporting more tree planting	A national forestry advisory service and national spatial plan will be developed.
	The State of Forest Strategic Report will be published, and a nursery advisory group established with a programme of work.
	We will enable native tree planting and on-going contract management to deliver One Billion Trees.
	Co-investment in a portfolio of regenerative projects will continue.
Regenerative farming and establishment of Te Taiao	The technical advisory group will advise on a long-term regenerative farming strategy, and integration of Mātauranga Māori practices.
	There is on-going work and support to implement Te Taiao frameworks and pathways.
	A DairyNZ-led project on regenerative farming in Taranaki, and Beef +Lamb NZ global study into regenerative agriculture will continue.
He Waka Eke Noa - Primary Sector Climate Action Partnership	Milestones for 100% of farms to know their annual total on-farm GHG emissions, and for 25% of farms to have a written plan to measure and manage their emissions will be progressed.
	Ministers will report on an alternative pricing system for farm-level agricultural emissions.
	A pilot project testing a system for farm level emissions accounting and reporting will be developed for completion by 1 January 2024.
Freshwater and productive land	Freshwater farm planning regulations, and system design will be implemented.
	Extension services will be built up to support farmers to improve land use practices.
	Primary industry advisory services will be supported through research, capability, and capacity building.
	We will research and quantify the total pastoral contaminant footprint, and the effect of on-farm action.
	DairyNZ's guidelines for constructed wetlands tools will be promoted and the rollout of farm environmental plans will continue.
	DairyNZ's Dairy Tomorrow strategy will lead efforts to improve the health of our rivers and streams.
Business resilience	There is an on-going work programme for business continuity planning, financial risk management training, and processing of farm debt mediation requests, including providing mediator training and development.
	NZTE will lead the "Business for Good" pilot programme, and scale the programme nationwide.

Better data and decision support tools	More data collection from across pastoral and arable sectors will help us develop databases and models that underpin policy decisions and provide quality information for farmers and growers.
	Work on the soil mapping project will continue.
	DairyNZ's Step Change programme, which is focused on building farmer knowledge of their environmental footprint and benchmarking profitability and sustainability metrics will continue.
	The Beef+Lamb NZ one-stop-shop for sustainable, profitable farming will continue to be developed, including the knowledge hub containing over 947 resources.
Fishing sector transition	SeafoodNZ has completed an independent review of the Seafood Standards Council to consider the strategic goals and operational plan for the next 5 years. Following the review two proposed extension activities that link with FFBW programme initiatives, safe and healthy food and market access will be undertaken.
	The rollout of cameras on boats will continue, with installation and review for remaining vessel groups.
	The Fisheries Industry Transformation Plan will be developed and delivered.

Whakaurutia | Inclusivity: the year ahead

Programme

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New Zealanders in jobs	Programmes and campaigns to attract younger people to consider primary sector careers will be developed.
	Primary sector social and employment support services and resources will be scaled up, including a programme of upskilling employer initiatives and a publicly accessible skills and employment dataset.
	Seafood NZ is developing and implementing a long-term strategic programme of work to transition more people into the seafood industry.
	A DairyNZ-led dairy sector workforce transition programme will be launched and implemented.
	The Beef+Lamb NZ Growing Future Farmers initiative to equip young New Zealanders with business and technical skills to succeed on Sheep and Beef farms will continue, as will the Beef+Lamb Generation Next Programme to nurture, assist and encourage the current and future farmers within the sector.
Safe and healthy food	There will be improvements to the imported food safety system to start monitoring importer performance and the modernisation of standards.
	Seafood NZ will coordinate food safety research for priority seafood safety issues and emerging risks.
	Targeted information campaigns will focus on food safety issues for producers and consumers.
Connect rural New Zealanders	We will engage across government and work with stakeholders to deliver improved rural connectivity, including identifying opportunities for partnership, and to establish projects.
Thriving rural communities	We are committed to building the capability of Rural Support Trusts, and support the network of rural community hubs across New Zealand.
	DairyNZ will continue to lead the Dairy Environmental Leaders' Programme, and NZ Winegrowers's Go You! initiative will support industry partners to grow, thrive and better respond to the challenges of COVID-19.
	The horticulture industry will work to better understand harm and the causes of workplace injuries in the sector.



Fit for a Better World strategic groups

Food and Fibre Partnership Group

The Food and Fibre Partnership Group is a pan-sector leadership group tasked with developing, co-ordinating and supporting a progressive work programme to implement the sector's vision, and continued evolution and transformation of core industries. It includes the following members:

- Mike Petersen (Chair)
- Ray Smith
- Carolyn Tremain
- Vicky Robertson
- Peter Chrisp
- Traci Houpapa
- Miriana Stephens
- David Rhodes
- Andrew Morrison
- Barry O'Neil
- Jim van der Poel
- Philip Gregan
- Jeremy Helson

Nga Pouwhiro Taimatua

The Māori Primary Sector Forum provides strategic advice towards policy solutions and opportunities for how participants in the Māori primary sector can best realise the potential of their whenua, communities and primary sector economy. It includes the following members:

- Traci Houpapa (Chair)
- Nadine Tunley
- Te Kapunga Dewes
- Tanira Kingi
- Dr Riri Ellis
- Bob Cottrell
- Richard Manning
- Ray Smith
- Ingrid Collins
- Tane Bradley



Our Food and Fibre Partnership Group contributors











Te Puna Whakaaronui

Te Puna Whakaaronui Governance provides leadership and strategic thinking to support New Zealand's Food and Fibre Sector transformation, and includes the following members:

- Sir Brian Roche (Chair)
- Lain Jager
- Ray Smith
- Dr Caralee McLiesh
- Peter Chrisp

Te Puna Whakaaronui thought leaders group includes the following members:

- Lain Jager (Chair)
- Neil Richardson
- Nick Hammond
- Debbie Birch
- Murray Sherwin
- Andrew Ferrier
- Rob Hewett
- Dame Juliet Gerrard

:WELL_NZ is the first thinkpiece released in May 2022 by Te Puna Whakaaronui as a scene-setter and conversation starter, describing three macro trends driving global change and impacting heavily on the New Zealand Food and Fibre Sector's operating context.



A CONVERSATION STARTER FROM TE PUNA WHAKAARONUI THE FOOD AND FIBRE SECTOR THINK TANK













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