

SHIFT HAPPENS

Where is your Agribusiness heading?





WELCOME TO THE SECOND BNZ FUTURE OF AGRIBUSINESS REPORT



‘Manaaki whenua, manaaki tangata, haere whakamua - Care for the land, care for people, go forward’ – Māori proverb.

COVID-19 has changed our economy and way of life irrevocably. The country that emerges from the pandemic will be different to that which went before. We are not simply rebuilding an economy, we are reshaping the way we think and do business.

The health crisis that closed borders, restrained commerce, restricted movement, and minimised choice, focused New Zealanders minds on what they were eating and the importance of agriculture to our wellbeing. With other leading industries constrained, there was also increased recognition of the importance of the primary sector to our economy, not only to keep the wheels turning during lockdown, but its vital role in our recovery.

This presents an incredible opportunity for our primary sector and one we know our primary producers are ready to take on. Our BNZ ‘Shift Happens - Future of Agribusiness’ survey tells us optimism is high, as is pride, resilience and belief in a great future for New Zealand agriculture.

We have learnt much from COVID-19 and the ensuing lockdown. It forced us to slow down and reconnect, not only with our families but also with our food.

The ‘pasture to plate’ philosophy came into sharp focus. Faced with empty shelves of flour and meat, what was once abundant was suddenly scarce and more consumers understood the path their food takes to reach the supermarket aisles.

The importance of food has always been clear but its link to our wellbeing is even more tangible, and with it the importance of those who produce it. It’s no coincidence that our report starts with the impact of changing consumer preferences on the way New Zealand primary producers create process, package and present food.

COVID-19 also accelerated our digital evolution. More New Zealanders moved online, connected digitally and conducted commerce through phones and laptops. In a matter of weeks we stumbled into the digital economy that successive governments had been talking about for two decades.

Our primary producers were no different, embracing digital ways of connecting with partners and consumers. Respondents to our survey also suggested that the move online exposed inefficiencies in their agribusinesses and better ways of working.

Digital technology has a considerable role to play in our primary sector. The collection and analysis of data is a huge problem solver for everything on-farm, lifting growth rates to managing finances and land management.

Not only will it improve on-farm productivity, quality and sustainability, technology and digital shrinks the distance to other markets. Our primary producers are closer to the global consumer than they have ever been before and this connectedness to consumers is valuable and offers insights that also can guide on-farm decisions.

The combination of science and digital technologies coupled with nearly two centuries of pastoral knowledge, also offers a very real commercial opportunity to New Zealand’s agritech industry. Just as COVID-19 has been a catalyst for technological change and adoption, so too it should be for commercialising on-farm innovation and developing another valuable export from our primary sector.

Pleasingly, despite the uncertain economic outlook, core tenants of sustainability and care for the land remain. Increased levels of environmental ambition from both government and industry have not wavered in the face of the pandemic and we find BNZ’s primary producers taking on the challenge of protecting waterways and conserving our land.

In our last Shift Happens we saw an industry facing a huge amount of change. Little did we know our subsequent edition would document the greatest upheaval to our global economy in living memory. In asking questions of our agribusinesses before the pandemic and during lockdown, this edition of Shift Happens captures the seismic shift to our way of life and what it means for our primary sector.

We are proud of what the primary sector has achieved through the COVID-19 response, and the critical role that the primary sectors will play in our recovery and economic reboot. We look forward to our agribusiness team continuing to partner with you in building a sustainable and successful future for your agribusiness.

Angela Mentis
CEO and Managing Director, Bank of New Zealand

ROAD TO SUCCESS

On the farm or in the field, nothing works in isolation. It takes water to germinate the barley, sun to ripen it, skilled hands to prune the grapes, fast hands to harvest the kiwifruit. From beef to beetroot, merino to mushrooms, there's a host of processes in play, helped along by primary producers and they don't stop at the farm gate.

In this report, we look at the five big forces in agribusiness today: consumers, technology, finance, the environment, and the most important force of all, mindset. When the first four serve up setbacks, signal opportunities, or present ideas that shove the status quo on its backside, the right mindset can make a world of difference. And for the different world we all find ourselves in, mindset really matters.

In Shift Happens, we've taken two moments in time, pre- and post-COVID-19, and captured our primary producers' thinking and laid it out in a roadmap for you.

In each section, we provide some insights into the trends that will influence agribusiness, starting with the consumers who generate the demand for our primary produce and whose changing tastes, preferences and demographics can create real opportunities for our primary producers.

We look inside the agritech toolbox to see what's new, what's working and how primary producers are using technology and data to lift their performance financially and environmentally.

Then we talk finance and a different set of tools, from short- and long-term budgets to scenario planning, alongside insights into change in the financial sector, and the value of natural capital in the primary sector.

With primary producers facing growing expectations around how food and fibre is produced, we look at environmental trends including regenerative agriculture, how producers are managing as they navigate new regulations, a changing climate and the desire for sustainability, and what they expect next for their environmental management.

Finally, we get off the land and into the head, to talk about new ways of thinking, along with the well-tested truth that when you look after your own wellbeing, you're in a far stronger position to look after your agribusiness.

We've added some Q&A's with your fellow primary producers, talking about success, pride and tools that are helping in their agribusiness. There's a few expert opinions in here too. You'll also find a notes page, and some thought-provoking questions, should you wish to jot down some ideas for your own agribusiness.

It's a rapidly changing world and nobody's quite sure what will happen next, but there's no doubting that our New Zealand primary producers are up for it. Mauri mahi, mauri ora – through work, we prosper.



CONSUMER



TECHNOLOGY



FINANCE



ENVIRONMENT



MINDSET





EXECUTIVE SUMMARY

BNZ understands the critical role that primary producers play in the New Zealand economy and, together with Massey University, wants to make sure the voice of the producer, on the future of agriculture, is heard.

The 2020 'Shift Happens - Future of Agribusiness' report reflects on pre-COVID-19 trends, considers what has changed and looks at the wealth of resources the primary sector can bring to New Zealand's post-COVID-19 recovery. Survey results are summarised to show farmers current thoughts on issues of importance to our primary sector – consumers, the environment, technology, finance and above all, mindset. Ideas, actions and expert advice are included to inspire primary producers to find new ways to work towards powering the New Zealand economy post-COVID-19.

What did producers have to say? Overall, positive things, with producers remarkably optimistic about the opportunities the pandemic has presented for the primary sector to be part of New Zealand's economic recovery. It is also clear producers have been thinking carefully about their end-consumers and how their needs and wants may have changed as a result of COVID-19.

They made some interesting observations, with producers picking that nutrition and price will leapfrog sustainable production as the qualities consumers will seek in our products. Nonetheless, producers continue to recognise the value of quality, integrity and sustainable farming practices with 64% agreeing that climate, land and water remain highly relevant to the success of our primary produce.

In common with many parts of the economy, producers have seen the value of connectivity and technology. On-farm, it's data that counts, for tracking performance, for quality control and for managing growth as well as finances. It's also encouraging to see producers recognising the value of regular budgeting, as well as risk mitigation through scenario planning and forecasting.

As the pulse of BNZ primary producers, this report finds a sector in pretty good health, mentally as well as physically. As a university that prides itself on educating the next generation of agricultural leaders, we're delighted to see that mindsets are generally positive, there's growing awareness of wellbeing as the first requirement for successful farming and that the optimists, in particular, recognise the value of a plan.

The future, post-COVID-19, is hard to predict. The way we live, work, travel and conduct business will likely change significantly. Some sectors have been stifled but people will always need food.

New Zealand food producers are in a good place, producing quality products for the local and international markets. Consumers can have confidence in the authenticity, provenance and safety of our food. This is an opportunity for us as an exporting nation. To quote Peter Chrisp, CEO NZTE, "We can come out of this with a much stronger halo effect around the country that allows us to capture premiums on our long-term evolution from volume to value. Our sustainability credentials could be stronger but our reputation for having managed the pandemic well will have added to our global reputation. The food and beverage opportunity is at the sharp end of that. The world is hunting for health, hunting for countries that care for their people and care for the environment."

As you read this report, be sure to consider how the voice of the primary producer relates to your own agribusiness, and where there are opportunities to learn and grow, be sure to note these down.

Cheers,

Iona McCarthy

Agri Commerce Programme Director, Massey University

CONTENTS

Consumer

8

Pre-COVID-19 survey	8
What was on our mind pre-COVID-19?	12
Changes to life after lockdown	14

Technology

22

Pre-COVID-19 survey	22
What was on our mind pre-COVID-19?	24
Lockdown & Beyond.....	26

Finance

36

Pre-COVID-19 survey	36
Financial wellbeing for you and your agribusiness	42
Budgeting for your farm's future	45

Environment

52

Pre-COVID-19 survey	52
What was on our mind pre-COVID-19?	56
Looking long term after lockdown.....	58

Mindset

68

Pre-COVID-19 survey	68
Pride after a pandemic	71

Summary

80

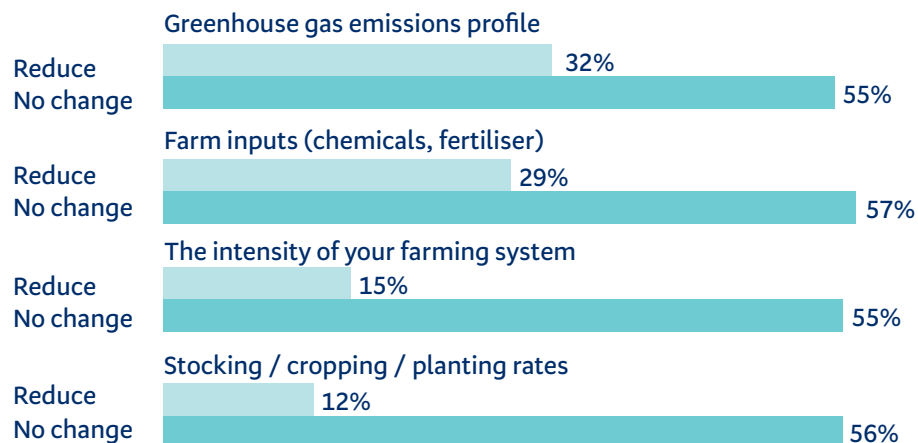


CONSUMER

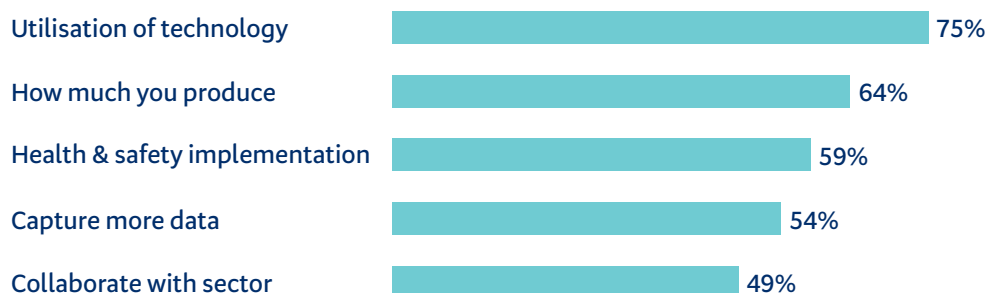
PRE-COVID-19 SURVEY

Understanding New Zealand primary producers' views of how their products are perceived in-market and any actions they are taking to influence market.

Over the next five years some primary producers plan to reduce their greenhouse gas emissions, farm inputs (chemicals, fertiliser), the intensity of farming systems, and stocking / cropping / planting rates. Over half of BNZ primary producers expect to make no change to the below.



Over the next five years most primary producers plan to increase the following (% plan to increase).



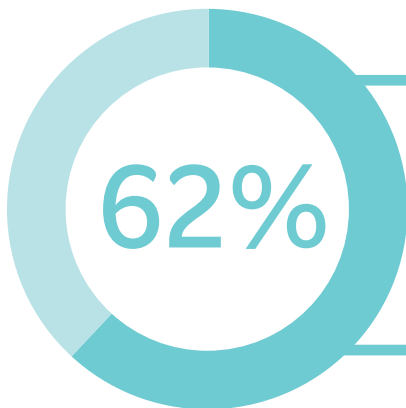


“There will be increasing consumer demands for sustainable production and enhancement of the environment by producers.”

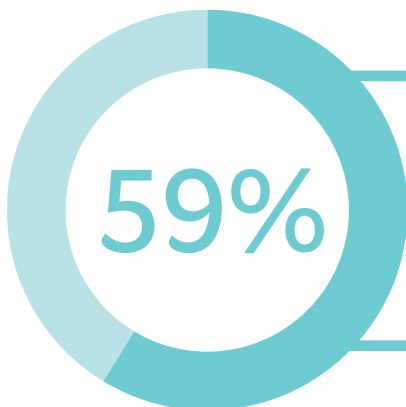
Kiwifruit grower, BOP

What primary producers think is important to the end consumer both now and in five years’ time (% agree / strongly agree).

	NOW	5 YRS
Quality of product	68%	57%
Healthy / nutritious	48%	46%
High level of integrity	38%	42%
Price of product	37%	30%
Sustainably produced	34%	50%
Connected to New Zealand	30%	24%
Ethically produced	29%	33%
Produced free of any GMO	10%	12%
Connected to cultural heritage	1%	1%
Innovatively produced	1%	1%

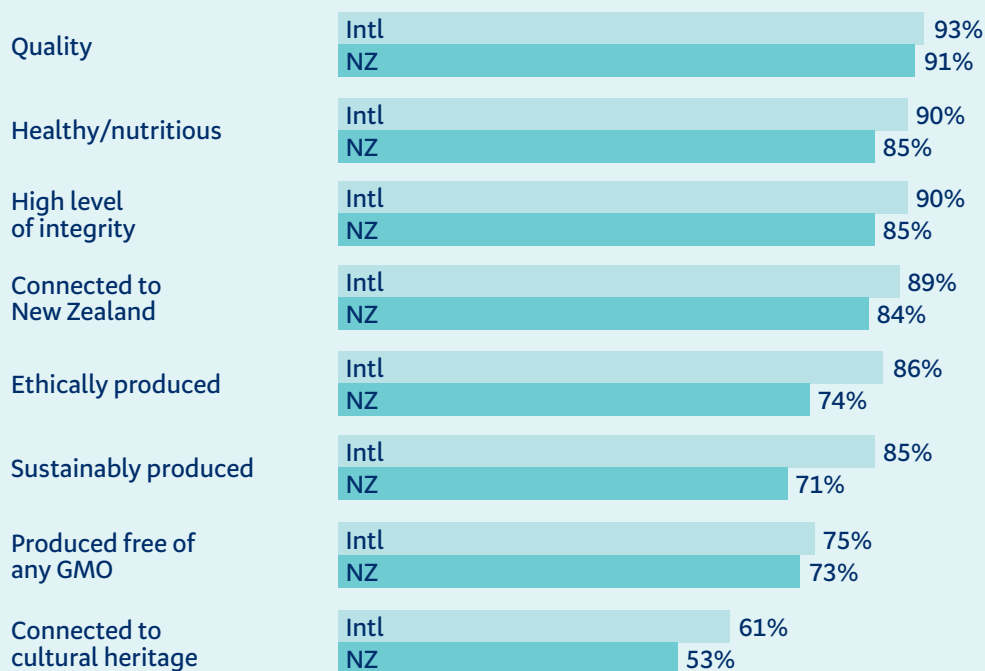


The majority of primary producers believe they have a good or excellent connection to their consumers through the provenance story of their product.



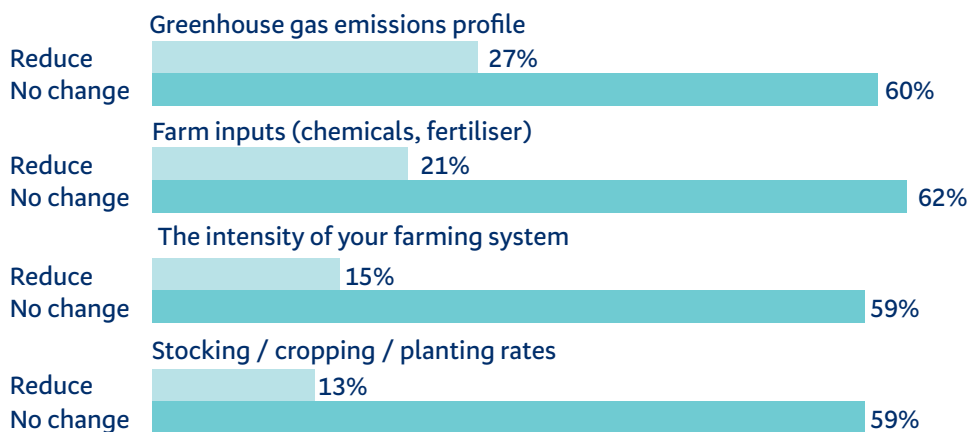
The majority of primary producers believe the overall 'premium' international reputation of New Zealand primary products has improved in the past five years.

What primary producers think both New Zealand and international end consumers would say about their product (% agree / strongly agree).

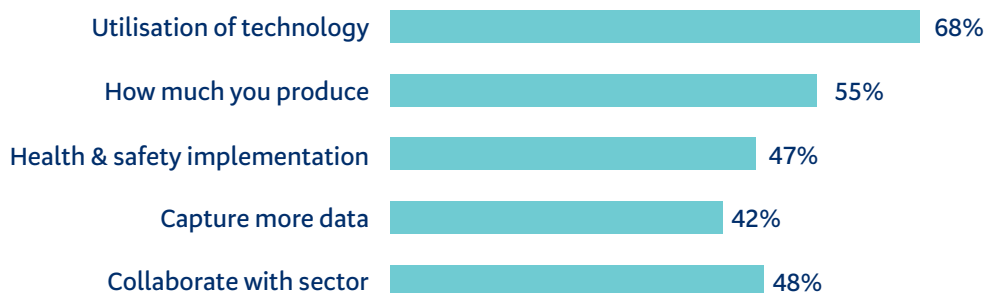


COVID-19 SURVEY

COVID-19 has not affected the plans of some primary producers to reduce their greenhouse gas emissions, farm inputs, the intensity of farming systems, and stocking / cropping / planting rates. However, the majority still expect to make no changes in these areas.



Over the next five years most primary producers plan to increase the following (% plan to increase).



What primary producers think is important to the end consumer both now and in five years' time (% agree / strongly agree).

	Pre-C-19 NOW	Pre-C-19 5 YRS	C-19 5 YRS
Quality of product	68%	57%	62%
Healthy / nutritious	48%	46%	46%
High level of integrity	38%	42%	50%
Price of product	37%	30%	39%
Sustainably produced	34%	50%	29%
Connected to New Zealand	30%	24%	40%
Ethically produced	29%	33%	19%
Produced free of any GMO	10%	12%	4%
Connected to cultural heritage	1%	1%	2%
Innovatively produced	1%	1%	2%

WHAT WAS ON OUR MIND PRE-COVID-19?

Prior to entering level 4 lockdown, New Zealand was busy working to create a value chain that responded to consumers' expectations of their food, drinks and fibre, ensuring those products were produced and exported to a world-leading standard. Here are the key consumer trends and opportunities we have identified and their effects on industry, government and producers:

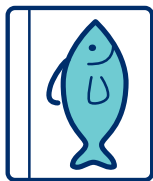
December 2018:

1. We asked our producers in the 2018 edition of Shift Happens, "Is your agribusiness ready for the changes impacting your business, initiated by the way consumers view food production?"

- Those changes included how your agribusiness was coping with the pressures on its 'social license to operate' – the ongoing acceptance of a company or industry-standard business practices and operating procedures by its employees, stakeholders, and the general public.
- We saw that producers believed the international marketplace perceived their product more positively than New Zealand consumers, with 92% confident that global consumers would view New Zealand primary products as high quality, sustainable, and made with integrity (made and sold with values such as accuracy, consistency and honesty).
- When we summarised the key opportunities and threats agribusinesses would face in the 18 months that followed, we discussed the emphasis consumers were placing on 'sustainable' and 'ethical' production standards and getting proof of these production standards. We also explored the rise of alternative proteins. Our BNZ producers told us that if they could prove the sustainable and ethical standards by which they produced their products, they could remain the number one choice for the discerning customer, despite a place being established for alternative forms of protein.

Food trends of 2019 / early 2020:

The New Zealand primary sector has a consumer-first focus. We need to because without them we have no markets. We searched the globe to find out the key trends consumers were looking for in 2019, and how the New Zealand primary sector is responding. Here's what we found:



1. Food stories: In Paris, consumers wanted to hear the story of how your food was made, why you made it the way you did, and why they would enjoy consuming it.¹ Story telling was their bread and butter.

Here are some examples of how the New Zealand primary sector was responding:

- In New Zealand, we saw initiatives led by industry groups, like the launch of 'Taste Pure Nature' by Beef + Lamb NZ, targeting 'conscious foodies' with the story of New Zealand grass-fed red meat.²
- In July 2019, Story Kaitiakitanga was launched, a collaboration between Manaaki Whenua Land Care Research, Rōopū Tikanga Rangahau, Tiaho and Victoria University of Wellington. This aimed to raise the profile of existing and emerging Māori food production practices that contribute to the Māori food story, with the goal of sharing Kaitiakitanga values and practices to enhance productivity and identify new niche markets.³ The work is still underway and encourages farms, catchments and communities to get involved.
- Sanford Fisheries wanted to showcase their sustainable fishing story⁴, highlight the diversity of species within New Zealand waters and provide tourists and locals a way to 'eat at the source', so they opened a new seafood market in Auckland's Wynyard Quarter, including a home delivery service for fresh fish.

1. <https://www.foodbusinessnews.net/articles/15010-storytelling-takes-top-spot-in-innovas-2020-trends> 2. <https://beeflambnz.com/news-views/taste-pure-nature-origin-brand-launches-california> 3. <https://ourlandandwater.nz/capacity-for-transition/storying-kaitiakitanga/> 4. <https://www.afm.co.nz/eatery/sanford-sons/>



2. Sustainability matters: What does sustainability mean to consumers? Well, it differs – the French saw sustainability as food that was organic, while the Germans wanted to know the animals were well cared for. And the Americans? Food waste was the top of their sustainability concerns.

- In New Zealand, we saw the emergence of government-led initiatives including:
 - The inaugural New Zealand joint primary sector vision was delivered by the Primary Sector Council.⁵ The ‘Fit for a Better World’ vision has been set to help the primary sector achieve greater sustainable value from its work.
 - MPI’s sustainable food and fibre futures initiative focuses on providing co-investment for community through to large scale industry projects to support sustainable approaches in the New Zealand food and fibre sector.⁶
- We also saw companies, like kiwifruit giant Zespri, unveiling their sustainability commitments, including a move to 100 percent recyclable, reusable, or compostable consumer packaging by 2025. Their growers will also commit to an industry-wide climate change adaptation plan by 2022 and will be actively managing their water use by 2025.
- Producers showcased sustainability through the ‘Open Farms’ initiative aimed to reconnect urban New Zealanders with where and how their food was produced.
- Producers and the private and public sector collaborated to amend regulations permitting hemp seed to be sold as food.⁷ From this came a new horticultural industry. The mix of environmental benefits and rapid growth, led experimental producers to the table, while the investment horizon and economic opportunities caught the eye of the entrepreneur.



3. Plant-based: In Amsterdam, consumers are seeking out plant-based meals, with special diets being all the rage. Promote your product as plant-based, not vegan, or vegetarian in 2019, and you’d likely see (on average) a compoundable growth rate of 68% over four years, if recent history is anything to go by.

- In New Zealand, Massey University-based FoodHQ⁸ partnered with Dutch researcher FoodValley to release a report in early 2020, highlighting the ability for the meat and dairy industry to thrive, while also increasing investment, in alternative proteins, as consumers consider ‘protein transitions’ within their diets.
 - Air New Zealand served the first ‘Impossible Burger’ in flight, with mixed reactions from those in the New Zealand primary sector.
 - Fonterra invested in American biotech company Motif, exploring dairy-free protein alternatives, foreseeing room for both dairy and dairy-free alternatives in the marketplace.



4. Food Tourism: Agri and food tourism was a growing trend within developing nations like Mexico, China and India, with 53% of leisure travellers choosing their next destination because of food or drink.⁹

- The New Zealand primary sector expanded opportunities to showcase its food, landscapes, and country hospitality to the world. In the Bay of Plenty, the regional council offered funds to farmers within the Lake Rotorua catchment to help them establish farm tourism as an alternative land use.¹⁰
- Angela Clifford’s website, Eat New Zealand, continued to shine through 2019. The not-for-profit group connects people to the New Zealand land through food, enabling tourists to build a food-based itinerary around New Zealand.¹¹



5. Wellness: Eating for mind, body, and beauty. Health and wellness has solidified its position on the list of key attributes consumers are seeking from their foods, especially amongst our South East Asian trading partners. “Health is no longer just the absence of disease, but the focus on wellness”.¹² KPMG, ‘Food for Health.’

- In New Zealand, global food nutrition giant, Danone partnered with Maui Milk, the grass-fed sheep-milking operation at Lake Taupo. Maui Milk, one of two companies driving the sheep-milk industry expansion, has seen demand for the lactose-free product resulting in them offering multi-year contracts to new sheep milk conversions in the greater Waikato area, to underpin growing supply needs.

5. www.fitforabetterworld.co.nz 6. <https://ourlandandwater.nz/capacity-for-transition/storying-kaitiakitanga/> 7. <https://www.mpi.govt.nz/growing-and-harvesting/plant-products/hemp-seeds-as-food/> 8. <https://www.foodhq.com/news-and-events/2019/10/8/international-partnership-to-support-the-future-success-of-the-new-zealand-food-industry> 9. <https://medium.com/@ErikWolf/top-culinary-tourism-trends-in-2020-c3819f7037fe> 10. <https://www.rotorua farmers.org.nz/agri-tourism-to-provide-new-income-stream-for-farmers/> 11. <https://www.eatnewzealand.nz/#> 12. <https://home.kpmg/au/en/home/insights/2018/09/food-for-health-trends-asean-region.html>

OPPORTUNITY ON A PLATE – CHANGES TO LIFE AFTER LOCKDOWN

Fast Facts

Feedback from our 2020 surveys indicates that:

- BNZ primary producers ranked quality of product as the key consumer attributes pre-COVID-19, followed by health, nutrition, and price.
- ‘Sustainably produced’ products were picked to be a rising consumer expectation pre-COVID-19.
- Post-pandemic perspectives were a little different. Quality and integrity were still expected to be high on consumers’ radar, but nutrition and price eclipsed sustainably-produced products, which trended down, as a result of what producers thought may be important to consumers post the arrival of COVID-19.
- The direction of travel, from initiatives such as the Primary Sector Council vision, will keep sustainability front of mind for consumers and producers.
- Overwhelmingly, 89% of producers were excited by the opportunity COVID-19 has delivered to recharge the New Zealand economy by doing what they do best – producing great food and fibre.

The ‘pasture to plate’ philosophy came into sharp focus in 2020. For the first time, some consumers understood the story of how their food was created and how it reached the supermarket aisles. It’s no coincidence our report starts with the impact of changing consumer preferences on the way New Zealand primary producers create, process, package and present food.

Speak to any successful company selling their own ‘pasture to plate’ story, like the Dairy Goat Cooperative or Coastal Spring Lamb, and they’ll tell you the key to success comes from really knowing your customers – then offering them what they want, seasoned with a good story.

In contrast to the 2018 Shift Happens survey results, BNZ producers were becoming slightly more inclined to believe domestic consumers are starting to understand their sustainability story, when compared with their international consumers. If ‘tell your story’ is a key attribute of making a product more appealing to the consumer, then the New Zealand primary sector is starting to listen. We previously wrote about how producers thought that international consumers had a more positive view of their products than domestic consumers.

While this is still true, the BNZ 2020 survey (conducted prior to COVID-19) showed the gap between perceptions of local and international consumers is closing. For product attributes such as ‘connected to New Zealand’, ‘sustainability’, ‘produced free of GMO’, ‘connected to cultural heritage’ and ‘ethically produced (e.g. labour and animal welfare standards)’, primary producers believe the New Zealand consumer is more inclined (than they were in 2018) to understand these attributes of primary sector products.

The primary sector has put a great deal of effort into ensuring that the work that goes into delivering sustainable products is not only a story, but one that rings true because it has a basis in facts, and our survey findings are indicating producers believe this is helping with domestic perceptions. The 18 months prior to COVID-19 saw pan-sector partnerships (such as ‘He Waka Eke Noa’, discussed later in this report), often for the first time, agreeing how we lead from the front, and ensuring plans were being made.

We also saw processing and marketing companies ensuring this message was reaching the right audience. A good example is Sanford’s “Big Glory Bay” salmon brand¹³, which is all about using provenance (origin of the product) and technology to showcase the pristine waters in a national park near Stewart Island and the sustainable ocean farming of the fish.¹⁴ It’s a story that US chefs have embraced, opening new opportunities to grow sales.

On a smaller scale, we saw the continued success of organisations that build their agribusiness around their values to improve their communities, showcase culture and enhance the planet. Te Whangai,¹⁵ for example, is a working dairy farm and native plant nursery, that offers activity-based learning to the local community to instil a sense of passion, renewed cultural identity, and work ethics.

Following COVID-19, listening to the needs of domestic consumers was a key primary sector concern as the nation struggled to import some of the food staples New Zealand has not traditionally been self-sufficient in. Reassuring consumers that domestic producers could supply their needs in many cases was another priority.

Thanks to the response of New Zealand arable growers to the shortage of imported milling wheat, the bakers of New Zealand can breathe easy. The Arable Industry Marketing Initiative surveyed growers' autumn planting intentions and received a clear signal back on further steps towards flour self-sufficiency.¹⁶ Autumn/winter sowings of milling wheat were forecast to increase by 1,500 ha, while planting of milling oats was set to rise by 800 ha.

New Zealand's arable farmers are highly productive, achieving a 31 percent increase in harvested milled wheat from only a 13 percent increase in hectares planted for the 2020 harvest. Production of malting barley is also expanding with 1,200 more hectares sown in autumn/winter as craft beer demand continues to rise.

Furthermore, the wider arable sector is gaining the right support when it comes to connecting to the consumer. Leftfield Innovation worked alongside the National Science Challenge, 'Our Land and Water', to develop 'The Specialty Grains and Pulses Report', which identifies six crops with high potential for market and environmental advances: soy, hemp, chickpeas, oats, buckwheat, and quinoa.¹⁷ Starting from where the demand lies and working backwards to what can be feasibly grown on-farm was the basis for the work. Leftfield Innovation are also developing traceability technology, capturing on-farm data to attest to the provenance of how our food is grown, and advocating for diversified farming systems where plants and animals work together to enhance sustainable outcomes.

COVID-19 has seen the primary sector pull together to respond to the needs of consumers. However, aside from the fundamentals of food to eat, BNZ primary producers told us they are unsure of exactly what those needs will look like in the future.

Pre-COVID-19 there was overwhelming agreement that product quality was the most important attribute to the end consumer (68% agreed). In five years, BNZ producers expected 'sustainably produced' attributes would come close to eclipsing 'quality' as the number one most important factor to the end consumer.

Integrity of the product was also expected to become more important to the end consumer over time (38% - 42% in five years), while attributes like health and nutrition, the price of product and connection to New Zealand were all expected to become less important to buyer behaviour. Our producers' views were supported by global predictions of food and culinary trends. 'People spend more on food and beverages regardless of income'¹⁸ one 2020 prediction headline read, with people saving in order to splurge on expensive meals, some looking for taste, others looking for the bragging rights.

However, the arrival of the pandemic saw changes to many things, especially with regards to how we eat, and the security of the global supply chain, with shipping and aviation severely disrupted.

Our primary producers questioned the relevance of some of the attributes they felt consumers would perceive as important within the survey. While quality of product remained the most important, integrity of the product became the second most important, followed by 'Is it nutritious?' and 'How much does it cost?'.

While these statistics bode well for the confidence of the sector, primary producers did shy away from recognising the importance that 'sustainably produced' attributes would continue to have with their end consumer. This fell from being perceived as the second most important attribute in five years' time (50%), to the sixth most important post-COVID-19.

Plans to make changes to sustainability factors within their business also declined, producers were less likely to plan reductions in greenhouse gas (GHG) emissions profiles (five percentage points) and their farm inputs (eight percentage points). This result suggested to us there was an enquiry, albeit small, regarding how the sector would continue progression toward a more environmentally-friendly business model. This was mirrored by some during initial discussions about the rebuild of the economy in the wake of COVID-19. What role would sustainability play in the rebuild of the economy, and, when thinking specifically about the food supply chain, how would we find the right balance between sustainable food production and packaging, and food safety and security?¹⁹

During the lockdown, Otago University Director for Sustainability, Janet Stephenson outlined the answer nicely as she analysed the major risks to the economy²⁰ and framed up how a sustainable economy could look post-pandemic. She emphasised the need to think beyond the short-term and create a New Zealand economy that is more resilient, by looking at long-term, sustainable, 'shovel-ready' projects, like access to reliable water sources or new forms of transport.

She also talks of the power of this pause in the economy, of Kiwi ingenuity and adaptability to create new (or reshape existing) businesses out of this crisis. The restrictions put on trade could potentially spell good news for re-localising some parts of the supply chain, which in turn creates environmental gains and lifts local communities, especially with regards to job creation within the food supply chain. Welcome news for those BNZ producers who talked about the difficulties of relying on access to migrant workers or skilled local workers in the post-COVID-19 survey.

16. https://www.fedfarm.org.nz/FFPublic/Media-Releases/2020/High_yields_in_difficult_season_a_credit_to_NZ_arable_farmers.aspx 17. <https://ourlandandwater.nz/news/beef-and-buckwheat-the-6-grain-and-legume-crops-with-high-potential-for-new-zealand-farmers/> 18. <https://medium.com/@ErikWolf/top-culinary-tourism-trends-in-2020-c3819f7037fe> 19. https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objec-tid=12326905 20. https://www.interest.co.nz/sites/default/files/embedded_images/WEF_Global_Risk_Report_2020.pdf

“We were having trouble finding acceptably skilled and motivated staff before COVID-19. We are unsure whether the pandemic will help or hinder that once we move to level 2 or 1.” Sheep and beef farmer, Gisborne.

Programmes like that established by Telford and the Southern Institute of Technologies aim to support this labour shortage, offering short training courses to allow people, who may have lost employment due to COVID-19 to quickly retrain for agricultural and forestry jobs over the 2020 winter months.²¹

We are reminded of the Primary Sector Council vision: “We (New Zealand farmers) embrace the Māori concept of Taiao, a deep relationship of respect and reciprocity with the natural world. The health of the climate, land, water and living systems comes first. And when nature thrives, so do our families, communities and businesses.” Almost two thirds of BNZ primary producers agreed with this statement in the pre-COVID-19 survey. Given the rather minor shift in the opinion of the importance of sustainability outlined above, the support for this statement brings confidence to the direction and heart of what the primary sector is working to achieve together, global pandemic or otherwise.

In the numbers we trust

BNZ primary producers were responding to the needs of their consumers before and during the pandemic with positive anticipation. 89% saw COVID-19 as an opportunity to play a pivotal role in supporting the New Zealand economy, as opposed to the 11% who felt threatened by what COVID-19 may mean for the future of their business. The Government budget announcement in May 2020 acknowledged the tractor towing the economy has been ticking over nicely.

Based on provisional data, between February 1 and April 22, 2020 New Zealand exported primary products worth \$8.17 billion compared to \$8.69 billion for the comparable period in 2019.²² This broken down by sector indicated:

- **Dairy product exports were worth \$3.95 billion**
- **Meat exports of \$2.24 billion**
- **Forestry exports of \$0.73 billion**
- **Fruit exports of \$0.89 billion**
- **Seafood exports of \$0.37 billion.**

In March 2020, the Meat Industry Association celebrated red meat and co-product exports topping \$1 billion in monthly value for the first time – up 12% on the same period last year, through a shift in market focus.²³

New Zealand's Horticulture sector took a bow for its annual export performance:

- **The industry's value reached \$9.5 billion in the year to June 2019**
- **Notable mentions within this figure include \$3.4 billion in fresh fruit exports, up by \$54 million since 2018²⁴**
- **Kiwifruit exports reached \$2.3 billion with 545,800 tonnes of kiwifruit exports sent overseas, two thirds to Asian countries**
- **Apples were the second largest fresh fruit export, earning \$829 million.**

We also noticed fruit and vegetable growers were consistently the most optimistic sector as they answered each survey. They were the most inclined to agree with the concepts of ‘Taiao’, as established by the Primary Sector Council vision, and the most likely to consider the changing landscape of New Zealand agriculture as an opportunity for the future of their business, rather than a threat.

There's reassurance there that our primary producers more than hold their own in a competitive world and can continue to support the domestic economy. We have established access to global markets and, as the WTO reiterated in their April 2020 forecast²⁵ for world trade, it's in all countries' interests to work together to keep borders open in order to maintain a good balance between supply and demand, ensuring food accessibility and security.

Safety in a COOL bowl

Consumers want safe, nutritious food. This hasn't changed for a long time, but the emphasis on it has. How we go about ensuring we can provide consumers' confidence in our food safety and health claims is going to depend on our ability to further research and streamline traceability technologies.

Ian Proudfoot, KPMG Global Head of Agribusiness, spoke to the New Zealand Government in May 2020 about this, saying “Ensuring the health benefits of our products are a value driver requires commitment to science programmes that support producers to make verified health claims when telling their stories.”

21. <https://whatsoninvers.org/sit-expo-to-assist-job-seekers-find-employment/> 22. https://www.nzherald.co.nz/the-country/news/article.cfm?c_id=16&objectid=12328989 23. https://www.nzherald.co.nz/meat-industry/news/article.cfm?c_id=254&objectid=12329916 24. <https://www.scoop.co.nz/stories/BU2005/00167/new-zealand-horticulture-exports-grow-to-62-billion.htm> 25. https://www.wto.org/english/news_e/pres20_e/pr855_e.htm#to-62-billion.htm



“Consumers will continue to increase demand for visibility from producers through the supply chain - producers need to prepare to be more transparent than ever before.”

Dairy farmer, Waikato

In our surveys, producers felt the integrity of production systems would be more important in the future than today, with 38% ranking it as important now but 50% stressing its future importance post-COVID-19.

Country of origin labelling (COOL) is a key factor that may contribute to consumer trust of food and beverages. COOL is already mandatory in some countries and regions that import our products, such as the USA, China, the EU and Australia.

In 2018, the New Zealand Parliament passed the Consumers’ Right to Know (Country of Origin of Food) Act²⁶ to help consumers make informed decisions about their food purchases. Many primary sectors, particularly the pork industry, saw this as a major opportunity to ensure discerning consumers understood which foods were locally grown and which were imported.

With the Act parked for the moment due to COVID-19, the importance of programmes and technologies to support the knowledge of a product’s origin becomes even more vital. For export markets, programmes like the NZTE New Zealand Fernmark programme²⁷ have given New Zealand agrifoods a notable icon to differentiate themselves. Technologies like Trustcodes’ QR systems²⁸ add food safety and provenance reassurance to our New Zealand story, helping to combat counterfeiting and integrating readily with various systems used by the primary sector.

There’s also a great deal of research underway to go beyond storytelling into the DNA of the foods a consumer is buying. AgResearch²⁹ is developing a method of giving New Zealand exports a unique fingerprint that scientifically proves their provenance. The technology is said to be so accurate that it can differentiate between New Zealand, English and Welsh lamb using a measurement that takes only seconds. It can also detect what feed, such as grass, grain or chicory, went into the animal carcass being tested.

The aim of the AgResearch initiative is to develop a tool that can be taken to a farm or a processing works to determine which sheep is the most adaptable to suit the flavour preference profile of a specific market, such as China or Europe.

It could also reduce the threat of food fraud and potentially even extend to understanding consumer preferences, which would give the old idea of ‘knowing your customers, from paddock to plate’ a whole new meaning. As a sector, we’ve got the heart and the desire to create products that consumers want. The export numbers show we do well at selling to consumers already. Ensuring we can verify the provenance story is the next string to our bow, which the sector is working hard to add.

26. <https://www.beehive.govt.nz/release/consumers-know-country-origin-food> 27. <https://www.fernmark.nzstory.govt.nz/>
28. <https://www.trust.codes/#/> 29. <https://www.agresearch.co.nz/news/new-machine-to-help-export-traceability/>

Q+A

DAVID HEMARA

CEO Dairy Goat Co-operative (NZ) Ltd



Dairy Goat Co-operative (NZ) Ltd (DGC) is a New Zealand farmer-owned co-operative, established in 1984 with the goal of making the highest quality products to nourish infants, while providing sustainable returns for shareholders. We spoke with CEO David Hemara about his insights on understanding the marketplace and consumer preferences. (BNZ Corporate Partner: Gary Osborn)

David shared with us what he understands to be the attributes that consumers are looking for and his thoughts on how he sees this changing in the future.

David believes that the New Zealand food story is important to many of their consumers, but he says, “It’s important to understand that the specific attributes that make up the New Zealand food story carry different weight for consumers in different markets. Communicating the co-operative’s provenance story is increasingly important.” David says, “For us, this is about being from New Zealand, being a farmer-owned co-op, our vertical integration and control of milk from farm to product in market, our history and singular focus on infant nutritionals.”

The NZ Story FernMark Licence Programme enables exporters to carry the trademarked New Zealand silver fern to connect their customers to the stories and products that reinforce New Zealand’s reputation. DGC products have carried the FernMark logo for almost 15 years. David shared his insights on how this programme has helped DGC to share the story of the provenance and safety of their products.

“We continue to use the FernMark Licence Programme as we believe the FernMark logo is positively received in many markets. We’d definitely encourage primary exporters to consider joining this Programme”, said David. “Working with NZ Story proved valuable when we needed to access high-quality New Zealand imagery for a couple of their new markets, where strong New Zealand imagery was important.”

We asked David about how DGC have been able to better prepare for the forces at play in the marketplace. Here’s what he had to say.

DGC shareholder suppliers are continually having to evolve and adapt their farming systems to meet the expectations of their consumers. In addition, David views being market-led, rather than production or supply focused, as another success factor for DGC. “We think that this is achieved by enhancing our understanding of our consumers. If you fail to understand your consumers and their changing needs, you can become irrelevant very quickly. Our partners in each market have a deep understanding of local consumers and the local culture – we work hard to learn from them as well.”

On the topic of new market opportunities, we asked David to share his thoughts on how he would recommend other farmers participate.

Having gained a lot of very useful insights and perspectives on markets from both New Zealand Trade and Enterprise (NZTE) and the Ministry of Foreign Affairs and Trade (MFAT), David says, “We’d strongly encourage primary exporters to link in with these organisations where they can. They have a great understanding of the local markets and the unique local business protocols where they are based.”

David also believes that perseverance is essential. “Sometimes it can take a long time to find the right opportunity or partner in a market. Be market led. Think about the consumer need that you think you can fulfil and be prepared to invest time in understanding if the consumer opportunity or consumer need, that you think you can fulfil, is a real opportunity.” David believes it’s important to think about your point of difference when developing a market-facing business, and consider these questions:

What is your point of difference? Will consumers appreciate that difference? How can you communicate that difference in a way that will be noticed in your target market?

You can read more and get to know the DGC family at <https://www.dgc.co.nz>



RICHARD REDMAYNE

Coastal Lamb



Richard and Suze Redmayne farm at Turakina, near Whanganui, and established Coastal Lamb in 2010. They now have 17 coastal farmers from the North Island supplying the brand, over 80,000 lambs being processed per year and supply to consumers dining in their homes and at leading Michelin Star restaurants around the world. (BNZ Agribusiness Partner: Greg Blackwood)

We asked Richard what motivates him and what has defined success for the Coastal Lamb business?

Richard says, “Originally, our motivation for the business came from wanting to be closer to our customers - private households and restaurants, rather than just selling lambs from the farm to the processor.”

He says the biggest change has been the ability to personalise the brand. “As soon as we branded our product, and put our farmers’ names behind the brand, there was a quantum shift, from anonymously producing food, to farming families connecting directly with their end customer. Being open and sharing our story creates trust.

Success for us is the feedback from our customers about how much they enjoyed our lamb, and the experience all the way to their plate; a photo of how they cooked it or seeing the excitement the chefs have when working with our lamb. Prior to starting Coastal Lamb, success was the weight of our lambs as they left the property.”

Recently, they ran the ‘Coastal Lamb Challenge’ asking chefs to create a unique dish pairing Coastal Lamb with an element of New Zealand seafood. “The competition culminated in the winning International Chef, Johan Ducroquet from Hong Kong, travelling to New Zealand and staying with several of our farming families and then hosting a dinner at Palate in Hamilton with the New Zealand winner Mat McLean. At the dinner we had 60 of our farmers, chefs and food critics – it was a fantastic night that captured the whole spirit of Coastal Lamb.” When it comes to success, customer satisfaction is the key factor for Richard.

Richard also talked us through the marketplace for Coastal Lamb, how it has evolved overtime, and how they have managed to maintain the provenance story.

Richard says they are conscious that they should have diversity in their markets. “Originally the brand was established within the New Zealand market. As we grew our credentials, we began to get interest from offshore.” Richard says the business now supplies to consumers in New Zealand, USA, Europe and Asia. While it was demand for their products which led to expanding their markets, it has taken time to establish strong, mutual relationships.

Richard explains “Once we gained a new customer, we would go straight to their market to meet our new partner in person, share the Coastal Lamb story, and spend time with their teams, helping them get to know the couple, and the brand, so they can represent the Coastal Lamb brand effectively. “We want not only the end customer to be satisfied and happy, but also the chefs, and our distributors”.

They offer a membership to the Coastal Club, where members get regular updates on how the brand works, the values, families and animals behind it and hear from leading chefs working with their product to get a real understanding of the culinary experience of eating lamb naturally seasoned by the sea. “It’s all about sensational taste with an interesting story”, Richard says. The coastal origin of the product is the key point of difference. Around the world, the flavours of lamb grazed on lightly salted pastures is something top chefs understand – naturally seasoned by the sea.”

BNZ Director of Agri Value Chain, Nick Hawken, knows the Redmaynes well from his time working with the group. We asked Nick to talk us through the qualities of the Coastal Lamb business that he believes have helped them succeed:

Nick works with customers who are focused on creating their own value chain, through producing, processing and creation of brands to bring their own products to market. Working across a range of businesses has given him insights into how businesses like Coastal Lamb succeed.

“In order to create more value you have to be able to identify the key attributes of your product that are unique and align these with your target market. Richard and Suze identified that the coastal origin of their lamb provided a unique taste and established a supply chain around them, which supported all the values they adopted growing their lambs. They not only produce fine cuts of lamb but are creating a quality experience.”

Nick says in his dealings with the Redmaynes they talk a lot about the importance of quality relationships. “We’ve watched them create a supply chain that provides exceptional customer satisfaction because their values are embedded into the Coastal Lamb brand. The end result? They create greater value both for the customers and producers because they wanted to be more connected with their end consumer.”

You can read more about Coastal Lamb, Coastal Club and meet the Coastal Farmers at <https://coastallamb.com>





A LOOK TO THE FUTURE

Julia Jones, NZX, Head of Analytics

NZX operates New Zealand capital, risk and commodity markets. NZX provides market information, stock quotes and market data, amongst other services. Julia takes a look below at the key agrifood consumer trends during COVID-19, and the opportunities she hopes the primary sector will take advantage of in future.

The immediate shock of COVID-19 has passed, as if a blunt instrument hit the New Zealand economy. Many sectors and businesses were derailed, however for the agrifood sector it created a wonderful opportunity to show how we can lead through disruptive events and provide a platform for agriculture to lead an economic recovery.

What will the future be for agrifood post-COVID-19? Amongst the great uncertainty, one thing is clear, consumers and wider communities will continue to define the criteria for 'acceptable' food production. Where disruption is extended and creates prolonged behaviour change, historically this has led to permanent lifestyle change. My Auntie Irene who is in her mid 80s still stockpiles toilet paper and dishwashing liquid due to her experience in World War II. Keep in mind also that, 'averaging out' behaviours of one onto many is extremely dangerous and provides little to no insight. There will be a sliding scale and varying levels of change across society.

A few general themes we are seeing:

Food that keeps us safe – Consumers seek food that is good for them, has high nutritional value and is food that they think will keep us healthy, potentially even to combat not just this virus but also any future illnesses. Healthy production methods tie into this, removing chemicals where possible and ensuring that a natural process has been used and can be verified.

Food production traceability – To understand if the food is safe, consumers need to be able to trace and verify the life cycle, through all parts of the supply chain. This is very much a consumer desire. However, this runs deeper with Government agencies needing speed of traceability throughout the supply chain, when trying to reverse engineer the journey of potential contaminants. A space to watch, as development and demands will be swift.

Food accessibility security – The immediate impact of lockdown illustrated a panic-buying epidemic. This however, was in fact just an increase in demand and slow reactions from supermarkets to deliver. Stories emerged of fields of vegetables being ploughed and meat being urgently sold by butchers due to distribution outside supermarkets being shut down. There needs to be a way to connect more produce with those organisations that distribute food to those who do not have the economic ability to access it through commercial channels.

The pandemic also highlighted some amazing opportunities:

Re-designing the global and local food story – Food producing countries will be looking more and more to eating local. In New Zealand we have an abundance of amazing produce. As we continue to grow into new markets, we should start with creating a strong local food culture that becomes part of our global food narrative. While food is a prominent focus, we need to have a clear and evolving narrative around HOW we produce, not just what we produce. This includes being really clear about those production methods that are restorative for the health of the environment. As a sector, we need to invest heavily into nutritional science to add verifiable health claims to the narrative, as when the land is healthy, so too are the people.

Digital acceleration – E-commerce and traceability are the biggest opportunities ahead. Accelerating digital traceability will accelerate this, providing a powerful platform for New Zealand agrifood to maintain a relevant food narrative. We will see digital channels to market grow at pace. Very quickly you start to notice the value of having a close digital connection with customers and the power of real-time feedback, signals that allow you to evolve at pace.

Capturing existing value – Creating value is great but let's not chase new value without first ensuring we have captured the value we already have at hand. Strong business execution, regardless of the idea, is essential. As agrifood moves towards leading an economic recovery for New Zealand, let us not leave any value on the table, and take full advantage to set the industry up for success. This means making sure we share our knowledge and learnings from our failure and success, to empower all.

This crisis has provided a unique privilege of future opportunity for agrifood. This will be most obvious to those who stay in tune with the consumer, who can stay focused on the future and are not afraid to let go of the past - do not waste this crisis!

NOTES:

We encourage you to think about the below questions when considering what notes you might like to make:

- What steps could you take to better prepare for the changing forces at play in the primary sector?
- How could you contribute to showcasing to consumers the key attributes of your product inside the farm gate?
- What steps can you take to ensure your farming practices are of the standard your consumers desire?

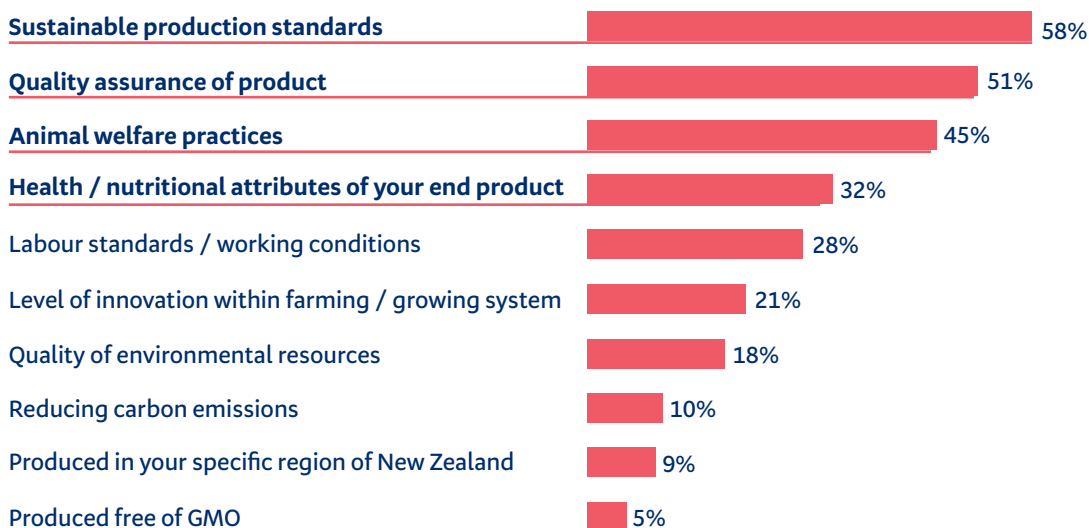


TECHNOLOGY

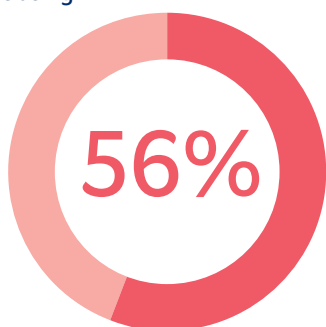
PRE-COVID-19 SURVEY

Understanding New Zealand primary producers' current and future plans to innovate and utilise agri technologies to help make their agribusiness more efficient and productive.

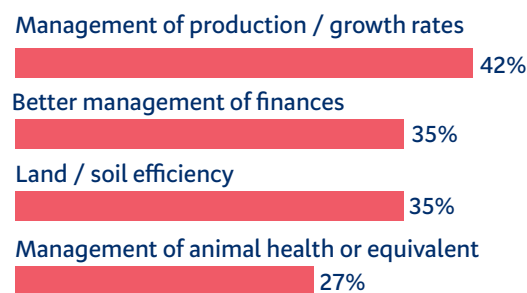
Primary producers believe that sustainable production, quality assurance and animal welfare are the most important aspects to demonstrate using data.



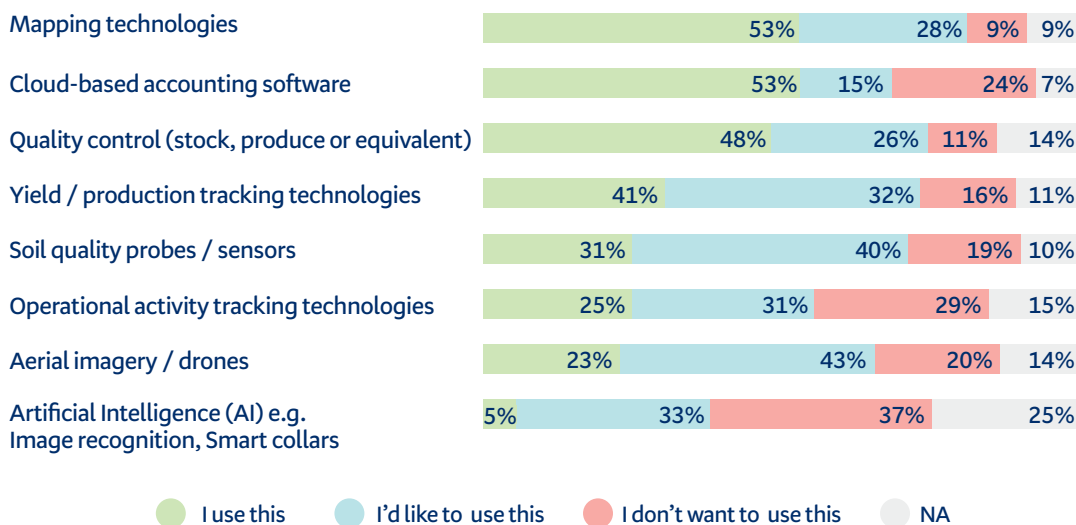
About half of BNZ primary producers anticipate using more technology in their agribusiness over the next 2 years, while 38% believe they'll use about the same amount.



Top challenges agribusinesses are trying to solve for using technology.



Mapping technology, cloud-based accounting software, and quality control technology are the most commonly used among agribusinesses.



COVID-19 SURVEY

How has COVID-19 influenced the way you utilise or plan to utilise technology in your agribusiness?

“When in a bubble, technology is your greatest tool for up-to-date info.”
Beef cattle farmer, Northland

“Actually, it’s made us realise what’s important, and what’s not. Many fancy systems are superfluous.”
Apple and pear grower, Hawkes Bay

“We will work towards improving productivity through using technology regardless of COVID-19, but it does make it more urgent.”
Dairy farmer, Waikato

“Increased usage, ZOOM, online banking, internet purchase of farm goods.”
Dairy farmer, Waikato

“Reliance on technology increases all the time and COVID-19 emphasised the use of technology for communication between producers and buyers. E.g. online stock sales.”
Sheep and beef farmer, Waikato

WHAT WAS ON OUR MIND PRE-COVID-19?

What were the agritech trends that were influencing agribusinesses pre-COVID-19, both within New Zealand and abroad, and how were our primary producers adapting and connecting? We take a look.

LATE 2018

1. New Zealand becomes the first 'country partner' to global initiative Farm2050³⁰, set up by top global industry players such as Pepsi, Microsoft and John Deere, aimed at accelerating the development of sustainable agricultural technologies to support the need to feed 10 billion people by 2050.
 - The Farm2050 Agreement is designed to rapidly scale the impact of New Zealand's agritech sector in the global market, with a particular focus on support for start-up agritech companies.
2. In the 2018 BNZ 'Shift Happens' report, primary producers were asked: "How has your understanding and use of technology evolved over time, and when it comes to the future of agritech, what excites you most?"
 - We discussed how 25% of BNZ primary producers considered themselves early adopters of new technology, and how most were using mapping technologies or cloud-based accounting software, but very few were using soil quality sensors.
 - Looking to the future, producers were expecting to maintain or increase their levels of technology use and over half were excited about how technology would help them run their business better, especially viticulture, arable and horticulture growers.

EARLY 2019

1. Forbes released its list of 120 global Artificial Intelligence (AI) predictions for 2019,³¹ and agriculture featured heavily. Two of the key predictions which emerged with pace in the global agriculture space:
 - The rise of big data: Centralised data being replaced by single-view data.
 - Different vendors coming together to standardise and streamline data sources (think FarmIQ to support environmental reporting).
 - Understand how using AI, imagery and sensors to enhance precision agriculture could grow better crops and replace labour shortages. "Farms across the world are moving to fill the labour gap—not replace jobs—with AI technology"—Ofir Schlam, CEO and Co-founder, Taranis.

MID 2019

1. 'From the Knowledge Wave to the Digital Age: Growing Innovative Industries in New Zealand' report³² was released by the Ministry for Business, Innovation and Employment (MBIE), outlining an approach to grow industry innovation and boost productivity, particularly in relation to labour.
2. KPMG release their annual Agribusiness Agenda – themed around ideas to acknowledge, evaluate and accelerate the sector. The report spoke of the change happening within agriculture and the ability for technology to be part of the solution:
“The challenge is not just in producing more but doing so in a sustainable and ethical way that provides nutrient-dense foods to support health for all populations.” KPMG Agribusiness Agenda, 2019.
3. Registrations opened for the Sprout Accelerator programme³³ for innovators working on New Zealand’s agriculture and food challenges, providing funding to commercialise new agritech, led by Callaghan Innovation with support from Fonterra, Zespri and Massey University, amongst others.

LATE 2019

1. Beef + Lamb NZ released the 'Shaping the Future of New Zealand's Red Meat Sector' report which looked at future trends that will ensure the sector is well positioned with strategies for the future.³⁴ One of the seven key priorities for action in response to change was to drive transparency beyond traceability by using the right tools to make sure New Zealand's agri products can evidence their key qualities.
2. The Australia New Zealand Agritech Council³⁵ was established to bring together key ecosystems, leveraging work done across both country's progressing agritech developments, in the public and private sector.

EARLY 2020

1. Microsoft teamed up with Massey University and not-for-profit group The Collaborative Studio to launch 'The Industry 4.0 Accelerator (i4)'³⁶. The programme is designed to connect Massey University students with innovative businesses to equip them with up-to-date and relevant digital skills for their 4th Industrial Age careers in the agrifood and fibre sectors.
2. New Zealand company, Robotics Plus secured a coveted position in the THRIVE Top 50 global Agritech³⁷ company rankings. The only New Zealand company to receive the honour, Robotics Plus received the ranking for exemplifying the best in agricultural innovation through its work launching its first two commercial operations, the Āporo apple packer and an automatic log scanner.
3. Farm Environment Plans (FEPs) go digital on FarmIQ.³⁸ In an Otago farm catchment trial by Beef + Lamb NZ and Agfirst, farmers can record their FEPs via a single platform, allowing for the once-stagnant data to become transferable between parties, accessible, easily understood and editable.
4. Agritech New Zealand, together with MBIE, created the Industry Transformation Plan,³⁹ which sets out a vision and outlines a series of actions to accelerate growth. The vision: “A globally competitive agritech ecosystem, producing ingenious value-adding companies that provide meaningful jobs, solving New Zealand's and the world's sustainability problems.”

32. <https://www.mbie.govt.nz/business-and-employment/economic-development/industry-policy> 33. <https://www.sproutaccelerator.com/>
34. <https://beeflambnz.com/news-views/shaping-future-red-meat-sector-report> 35. <https://agritechnz.org.nz/tag/anz-agritech-council/>
36. <https://www.i4accelerator.net/> 37. <https://agritechnz.org.nz/tag/anz-agritech-council/> 38. <https://blog.farmiq.co.nz/blog/farm-environment-plans-get-digital-platform> 39. <https://www.mbie.govt.nz/dmsdocument/10750-growing-innovative-industries-in-new-zealand-agri-tech-in-new-zealand-industry-transformation-plan>

LOCKDOWN AND BEYOND

Agritech, it's kind of a big deal

The Fast Five

Feedback from our 2020 surveys indicates that:

- Producers love their data and are using it to confirm sustainable practices, for quality assurance, to track animal welfare and to verify the health and nutritional qualities of their products.
- Data's a problem solver for everything, from lifting growth rates to managing finances and keeping their land in better shape.
- Mapping technologies dominate with 81% of producers using or wanting to use them to measure, manage and mitigate risks.
- COVID-19 opened producers' eyes to the simple solutions tech provides – from online ordering of supplies to cloud-based accounting.
- Traceability is recognised as an increasingly important technology when it comes to food safety and origin.

Agritech is big. Big data is big. Using artificial intelligence to shift your cows and pick your fruit is getting bigger. COVID-19 is going to make agritech even bigger. It takes a big mindset shift for some to get on board, but the rewards of knowing the intricate details of your business, your environment, your supply chain, your finances; well that's a big advantage too.

There are a lot of questions. What problem is agritech going to help me solve, what are my options, why is this the best solution, and will it work for me? We asked BNZ primary producers about this, because it's something we are equally curious about.

In February 2020, the majority of BNZ primary producers were using some form of agritech.

They were looking to capture data to:

- **Show what their sustainable production standards look like (58%)**
- **Provide assurance of their products' quality (51%)**
- **Provide evidence to support their animal welfare practices (45%)**
- **Verify the health and nutritional benefits of their products (32%).**

There are other farming practices which can also benefit from agritech, such as labour standards, health and safety, supporting country of origin data and the quality of environmental resources - all technologies which help communicate with the market and rebuild consumer confidence.

Primary producers look to technology to solve problems, such as the 42% of BNZ primary producers using it to manage growth rates and track production, with another 35% looking to manage their finances better or create better land and soil efficiencies. Technology to better manage animal or plant health was favoured by 27%. Overall, producers are looking for technologies to help them manage their land, improve their profitability and provide evidence of their farming practices to consumers, the public, regulators, and their suppliers.

Despite well-known benefits, the uptake of digital tools is often the most challenging hurdle. A raft of economic and social considerations play into a decision to solve the above problems by investing in technology.

Producers with digital skills are often the early adopters of technology, but cost, internet connection and user friendliness are all barriers which play a role in the decision to use technology.

Some of the uptake has been by necessity, some by desire. Necessity has driven adoption of proof-of-nutrient losses in catchments where farms must fit within prescribed limits, the recording of stock movements to satisfy biosecurity controls or reporting fertiliser applications and tonnages for regulatory approvals.



“The technology we have introduced so far is making our business more efficient... I’m not sure it’s exactly making it more profitable. Perhaps it is making us think a little differently, more open minded and adaptable to change.”

Sheep and beef farmer, Manawatū

There are also large proportions of primary producers investing in additional agritech to understand more about their financial performance, the efficiencies of their land use or to strength-test their production assumptions. Big data is giving an edge to those who see the benefits of better recording and evaluating, and the industry is becoming increasingly interested in the future opportunities better data could create.

Agritech for the planet, profit and people

New Zealand is a unique country in terms of our isolation from major global markets. Through COVID-19 this remoteness has served us well, but often it’s a disadvantage when it comes to establishing ourselves in major markets. Fortunately, technology is reducing the costs of isolation from major trading partners and getting us noticed.⁴⁰ Technology is helping us to sell more products and also attracting offshore interest in our digital solutions. We’re seeing more collaboration amongst those funding and creating the innovative agritech solutions, for instance small players accessing the benefits of technology to play on a big stage, an example of which you’ll read about below.

That the agritech industry is at home on the farm, but has the opportunity to get out and earn more offshore, was underlined in February this year in the MBIE Transformation Plan.

The consultation document sets out the plan to accelerate growth in the agritech sector, which in turn is designed to drive sustainable growth in our primary industries. The logic is that agritech is already valued for its input into New Zealand’s food and fibre sectors. It is a key driver for increasing productivity, quality and sustainability across the entire food and fibre production and value chain for New Zealand. It aligns with the views we hear from BNZ primary producers that agritech plays an important role in achieving more efficient land use and enabling management for better environmental outcomes.

Importantly, in both a pre- and post-COVID-19 world, the MBIE Transformation Plan also highlights that New Zealand’s strong food and fibre sector represents an opportunity for agritech to be an economic driver in its own right, as an export industry. Agriculture’s biggest challenge is to balance a focus on sustainability, while simultaneously feeding people and creating a profit. The world’s forecast growth in population (c. 2 billion more people by 2050⁴¹), demands a rapid growth in global food production, achieved through sustainable production methods. At present, there are limited available options to achieve such an ambition, particularly within current livestock farming systems.

That’s why the Industry Transformation Plan for New Zealand Agritech aims to accelerate its growth and attract necessary investment, by increasing the commercialisation of New Zealand agritech intellectual property (IP), addressing global opportunities to increase exports, developing needed skills and addressing regulation and data issues.

40. <https://blog.bnz.co.nz/2020/05/lockdown-lessons-towards-a-more-productive-digital-new-zealand-economy>

41. <https://www.un.org/development/desa/en/news/population/world-population-prospects-2019.html>

Proof is in the data

The Industry Transformation Plan for New Zealand Agritech recognises that while producers recognise it as a useful tool, they want to be convinced of a clear value proposition. There is also realisation that digital solutions are not always as easy to adopt as the latest smart phone. Primary producers work within biological systems that are complex and not always easy to change. There's an ingrained faith in the tried and true tools and processes.

The lockdown, while it spiked interest in digital solutions for many, has also created clarity of what value from these tools could mean, as one producer noted, "Actually, it has made us realise what's important and what's not. Many systems are superfluous." Apple and pear grower, Hawkes Bay.

To prove one value proposition and show how the Internet of things (IoT) can assist with farm management in New Zealand, MPI teamed up with the Foundation for Arable Research (FAR) in early 2019 to create a pioneering arable farm tech trial.⁴²

IoT is the interconnection via the internet of computing devices embedded in everyday objects, enabling them to send and receive data. A simple example is a home security camera linked to your mobile. A more complex one is Alexa, an in-home device capable of voice interaction, making to-do lists and providing weather, traffic, sports, and news – all while running your home heating system and controlling your lighting.

The aim of the MPI / FAR pilot farm is to highlight how IoT technology could support the better use of technologies within the primary sector, making it more productive and competitive, irrespective of the size of the operations. The pilot uses IoT technology to provide low-cost and effective digital infrastructure, to deliver water nitrate readings to the cloud. It is anticipated that this will allow groups of farmers to monitor their collective performance and collaborate in developing further mitigations where necessary. Sensors are also used on nearby water bores to monitor soil moisture, collect climate and plant health data, sending further readings to improve the level of data held.

Which technologies primary producers use and why is often influenced by whether a system is reliable, easy to use and functions with available broadband capacity. These are the key considerations that must be addressed by developers of agritech.

Mapping technologies are the most sought after form of agritech with 81% of BNZ primary producers either using or wanting to use this in future. The ability to map the productive land classes, measure grass or crop cover, and analyse nutrient management strategies is driving investment in this technology. An accurately mapped area of land can also provide greater accuracy for budgeting of costs and income per hectare.

Aerial imagery and drones, used for similar activities, are used by fewer than 25% but are the most sought after. We're seeing New Zealand agritech companies punching above their weight in areas such as mapping and aerial imagery and, as a result, attracting heavyweights of the tech world to New Zealand. Start-up GPS-it is working alongside Amazon Web Services to bring the latest drone and aerial imagery technology to produce accurate farm and orchard maps.⁴³ They've helped Fonterra to accurately predict which waterways need to be fenced to reach their goal of 100% stock exclusion across Fonterra farms.

Other technologies used by BNZ primary producers include cloud-based accounting software, such as Xero or Figured⁴⁴, used by 53% of primary producers, for budgeting and cost analysis, with another 15% keen to take it up.

Quality control technologies were the third most commonly used technology (48%). Investment in this type of technology has also helped to control environments within the market garden sector. Fresh herb growers, Superb Herb, have seen a dramatic improvement in the efficiencies of their greenhouses by investing in quality control technologies.

"We've been into Europe and looked at some of their leading technologies and invested in these within our greenhouses. We've been able to improve the energy efficiency of our heating systems from about 60% up to 99%. We've also automated our watering and overhead spraying systems. We've automated plant spacing, and the moving of plants through seedling stages", says Managing Director of Superb Herb, Ken Rogers.⁴⁵

While artificial intelligence features high on the list of trends emerging within the agritech space, the golden age of AI is dawning rather slowly for BNZ primary producers. Innovations such as smart collars for stock are being used by only 5% of producers, with more than 60% not interested in using these or feeling that it wasn't going to be a technology relevant to their agribusiness.

So, are we going to use more agritech in the future? Over half of BNZ primary producers say yes, with corporate-sized agribusinesses and horticulture producers most likely to increase investment in their agritech in years to come. The interest is there, but there's no stampede to fast adoption. Ahead of the investments, primary producers want to be confident the technology they adopt will deliver a return through better data, better farming decisions, better productivity and ultimately better profits.

Q+A

ENDA AND SARAH HAWE

Dairy Farmers



Enda and Sarah Hawe operate a 700 cow dairy farm in mid-Canterbury and are proud members of the Synlait Lead With Pride™ programme. We talked to them about how, through using technology, they have been able to improve their record keeping and farm management, helping them to continue doing what they love. (BNZ Agribusiness Manager: Cam Blain)

We spoke with the Hawes about what motivates them to produce high-quality food.

“Farming is a wonderful industry to be involved in. I’m so lucky to have been born into it, and to proudly call myself a farmer.” Enda shares that there is no better feeling than seeing Synlait dairy products on the supermarket shelves around the world, and knowing that it could have come from their farm.

Enda told us about some of the key factors he believes are important to his future business success.

Ensuring their business is financially sustainable to continue to invest in improvements is a key part of achieving a brighter future for the couple. “Farming

today is quite different to farming twenty years ago, or to how my parents farmed.” Enda believes “Technology is the way of the future.” He discusses that technologies have decreased the workload on their farm and increased their efficiencies, leading to better decision making, and more time to focus on what matters.

Synlait’s Lead With Pride™ Programme recognises suppliers who achieve dairy farming best practice, guaranteeing the integrity of milk produced on certified dairy farms. Lead With Pride™ uses technology from FarmIQ to help maintain accurate records to improve farm business management. Enda talked with us about how this technology has helped his business.

The Synlait Lead With Pride™ programme gives Enda confidence that he will be able to adapt to changes going forward. When Synlait first introduced the Hawes to FarmIQ, they recognised the opportunity to collate multiple sources of data. “FarmIQ is a one-stop shop that has been easily integrated into our business and helped us become more efficient.” Enda explains that the technology has enabled their team to access one system for monitoring hours, health and safety plans and milk quality. FarmIQ connects to other systems to keep live records of fertiliser applications, pasture growth, their environmental position and herd data.

“All farmers collate some sort of data, but for us recalling all of this data was always a battle. We’ve found with FarmIQ, we now have an info hub where we can easily look back at the previous year’s performance, as well as track and budget going forward.” Enda comments.

For instance, Enda says FarmIQ enables his team to keep an eye on milk quality, and therefore minimise any grading issues in the future. And it’s clearly working, with Enda stating, “Our animal health and welfare scored full marks two years in a row. We constantly receive really good feedback from the Synlait team.”



Q+A

LEO AND KATHRYN VAN DEN BEUKEN

Dairy Farmers



Leo and Kathryn van den Beuken, dairy farm operators and previous New Zealand Dairy Industry Sharemilker of the Year award winners, spoke with us about using agritech within their Mid-Canterbury-based business, where they share milk for Max and Adrienne Duncan. (BNZ Agribusiness Partner: Jim Pain)

Leo and Kathryn spoke about their passion to be a food producer in New Zealand.

With a dairy farming career spanning thirty years, the van den Beukens are driven to produce a high quality, meaningful product that feeds the world. “It’s about the satisfaction of providing employment opportunities for the twelve people and their families that rely on our success in order for them to prosper and provide for their families.”

HawkEye, Ravensdown’s map-based software, aims to help farmers make smarter decisions for better environmental outcomes. Kathryn and Leo shared how using HawkEye has incentivised them to change their behaviour and improve their environmental footprint.

Using HawkEye, combined with a Farm Environment Plan strategy, Leo and Kathryn feel they have been able to better prepare for external changes, by developing their strategy for improving their nutrient management into the future. “Environmental management was an area we needed to improve on”, explains Leo. “We use the HawkEye technology as a tool to motivate us to make a difference with our nutrient management and to help meet our targets. The best thing we have found is that HawkEye not only improves efficiency, it eliminates our mistakes, reducing wastage and costs.”

Prior to using HawkEye, Leo elaborates, they relied on a paper trail. “A paper copy of a map was used to

ascertain where fertiliser was being directed, then someone had to manually calculate the quantity required, followed by a phone call to Ravensdown to order the product and another phone call to the spreading company.”

Leo explained that now, at the press of a button, they have their finger on the pulse. The ability to access information has helped them make timely decisions and adjust their plans accordingly.

We discussed the couple’s thoughts on the key factors they believe will be fundamental to a successful farming future in New Zealand.

With a commitment on protecting the environment, Leo feels there will be an increased focus on looking at the most appropriate land use. There might be an opportunity to retire certain classes of land, where current farming practices are not sustainable. “Certain classes of land may not be suitable for dairy. It has never been easy, and it will never be easy”, shares Kathryn, “The biggest challenge is embracing change and learning to adapt with new technologies.”

“If you want to be successful, you will need to understand how you can add value to your business going forward; asking the question, is this going to add value, or hold me back?” explains Kathryn.



Q+A

TIM WIXON

Head of Technology Industry, Growth Sectors, BNZ



We spoke with Tim about the agritech sector in New Zealand and the importance, and growing pains, of growth in this industry.

We asked Tim to tell us a bit about the New Zealand technology sector, and why this is an important sector to agriculture:

In the past two years, technology - specifically the top 200 companies, known as TIN200 - has been the third largest and fastest growing export industry, behind dairy, but ahead of meat and forestry, within the New Zealand economy. “This is an essential and positive sign for the continued growth of other primary sector export markets”, Tim explains. “When we look at the past 12 years since the GFC, labour productivity growth (or output per week) within New Zealand has slowed. Labour productivity growth remains about 40% below the average OECD benchmark, and that gap has been increasing since 1996.”

“This is where further investments into technology to support improvements in output across all sectors, but especially the primary sector, is important, to help narrow the gap with the rest of the OECD”, says Tim.

Tim also talked us through opportunities for better utilisation of agritech and how he sees this evolving:

Given the reputation of New Zealand science and innovation communities for punching above their weight, particularly in the agriculture space, agritech seems intuitively to be a huge opportunity for New Zealand. The New Zealand tech sector often tends to struggle to turn its innovations into marketable products and services. There is certainly increased opportunity given the relative proximity and accessibility of government organisations, agriculture businesses and capital providers in order to support agritech innovation.

Moreover, COVID-19 has presented a catalyst for technology adoption and enablement across BNZ’s client base, including in agriculture – and indeed, within BNZ itself.

New Zealand should be able to tell a strong agritech story. Tim says, “Agritech has huge growth capacity in the New Zealand marketplace, especially in the start-up and small to medium enterprise space. There is strong demand for New Zealand agritech in the domestic market, more than in the broader technology market. This sector is one BNZ is really excited to continue to support and grow.”

We also asked Tim what a typical agritech company in New Zealand looks like and how agritech compares to the broader tech sector:

Tim references the Technology Investment Network’s (TIN) Top 200 New Zealand Technology Export Businesses for 2019, and notes the key agritech stats, which show just how much growth he’s seeing:

- There were 20 agritech companies in the TIN200 in 2019, generating NZD c. \$1.4 billion in revenues.
- Only two of those 20 have operated for fewer than 15 years (i.e. new operators of scale have been limited).
- Agritech in New Zealand has been dominated by larger high-tech manufacturing (i.e. with hardware components) and some biotechnology businesses.
- Of the TIN200 agritech companies, revenues were skewed toward exports at 57%, which is good news for the strength of demand from the New Zealand primary sector for new technologies. By comparison, 73% of overall TIN200 revenues are export revenues.
- As at April 2020, agritech start-ups in New Zealand had attracted c. \$29.9 million in investment since 2018.



TRUST CODES®

A DIGITAL STORY

Emma Wheeler, Head of Strategy, Trust Codes

Trust Codes® is a powerful cloud-based platform providing a suite of solutions to digitally fingerprint each and every food, beverage and nutraceutical item. This helps to protect brands, provide transparency to consumers, better control their supply chain and deliver data visualisation of their supply chain.

Over the last few months there has been recognition that the primary sector is the heart of New Zealand; food is a crucial part of our identity and we are proud of it. The meaning of food now holds more weight; not only does food provide calories for survival, it connects us with our friends and family (something we have all missed through COVID-19), it gives some of us a livelihood, it has the potential to mitigate health problems, and it gives us a chance to tell a connected story to the world. As New Zealanders, it is part of who we are.

We are known across the globe for our safe and nutritious produce, underpinned by integrity from those that grow it. The intersection in which technology can supercharge what we are doing and the way in which we are doing it, is a prized tool when paired with our passion. As New Zealanders we instinctively innovate; how can we do things better, faster, with more impact (not just financially, but socially too).

As fear swept across the country, a new norm was quickly established. Digital capability for online and contactless deliveries proliferated like we could have never imagined. Many that had never bought groceries online were placing orders weeks in advance.

Tracing tools were quickly introduced. Tracing people physically in food stores but also tracing food for safety. Consumers remain curious, with connected packaging a way for brands to directly engage with those consuming their products (for example scanning a QR code, which displays a contextual platform of information). Consumers want to know the supply chain of their food; is the food safe, have they complied with regulatory rules, have workers kept distance from each other, is it authentic and so on.

During COVID-19 the systems that underpin our supply chain have been massively challenged. Not only from a supply-demand perspective but exposing how little digitisation we have across the supply chain. The spread of the disease forced us to implement contactless work. Operating a supply chain still using paper was no longer an option if actors in the supply chain wanted to remain open. Across a linear supply chain, let alone complex web, all parties would normally largely be required to touch paper. This inhibited the ability to operate, so quickly sped up the adoption for the digitisation of the supply chain.

Coexisting with the digitisation of supply chains is traceability and transparency. As traceability improves, so does trust and the ability to track food for provenance and better storytelling, facilitating better distribution and logistics practices. The adoption of digital solutions creates a pathway directly from those producing products, through to



“Use of technology has been essential to the very existence of dairy farming and will continue to be so. The problem is to know which technology to invest in next. This applies to breeding decisions, farm management and capital expenditure.”

Dairy farmer, Waikato

trust and the ability to track food for provenance and better story-telling, facilitating better distribution and logistics practices. They are not constrained by the medium between them.

With better traceability and logistics data we can pinpoint errors and blockages in the supply chain, assisting to alleviate food insecurity in New Zealand. This type of information is valuable as it increases visibility, encouraging efficacy of accessibility, efficiently working to bridge gaps that lead to food insecurity.

At Trust Codes®, authenticity is a critical pillar in our business. Counterfeiting of medical supplies has sky-rocketed but most don't realise that billions of dollars is lost through counterfeiting food and beverage products every year. Counterfeiting puts consumers at risk of food safety issues as well as potential losses for producers. As we understand the benefits of a digital supply chain, the all-encompassing benefits are apparent.

Health and wellness awareness has heightened. Consumer demand for Immune systems support has meant they seek out information to inform purchasing decisions. We have the ability to scan a QR code on products, and connect to authenticated education about that individual product and what we can eat it with to ensure absorption of nutrients for optimal health.

Types of farming, such as vertical farms could have a place in the future sooner that we thought. With shorter supply chains, and the ability to tweak the nutritional constituents leveraging less environmental impact, many boxes begin to be ticked. Consumer awareness of nutritional density and also safety has been boosted, creating a local opportunity to have farms in urban areas (vertical farms).

Packaging innovation is still ripe for disruption. COVID-19 has amplified our response to safety and food is not immune to this. The sustainability story has not been mitigated, if anything it has highlighted that this can be our opportunity to reset, a chance to start fresh. Consumers want to be associated with brands that align with their personal values, and more than ever, sustainability and environmental values are critical to this association.

As we all move to a new normal, our primary sector has a brighter future as consumers awaken to the passion that transpired during this time of challenge. Technology has a role to play in innovation, disruption and efficiency across the sector, with an opportunity to connect producers to consumers more intimately than before.

NOTES:

When jotting down notes about agri technologies, consider the following questions:

- When was the last time you reviewed how available technologies could enable your agribusiness to perform better?
- What areas of your agribusiness could be improved through improved data capture and reporting?



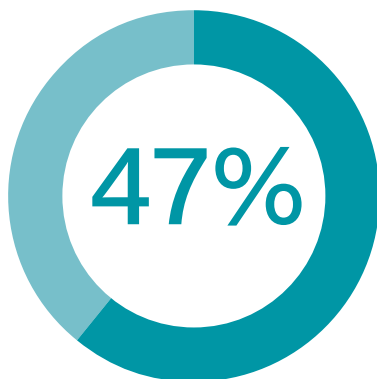
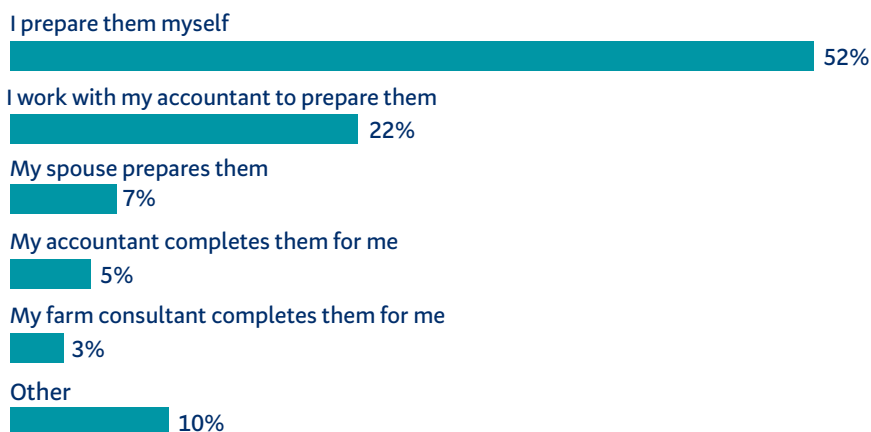


FINANCE

PRE-COVID-19 SURVEY

Understanding how primary primary producers approach finance within their agribusiness.

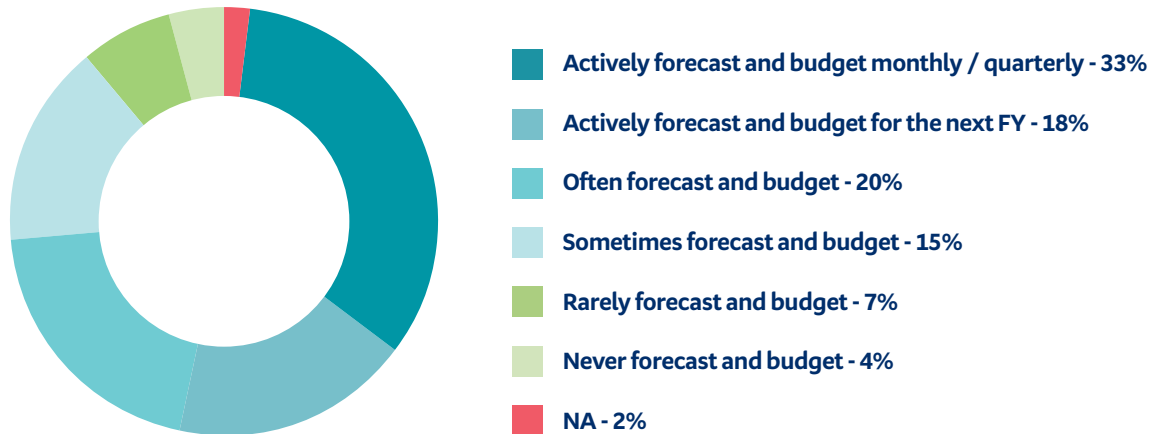
Who prepares your financial budgets / forecasting for your agribusiness?



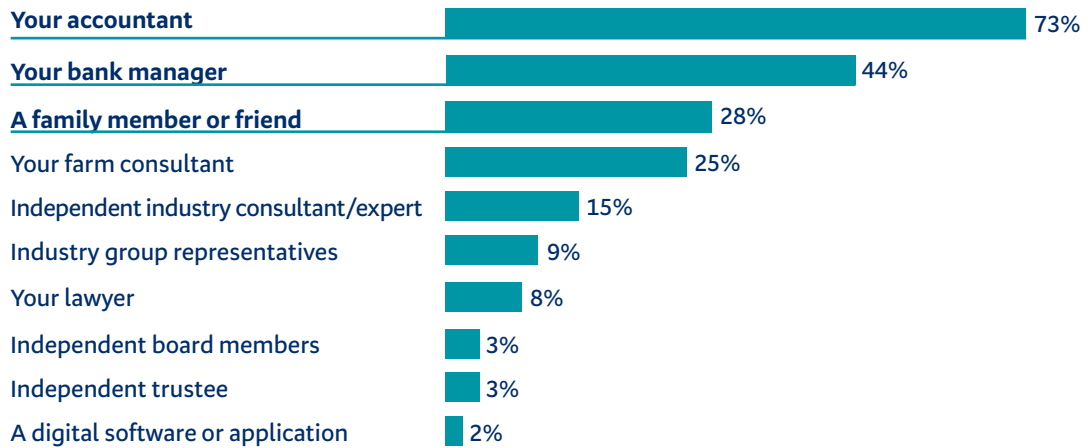
About half our primary producers are competent and comfortable understanding financial documents. Men (54%) are significantly more confident than women (36%).

Xero is the most commonly used accounting software among New Zealand agribusinesses at 35%, particularly among younger people (48%), more profitable agribusinesses (47%), and horticulture / arable agribusinesses (53%).

Most are doing at least some forecasting and budgeting. Corporate-sized agribusinesses are more likely to actively forecast and budget on a monthly / quarterly basis (53%).



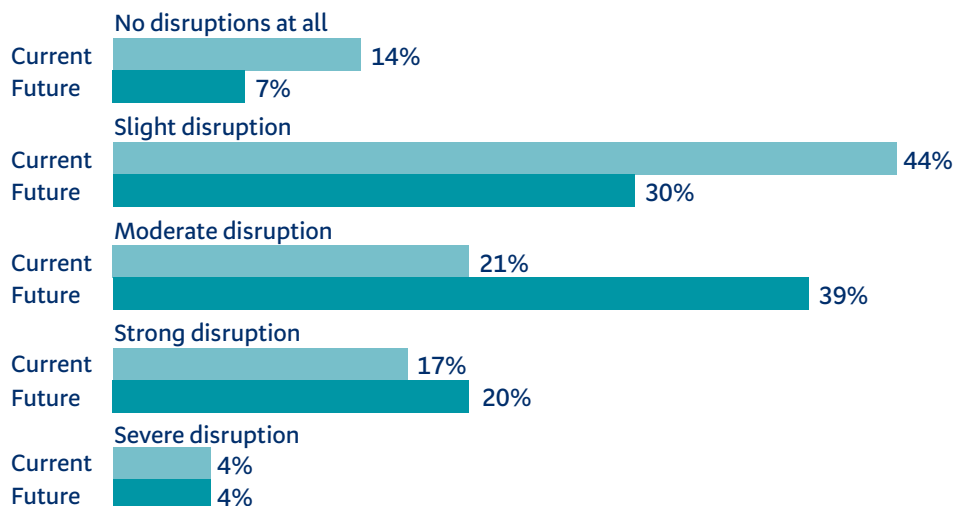
Accountants are most customers' 'go-to' trusted business advisor, followed by their bank manager.



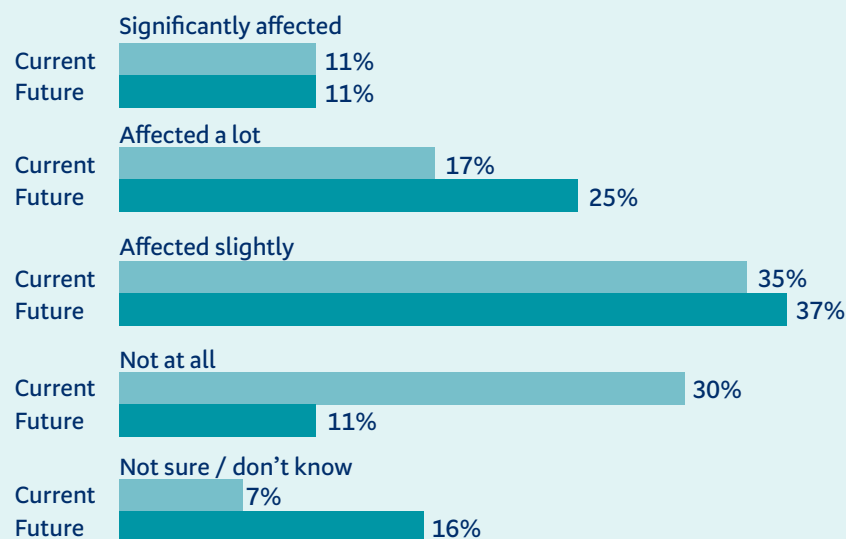
COVID-19 SURVEY

Understanding the impact of COVID-19 on New Zealand primary producers.

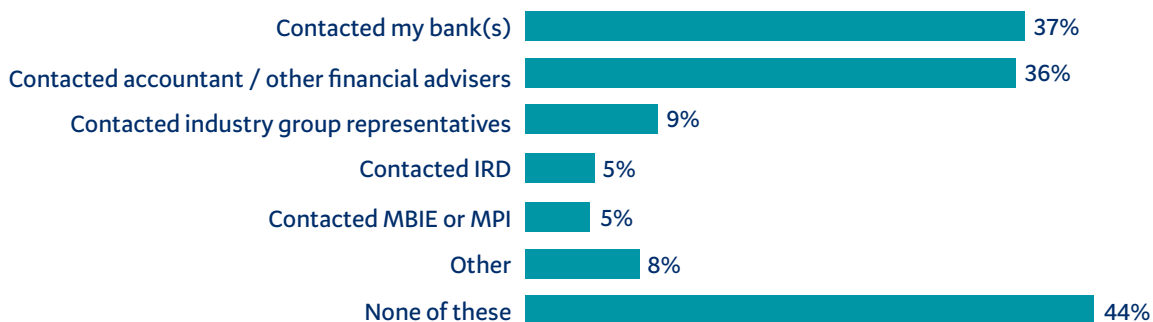
Most agribusinesses have experienced some disruption due to COVID-19 and a quarter expect a strong or severe disruption to continue into the future.



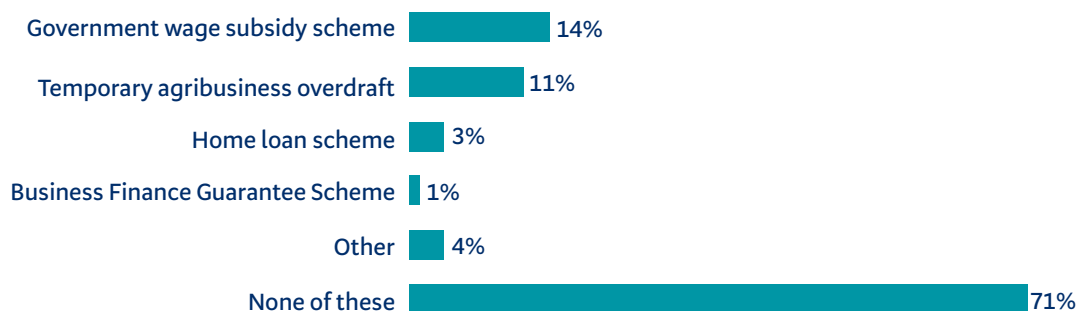
Most agribusinesses have seen a negative financial impact due to COVID-19 and over a third expect this to continue into the future.



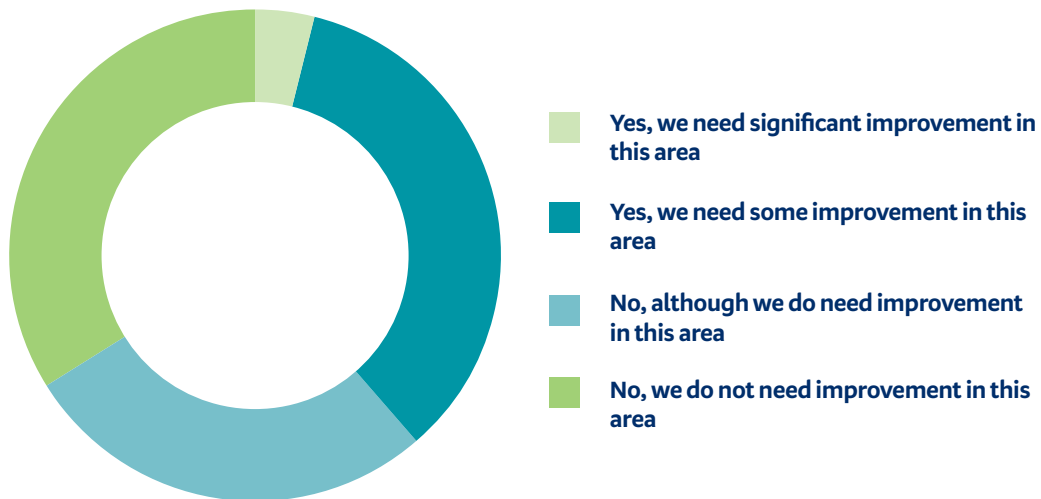
Where have you looked for help or information with regards to your finances for your agribusiness as a result of COVID-19?



Have you taken up or are you looking to take up any of the following support offers?



As a result of COVID-19, have you looked at creating or improving your agribusiness continuity and financial preparedness plans for future shocks to your agribusiness operations?



Reflecting on the impacts of COVID-19 to the New Zealand economy and way of life, what lessons do you think all businesses could take from a crisis like this?

“To create more resilience, we have a plan B for the worst-case scenario that may affect our business, e.g. pandemic, weather, etc.”
Sheep and Beef farmer, Otago

“Focus on what you can control and show leadership within your community. Having a clear plan within our business has kept everybody focused and motivated, with compassion and empathy being at the forefront of most of our decisions.”
Dairy farmer, Hawkes Bay

“Operate as lean as possible. Utilise technology. Be agile. Prepare to change business course at any time.”
Poultry farmer, Taranaki

“You need to be resilient. Your business needs to be set up to allow for instant change. What you think is normal may not be any longer. You need to be flexible and be able to embrace change.”
Vegetable grower, Northland



FINANCIAL WELLBEING AND THE ROLE OF TRUSTED ADVISERS IN YOUR BUSINESS

Peter Tozer, Associate Professor of Farm and Agribusiness Management, Massey University

Peter spends a lot of his time teaching the future leaders of the New Zealand agri sector about financial management of an agribusiness. Here he talks us through the role of trusted advisors and ensuring you're getting the right advice.

In this world of increasing uncertainty; prices, markets, and now pandemics, it's important that farmers, and our students of agribusiness, really understand the markets agribusiness operates in, what uncertainties may arise and how these could impact the bottom line.

We only have to look back to milk prices over the past decade to see the impacts of commodity market volatility.

Now is the time for farmers to look at the financial situation of their business, particularly the level of debt they are carrying and the capacity of the business to pay down debt. It is important to look beyond simply paying interest to increase your equity, beyond that achieved through capital growth. The only positive currently, is that record low interest rates are reducing debt servicing costs. Take advantage of the extra cashflow you may have as a result of a lower interest bill and consider paying down debt to ensure the sustainability of your business.

When we teach financial management to our students, getting them to understand the financial structures of many farm businesses is often a challenge. Some of these structures are historical, such as farmland being owned by a family trust, with the farm business itself run as a partnership, or some form of company. As intergenerational changes are made, a loan may be provided by one entity to another within the business, creating what we call 'family' debt, which appears in the accounts as a debt, but may not need to be repaid. Thus, assessing the 'true' profitability of the business can be problematic. Some of these structures are in place for intergenerational transitions but, from the financial wellbeing perspective of the business, the entangled nature of these arrangements makes the true financial situation of the business difficult to measure.

So, who do you turn to for advice? There are numerous potential sources - suppliers, accountants, agents, bankers, family, or friends, social media, and even locals at the pub. But before you take the advice, ask yourself three questions. What is the decision to be made? What will the consequences of that decision be? How informed and trustworthy is the advice I am getting?

Simple decisions usually don't require much input from outside advisors. Others do because the consequences are long-term. For example, pasture species selection would seem to be a relatively simple decision, but the wrong choice can have a lasting influence on cashflow, profitability and overall sustainability. Decisions that can have major consequences on the farm business should, in most instances, be supported by advice from outside the farm business.

Trusted advisors should be those from inside and outside the business that understand the business, or parts of the business, completely. This means that they understand the consequences of the decision in the context of the goal, values and management practices of the business owners, and can bring timely and relevant knowledge to the decision-making process.



“We meet with our governance team every quarter - that is our bank manager, accountant and farm consultant.”

Sheep and Beef farmer, Manawatū

It is valuable to have several trusted advisors to call on, especially when making critical long-term decisions. With some choices it may be worthwhile for the key members of the business to meet with a group of trusted advisors at the same time to ensure everyone has the same relevant information to make the decision and are working toward the same goals for the business.

When thinking about who may suit as your trusted advisor, consider these questions:

1. **What information do I need?**
2. **Where do I get it from?**
3. **Who can I trust to provide the “best” information?**
4. **Do they understand my business? (This is about the business itself)**
5. **Do they understand the business I am in? (This is about the industry the farm business is in)**
6. **Do they understand the consequences of the decision on my business? (This is both a short- and long-term question - short term may be effects on cashflow or borrowing - long term may be effects on overall value or profitability of the business.)**
7. **Am I getting consistent advice from different sources, or is it conflicting? If so why?**

FINANCIAL WELLBEING FOR YOU AND YOUR AGRIBUSINESS

“Farming businesses with strong balance sheets and robust environmental strategies will be well positioned for future success.” Dave Handley, GM Agribusiness, BNZ

The Fast Five

Feedback from our 2020 surveys indicates that:

- The mindset of primary producers is more proactive than reactive, but this is only true for just over half of those surveyed – 51% of producers are actively forecasting or budgeting, while the rest are working out how to achieve this.
- When it comes to financial literacy, male primary producers (54%) were more confident than female (36%) at interpreting their financial statements.
- Producers are recognising the value of budgets as a real-world view of the year ahead – COVID-19 spurring some into action given its disruption, with the majority reporting a hit to their budgets for this financial year.
- The bank (37%) and financial advisers or accountants (36%) were the professionals primary producers turned to first during COVID-19. 14% of primary producers accepted the wage subsidy scheme support offered by the Government.
- It's important to be able to demonstrate to your rural professionals and other stakeholders that you are, or are working toward being, a sustainable business, financially, socially and environmentally.

Pandemic or no pandemic, the importance of knowing your numbers, working alongside trusted advisors and having a sound plan remains unchanged. Agriculture is a sector subject to the fluctuations of market forces, currency and climate. It's vital to have a strategy to make the most of the rewards, while managing the risks.

BNZ primary producers are aware of this. It's encouraging to see that 51% of BNZ primary producers report they are actively forecasting and budgeting. The remaining 49% report still working on how to incorporate monthly or quarterly budgeting into their agribusiness, citing they 'often', 'sometimes', 'rarely', or 'never' make budgeting a priority. When it comes to preparing a budget, of those producers that do, 52% are happy to prepare cashflow projections themselves, while others prepare these alongside their accountant (22%) or a farm consultant (3%).

Managing your businesses is a vital skill and often involves a change in behaviour, with a mindset shift from reactive to proactive. We found that BNZ primary producers who had answered that they were embracing the changing landscape of the primary sector as an opportunity, rather than a threat to their business, were more likely to:

- **actively forecast and budget on a regular basis**
- **take responsibility for preparing their financial budgets themselves**
- **collaborate with their bank manager to support strategic decision making to future proof their agribusinesses, including reviewing banking facilities to ensure their debt facilities are structured appropriately.**



“We try to always have a financial buffer, as seemingly strong businesses are falling over due to having no reserves.”

Dairy farmer, BOP

Rural banking trends

Prior to COVID-19, the Reserve Bank of New Zealand (RBNZ) had set out a requirement that all banks in New Zealand increase their capital reserves, phased in over five years, which will enhance the financial resilience of our banking system. In response to COVID-19, the RBNZ has delayed the start of the phasing for increased capital requirements by 12 months to 1 July 2021.

New Zealand’s financial system is more resilient now than it was through the Global Financial Crisis (2008), which triggered banks to take several actions to reduce liquidity and balance sheet risks. BNZ continues to invest and support sustainable growth in the primary sector, particularly for resilient businesses with clear long-term strategies and an ability to demonstrate financial, social, and environmental sustainability.

Agribusiness bankers and primary producers have worked hard together in recent times to transform agribusinesses into a stronger shape and minimise vulnerability to downturns in commodity prices or lower capital gains. Agribusiness bankers are actively encouraging clients to pay down principal on their loans, so that they can reduce their debt to a level that’s sustainable in the long-term. In an environment where capital is clearly becoming harder to source, alternative options are also starting to become apparent. BNZ’s view is that the agribusiness market will continue to be capital constrained for the foreseeable future, and a prudent investment approach within the sector should be adopted.

Given the increased focus on capital, it’s a good time to review the structure of your debt and working capital facilities with your BNZ Agribusiness Partner.

Lessons from COVID-19

The profound impacts of COVID-19 on the agri sector and across New Zealand have reinforced the importance of planning. The majority of our respondents experienced some level of disruption to their business as a result. Most primary producers indicated that their financial performance was negatively impacted in the lockdown phase of New Zealand's response to COVID-19.

There was a 10-percentage-point increase in the number of producers expecting a negative financial impact in future. Other impacts reported included an inability to work off-farm, downward pressure on red meat and dairy prices, difficulties off-loading stock, increased feed costs due to drought, and delays in cashflows. Farmers in the dairy and horticultural sectors also reported difficulties with migrant workers arriving, and uncertainties surrounding future staff hiring.

For most, the bank (37%), and financial advisers or accountants (36%), were the first source of support during the pandemic. 14% accepted the wage subsidy scheme support offered by the Government, while most needed no financial government support. Overdraft extensions for cashflow purposes were the most common requests for bank support. A further 30% expected future financial guidance from the bank, especially around the banking environment and strategic decision-making to navigate the financial impacts of the pandemic.

When adversity and uncertainty arrive, good financial practices are invaluable. A budget to forecast costs and cashflow can pinpoint difficulties, identify when gaps may arise, and serve as a tool to communicate with your bank on how your future strategies may shape up.

Formulating a strategic plan to withstand a future economic shock was identified as an area requiring improvement by 66% of BNZ primary producers. The COVID-19 experience has been a firm reminder of just how quickly things can change, evidencing the need to have a financial buffer in your agribusinesses.

CPR for financial health – change, plan, resilience

Taranaki farm accounting specialist⁴⁶ Amanda Burling urges farmers to be proactive about their finances, encouraging agribusinesses to focus on CPR for the future health of their farms: change, plan, and resilience. She says it's about enabling primary producers to work with change, enabling producers to plan for it and the volatility it brings - controlling the controllable. Amanda also discusses that building resilience is about the ability to ride out volatility and understand the implications of this.

Post-COVID-19's significant disruptions: 39% of BNZ primary producers said they were working to improve their financial preparedness for disruptions. Accounting software tools offer the flexibility to run scenarios and stress test your goals against risks. You can also test out different management strategies, for example, buying in feed or adjusting stocking rates.

Experimenting with a budget scenario tool can give an idea of how best to manage a downturn, via cash reserves for example, or a comfortable debt-loading position that supports cashflow requirements. Cloud-based accounting software, such as Xero, were the dominant tools employed by BNZ producers. Tools like these provide an opportunity to collaborate effectively with accountants, bankers, and farm advisors, and enable transparent and informed conversations.

- 'Scenarios' is one of the functions the Figured accounting software offers, enabling you to establish a working budget that sets out what is expected to happen, add a couple of alternatives that can highlight where pressure may build when a 'what if' happens, and provide a view of the resulting impacts on your balance sheets.

With expectations of the agri sector high, as well as ambitions, how you manage and use your money is more important than ever. It's all about the goals, the plan, the budgets and backing yourself.



“A budget gives us a sound basis to communicate with our bank manager. It helps us evaluate the viability of different business models and decisions.”

Beef farmer, Waikato

BUDGETING FOR YOUR FARM'S FUTURE

Having a budget for your farm is a great way to understand and track the financial performance of your business. However, over a quarter of BNZ producers told us that, in 2020, they were unlikely to actively forecast or budget for the financial performance of their agribusiness each year.

We know that sometimes the financial side of things can take a back seat to the daily challenges of running your business. You may have to deal with weather extremes, fluctuating commodity prices, seasonal labour shortages, or the demands of environmental compliance. However, it's when you're dealing with issues like these, along with all your usual daily demands, that having sound financial management practices in place is so important.

Changes in costs, cashflows, or valuations can create dramatic changes within your agribusiness' financials. Having clear financial goals for your operation and a plan to achieve these goals is crucial to manage these changes. Creating some sort of a budget is the best place to start.

How to get started:


It's not uncommon for farm owners and managers at different stages in their farming lives to need some guidance on how to manage cashflows and budgets, depending on what changes arise in their business. The most important thing to remember before creating a budget is that every agribusiness will be different. Create a budget that is workable for you and feels right for your business.

To help you get started, we've answered some of the frequently asked questions we often hear:

Q. What should be included in my budget?

An agribusiness budget focuses on estimating your income and expenditure for the year ahead. Think about including things such as:

- Income from different sources (e.g. milk, produce or stock sales)
- Your farm's working expenses (e.g. power, environmental enhancements, labour costs, fuel, feed, repairs, and maintenance)
- Interest, fees and lease payments
- Loan principal repayments (within a cashflow budget)
- Planned capital expenditure (e.g. stock, vehicles, or equipment). It's also worth considering different ownership models, i.e. leasing vs buying (within a cashflow budget)
- Expected tax payments
- Your personal drawings or shareholder remuneration
- 3-5 year savings goals and ideal cash reserves (a safety net for more challenging seasons).



Make a budget that is going to work best for you. Budgets should not be designed so you spend all your time obsessing over spreadsheets. Rather, they are a tool to ensure you understand the most efficient ways to spend your money and time when out on the farm.

There are plenty of online budgeting tools to choose from that make creating and updating your budget a lot easier than doing it yourself. BNZ has partnered with Figured to offer an online farm budgeting tool to our customers at discounted rates as an option to use when starting this process – available on our agribusiness website: www.bnz.co.nz/agribusiness

Q. How will a budget benefit my business?

By creating a farm budget, you're generating an accurate, real-world view of how you expect your year will pan out. Of course, things can and will change, but a budget gives you some key markers to hit over the next 12 months, as well as a benchmark to measure your farm's financial progress against. That way, you will get an early heads-up if things are not going according to plan, and you can stop, take stock and decide what changes, if any, you might need to make. It will also help inform where you are best to invest your capital over the short and long term.

Q. Once I've created a budget, what then?

- 1. Compare:**
Having a budget means you can sit down at the end of each quarter to check your actual performance against what you planned. This can help you identify shortfalls, work out what's causing them, and address them before they become larger problems. Once the year is up, you can analyse what worked well, where your budget was on track and where it wasn't, and what needs to be improved in your budget for next year.
- 2. Prepare:**
Having a budget won't stop the bad things from happening, but it will provide a degree of financial preparedness and resilience to help you deal with unexpected situations.
- 3. Benchmark:**
Budgeting enables you to benchmark and compare your performance against industry averages, see where you have room for improvement, and test how resilient your business might be to a downturn.
- 4. Position:**
A budget isn't just about being better equipped to raise finance or better manage debt. It's about the bigger picture and positioning your business for how you want the future to look: having some clear financial goals for your operation, and a plan for achieving them.
- 5. Scenarios:**
Analysing various scenarios within your budget (such as a decreased milk pay-out or increased costs) can help you to analyse where the risks are, and where your business is at its most profitable.

Q. Are there tools or groups that can help me understand how to use a financial budget?

Many industry groups, like DairyNZ and Beef + Lamb NZ, offer sector specific budgeting tools, workshops and practical information about how a budget can work to enhance your agribusiness' financial performance. Having a look at these resources can help you evolve your business thinking and get to know how others are managing their financials too. You can also turn to your accountant or farm consultant, or your BNZ Agribusiness Partner to help you get started or seek feedback.

Q. Does a financial budget help with conversations with my bank?

Yes. Having a financial plan for your farm helps when you're talking finance with your bank, acting as a tool to strengthen your banking relationships. Not only does it demonstrate you have a good understanding of your business' finances, it gives the bank a clear idea of your financial needs and helps them work out how to best support you. Importantly, it also helps the bank assess what the sustainable level of debt is that can be supported by your farm cashflow.

Your farm budget can also put the spotlight on debt levels, which again helps when you're talking to the bank.

Having greater knowledge of your debt situation allows BNZ Agribusiness Partners to better structure finance in ways that help you to minimise your interest and fee costs wherever possible.

For more information, or if you would like to have a chat about the above, get in touch with your nearest BNZ branch or contact your BNZ Agribusiness Partner.

Q+A

LEO AND JOHN DONKERS

Dairy Farmers



Brothers, Leo & John Donkers established and operate the joint venture dairy farming business, The Camden Group. They spoke to us about how they approach all things financial, when it comes to the performance of their Canterbury based business.

(BNZ Agribusiness Partner: Cam Blain)

We talked with Leo & John about some of the key factors they believe are important to the success of the Camden Group.

John attributes the success and longevity of the Camden business in large part to good governance, “Good governance, is what oils the wheels.” Leo agrees, explaining that it all starts with their Board and an alignment with the vision and direction of The Camden Group. “Ultimately, our budget is our guidebook and guides our daily business decision making. It’s this that enables us to achieve our goals”, shares John.

“Creating a positive, sustainable environment is our focus, this is sustainability in all regards – social, environmental and economic. Fundamentally though, we must be profitable to be able to deliver on our strategy”, John says.

The Donkers brothers discussed the opportunities they see to improve financial wellbeing in the primary sector.

John acknowledges that the sector is great at collaborating, “We’re just not great at sharing financial information. Financial management is not about processing the accounts at the end of the month, it is about considering the financial aspect of decisions made on-farm every day. What does it cost? Does it improve the system? Does it save me time? Will it reduce the risks to my business? Will it make money?

Drilling into the numbers is critical”, says John, “Milk solids production in dairy is a key driver for profitability, but it is only one part of the story. Cost of production is also a key driver, but is not generally managed as well as production.” Leo believes “A cultural shift is needed, where the dairy industry focuses more on cost and this requires knowing what’s behind the numbers and doing the little things really well.” “It’s about farmers getting their hands in the gearbox and having an intimate knowledge of their cost structure”, says John.

Reflecting on the future of agribusiness, Leo & John shared their thoughts on how they are preparing for this.

John believes it’s essential that the Group maintains profitability to better weather economic downturns and be able to afford to invest in the business to achieve environmental targets and improve the efficiency of the business. John elaborates that FEPs are seen by many farmers as a compliance requirement, when in fact they are a key tool in assisting a farmer to better plan the future of their business – not just from an environmental perspective but also operationally and financially. “It’s not only a plan that future-proofs your farm for the first set of environmental goals, but also the next set. Change is constant and long-term profitability also needs to be a constant for farming businesses to thrive.”

Q+A

RIKKI JAMES

General Manager, Operations at Cameron Farms,



Rikki James is General Manager, Operations at Cameron Farms, a mixed operation encompassing sheep, beef, dairy, kiwifruit, avocados and forestry. He discussed with us his viewpoint on financial performance when it comes to the management of the family's business located in the Bay of Plenty. (BNZ Agribusiness Partner: David Proudfoot)

Rikki talked about the absolute privilege he feels to be living and working on the land with four generations and his passion for farming in New Zealand.

Creating a high-quality, healthy, sustainable product for consumers drives Rikki to produce food for the primary sector. "It's about ensuring you are constantly adding value and adapting, to sustain business prosperity over the years for future generations to follow."

Rikki told us about some of the key factors he believes are important to the financial wellbeing of his business.

Rikki highlights the appreciation of having a diverse mix of farming systems within their operation, enabling them to spread their risk. "Farming is by

no means an easy industry, actively budgeting and forecasting financial performance helps to manage uncertainty, and provides you with the ability to make informed timely decisions to ensure your business is sustainable and resilient into the future." Rikki talks about the utilisation of cloud-based accounting software Xero and Figured, providing the ability to track each orchard, farm, and business unit to accurately understand how each is performing. After setting a budget, actual financial performance and revised forecasts are updated and reported monthly. In Rikki's opinion, the combination of utilising good software and good financial management practices enables them to make timely, well-informed decisions about both operating and capital expenditure.

Rikki says "It provides the ability to monitor group cashflow implications from both an operational and capital expenditure perspective". Rikki emphasises the importance of having a great team of professionals surrounding the business, like his accountant and lawyer. "These are the people that the [Cameron Farms] Group trust and respect in the business community. They offer advice and guidance in our decision-making to help us on our journey in achieving our goals."

Here's what Rikki had to say about one of the key factors he believes will be fundamental to the future success of farming in New Zealand.

"It is fundamental we continue to innovate, to be more productive whilst reducing our carbon footprint, and maintaining premium quality, safe food for the consumers, grown in an ethical way."





COVID-19'S INFLUENCE ON MARKETS

Doug Steel, BNZ Senior Economist

You may recognise Doug from the BNZ Rural Wrap, a collection of articles outlining the economic outlook and his predictions for the future of the primary sector. Below he discusses his views on the impact of COVID-19 on the New Zealand primary sector:

While eating Christmas dinner in 2019, no one had the faintest idea what was about to unfold. The speed and enormity of the worldwide hit from COVID-19 to society and the economy is difficult to overstate. It wouldn't be much of a stretch to suggest it has affected everyone in some way.

For New Zealand – and the primary sector – selling its goods and services into world markets, all this has profound implications. International tourism has been hit especially hard with closed borders halting revenue. As a result, the agri sector's export receipts have become even more important to the country than before.

This is not to say that the primary sector is immune from it all – far from it. At home there have been enormous challenges to confront from lockdowns, all this while much of the sector faced into a severe drought. Meanwhile, markets saw widespread closure of food service businesses causing dramatic changes in food consumption patterns. This upheaval is likely to accelerate many trends already in place before the virus, including the move towards digital engagement, with many of these changes likely to prove permanent.

Looking ahead, there is much uncertainty given the complex nature of the shock with varying influences across demand, supply, trade channels, supply chains and logistics. Exporters will need to remain agile. The sudden stop in economic activity is expected to bring a stark lift in world unemployment, and a negative impact for households' purchasing power, limiting demand ahead. Food product prices may well hold up better than most. It's a cliché, but people have to eat. Food is one of the ultimate necessities.

A floating New Zealand dollar offers some solace for primary producers. At least during the initial few months of the virus outbreak, it has proven again to be a useful shock absorber taking the edge off falling world prices. While it is never easy to forecast, it would be reasonable to expect that if international prices were to fall much more than expected, the New Zealand dollar would likely push lower to cushion the blow to domestic prices. Meanwhile, many monetary authorities across the globe, including in New Zealand, have pledged to keep interest rates low for an extended period to help economies recover from the massive shock. This is helpful to the primary sector.

There is also a growing risk of more trade protectionism around the world if countries turn inward-looking as a result of recent disruptions. Part of this may be driven by food insecurity. Or deteriorating economic conditions may inflame previous tensions. In any case, New Zealand needs to do all it can to ensure markets remain open and accessible so commerce can be done. So, it looks like being a rather challenging, uncertain, and risky global macroeconomic environment for New Zealand's primary sector over coming years. But there is hope.

Importantly, New Zealand's brand has likely been enhanced by international coverage of our initial response to the virus. Being a safe place can only help reinforce the safety of our produce offshore. Even New Zealanders' unified response to the virus and doing what was required, instils trust. High-quality, safe produce, from people you can trust, will go a long way to commanding premiums in international markets and push against the expected macroeconomic headwinds.

Usually recessions see expenditure on luxury goods suffer more than staples. We expect this time to be no different. But we do see some scope for food to forge a different path under current conditions. With this recession being driven by a health scare, it is quite conceivable that we see the prior trend of movement toward more nutritious foods accelerate exceptionally for those foods with immunity supporting properties. So, the usual response across the food complex, when incomes are compromised, may be diminished somewhat and demand for high-quality, nutritious, and safe food may do better than it otherwise might have.

None of this means agriculture will come through the world's ills unscathed but we do think this places agriculture to be one of the better performing sectors through this crisis. And the country will be better off for it.

If there is a silver lining to any of this, it could be that the most challenging of times often generate the best ideas – great ideas to do things in better ways. In New Zealand, we know it as Kiwi ingenuity. It comes from necessity. It is all about doing the best with the resources and conditions that we face. We should never underestimate the power of people to adapt. When the dust has settled, we may see productivity lift and with it, better medium-term prospects.

NOTES:

When considering what notes you might like to jot down, we invite you to reflect on the following financial wellbeing aspects:

- Who could help you better prepare for the ‘what if’ scenarios?
- How could you strengthen your understanding of your current financial position?
- What are the key attributes to the financial sustainability of your agribusiness?





PRE-COVID-19 SURVEY

Understanding how New Zealand primary producers feel about their agribusiness' natural resources and the actions they are taking to prepare their agribusiness for a changing environmental management system.

There is no standout environmental matter that farmers believe will have a large impact on their agribusiness, although only a minority believe each factor will have no impact. There is a relatively even split between people agreeing each factor will have little, moderate or high impact now and in the next five years.

- The horticultural industry (49%) were more concerned about the impacts of limits / regulations on their ability to source water for the current season.
- The beef and sheep cattle industries believe management of waterways on or through their property will have a large impact on their agribusiness in the current season (35%) and in the next five years (43%).

Thinking about your agribusiness in the current season, please tell us how much of an impact you think the following environmental matters will have on your agribusiness

Limits / regulations on your ability to source water



Limits on land use activities (e.g. limits on activity change)



Biosecurity preservation (e.g. pests and disease control)



Management of waterways on or through your property



Requirements to limit or plan for nutrient inputs



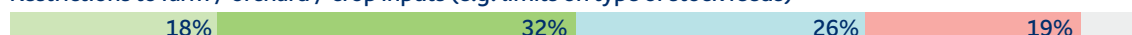
Changing consumer preferences regarding your sectors 'social licence to operate'



Greenhouse gas emission restrictions

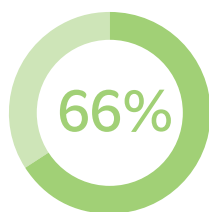
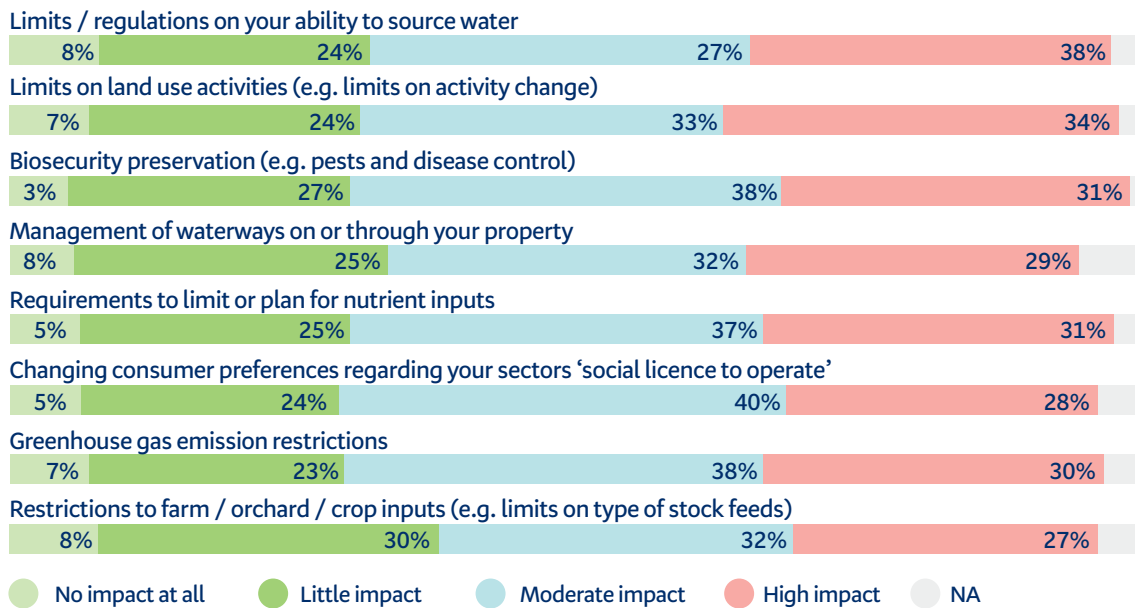


Restrictions to farm / orchard / crop inputs (e.g. limits on type of stock feeds)



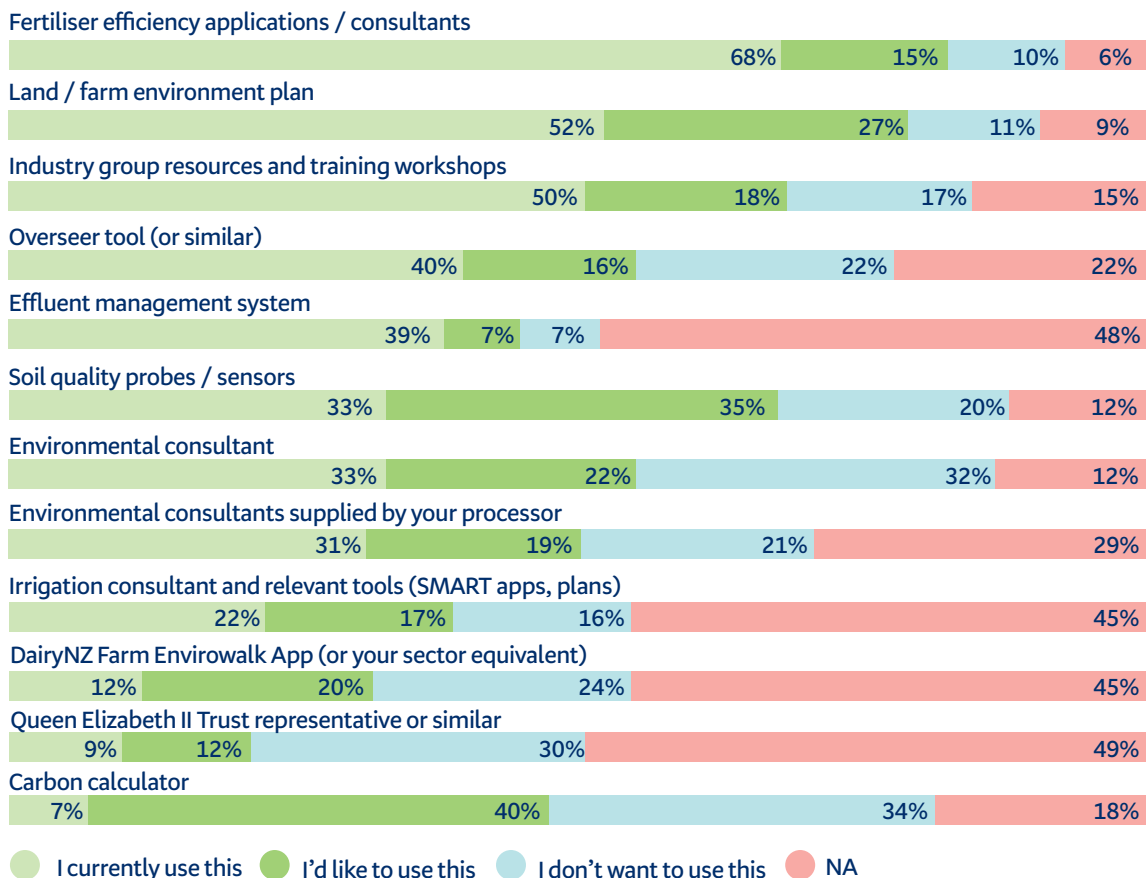
● No impact at all
 ● Little impact
 ● Moderate impact
 ● High impact
 ● NA

Thinking about your agribusiness in five years' time, please tell us how much of an impact you think the following environmental matters will have on your agribusiness

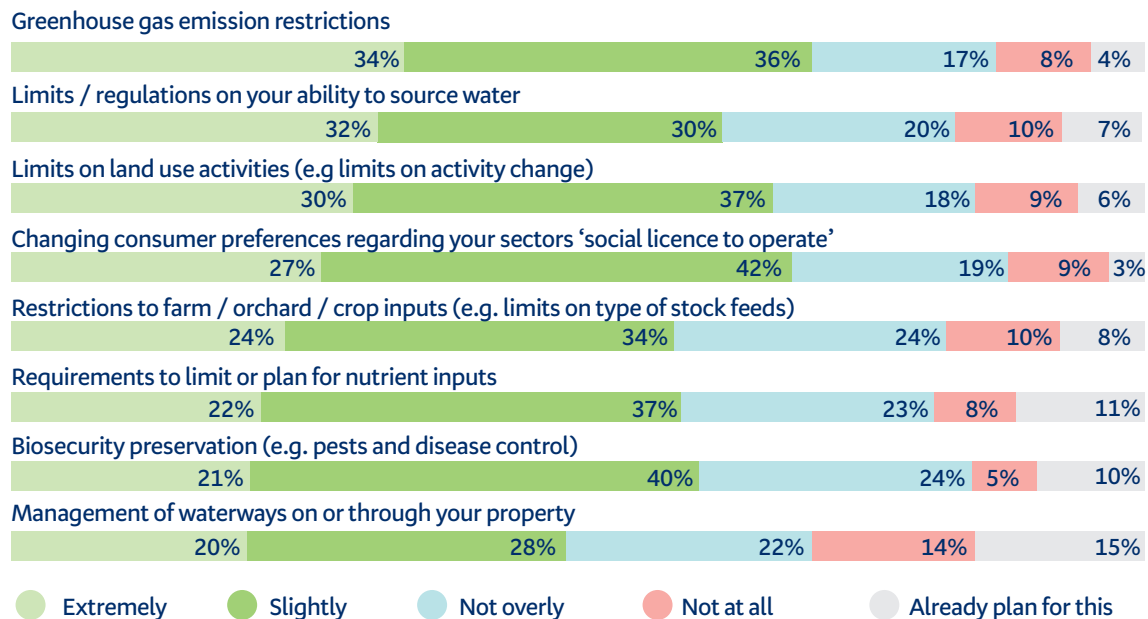


Two thirds of primary producers agree with the statement “We (New Zealand farmers) embrace the Māori concept of Taiao, a deep relationship of respect and reciprocity with the natural world. The health of the climate, land, water and living systems comes first. And when nature thrives so do our families, communities and businesses.”

Which of the following products, tools and services do you currently use, or consider using within your agribusiness to help plan and mitigate the impact of those environmental matters?



Considering your agribusiness in five years' time, how challenging do you think it will be to plan for and mitigate / manage each of the following environmental matters within your agribusiness?

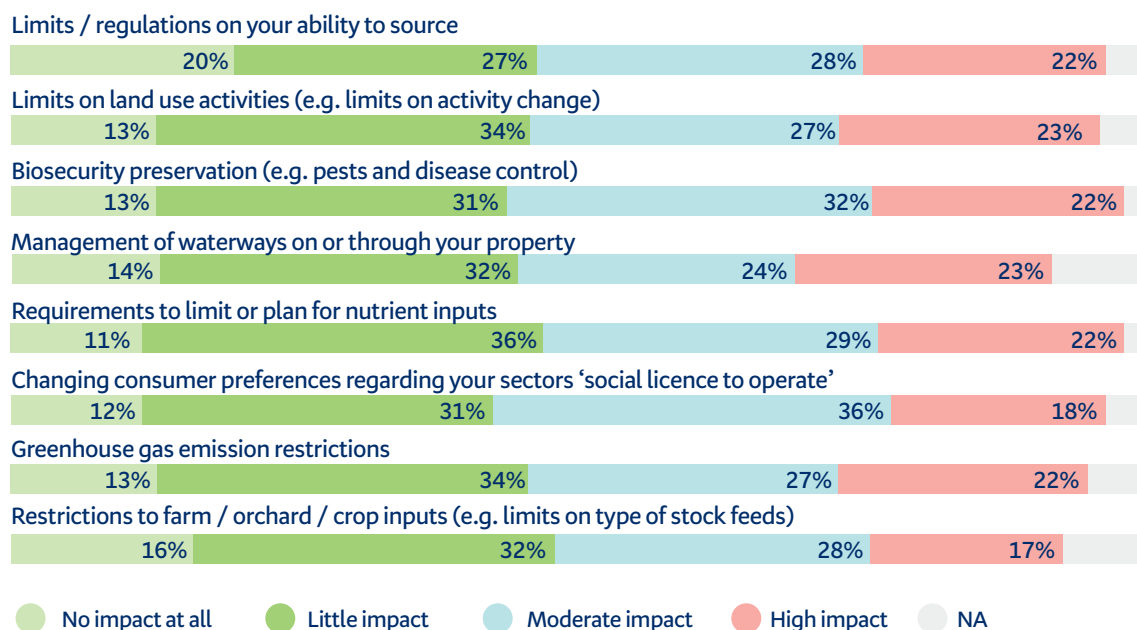


COVID-19 SURVEY

Understanding the impact of COVID-19 on New Zealand primary producers

New Zealand primary producers are slightly less likely now than pre-COVID-19 to think the following environmental matters will have a high impact on their agribusiness.

Considering the potential impact of COVID-19, please tell us how much of an impact you think the following environmental matters will have on your agribusiness over the next five years.



Could you describe what sustainability means to you in your agribusiness?

“The ability to continue to produce a great product without depleting the natural resources of the land on which it is grown.”
Cut-flower grower, Wellington region

“Sustainability means carbon neutral (no ‘new/additional’ methane, offsetting NO₂ and CO₂ emissions through trees and soil) nutrient loss that the water ways can sustain and sustainable water use (no depletion of aquifers etc). It also probably means the maintenance and improvement of insects and wildlife and the growth of native species of birds.”
Dairy farmer, Wellington

“The ability to be profitable in business at the same time as improving the land that we farm.”
Dairy farm, Bay of Plenty

“We need to collaborate with the full supply chain partners and also others with values like we have in regards to sustainability and the environment.”
Dairy farmer, Waikato

“Sustainability in our agribusiness means:
1. Leaving our property and waterways in a position that it can continue to be farmed beyond our future
2. Having financial sustainability for both us and our employees.”
Vegetable grower, Northland

“I disagree with the use of this word [sustainability]. One can sustain a degrading system - Regeneration would be a far greater goal.”
Grain grower, Canterbury

“Healthy soils, good water management, a stable climate, efficient pest and disease control that doesn’t create really adverse effects further down the line. Sustainability [to me] also means being able to operate profitably within these ‘healthy’ parameters. It also means the physical and mental well-being of the people involved in the industry - sustainability covers every aspect of business.”
Dairy farmer, Wellington

WHAT WAS ON OUR MIND PRE-COVID-19?

The concept of sustainability strikes a chord with many in the primary sector. How do we define sustainability and how do we know if we are achieving it? We look back at the key moves made by government, primary producers and the primary sector since late 2018, toward the collective goal of a more enriched primary sector:

November 2018:

We asked our producers in the 2018 edition of Shift Happens “Is your Agribusiness ready for the changes, and if not, what are your concerns, regarding how environmental regulations will impact on the way you do business, now and in the future?”

Those concerns revealed four key trends which were top of mind for BNZ producers:

- **Resource management** – Changes to nutrient management plans, and on-farm inputs were key issues with producers unclear about how changing regional council regulations and processor guidelines might impact their agribusiness. There was disparity between the actions producers planned to take to protect their natural resources, and the high level of concern felt.
- **Agricultural water use** – Regionally, there were large variances between concern levels of producers regarding their ability to source and use water, with drought prone regions such as Canterbury and Northland most concerned.
- **Biosecurity** – At the time of the survey, the initial effects of MycoPlasma Bovis (“M.bovis”) were being felt throughout the livestock sector. Brown marmorated stink bug threats to the horticulture and viticulture sectors were also emerging, so biosecurity was top of mind for producers.
- **GHG Emissions** – In 2018, GHG emissions registered low on the concern radar for producers. The public discussion regarding emissions was secondary to resource management and biosecurity pressures. Producers saw this as a regulation more likely to impact them in five years’ time.

GOVERNMENT POLICY ACTIONS

PRIMARY SECTION ACTIONS

LATE
2018

EARLY
2019

- DairyNZ and NZME launch ‘The Vision is Clear’ to raise awareness throughout New Zealand that farmers are working towards improving waterways and to inspire Kiwis to get involved.

- The New Zealand Government introduces the Climate Change Response (Zero Carbon) Amendment Bill, including a target for biogenic methane reductions, produced by livestock and landfill waste to reduce by 10% by 2030 and between 24-47% by 2050 (relative to 2017 levels). Currently, the pastoral agricultural sector makes up around 48% of total New Zealand GHG emissions.⁴⁷
- The first Government ‘Wellbeing Budget’ was released – a reframing of the traditional financial GDP-focused budget to one that incorporated a broader suite of metrics relating to human, social, physical, financial and human capital within the budget, in line with Treasury’s Living Standards Framework.⁴⁸ This included a direction to spend on freshwater and the Emissions Trading Scheme (ETS), the One Billion Trees Programme and on-farm tools and advice to support a low-emissions transition.

- OverseerFM is officially launched, featuring more collaborative farm modelling.
- KPMG Agribusiness agenda is released,⁵⁴ naming biosecurity as the #1 priority for the past 10 years running.
- The primary sector climate change commitment He Waka Eke Noa is released.⁵⁵ A joint commitment from HortNZ, DairyNZ, Beef + Lamb NZ, MIA and FAR, amongst others, outlining collective commitments in response to challenges posed by climate change, whilst maintaining food production.
- Fonterra declared that they will no longer send waste to landfills, and will be using 100% recyclable, reusable and compostable packaging.
- New Zealand Agricultural GHG Research Centre (NZAGRC) establish a new website, providing emissions expertise, aimed to equip farmers with the knowledge they need to assess and manage emissions: www.farmingmatters.co.nz

47. <https://www.mfe.govt.nz/climate-change/zero-carbon-amendment-act> 48. <https://treasury.govt.nz/information-and-services/nz-economy/higher-living-standards/our-living-standards-framework> 49. <https://www.teururakau.govt.nz/funding-and-programmes/forestry/one-billion-trees-programme/one-billion-tree-fund/> 50. <https://www.mpi.govt.nz/news-and-resources/consultations/proposed-national-policy-statement-for-highly-productive-land/> 51. <https://www.mfe.govt.nz/publications/fresh-water/action-healthy-waterways-discussion-document-national-direction-our> 52. <https://www.mfe.govt.nz/climate-change/new-zealand-emissions-trading-scheme/about-nz-ets> 53. <https://www.mfe.govt.nz/publications/biodiversity/draft-national-policy-statement-indigenous-biodiversity> 54. <https://home.kpmg/nz/en/home/insights/2019/06/agribusiness-agenda-2019.html> 55. <https://www.mfe.govt.nz/climate-change/joint-action-plan-reducing-primary-sector-emissions>

LATE 2019

- A funding boost was provided to the One Billion Trees Programme, to research effective native seedling propagation techniques, following concerns about the use of exotic pines, rather than natives.⁴⁹
- A National Policy Statement for highly productive soils was released for public consultation⁵⁰ to look at protecting and managing versatile soils in the face of urban growth.
- The Ministry for the Environment (MfE) released 'Action for healthy waterways: A discussion document on national direction for our essential freshwater'⁵¹ outlining steps to restore national freshwater to a healthy state via new standards for freshwater management.
- MfE released a discussion document on climate-related financial disclosures (TCFD), aimed at engaging business leaders in a conversation about reporting on financial risks and opportunities related to climate change.
- The New Zealand Government passed the Climate Change Response (Zero Carbon) Amendment Bill into law, creating strategies to reduce all GHG emissions, including on-farm GHG emissions.
- The New Zealand Government introduced the Climate Change Response (Emissions Trading Reform) Amendment Bill, focussed on the ETS.⁵² The focus is on adjusting tools to reduce all GHG emissions, including capping emissions, changing rules for forestry and the inclusion of livestock farming.
- A National Policy Statement for Indigenous Biodiversity⁵³ (NPSIB) was released for public consultation. It covers policies to identify, protect, manage and restore it.

- Synlait Milk entered into an Environmental Social Governance (ESG) sustainability-linked loan,⁵⁶ the first loan in New Zealand which provides financial incentives to encourage the borrower to improve performance against a set of independently assessed ESG criteria.
- A group of 50 New Zealand companies (including Fonterra, Miraka and Auckland Airport) sign the first biosecurity business pledge, agreeing a more proactive approach to biosecurity.⁵⁷
- Lobby group '50 Shades of Green' lead a protest march to Parliament to ask for a 'fair go' on rural issues, including the Zero Carbon Act, water regulations, mental health and changes in land use.
- The New Zealand Round Table for Sustainable Beef was launched, committing to ensuring the beef sector is economically, socially and environmentally sound.⁵⁸
- The united primary sector vision was released by the Primary Sector Council; 'Fit for a better world' focusses on how the primary sector can lift its reputation as climate friendly, sustainable and ethical producers.⁵⁹
- The 'Thriving Southland Change and Innovation Project'⁶⁰ was launched as the first region-wide initiative, supporting a lift in environmental sustainability and unlocking more value from producers land and hard work.

EARLY 2020

- The 2020 Government budget included \$500 million in initiatives to support and place people in jobs in the primary sector, and a further \$1.1 billion for environmental jobs.
- Details were released in May 2020 on the direction and funding for the Action for healthy waterways: National direction for freshwater, including \$700 million of funding to set higher health standards for swimming spots, embed controls on-farming practices such as winter grazing, feedlots, nitrogen fertiliser inputs and support regional council planning and a national farm environment plan rollout.
- A long-awaited national standard for organic production was announced, which sets mandatory requirements for producers to achieve organic certification. The 'Organic Products Bill'⁶¹ was open for public submissions until 28 May 2020.
- 'Whenua Ora Tangata Ora' initiative was launched. A joint partnership between FOMA Innovation: Soil Connection, biological farming, and soil health experts; and Toha, an environmental impact platform that recently launched 'Calm The Farm.' It aims to support farmers to reduce their environmental and climate impacts while improving their financial resilience, through regenerative farming systems.

56. <https://www.synlait.com/news/synlait-secures-new-zealands-first-esg-linked-loan/> 57. <https://www.beehive.govt.nz/release/businesses-pledge-protect-new-zealand> 58. <https://www.scoop.co.nz/stories/BU1911/S00277/new-zealand-roundtable-for-sustainable-beef-launched.html> 59. <https://fitforabetter-world.org.nz/> 60. <https://thrivingsouthland.co.nz/> 61. <https://www.beehive.govt.nz/release/new-legislation-boost-organics> 62. <https://www.scoop.co.nz/stories/BU2003/S00090/whenua-ora-tangata-ora-partnership-leads-the-way-forward-in-regenerative-agriculture.html>

LOOKING LONG TERM AFTER LOCKDOWN

The Fast Five

Feedback from our 2020 surveys indicates that:

- 64% of primary producers agree that climate, land and water are highly relevant to the success of our products in market.
- 62% agree good environmental practices are highly relevant to net profit and 60% agree it is highly relevant to their ability to operate.
- Primary producers are concerned about the growing costs of compliance with new regulatory regimes. However, they are also making the most of advice and information from industry good groups and adopting new farm management techniques to enrich their future.
- Kaitiakitanga within mainstream farming practices; the principles of guardianship and protection, and regenerative agriculture, are gaining momentum.
- ESG factors, long-term planning and more robust environmental reporting will be pivotal to the success of the primary sector going forward.

2019 saw increased levels of environmental ambition from both government and industry. Policies emerged for the management of water quality, agriculture to be included within the Emissions Trading Scheme, and frameworks were developed to preserve and protect valuable productive land.⁶³

For some, these changes could have spurred action and accountability within your agribusiness, or they could have increased the levels of trepidation you may feel about adapting to changing environmental requirements.

Overall, BNZ primary producers are adapting. The impacts to changes in farming systems as a result of regulations for freshwater management and GHG emissions were felt by more than half of those surveyed in early 2020. Horticulture producers felt most strongly about the impacts of limits to source water (49%). The red meat sector was the most interested in how management of their waterways could be impacted (35%), rising to 43% in five years as apprehension surrounding costs to potentially fence waterways grew during late 2019 and early 2020.

Prior to this most recent round of primary sector regulatory change, half of BNZ producers had a farm or land environment plan, and a third had an environmental consultant and were using tools like Overseer and soil probes to support the knowledge of their farming systems. Given the May 2020 announcements on the Action for Freshwater,⁶⁴ these statistics bode well for the transition to meet many of the goals set out for the primary sector.

Producers understand the need for better on-farm data to support traceability and provenance and there is a clear connection made by consumers between improved environmental practices and the demand for our primary produce.

Sustainability of food production was the fifth most important attribute producers saw the market demanding in early 2020, which lifted to the second most important attribute when they considered that marketplace in five years. Half of BNZ primary producers in early 2020 were using industry group resources or attending training workshops to better understand their environment and creating plans to ensure they can manage their land to the best of its ability.

When COVID-19 hit the New Zealand economy, there were murmurs that perhaps this movement toward meeting climate goals may slow. When we re-surveyed producers about their environmental management, post-COVID-19, some thought resting on laurels would become enough, because of our role in feeding five million. Primary producers are less likely now, than they were pre-COVID-19, to believe that land use restrictions, water limitations, nutrient input plans or GHG emissions would have a high impact on their agribusiness over the next five years. Some producers also thought consumers would change their view of sustainability as an important product attribute. They said sustainability would fall down the list of qualities demanded by consumers, behind nutrition and health, integrity, price, quality and provenance.

However, the idea that traditionally innovative, bold New Zealand primary producers would remain stagnant in an ever-evolving world, proved inaccurate. Our social licence to operate is being tested, agritech, science and advances in breeding are developing ways forward, and mindsets have already evolved to strive for New Zealand's place as a leader in protecting and enriching our agricultural land for the better.

While there was a minority who thought it might, the importance of sustainability has not waned, with over half of the BNZ producers in our post-COVID-19 survey agreeing environmental matters are going to have a high impact on the primary sectors social licence to operate. This told us that producers were continuing to face into the challenge; the challenge to be the best, tackling the challenge of remaining a leader in the production of food and fibre, through innovation and adaptation, rather than extensive land use.

Too much work has already been done, so rather than take a breather, producers are planning to take a deep breath and push on.

Climate, land and water

Two-thirds of BNZ primary producers agreed with the vision statement established by the Primary Sector Council, and the concepts of Taiao, a deep relationship of respect and reciprocity with the natural world.

We're seeing the strength of Kaitiakitanga (the principles of guardianship and protection) evolving within mainstream farming practices. When we spoke in-depth with primary producers to create the Q&As within this report, without fail they spoke of environmental guardianship for their land.

Primary producers are long-term thinkers, but it is a seasonal business. Creating a five-year plan for your agribusiness can be a challenge, let alone one that spans centuries. But 100+ year plans, designed to protect the long-term health and wellbeing of the natural resources that sustain us, are emerging among primary sector groups.

The philosophy is similar to that underpinning integrated reporting, where social capital (people and culture), natural capital (planet), and economic capital (profit) are reported on, as progression toward company goals is made.

In 2018, Nelson based Māori organisation Wakatū revealed their intergenerational vision, or Te Pae Tawhiti, seeing them through to 2512. Auckland's Cornwall Park farm has a 100-year vision for the land, including how its ecology will evolve over the century. Large primary sector processing companies, like Sanford Fisheries⁶⁵ Ravensdown Fertiliser⁶⁶ and Synlait Milk⁶⁷ now publish integrated annual reports that track their progress against social and sustainability targets, as well as financial targets.

James Robertson, current New Zealand Young Farmer of the year believes farmers need to consider longer-term horizons more than they have previously for their farming business decisions.

"Imagine if every business in the primary industry made decisions evaluating the benefit on a 100-year time horizon. Many family farms that have passed through the generations, make decisions with a longer-term perspective, leading to intergenerational success. It's natural to make investment decisions on the return generated tomorrow, rather than the longer-term payback period. Debt servicing and cashflow often drive the shorter-term time horizon when making these decisions, but ideally these would be balanced with a view of long-term impact."

Nearly all primary producers have noticed either a slight (39%) or a large (52%) increase in costs related to environmental matters over the last five years. Corporate sized agribusinesses were more likely to be planning for reductions in GHG emissions, while highly leveraged and medium sized businesses were more likely to be planning a reduction in the intensity of their farming systems.

This could reflect the costs and challenges associated with environmental regulation, or it could be a sign that producers are already striving for best practice, not just compliance, in their agribusiness.

Mitigating risks

For some time, the financial sector has been aware of the risks associated with non-compliance and poor management of Environmental, Social, and Governance (ESG) factors in businesses. For instance, it is well known that a non-compliant effluent pond creates challenges for the producer, the bank and the policy maker. BNZ Head of Sustainable Finance, Louise Tong, says sustainability and ESG related factors are now coming more definitively into investment decisions.

The Aotearoa Circle, of which BNZ is a member, recently received a legal opinion that company directors have an obligation to assess and manage climate risk as they would any other financial risk. The Aotearoa Circle is a unique mix of the public and private sector, committed to sustainable prosperity and reversing the decline of our natural resources.

65. <https://www.sanford.co.nz/assets/announcements/SAN090-AR2019-v7a.pdf> 66. <https://integratedreporting.ravensdown.co.nz/#challenges-1>
67. <https://www.synlait.com/wp-content/uploads/2019/09/Synlait-Milk-Annual-Report-2019.pdf>

The Circle's Sustainable Finance Forum (SFF) recognises the critical role of finance in achieving a sustainable economy.⁶⁸ The SFF's interim report highlights three priorities needed to redirect capital to transition to a sustainable economy: greater leadership, improving the availability and quality of environmental data, and pricing of natural and social capital.

"Sustainable finance is about allocating capital in a way that drives a positive social and environmental impact. Being able to support the primary sector on its journey to better environmental outcomes through sustainable finance is an exciting concept for BNZ to explore with its customers", says Louise.

Since 2018, our BNZ Natural Capital and Agribusiness team has been providing practical support and professional guidance to help New Zealand primary producers as they strive to balance economic and environmental performance, and aiming to excel at both.

We understand that natural resources, like water, soil, climate, biodiversity, and ecology, are the fundamentals of food production. We also know that our New Zealand agribusinesses are highly attuned to the harnessing of these natural resources to create value.

Like our primary producers, we know natural capital is as integral to their success as financial and human capital. A business can't run well with depleted financial capital, and the same applies to natural capital. Both impact the long-term viability of an agribusiness and both involve risks that need managing.

BNZ wants to ensure we are supporting conversations with primary producers about their natural resource management. This includes understanding the risks and the opportunities, to ensure producers are forecasting and preparing for the one-off and ongoing costs and benefits that come with further environmental management. How primary producers manage their natural resources – the land, the climate, the water – is unique to each agribusiness.

Working alone, but not working it out alone

If the pandemic has taught us anything, it's to control what you can. For producers, control starts inside the farm gate, and doing what you know will make a difference. FEPs are one tool that can effectively give line of sight of future costs and risks associated with an agribusiness and help schedule the actions needed to achieve compliance. They're also another way of capturing the valuable data the primary sector needs in order to prove the management of environmental resources over time.

There is a vast array of tools and services available to the agribusiness sector to help make sense of environmental needs. Producers might often work largely alone, but collectively New Zealand producers are anything but alone when it comes to support and advice.

Industry good groups, such as DairyNZ, Beef + Lamb NZ and HortNZ, are all enabling producers to take environmental management into their own hands by offering workshops, tools and guidance. For instance, through participation in Good Agricultural Practice (GAP) industry assurance programmes, the horticulture industry has approximately 90% of fresh fruit and vegetable production under audited FEPs. FEPs will now be compulsory by 2025 under the National Direction for Freshwater.⁶⁹ Processors are also playing their part, like Fonterra, who are supplying FEPs for free to their shareholders.

Managing emissions is another area where a plan helps bring a problem under control. Through the joint primary sector agreement, He waka eke noa, the agricultural sector has committed to delivering a system for estimating and benchmarking farm level GHG and supporting the rollout of FEPs, likely covering emissions reductions, offsets and adaptation to all agribusinesses by 2025. Primary producers can expect to see guidance on how to measure and manage GHG emissions through farm planning by 1 January 2021.

In the meantime, tools like Overseer can help to calculate your on-farm emissions profile, and DairyNZ have launched a programme called StepChange to help with on-farm emissions and efficiencies. StepChange⁷⁰ is a five-year programme that aims to help producers increase profit and reduce environmental footprint through an integrated approach. This considers profit, water quality and GHG emissions as a package. "It's important we stop looking at these things in isolation and begin to find solutions that serve all three goals together", says Dana Carver, Wellbeing specialist at DairyNZ.

"StepChange is about getting ahead of the game", Dana says. "It's our response to customer needs, not to regulation. We want to ensure dairy farmers are both financially and environmentally sustainable – so we can protect the future and preserve our position as the most sustainable dairy farmers in the world."

Now is also a good time to plan for building more drought resilience into farming systems, with more efficient water management and storage. There is no one-size-fits-all solution, because water use will vary by sector, geography and farm management systems and, increasingly, water allocation regimes. However, there are many theoretical and practical tools to guide such decisions, and best practice guidelines offer a sound basis for adaptive management. Look to your industry sector for advice; DairyNZ, for example, have a wealth of advice of water use efficiency and IrrigationNZ provides advice on good farming practices and offers an e-learning centre.

Spotlight on Regenerative Agriculture

Our economy relies on 15cm of topsoil. Without it we'd have to find NZD \$46 billion. That's the revenue our primary sector earned in the year to June 2019. Soil takes hundreds to thousands of years to be produced, so it makes sense to take care of what's essentially a non-renewable resource. In response to this, interest is growing in regenerative agriculture, a conservation and rehabilitation approach to food and farming systems.

In 2020, Beef + Lamb NZ announced it was launching a significant global study into regenerative agriculture and the market potential for this approach to derive greater value for primary sector products.

Regenerative agriculture practices include no tillage, keeping soil covered by living plants and residues at all times, and an integrated grazing system. Supporters say these practices improve soil health. Deeper rooting plant species are often selected to improve the uptake of nutrients, and there is a strong emphasis on legumes to support nitrogen fixation. Emphasis is placed on grazing techniques, with many regenerative farmers finding pastures recover more quickly post grazing, erosion is reduced, farms cope better when rain is either too scarce or too abundant, and biodiversity scores are enhanced.

When the economic and environmental benefits line up, we often see farmers quick to adopt, or trial new farming systems. Soil ecologist, Dr Gwen Grelet at Manaaki Whenua – Land Care Research, is in the final year of a two-year pilot study, comparing the ecosystem performance of conventionally and regeneratively managed pastoral farms across a range of indicators, including business profitability and resilience. She is on the road to building a sound scientific understanding of what exactly is happening to the soil on farms that follow regenerative agriculture approaches.

“Regenerative practices make farming fun... and profitable.”

Dairy farmer, Waikato

Take one hectare, try it

One such farmer with abundant knowledge of regenerative farming is Peter Barrett, who currently runs Linnburn Station in Central Otago, a large sheep and beef property, which has been in his family since 1944. When he took over in 2012, following a successful career in finance, Peter took a step back and analysed the business like he would any other investment.

“We realised we had not maintained our asset and had to play catch-up. If we used the conventional model to develop the land we would be broke in a few years. We had to find an alternative approach that enabled us to do more for the same money. Embracing regenerative systems provided the solution, allowing us to do more with our land for the same dollar spend. In other businesses, it has always been about differentiating your business from your neighbour, but in Ag there's this mentality that the only way is how the neighbour does it.”

He says the sector has moved a lot in the past 18-months towards understanding the benefits of regenerative agriculture. “If we want to flourish, we need to understand the natural ecosystem and how it really works, learn more about soil, have diversity of species and allow the soil biology to define what it needs to be healthy and resilient.”

Peter applauds those who have decided to give it a try. His biggest advice? “Don't over think it, keep it simple. Find a small paddock, say one to five hectares, not your best or worst. Get a cover crop seed mix from someone that has experience. Put it in the ground without fertiliser, watch it grow for 140 days, without any animals, then introduce animals and watch and learn. Ensure you keep the ground protected. Ideally leave one third protected to feed the underground microbiology. When you do this, you will see life come back to the area you have planted, you will see nutrients start to cycle, allowing air and water to enter your soil and you will know you are on the right track to soil health. It's about choosing to have a mindset that embraces all forms of life and try not to control or disrupt nature. It's about choosing to replicate nature in all its diversity ensuring we do not till the soil, we keep the soil covered at all times, have diversity of plants and animals, and maintain living roots at all times”, Peter explains.

Q+A

FRASER AVERY

Bonavaree



Responsible for the operations at the family drystock farm, Bonavaree, south of Blenheim, Fraser Avery talks to us about how collaboration and seeking support from groups such as Beef + Lamb NZ, has helped him reshape his mindset toward protecting the environment at Bonavaree. (BNZ Agribusiness Partner: Cam Doig)

Fraser spoke with us about his drive to contribute to the primary sector.

Fraser says the key to determining success is whether the people in the business are happy and satisfied with what they are doing and have the ability to reflect on how far they've come. Fraser says farming is his 'raison d'être', his 'reason for being'. "It's hard to explain but being passionate about farming is how I was born and bred, it's what I do."

He elaborates that in his view, there are four key pillars to building a successful farming business:

1. Passion for what we do
2. Strive to work with others who are equally passionate about what they do
3. Understand our own strengths and weaknesses
4. Monitor how your business is performing and be able to have a 'helicopter view' of how far we've come.

Fraser has a passionate interest in creating a prosperous environment for his land, he told us about his approach to environmental resource management.

At Bonavaree, Fraser believes they have been striving for better environmental management for the past 101 years. "It's an intergenerational mindset, to

pass the land on to future generations in good heart, that's what drives us to care for the land." The farm is currently participating in a pilot New Zealand Farm Assurance Plus (NZFAP) programme run through the Red Meat Profit Partnership, a collaboration of nine industry partners including Beef + Lamb NZ. NZFAP builds on the existing national farm assurance programme and sets high standards across the environment; people and biosecurity. This involvement, he says, has helped him to understand the key areas of their business, the need to improve, to achieve a higher standard of environmental stewardship.

We talked to Fraser about his philosophy when it comes to the mindsets of producers in tackling the changes impacting their business.

Change is something that happens and is actively embraced at Bonavaree. Fraser believes it is vital to focus on the controllable. "Lately I have been asking fellow farmers, how do the All Blacks react when the IRB changes the rules in which our national game is played on the field? Do we really think that our industry can go through time without rule changes?", "Be proactive, drive your own bus. Don't wait to react and let someone else drive. It is easy for us to be busy working. Make sure we are working on the best things", reflects Fraser.



Q+A

CHAMBERLIN FAMILY

Miraka Dairy Farmers



With the family dairy farm being established ten years ago, Tony & Nic began sharemilking for Tony's parents Wayne & Andrea Chamberlin, northwest of Taupo, supplying dairy company, Miraka. The Chamberlin family spoke with us about how they approach the performance of their dairy farming business in a sustainable manner.

(BNZ Agribusiness Partner: Johanna Avery)

We spoke with the Chamberlin family about their motivation to produce high quality food.

Tony and Nic have a natural desire to go above and beyond in all aspects of life. "We are proud of what we do and how we do it. It's a good solid industry, full of great people and we get to paddle our own waka." For Wayne and Andrea, they share that success is about getting the basics right. "If we look after the land, and our animals, we believe the financial returns will follow."

Te Ara Miraka, Miraka's Farming Excellence Programme, focusses on producing first class raw milk within a framework that nurtures the environment from which it came. The family talked to us about the impact this programme has had on their business.

"We had a strong desire to demonstrate both kaitiakitanga and seeking excellence, which go hand-in-hand with each other – it's a natural fit", shares Andrea. "Kaitiaki is not just about our environmental footprint, it's sustainability in every sense; managing our environment, finances and the welfare of our animals and our people", commented Nic. "One of these functions does not succeed on its own, it's a total package."

Incorporating Te Ara Miraka standards of excellence on-farm, we talked about the ability to better prepare for external changes impacting the way they do business.

"Adopting the Te Ara Miraka excellence standards on-farm has kept us on our toes through challenging us to delve deeper and keep improving our business", says Nic. "Each year, it's likely that something new 'pops up', either a standard driven by policy, consumer or farmer feedback – this keeps us and the industry improving in order to move forward." The family believe being part of the programme helps them deal with change better and feel like they are a step ahead when it comes to understanding upcoming changes. "Decision making is now of a more proactive nature and this has equipped us for better planning" Tony says. "It truly feels like a collaborative process. We feel we are in safe hands, being guided, rather than having to be an expert on environmental planning, leading to less stress", elaborates Nic.

The family shared their thoughts on the key factors they believe will be fundamental to a successful future in farming.

"Producing a top quality product in a socially acceptable way, will continue to be a focus", shares Tony. "It's about leaving the land in a better state than when you found it", adds Wayne. The family feel transparency will increasingly be demanded by consumers, with primary producers needing to be more accountable for their actions. "With more onus on adapting to new regulations, success will be underpinned by the need to adapt, and build greater resilience into the business to weather downturns."



DANA MUIR

BNZ Natural Capital Associate Director



BNZ's natural capital team is dedicated to supporting New Zealand agribusinesses through the changing landscape of environmental management, helping prepare agribusinesses for the future. We spoke to Dana about the importance of focussing on the controllable and thinking long term when it comes to success for your farm's environment.

We asked Dana to talk us through Natural Capital and how it relates to the everyday management of an agribusiness?

Fundamentally, natural capital refers to a whole ecosystem approach, Dana says. "Looking at your natural resources for the value they bring to your agribusiness, to your family and local community. The ability for fertile, quality soils to produce food and create financial stability for your business, for clean water to enhance the land and communities that depend on it, and so forth.

Sustainability means so many things to so many people. We asked all of our agribusiness customers how to define sustainability in the 2020 Shift Happens survey and we never received the same answer twice. It's been important for us to be able to articulate the importance of considering the value your natural resources create for your agribusiness, which farmers are naturally attuned to. We're focused on starting a conversation about your individual agribusiness, and how you plan on enhancing the natural resources for the benefits it brings to the wider ecosystem that relies on your farm – the long-term success of your agribusiness.

We want to encourage thinking about your natural capital as a capital input into your farming business. In the same way your human capital (staff) or manufactured capital (inputs) can create financial and operational gains for your business in the long-term, how you manage your natural capital can have a major impact on the long-term profitability of your business."

Dana explains that not only is this essential for our farming systems, but it's also essential for the success of our primary sector products in market. "There's this

incredible opportunity for the New Zealand primary sector to keep exceeding consumer expectations with the way we farm, and we need to grab that with both hands, to show to consumers the strong sense of Kaitiakitanga primary producers have to enhance their land."

We also discussed why BNZ sees natural capital as a core element of supporting New Zealand agribusinesses, here's what she had to say:

Dana discusses that, as a bank, we are naturally attuned to risk. "We evaluate a business based on their ability to mitigate the risks associated with operating a viable business over the long-term. From an environmental perspective, going forward banks will be more inclined to bank individual agribusinesses who are able to articulate and mitigate their environmental risks, and show they can manage their operations sustainably (financially and environmentally)."

She suggests ensuring your agribusiness is aware of and planning for future environmental regulations, is key. "Tools like farm environment plans, can help to guide your progress and provide line of sight of upcoming expenses.

Over and above risks, we recognise that the primary sector has been working toward an enriched future for some time. Farming is a way of being, a way of life. For us, having a natural capital conversation with a customer, is part of a succession conversation. Leaving your land in a better condition than you inherited it and creating a plan to achieve that", she says.

A key 'take-home' message from Dana for farmers looking to understand the best way forward for their agribusiness:

Acknowledging there's a lot of uncertainty surrounding the way the primary sector will need to manage elements of our environment in future, Dana suggests bringing a long-term view toward how you approach the uncertainty, is vital. "When you see your land in fifty or one hundred years, what does it look like?"

"The enduring future of New Zealand agribusinesses depends on the decisions made today." Dana suggests that incorporating this long-term thinking into your business planning, can lead to better knowledge of what needs to be achieved in order to realise future environmental goals. "Change is a constant in this business and creating strategies and mindsets to cope with the change is important. The progressive farmer of today, will be the norm in five years' time, so instead of working to catch up, why not be the progressive farmer yourself?"



MUSTERING SUCCESS

Corina Jordan and Lee-Ann Marsh, Beef + Lamb NZ

Beef + Lamb NZ is the farmer-owned, industry organisation representing New Zealand's sheep and beef farmers. Corina Jordan, Environment Strategy Manager and Lee-Ann Marsh, Global Market Innovation Manager at Beef + Lamb NZ spoke to us about the importance of good environmental practices to create success for the primary sector.

What does the medium term hold for New Zealand's red meat sector and our sheep and beef farmers, especially when we hopefully enter a post pandemic world in the next year or two?

First, some background. Over the second half of the 2010s, prices for sheepmeat and beef have been steadily increasing in part thanks to China's continued rapid economic growth and its emerging consumer class. In particular, beef hit high prices in December 2019, thanks to this demand from China.

At the same time, there's been a rightfully increasing focus on the environmental footprints of pastoral farming in New Zealand, with 2019 seeing a whirlwind of environmental policies put forward such as the Zero Carbon Act, the Essential Freshwater proposals, Emissions Trading Scheme reform, and the National Policy State for Indigenous Biodiversity, all of which have sizable impacts on sheep and beef farming.

Alongside all of this, there's been the rise of alternative proteins whether through plant-based or GMO/lab grown alternatives to one of the most versatile of all red meat products – beef mince.

Then the pandemic arrived.

Its human and economic impacts around the world have been immense. In the short term, it's reminded New Zealanders of the importance of our primary sector both for keeping us fed, but also in terms of underpinning New Zealand's economy. It has also resulted in at least a temporary pause in the progressing of environmental policies targeting the sector and, as it has done in China, it's likely to lead to at least some sort of shift in the way consumers purchase products with more of a focus via online rather than bricks and mortar retail.

Thankfully, the pandemic is not going to last forever and the various challenges our sector was managing before this will remain and still need to be addressed post the pandemic.

This is because the consumer values that were driving these trends and issues prior to the pandemic are still going to be around, if not even more pronounced following the end of the pandemic. One of the early trends Beef + Lamb NZ has already seen from China is how consumers are reacting, with much more of a focus on natural foods, traditional cooking and as mentioned before, the shift to ordering through online channels rather than eating out or shopping at retail outlets.

We also know that the values that are driving consumers to try things like alternative proteins or demand greater scrutiny of the environmental impacts of the food they eat or products they buy, haven't just magically disappeared during the pandemic. If anything, COVID-19 will have given consumers a pause to consider these things more deeply and will only strengthen the threats and opportunities around this for the sector in the future.

Major environmental issues like climate change, freshwater health, and protecting our indigenous biodiversity also haven't become any less important because of COVID-19 disrupting society. Temporary reductions in fossil fuel emissions aren't going to make any long-term difference to global warming unless they keep being reduced, while for farmers the issues behind the policy changes our sector is facing are still there, the environmental impacts from cattle and sheep don't change just because other parts of the economy have been disrupted.

VIEW FROM AN EXPERT

So, what is the medium-term outlook likely to be?

The fundamentals of what we were seeing pre-lockdown will return. Demand for red meat will stay strong, we still need to own and address our environmental issues, and alternative proteins will still be there being promoted in the same way they are now, with the added narrative of drawing a connection between climate/habitation loss and zoonotic diseases like COVID-19.

The trick is we need to use this time to make the most of the opportunities that are there for the red meat sector. We have been extremely fortunate to be able to still do our thing throughout the lockdowns around the world. This does mean we will be playing a leading role in the economic recovery from COVID-19, but in doing so we must address those underlying concerns around environmental issues and play to New Zealand farming's specific strengths – **we need to talk about the how and not the cow.**

The importance of initiatives like our Taste Pure Nature country of origin brand and the New Zealand Farm Assurance Programme are likely to become more pronounced as consumers will have a heightened focus on their purchasing habits. At the same time, we're also likely to be competing much more with local products in our export markets with a significant societal push for consumers to buy local. With 90 percent of New Zealand red meat production exported, we do have to leverage every environmental, ethical, and quality advantage we can muster.

Climate change and freshwater will still dominate much of the environmental policy conversation. As it is now, what's needed are policy frameworks that are flexible and allow farmers to adapt and innovate. He Waka Eke Noa is a good example of this in the climate space, and new more accurate methodologies for calculating methane's impact are already set to be considered by the Intergovernmental Panel on Climate Change, though it's important to note the sector will still need to reduce its emissions and play its part to combat global warming.

In short, it's not quite a case of the more things change, the more they stay the same. Rather, it's the more things change, the more important responding to that change becomes if we're to continue to have a strong social licence to operate and ensure the future wellbeing of our rural communities.

NOTES:

When thinking about what notes you'd like to jot down, why not consider answering the questions set out in the New Zealand Primary Sector vision:

- Regenerative: How could you revitalise your natural capital and cut waste?
- Outstanding: What makes or will make you and what you produce amazing?
- Ethical: How can you be an exemplar to others?
- New Zealand-ness: Which special part of New Zealand would you like to celebrate?

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MINDSET

PRE-COVID-19 SURVEY

Understanding how New Zealand primary producers feel about all of this change and what they plan to do about it.

While most consider the changing landscape of New Zealand agriculture to be an opportunity for the future of their agribusiness (58%), the other 42% do see it as a threat to their way of operating.



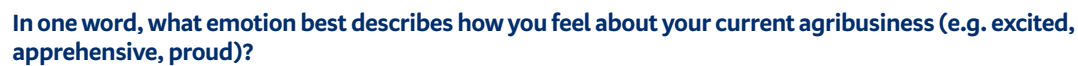
Those more positive about the opportunity tend to be:

- Younger
- In horticulture / arable industry
- Corporate sized

and are more likely to:

- Talk to a professional about their wellbeing
- Increase their utilisation of data and technology, collaborate with others within the sector, and develop alternative income streams
- Recognise the importance of sustainably produced products to the consumer
- Use industry group resources, environment plans, and carbon calculators
- Actively forecast and budget on a monthly / quarterly basis.

Getting at least 6 hours sleep at night

[illegible]

COVID-19 SURVEY

Understanding the impact of COVID-19 on New Zealand primary producers mindset.

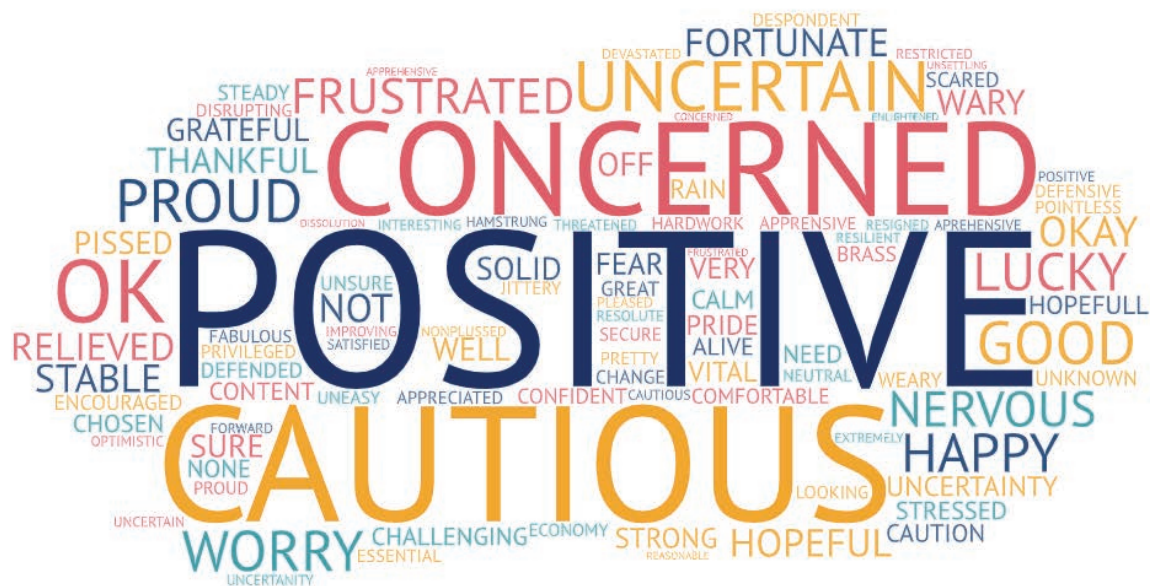
Broadly speaking, do you consider the changes created by COVID-19 to New Zealanders' way of life and the New Zealand economy to be an opportunity or a threat to the future of your agribusiness?

Threat to your way of operating and managing your agribusiness - **11%**

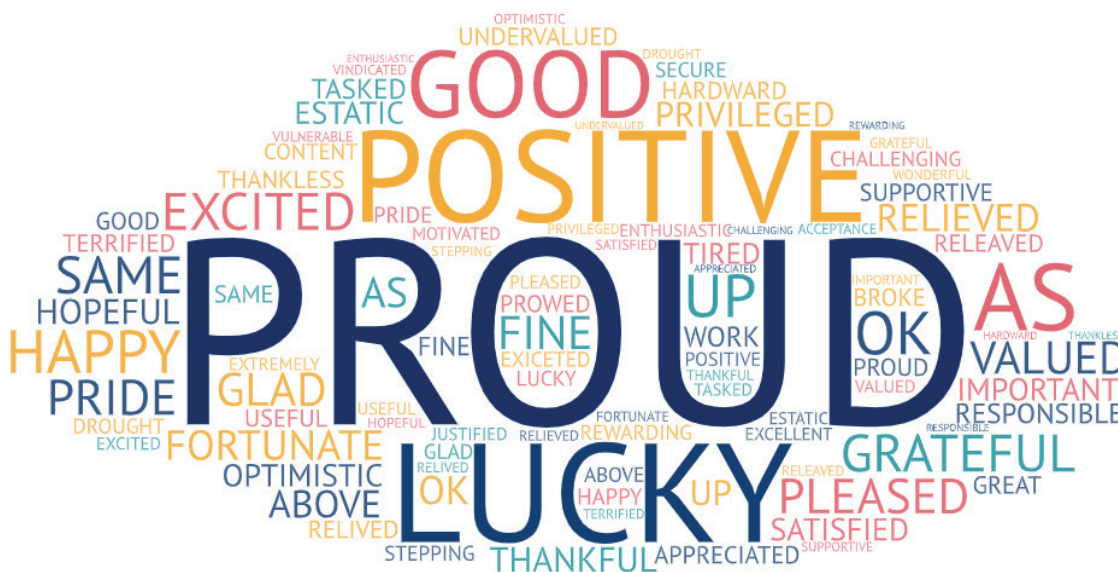


Opportunity to play a pivotal role in supporting the New Zealand economy - **89%**

In one word, what emotion best describes how you feel about your current agribusiness as a result of COVID-19.



In one word please describe how you feel about being a part of the New Zealand primary sector during the COVID-19 response.



PRIDE AFTER A PANDEMIC

The Fast Five

Feedback from our 2020 surveys indicates that:

- Producers used words like “proud”, “lucky”, and “valued” to describe being part of the New Zealand primary sector during the COVID-19 response; 89% are keen to play a role in New Zealand’s economic recovery.
- Adaptability Quotient (AQ) is the new IQ – minds open to possibilities prove resilient in facing setbacks and are adept at making the most of opportunities.
- There’s growing awareness that looking after yourself – body and mind – is the first start to looking after your agribusiness.
- But on-farm health and safety still needs some work, especially among older farmers.
- We found in the BNZ survey that optimists tend to share common habits; using data to support decisions, being bold enough to explore alternative income streams, making the most of available resources from industry groups and taking their wellbeing seriously.

Energise to execute

Creating an enriched future for the primary sector will rely on energised, innovative producers, with the ability to lead themselves and others and to embrace change with enthusiasm.

Producers with higher levels of self-awareness tend to be adaptive and resilient. They embrace the opportunity to learn and they ignite enthusiasm in others. They energise themselves with time away from the business, so they can bring this energy into execution, inspiration and being their personal best.

We gained a sense of BNZ primary producers embracing the FarmStrong philosophy⁷¹ that when you are looking after yourself, you're better positioned to deal with the inevitable ups and downs of farming.

BNZ producers are generally taking care of themselves in terms of getting adequate sleep and eating a healthy diet. Getting off the farm to socialise is slightly less of a priority and only 12% of farmers frequently talk over their worries with others.

The primary producers that view the changing landscape for agribusiness as an opportunity are more likely to engage in conversation and confide their concerns to close friends or family.

Doug Avery, the Resilient Farmer, says poor mental health holds us back from the next level of excellence, “but once you can measure the effects of mental health, it’s easy to measure the cost benefits in a way that business managers can justify actions and investments to promote improvement.”⁷²

Farming is a job with an ability to throw curve balls into the most efficient farm management systems. What’s encouraging is the broadening understanding in New Zealand that mental health is no different to physical health and there are times when some preventive care, or some intervention is needed.

When you take time to energise, you have more reserves to call on to execute your plans.

It’s a rollercoaster, but an exciting one

In our survey this year, we gave farmers a one-word challenge: What emotion best describes how you feel about your current agribusiness?

BNZ producers pre-COVID-19 responses covered the full scope, understandable in a sector where ebbs and flows are business as usual. Featuring predominantly were responses of ‘happy’, ‘excited’, ‘proud’ – and there’s reason to believe in the optimistic view. In March the Minister of Agriculture, Damien O’Connor, described the primary sector as “producing some of the highest quality food and fibre in the world – and the world knows it. They are bringing home record export returns and that’s something for them to be really proud of.”⁷³

The perception of an urban / rural divide appears to have subsided. A survey by research company UMR,⁷⁴ released in September 2019, shows New Zealanders with a positive view about our agricultural industries outweighed the negative by almost three to one. After some bruising encounters with COVID-19, New Zealanders thought even more highly of our primary producers in a May 2020 survey.⁷⁵ Close to three-fifths (63%) of New Zealanders held a positive view of sheep and beef farming - this is a significant increase of 9% compared to just eight months ago. Dairy farmers also enjoyed a similar increase in positive support now at 60% positive up from 51%.

Horticulture continues to receive the highest positive rating of 65%. Ratings for fisheries just clicked over into majority positive territory at 53% up from 47% in August 2019.

While the results are positive, there were still signals that the public expect more from the primary sector in certain areas, particularly in impacts on water quality. While primary producers may see that as a return to the urban / rural divide, the picture is not that negative. The same study also showed great acknowledgment from the New Zealand public for the jobs and quality of food produced by the primary sector, which they directly benefit from. So, while the expectations of primary sector improvements remain high, there is also much recognition of the vital role the primary sector plays.

That view is supported by our Land and Water National Science Challenge’s survey⁷⁶ of visitors to the Open Farm day in March. One pertinent insight was that visitors valued the contribution the primary sector is making in striving for improved sustainability, commenting that “criticism of farming isn’t about farmers, it’s about practices.”

When COVID-19 saw foodbanks stretched to meet the challenge of food insecurity ‘Meat the Need’⁷⁷ stepped in. The charity founded by farmers Siobhan O’Malley and Wayne Langford, is an example of ‘out of the box’ thinking that helps the community and, in doing so, really moves the dial on social licence.

Meat the Need enables farmers to give a little of what they grow, when they can, seasonally and financially. The initiative could potentially have a significant impact on New Zealand families in need and on the way both the New Zealand public feel about our food and fibre producers and equally, the pride they have in themselves. A boost to producers’ confidence is also expected, because as Wayne says, “not only are they producing amazing food, but they are proud to be supporting those suffering from food insecurity in our own country.”

The couple say “it has always felt not quite right that New Zealand produces and exports so much food yet people in New Zealand are going hungry. It doesn’t need to happen.” Partnering with Silver Fern Farms, their first supply chain is red meat and what’s more you don’t need to be a farmer to contribute: www.meattheneed.org

72. <https://www.resilientfarmer.co.nz/> 73. <https://www.rnz.co.nz/news/country/405592/primary-exports-to-reach-48bn-in-2020-mpi> 74. <https://www.beehive.govt.nz/release/research-dispels-urban-rural-divide-talk> 75. <https://umr.co.nz/wp-content/uploads/2020/05/COVID-19-impact-on-views-of-Primary-industries-May-2020.pdf> 76. <https://ourlandandwater.nz/news/survey-shows-farm-days-build-urban-rural-trust> 77. www.meattheneed.org

“As a business we do feel challenged. But it does swing between a positive and a negative challenge. We will continue to look for the positive challenges.”

Sheep and beef farmer, Canterbury

Learning the farm from the class

Six years ago, St Paul's Collegiate School set out to change New Zealanders' perception of pursuing a career within the primary sector.⁷⁸ St Paul's Collegiate School has formed an advisory group working with key representatives from across the primary sector, including BNZ. It has developed an agribusiness programme that met the primary industry's needs for engaged, well-qualified and capable young people, enthusiastic about their career opportunities in the primary sector.

One of the most notable outcomes from this programme has been the significant change in mindset towards a more positive perception of the long-term career prospects in the primary sector. Working within the primary sector is now accompanied with a good understanding of the dynamism, innovation, and exciting career prospects the industry has to offer. A change that has been recognised not only by students, but also by parents, teachers and schools implementing the programme across the country.

The future looks bright

Pre-COVID-19, 58% of producers saw the changing landscape of New Zealand agriculture as an opportunity to embrace the future for their agribusiness. The remaining 42% were more cautious, seeing the changes as a potential threat.

The optimist among our primary producers tend to share proactive traits, such as:

- talking to a professional about their wellbeing
- calling on data and technology to support their decisions
- collaborating with other in the sector
- developing alternative income streams
- recognising the importance of sustainability to consumers
- using industry group resources, such as environment plans and carbon calculators
- actively budgeting both monthly and quarterly.

Nearly half of producers reported that they are exploring innovative ways to increase production in the next five years and another 44% are trialling or implementing improved land use efficiency with current farms. Their toolkit is varied with producers reporting initiatives including:

- investing in genetics and cultivars to improve efficiency
- exploring regenerative agriculture, organics or alternative farming practices
- developing off-farm income streams
- exploring ways to capture better agribusiness data.

On the personal front, 28% of farmers are considering a potential succession or exit strategy to implement in the next five years, while 22% are investing in personal development.

Safe and Sound?

Our farmers are doing a better job of looking after their health and wellbeing, but the safety side of health and safety is still lagging. Agribusiness recorded 23 fatalities between April 2019 and March 2020.⁷⁹

A study by Worksafe Marketing and Communications Media Manager, Nicky Barton, for her Kellogg Rural Leadership Programme, showed it is frequently the older experienced farmers who are hit hardest⁸⁰ with almost a quarter of farm-related deaths involving those over 60. When you add those over 70, the tally soars to almost half of all on-farm fatalities. Nicky's findings uncover the challenge to all in the rural health and safety system; that when farmers are at their most experienced and perceived to be most adept at assessing risk they are also being fatally injured in the highest numbers.

78. <https://www.agribusiness.school.nz/>

79. https://data.worksafe.govt.nz/editorial/fatalities_summary_table

80. <https://ruralleaders.co.nz/nicky-barton-old-dogs-new-tricks/>

But when it comes to mindset, she also found that older farmers, who could be seen by their peers as “difficult”, have the opportunity to adjust their mindset, which could lead to them also becoming role models for a positive health and safety culture on-farm. Worksafe’s guidance on health and safety is useful, especially the campaign to encourage workers to “use your mouth” when it comes to reporting unsafe situations. Creating a culture where everyone has everyone’s back, and acknowledges that safety comes first, is the single biggest step to reducing on-farm injuries, lost time and fatalities. Everyone on-farm has to believe it’s the right thing to do, and that starts with you, as primary producers and sector leaders

Spotlight: AQ is the new IQ

Change is unrelenting. But if we operate as usual because ‘this is the way we do things here’, we risk missing the signals that the old way is no longer relevant, or sustainable.

The ability to adapt to embrace exponential change determines our Adaptability Quotient (AQ). AQ is the ability to face and overcome changes and adversities while turning them into opportunities for greater achievement. In the challenging business of farming, where one earthquake, biosecurity incursion or climatic event can undo decades of hard slog, AQ is a quality worth cultivating. It’s about the ability to recover quickly from a setback, or to handle a difficult situation calmly and make internal changes to fit the external circumstances. It’s a question of mindset, starting with an open mind. The advice is to stay open to possibilities and to not reject an idea simply because it requires change. An open mind will help you learn from those with different perspectives.

An open mind also at times requires us to step outside our existing models – this entails un-learning. Contrary to the name, the concept of unlearning is not about forgetting what you have learnt, it is about having awareness of this knowledge that was once effective in the past and having the ability to adapt habits or practices to progress and grow. It encompasses firstly breaking old habits, holding the mind open with a focus on evolving and trying new techniques to grow. American Futurist, Alvin Toffler, believed the concept of unlearning would play a pivotal role in business success. “The illiterate of the 21st century are not those who cannot read and write but those who cannot learn, unlearn, and relearn.”⁸¹

The primary sector has a history of changed circumstances that has led to changed minds. Remember the eighties when nearly 40% of sheep and beef income came from subsidies? One year six million lambs had to be removed from the system because there was no market for them.⁸² When subsidies ended, all the forecasts were for doom on the farm. Instead, minds were changed. Farms were managed for production, not subsidies. That’s not the only change. The Dairying and Clean Streams Accord of 2003 initially had dairy farmers up in arms. For the first time, their processor – in this case Fonterra, the entity which created the accord – had stepped inside the farm gate with requirements relating to environmental practices, not just milk quality. Now, 17 years on, fencing and riparian planting is routine, and farm environment plans are increasingly adopted.

The future prosperity of the primary sector will be underpinned by our ability to pivot and adapt, and to do this well there needs to be a positive attitude towards change.

Once upon a time, being smart was considered enough. Intelligence quotient (IQ) was the measure that decided who would be successful. Managing a farming enterprise from a dominant left brain approach, we risk finding ourselves on ‘auto pilot’ with a tendency to react to changing circumstances.⁸³

The right side of the brain is emotionally wired to act. Self-awareness, at the core of Emotional Intelligence (EQ), is the real pre-cursor to change. Leading from the inside out, is an inside job. The most successful sporting team in the world, the All Blacks, are distinctive in their success, partly because of their belief that leadership is an inside job.

And how are we feeling now?

At the start of this chapter, we talked about the one-word challenge we gave to BNZ primary producers to describe how they felt about their business. The mood was predominantly positive, but only just.

Post-COVID-19, we asked again. It was certainly an example of Adaptability Quotient in action. The optimism we saw from BNZ primary producers to support the economy post-COVID-19, while wrapped in a dose of realism, came through in the one-word challenge. Primary producers used words like “positive”, “nervous”, “cautious”, and “proud” when thinking about their own business.

Words like “good”, “positive”, “proud”, “lucky”, and “valued” were used to describe being part of the New Zealand primary sector during the COVID-19 response. As Winston Churchill said, “the optimist sees opportunity in every difficulty.”

81. <https://www.goodreads.com/quotes/568874-the-illiterate-of-the-21st-century-are-not-those-who>

82. <https://www.politico.eu/article/viewpoint-farming-without-subsidies-a-better-way-why-new-zealand-agriculture-is-a-world-leader/>

83. <https://ruralleaders.co.nz/category/kellogg-scholar-reports/page/16/>

JAMES ROBERTSON

FMG Young Farmer of the Year for 2019 / 2020



James Robertson, FMG Young Farmer of the Year for 2019 / 2020, spoke to us about how his mindset has evolved during his time in the coveted seat, in his approach to on-farm health and safety.

We talked with James about his thoughts on the mindset shift required to approach change within the primary sector.

It's simple; says James, "any proactive mindset shift to tackle change requires a transition, from short term tactical thinking, to longer term strategic planning. It's important to think - how can I implement changes that strengthen my farming operation, for the longer-term time horizon, not just the current season?" James also encourages farmers to engage with others with a completely different perspective to untap new ideas, or challenge thinking. "Take the time to understand what drives the changes they are making, their goals and their values. Surround yourself with forward thinking people and you'll find yourself in the best position to adapt for the future."

James shared his insights on the ways farmers are approaching the diverse forces at play within the sector.

He says he has seen a shift towards managing risks and hedging volatility where possible, utilising a range of tools, from forward contracts for product, through to farm health and safety software. "Change is a constant, it's happening right across the value chain, and our progressive producers see this not as a challenge, but as an opportunity to continue to advance" remarks James.

"Any change eventually flows back to the farm gate in some form, so the opportunity is for the sector to create the value for the consumers and capture the value for the producers." James suggests in order for this value creation to be achieved, it's the consumers' needs which need to be the key driver of any changes being made, with considerations for the costs and benefits to the producers balance sheet.

Here is what James shared about how his mindset towards on-farm health and safety risks, has evolved over time.

James gained first-hand experience of the impact an injury can have on a farm business, when his father suffered an accident. "I think I'd been a bit oblivious to health and safety as a young person. Having a key person not able to work for a few weeks places a lot of pressure on everyone else." As part of his FMG Young Farmer of the year programme, he also got to spend some time with the team at Worksafe, who have helped to highlight to James the various risks that can be avoided. "Think about the job you are going to do, think about the risks and how you will manage them, make sure you have the right gear, in good condition - and manage your fatigue. Good health and safety does not take a lot of time but, in the long run, healthy and safe staff add value to your business."

WORKSAFE

Mahi Haumarua Aotearoa

Q+A

JOANNA GREAVES

Corporate Agribusiness Partner, BNZ



We spoke to Joanna Greaves about her thoughts on the importance of mindset when it comes to agribusiness management. Joanna completed a Kelloggs Rural Leadership programme research project in 2017 titled 'Emotional Intelligence: Seismic shifts in the Primary Industry compel whole brain leadership'.

Seismic market shifts are calling for agile leaders within the primary sector, equipped with the ability to drive forward a prosperous and sustainable food and fibre sector. Here's what Joanna had to say on the key attributes she believes are required to best achieve this:

Joanna shares that self-awareness, the ability to really know oneself, is the key determinant to achieving real change. This is simply the ability to know 'how you do, being you' by understanding your drivers and what energises you by managing what you know.

"Know what stresses you, know what de-stresses you. Know your strengths, know your shortcomings, and recognise how these feelings influence your performance. Without awareness a person continues to operate with the same beliefs, attitudes and behaviour. With awareness there comes a choice", she says.

Joanna told us about her view on how mindset plays a part in tackling challenges that the primary sector faces:

"We are not defined by the challenges we face, but by our ability to steer our focus", shares Joanna. She believes this is underpinned by the ability to anchor in disruptive environments, acting with control to make the tough decisions. "Bad decisions are not usually made through a lack of knowledge or poor judgement; they can often be attributed to an inability to manage pressure."

Joanna believes that actively managing your emotional atmosphere by 'operating above the line', is what influences the ability to execute effectively.

We asked Joanna to elaborate on what operating above the line means, and here's what she had to say:

"Every day, each and every one of us, makes choices", suggests Joanna. "You make a choice; to look for what's wrong or look for the good. Whatever your perspective, you will find it." A line is representative of this choice and articulates where our mindset takes us. Above the line, we can be proactive, empowered and accept responsibility for our own actions, thoughts and behaviour."

"Operating below the line features criticism. We can be reactive, driven by feelings, and it is here we often default to blaming others, blaming conditions, blaming circumstances."

"Every day, each of us dip below the line", comments Joanna. She suggests we operate along the continuum between our best and our worst, and that it is our responsibility to create awareness of this position, recognise where we are and develop a strategy for pulling ourselves back up again. Alternatively, she reflects you could task someone else with the job of kindly letting you know. "Recognising that we always have a choice in how we respond to everything, is essentially the core of mental resilience."

Q+A

DUNCAN AND TINA MACKINTOSH

White Rock Mains



Duncan and Tina Mackintosh, owner operators of White Rock Mains, and 2019 Canterbury Regional Ballance Farm Environmental Award Winners, discussed with us their mindset philosophy when it came to approaching their recent involvement with Open Farms. (BNZ Agribusiness Partner: Alistair Edwards)

The White Rock operators talked to us about mindset when it comes to responding to changes in the marketplace.

"In adversity comes opportunity is the philosophy that guides our mindset", says Tina. "We look for ways that the changes we are facing can benefit our way of farming." The Mackintoshes strongly believe that having good, knowledgeable people surrounding them, to bounce ideas off, and to challenge them when they're facing adversity, has helped them immensely. They say, that this has helped them to be open minded, and unafraid of the challenges thrown their way.

Duncan and Tina speak about an 'opening of the mind'. They say, "we are observing that food producers are more willing to engage, be part of the conversation, to stand up and share their positive farming stories".

'Open Farms' was an initiative developed in 2020, to enable farmers throughout New Zealand to invite the public onto their farms to learn about farming and reconnect with the people and places that grow our food & fibre. Having recently participated in Open Farms, we spoke to Duncan and Tina about their key driver to open their farm to the public.

Duncan believes that the old adage that 'it's not the right time' will forever feed procrastination, so they thought now was as good a time as any. For Duncan and Tina, it was simply about engaging with their

guests, predominantly from a more urban background and sharing what happens on their farm, both from an environmental and production perspective. "It's about educating our fellow New Zealanders so they can make factual, informed decisions, to help promote our product on both a national and global stage."

The Mackintoshes reflect that it's important to "not be afraid to embrace transparency - transparency gives the farmer credibility".

The Mackintoshes discussed with us the key factors they believe will be fundamental to a successful farming future

"The future of farming looks great" remark the Mackintoshes.

Within their business, every time a decision needs to be made, they ask themselves 'what is our why?'. The couple believe being able to answer this honestly is one of their most valued behaviours. "Responding early, backing yourself then moving on eliminates any self-doubt that inevitably clouds judgement. It's ok if you don't get it right sometimes, just move on."





AGRIpreneurs OF NEW ZEALAND, WE LIKE YOUR CV

Dean Williamson, Global HQ

Together with his wife Cushla, Dean owns GlobalHQ. GlobalHQ is an agricultural data and information business incorporating their flagship newspaper Farmers Weekly, alongside AgriHQ data and insights, Dairy Farmer Magazine, the On Farm Story video series, Farmers Voice and new TV series Sarah's Country.

It reads: Reliable, adaptable, a great work ethic, can work under pressure, takes ownership, a humble but effective leader, and 100% loyal since the 1800s.

You don't need to sell yourself to get the job, actions speak louder than words. We've seen a rise in appreciation for the value of our primary sector during the first half of 2020. Whether it's perception or reality, let's not take it for granted but build on it. Those with a contrary view will always be there and social media is their friend. Those platforms are designed to monetise attention, and when it comes to getting attention, something negative, confronting and quite often wrong will always win. Social media algorithms reward the antagonists more than positive social media content like On Farm Story.

So, let's turn our focus away from the keyboard and on to the opportunity.

COVID-19 gifted us a focus on the primary sector, and an appreciation of the security it brings on many levels during these very uncertain times. In a crisis we look for comfort in the constant. Leaders are expected to step up and deliver security and the more 'constants' in their war chests, the better.

There is no better constant in New Zealand's war chest than our primary sector. Farming is the one reliable provider of all the essentials we need right now, and it has been since 1882 when our early Agripreneurs found a way to freeze meat and export it to the other side of the world. Without fail, over the next 138 years agriculture has continued to deliver food, income, health, employment and purpose to us all, and the value of those is greater in 2020 than ever. So is the opportunity.

If there's one thing we can be certain of in the wake of COVID-19, it's the importance of food.

When the COVID-19 disruption hit, I challenged my entire team to adopt Winston Churchill's advice: "Never let a good crisis go to waste." Be innovative, enterprising and agile, look to the future, strengthen our position and never lose sight of the horizon. As my 92-year-old father who has raised six sons and farmed through many a drought, flood and fall in income says: Bank the humps and prepare for the hollows and we'll weather together.

We'll weather together. Those three words radiate the wisdom, community and hope we all need. We made them our company mantra, and when we created a we'll weather together cartoon of a farmer with his arm around the country and put it on the back page of Farmers Weekly, people related to the message.

The people in the New Zealand food industry should wake up every morning inspired to go to work, feeling like they have the greatest purpose, feeling valued by everyone who eats the food they produce, process, market, sell, cook, share - whatever part they play.

We salute the Agripreneurs of New Zealand. All good CVs get better each year, and they certainly subscribe to that notion by improving food production, supply and security, and improving the way they look after the health and wellbeing of us all, as well as our environment.

It's a risky business being an Agripreneur, but COVID-19 appears to have changed people's views of our food producers, so that's one less thing to worry about. Keep improving the CV by looking to the future and we'll weather together.

NOTES:

When reflecting on the mindset section and the notes you would like to jot down here, consider how the following questions might relate to your mindset:

- What practices can you ‘lock in’ to energise yourself to better weather the ups and downs of farming life?
- On any given day, how do you know whether you are operating above or below the line?
- How could you better position yourself to adapt and perhaps even embrace the opportunity that accompanies change?

SHIFT HAPPENS – THE SNAPSHOT



You will be hard pushed to find a farm throughout New Zealand that doesn't have a few pairs of muddy Red Bands at the back door. They are a hard-wearing testimony to their hard-working owners. I was lucky enough to grow up on sheep and beef farm in Hawkes Bay, and I know first-hand how many pairs of dirty red bands we had scattered around our back door.

I thought about this as we received the results of our 2020 Shift Happens survey. Those Red Bands are a real symbol of durability, and our agricultural producers display durability in spades.

The work to bring you this edition of Shift Happens started earlier this year, when we asked our Agribusiness customers what was front of mind for them, and how this compared to 2019.

It was a rich conversation. Producers are confident in the quality and reputation of our primary produce, but at the same time concerned about the impact of environmental pressures on their businesses. They have mixed views on further reducing their farming inputs and intensity but are very keen to embrace new and exciting technology. Most are comfortable with their financial knowledge and have a hands-on approach to budgeting. When it comes to the changing landscape of New Zealand agriculture, in particular regulatory change, whilst 42% see this as a threat, more than 50% see a great opportunity to create an enriched future for their Agribusiness.

As we started analysing the initial survey results, COVID-19 struck. We all know that this has brought a fundamental shift to the way of life for many New Zealanders. We felt it was important to assess the impact of COVID-19 for our agribusiness customers, and to ask them how it impacted their business, and their view of the future. Not surprisingly it turns out that our clients, a lot like their Red Bands, are resilient in the face of adversity and are up for the new challenge.

An overwhelming 89% of clients see COVID-19 as an opportunity for Agribusiness to play a pivotal role in supporting New Zealand's economic recovery.

As our own Doug Steel said in a recent 'Rural Wrap', "it's a cliché, but people have to eat. Food is one of the ultimate necessities. The defensive qualities of New Zealand's food-heavy export mix may well be a godsend for our economy during the current turmoil."

Our primary producers agree. They see a great opportunity and believe in their ability to make the most of it for our economy. They are looking to technology, to data, and to industry collaborations to help harness this opportunity.

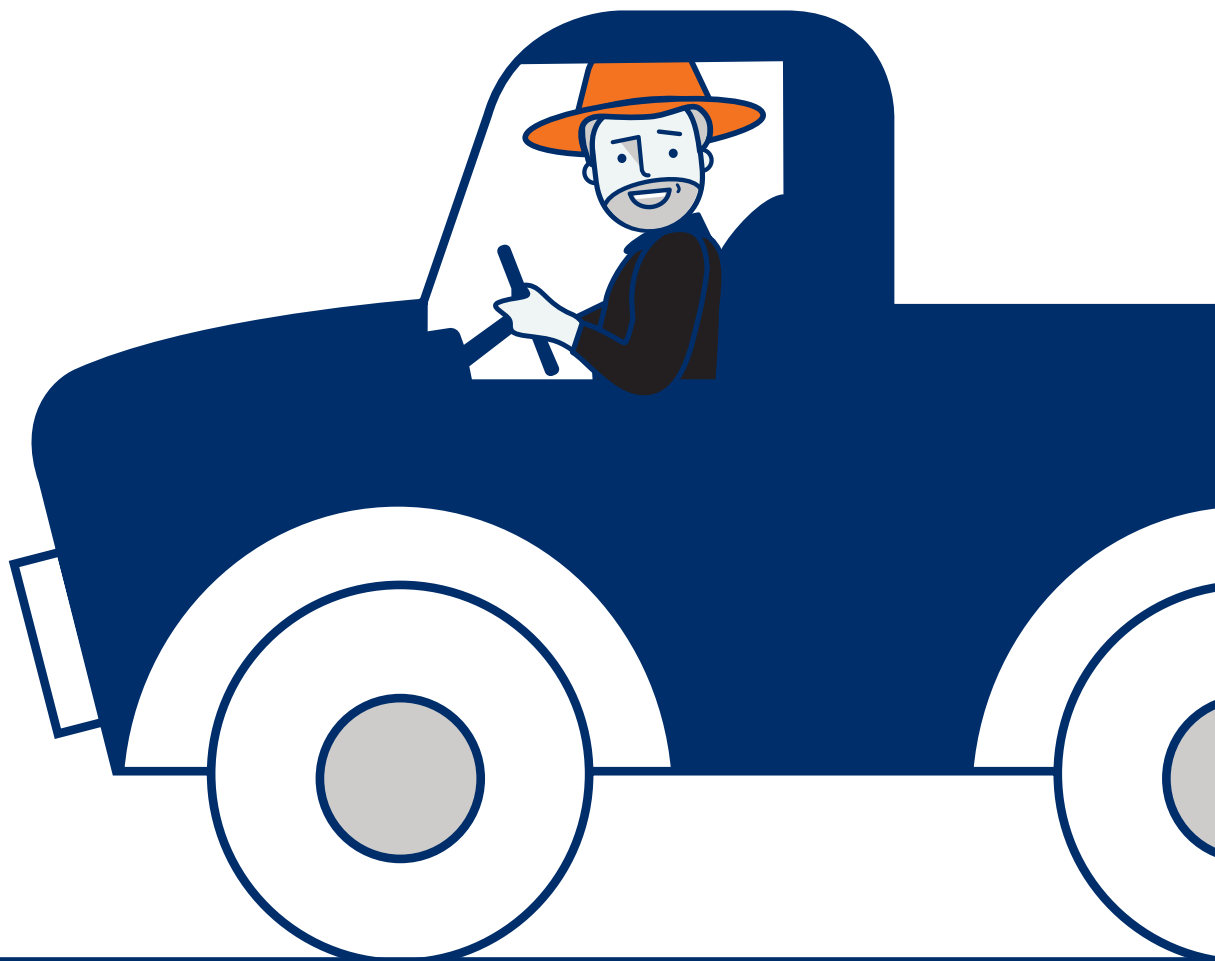
They're also looking to protect and improve their businesses, through budgeting, scenario analysis and a more strategic approach to managing risks. This is important, because a strong balance sheet ensures a business can work its way through challenges and thrive out the other side.

We are also really encouraged by the clear signs that our clients are taking more care of their personal wellbeing. Farming is hard work; it engages both head and heart. The drought has been tough for many, and the increased isolation from COVID-19 has amplified the pressure. We encourage our customers to pick up the phone to their BNZ Agribusiness Partner, as well as speaking to professional and industry experts, to just have a chat.

Shift happens and will continue to happen everywhere. As a country, we are looking for reassurance and a way forward. The positive, innovative and proactive mindsets of so many of our Agribusiness customers is an awesome start. We are proud of them, and we are proud to bank sustainable agribusinesses in every sense of the word.

Dave Handley
GM Agribusiness, Bank of New Zealand

**SHIFT HAPPENS,
WHERE TO
FROM HERE?
THE CHOICE
IS YOURS.**



ACKNOWLEDGEMENTS

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HELPFUL LINKS

Consumer:

- View the full Primary Sector Council vision and plan for the New Zealand primary sector, focused on Taiao: <http://www.fitforabetterworld.co.nz/>
- View the tools and research being established by the National Science Challenge, Our land and water: <https://ourlandandwater.nz/resources/land-use-tools/>
- Read about the work underway to support Māori agrifood: <https://ourlandandwater.nz/capacity-for-transition/storying-kaitiakitanga/#>
- Do you have an initiative that could make a difference to New Zealand's food and fibre sectors? It could be eligible for funding through Sustainable Food & Fibre Futures: <https://sff-futures.mpi.govt.nz/funding-and-programmes/sustainable-food-and-fibre-futures/about-sustainable-food-and-fibre-futures/>
- Thinking of taking a trip, why not plan it around New Zealand food: <https://www.eatnewzealand.nz/>

Technology:

- Read more about the Agri tech transformation plan: <https://www.mbie.govt.nz/dmsdocument/10750-growing-innovative-industries-in-new-zealand-agritech-in-new-zealand-industry-transformation-plan>
- See the full TIN companies for 2019: <https://tin100.com/2019-tin-report-press-release/>
- Learn more about Massey University's partnership with Microsoft: <https://www.i4accelerator.net/>
- The Australia, New Zealand Agritech council: <https://agritechnz.org.nz/tag/anz-agritech-council/>

Financial:

- Access a free three-month trial of Figured: <https://www.figured.com/>
- Budgeting tips from BNZ's own Dave Handley, GM Agribusiness: <https://www.bnz.co.nz/business-banking/business-moments/tips-for-farm-budgeting-and-planning>
- Banks explain what capital requirements mean for farmers: <https://www.dairynz.co.nz/news/banks-explain-what-capital-changes-will-mean-for-farmers/>

Environment:

- Learn more about the Decision on the Action for freshwater: <https://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/decision-on-national-direction-for-freshwater-at-a-glance-summary.pdf>
- Learn more about DairyNZ StepChange programme: <https://www.dairynz.co.nz/environment/step-change/about-the-step-change-project/>
- Learn more about how the NZGAP horticulture sustainability programme: <https://www.nzgap.co.nz/>
- Ways to continually improve your environment: <https://beeflambnz.com/compliance/environment>
- View the tools and research being established by the National Science Challenge, Our land and water: <https://ourlandandwater.nz/resources/land-use-tools/>
- Interested in reading more about Regenerative agriculture:
Peter Barrett, Linnburn station: www.linnburnstation.co.nz, www.symbiosis.co.nz
Calm the farm, marketplace, data, plans and outcomes for those looking to trial regenerative agriculture: <https://www.calmthefarm.nz/>

Mindset:

- See what the Resilient farmer, Doug Avery has been working on: <https://www.resilientfarmer.co.nz/>
- Read more about the Agribusiness curriculum for high schools: <https://www.agribusiness.school.nz/>
- View 'Old dogs, new tricks' Kellogg research report, Nicola Barton: <https://ruralleaders.co.nz/nicky-barton-old-dogs-new-tricks/>
- Read about the FarmStrong philosophy: <https://farmstrong.co.nz/wellbeing-topics/healthy-thinking/>

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