Agribusiness Agenda 2022

CHAPTER 1

Growth from resolve and resilience

June 2022

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Six priorities to drive growth and resilience

1 Taking control of reconnecting with the world

If we are to have the opportunity to create the future we want for our country and communities, the most important thing we can control now is how we reconnect with our markets and consumers to the world.

2 Accelerating towards the future of work

Current labour shortages will change the way the sector works forever. The industry will face continuing competition for talent resulting in the economics for automation of repetitive roles more compelling; long-term certainty around seasonal labour programmes, more critical; and the investment in future talent pipeline into schools and universities more urgent than ever.

3 Capturing the unique opportunity in decarbonisation

Unlike other sectors of the economy, which at best can aspire to net zero, the food and fibre sector has the potential to be climate positive. This requires urgent focus on practical steps to accelerate along the decarbonisation pathway, including aligned incentives to encourage these steps to be taken faster.

4

Collaborating substantively

We have clearly demonstrated our ability to collaborate effectively in a crisis in the last two years. It's time to bring that same mindset to solving the problems communities and consumers will face in the future. A key part of this is partnering with Māori more profoundly, bringing openness to different ways to do things that have always been done.

5

Bold steps now to benefit future generations

Steps are needed to ensure the sector thrives into the future. These include initiating a national discussion around the use of biotechnology, exploring the opportunities inherent in our oceans, investing in water infrastructure, creating an industry data exchange platform, and building a globally relevant bioproducts sector.

6

A food system that works for all New Zealanders

We have two food systems in New Zealand; a world class export system and a domestic system that has demonstrated its frailties over the last two years. We need different business models to lift the resilience of domestic food producers. A failure to provide accessible, quality, nutritious food to all New Zealanders will ultimately impact our ability to continue to generate the export returns we enjoy today.

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Ministerial foreword

Our food and fibre sector continues to lead New Zealand's economic recovery from COVID-19. In the year to 30 June 2022, food and fibre export revenue is expected to top a record $52.2 billion. This demonstrates the sector's ongoing resilience and commitment to providing vital food and fibre to consumers and businesses in Aotearoa and around the world.

I'd like to acknowledge our food and fibre sector's hard mahi, particularly in keeping their people safe, their businesses running, local economies ticking, and navigating the tide of challenges brought about by the pandemic.

I am impressed with how the sector continues to adapt and grow as we navigate the future together. KPMG's Agribusiness Agenda provides useful insights from industry leaders as we continue on our path.

In reviewing the leaders' Top Ten Priorities, I believe that Government is collaborating with the sector in ways that align strongly with these priorities.

For instance, we are continuing to improve our world-leading biosecurity preparedness, and our Mycoplasma bovis response is tracking toward a world-first eradication. Our trade agenda has good momentum with FTAs coming on stream and more to be completed. The new Centre for Climate Action on Agricultural Emissions public-private joint venture will be a critical initiative for a net carbon zero future.

As the Agenda notes, the key to this continued success rests on our ability to collaboratively produce world-leading food and fibre products that keep pace with consumer and market expectations while maintaining the integrity of our production system.

There is strong agreement that products backed by strong environmental credentials will sharpen our competitive edge in the future; generate more export revenue; and ensure our ongoing prosperity. To aid our sector's success, there is significant work and investment across Aotearoa for innovative solutions that further enable us to produce high-quality products, made with care for people and place.

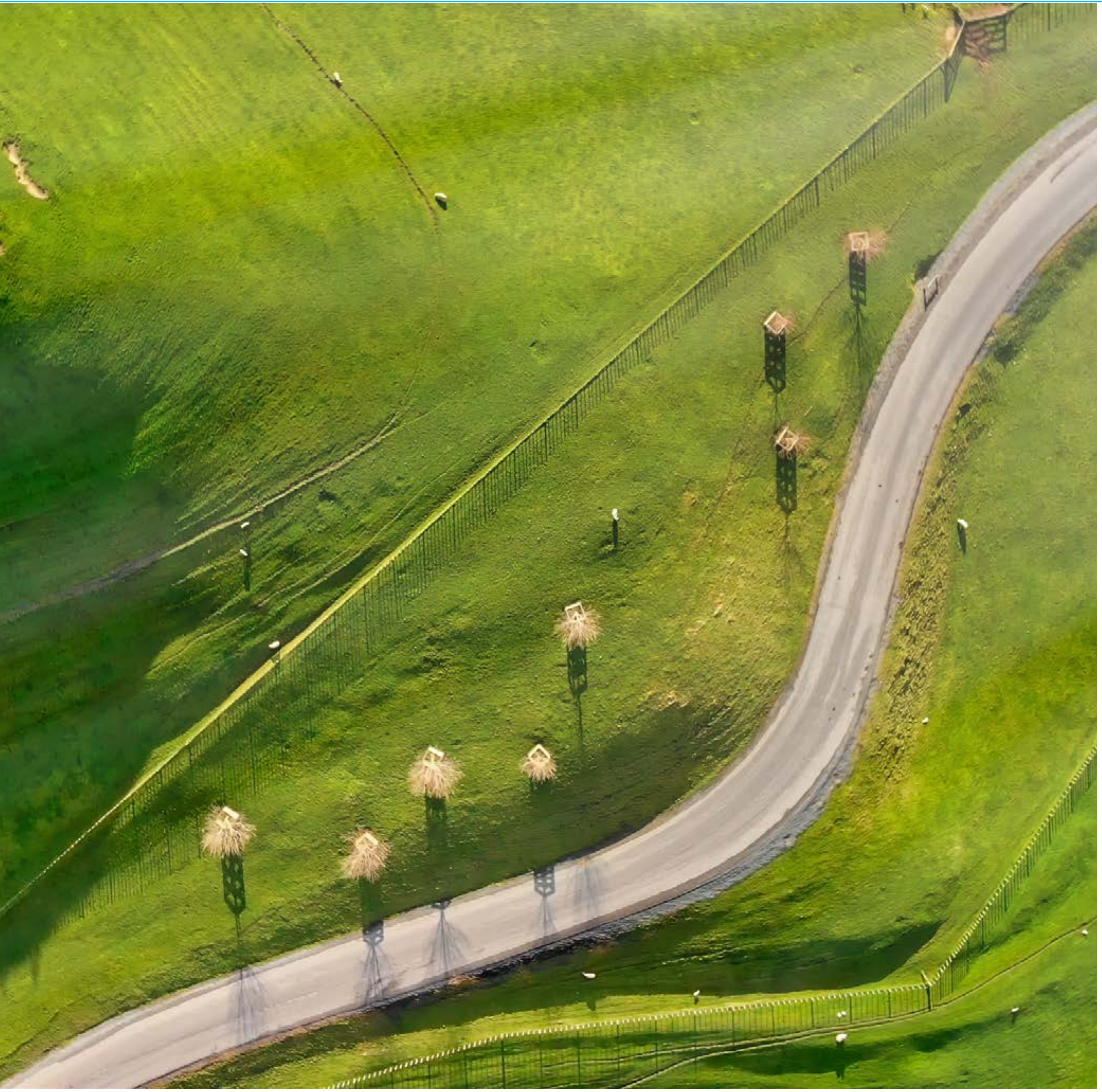
In May 2022, we announced new initiatives as part of Budget 2022 to accelerate efforts to boost productivity and the value of our products, while driving down environmental impacts. This represents a total food and fibre sector package of more than $1 billion.

This investment will drive product development of tools to help farmers and growers lower their emissions. It will ensure they have access to evidence-based advice to help with their business decisions to enhance their sustainability and lift productivity.

For some time now, this Government has committed to backing good ideas and innovation to boost value, sustainability, and jobs. For example, through our Sustainable Food and Fibre Futures Fund (SFF Futures), Government and industry have committed investment of more than $436 million on a range of projects.

As mentioned, we're making good progress on the international stage, with the signing of a historic free trade agreement with the United Kingdom and the upgrade of New Zealand's FTA with China. We're also taking positive steps towards an FTA with the European Union.

Additionally, rural connectivity continues to be a priority area for the Government with a target to improve broadband connection to 99.8% of the New Zealand population at the end of 2023. This will help drive growth of business and innovation in the food and fibre sector, support social connection and provide access to key services for people. It is also important to help meet emission reduction targets. More than 85% of the scheduled rural homes and businesses can now access improved broadband, and we have committed a further $60 million to improve broadband infrastructure in New Zealand's worst-served areas.



A key point in the Agenda states that 'while some hold the Government accountable for change, contributors were clear that change would be happening with our without regulation since it is what our communities and our consumers are demanding.'

The world is changing. Consumers are well informed, they're interested to know how their food was produced and by who. They want food and fibre produced with low emissions and high sustainability.

Our competitive advantage has been underpinned by low input production systems that draw from our natural resources. Science is giving us a better understanding of the impacts of production on the environment and technology will help us minimise those impacts and create value.

We have challenges ahead of us. What is essential is that we work together to overcome them and realise that they also present opportunities.

I'm proud of how the sector has rallied behind the Fit for a Better World food and fibre roadmap. We have purpose, we have the drive, and we will work together to ensure our industries have a prosperous future. In doing so we will ensure that food and fibre is the bedrock of New Zealand's economic security.

Hon. Damien O'Connor

Minister of Agriculture; Biosecurity; Land Information; Rural Communities; and Trade and Export Growth.

EXECUTIVE SUMMARY

Let's ensure we catch the opportunities inherent in our crises

Let's ensure we catch the opportunities inherent in our crises

In past years, having completed the roundtable conversations, the underpinning narrative for our KPMG Agribusiness Agenda report has been relatively straightforward to distil from contributors' comments. This year that has not been the case.

There have been few clear connections across all our conversations. For some leaders things have never been better; others face an existential crisis, while many have aspects of their operations that are humming and other parts that are on (or are close to) life support. Consequently, the juxtaposition of circumstances is the narrative underpinning this first chapter of the 2022 Agenda.

There is no single theme, trend, or story that nicely summarises the perspectives we heard from industry leaders. It is a muddled, opportunity packed, risk burdened story of high highs and almost as low lows. But it is one of an industry where each leader is working in their way through the fatigue we wrote about last year (which has gone nowhere and, if anything, is just an additional year more draining) to show the resolve and resilience necessary to identify and catch the opportunities that are flying at them from a variety of directions.

In last year's Agenda, we described the world as VUCA squared. Today, I am not sure what to call it, but it is more volatile, uncertain, complex, and ambiguous than last year. We have added disconnection from communities, curated facts, volatile economics, political populism, and the unexpected happening (think the invasion of Ukraine) to our existing six VUCA elements, (and we have upgraded the impact of climate to the impact of nature more broadly).

The assortment of issues that organisations have to balance to create and capture opportunities has increased. They are, in the main, doing a remarkable job to keep trading, keep growing and keep delivering record returns to the New Zealand economy at the exact time such returns are so desperately needed.

Thoughts from beyond our bubble

While I have not yet headed offshore, some contributors were able to provide firsthand accounts of what is happening in the world beyond our borders. One contributor noted, having recently returned from a trip, that they were feeling less resilient than they have done at any time in their professional career. They noted it was the first time they have not had all the tools they need in their toolbox to respond to the battles that they must fight. They talked about a world that appears to be driven by fear rather than purpose and of so many of the factors that will define the sector's future, feeling like they are currently outside of organisational control.

Deciding to focus on controlling the factors within our control is one call we can make.

Given the strong returns being generated across the sector at the current time, it should not be a difficult decision to make, for once the cash is available to invest in the future. However, there is a risk that if we keep winning on the commodity cycle (as we are doing in red meat and dairy) that we are not proactive in taking control of the things we can change that will assist in creating a sustainable competitive advantage.

Laser-focused on our sustainable competitive advantage

Our historic competitive advantage has been our ability to grow grass and convert this into dairy or red meat protein using a relatively low-cost production system. While our ability to grow pasture remains world leading, our ability to do it at low cost has evaporated. With the increasing costs of people and the need to meet necessary environmental regulations, costs are heading in one direction. Consequently, we need to think deeply about what a sustainable competitive advantage could be in the future for New Zealand based value chains.

Traditionally, competitive advantage has been viewed through a production lens, but as one contributor suggested, we should be thinking much more about what we can do in Aotearoa that is distinct, unique, and sustainable in the eyes of our consumers. This means determining that our competitive advantage or advantages may not come from tangible things that sit within our control but could come from intellectual property, a health attribute, or a brand story. In a world where these intangible elements are differentiating products in the minds of consumers, it will be increasingly difficult for a traditional New Zealand centric production based value chain to achieve a distinct and valuable sustainable competitive advantage.

Tomorrow does not exist
We can create the future we want

Given our need to invest time, effort, and capital into what we can control, how do we find and develop product attributes that will attract consumers and provide a sustainable competitive advantage, even if that period of benefit is shorter than it has been in the past?

- We can choose the efforts we make to understand current and potential consumers and the problems they have or will have. To create a competitive advantage, we need to look beyond today's issues, to develop plausible scenarios for the future that will guide us to the likely problems people will be seeking solutions to in five or ten years.
- We can choose the people we bring into our organisations; diverse thinkers who can look at problems through the eyes of a consumer and apply both modern science and mātauranga knowledge to find ways to solve future problems.
- We can choose the partnerships that we build with organisations worldwide to give us the best chance to find the right knowledge to create a solution.
- We can choose how we interact with nature to ensure the platform that our product is grown on is in balance (whether that be in New Zealand or elsewhere around the world).

We can make choices around every key element of a product that we offer to the world.

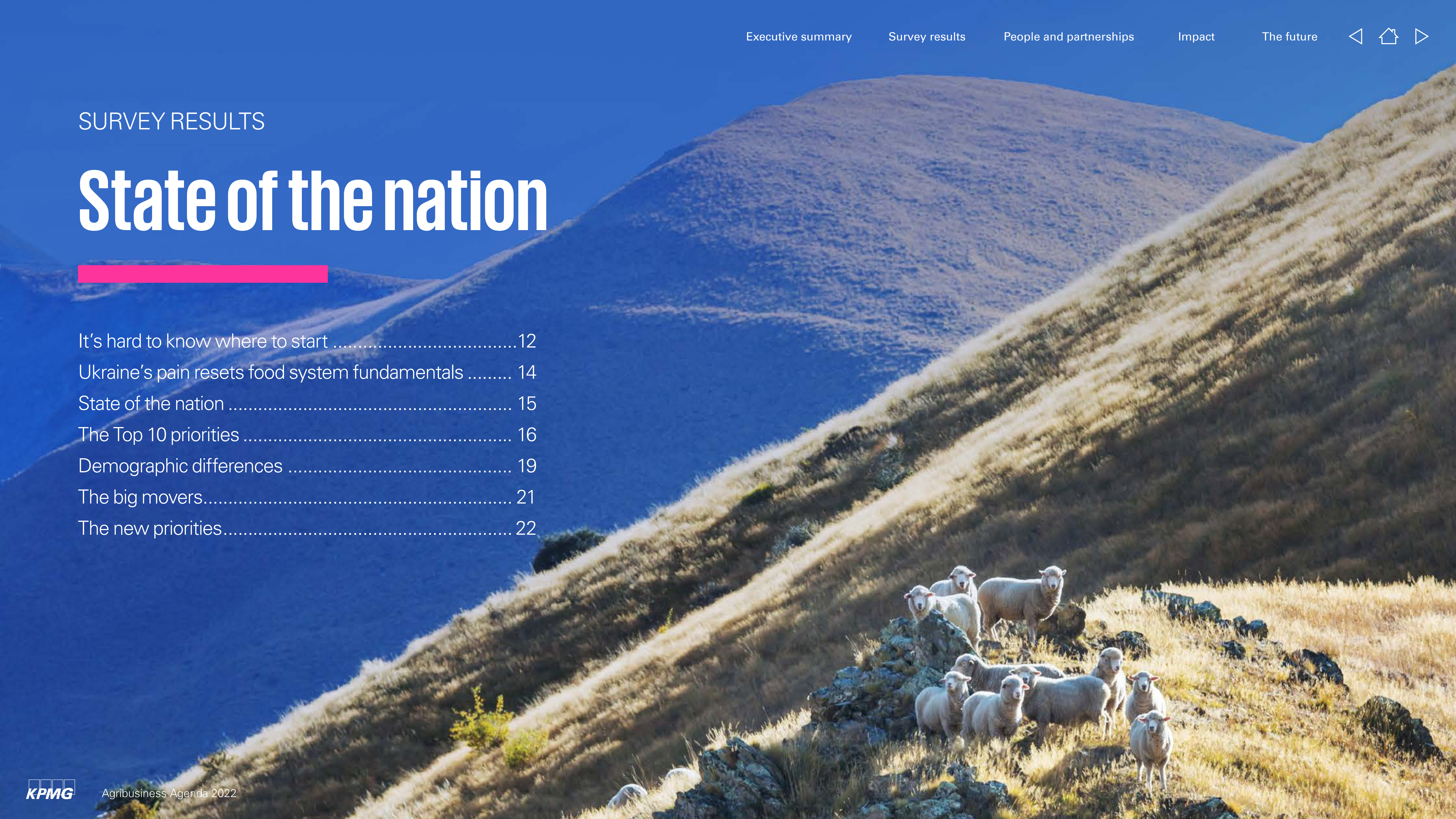
We must also choose to build our future value chains around globally relevant, science-based, nature positive, health engendering opportunities that have the potential to be scaled quickly enabling us to leverage our competitive advantage while it exists.

This Agenda, as always, reflects the conversations that we had with industry leaders and the priorities that they identified in our annual survey. It comments on many areas where we need to make choices and exercise control to create the future we aspire to. It explores where the sector is at regarding people and talent development, transformational collaboration, the status of the sector's relationships with Māori, the innovation system and the steps taken to become a better steward of our natural world.

However, there is one key element of any plausible future scenario that we might seek to explore that does not feature strongly in this year's Agenda because it did not feature strongly in our conversations. That is our current relationship with consumers and markets and the things that are disrupting them as we move into a Covid adapted world. While we have all been busy in New Zealand dealing with the juxtaposition of circumstances that have faced us domestically, the world has not stood still.

If we are to seize the opportunity to create the future we want for our country and communities, the most important thing we control now is how we reconnect with the world.

Ian Proudfoot
National Industry Leader – Agri-Food & Global Head of Agribusiness



SURVEY RESULTS

State of the nation

It's hard to know where to start

Tension and frustration are boiling over, but the focus must be on what is controllable.

At the first of our nine roundtables this year, the first comment from our first contributor, was that there is so much going on that it is hard to know where to start.

For some contributors, the start point was the exceptional returns that the industry is delivering to New Zealand and back to the farm, orchard, or factory gate. The latest update that the Ministry for Primary Industries has made to its Situation and Outlook for Primary Industries, suggests that total exports of food and fibre products for the year to the end of June 2022 will reach a record $52.2 billion, up 9% on 2021. The growth comes from the dairy, horticulture, red-meat, and forestry sectors, all delivering improved export returns.

For others, the starting point was the disconnect between prices, profitability, and the green fields across most of the country along with the uncertainty many farmers are feeling. This uncertainty is evident in Rabobank's most recent farmer confidence survey, which showed that 24% of farmers expected the agricultural economy to improve in the next year, 27% expected conditions to worsen, and 46% expected it to remain largely the same.

It was noted a lot of focus is being put on uncontrollable phenomena, like climate change, wars, and pandemics, which will not go away because we get angry about them. Others pointed to a wave of government initiatives, such as Fair Pay Agreements, unemployment insurance, Three Waters, He Waka Eke Noa, low emission vehicle rules and the immigration reset as driving increased tension, particularly as input costs surge with inflation. These frustrations have coalesced in the Groundswell movement, which through events like a 'Howl of a Protest', saw thousands of farmers and rural residents taking to the streets to protest against a raft of reforms.

There was little support during our conversations for the approach that Groundswell has taken to the challenges farmers are facing. Nobody benefits from raising problems without putting forward practical solutions. However, there was recognition that little has been done to mitigate the tsunami of rules and regulation approaching the industry that was flagged in last year's Agenda, while practical challenges like labour scarcity, supply chain disruption, covid related illness and water availability continue to make life challenging across the sector.

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Ukraine's pain resets food system fundamentals

The war is creating fundamental disruption to global systems – it could change everything

The pandemic has dominated our lives for the last two years as governments worldwide have created their playbooks to balance human and economic health to protect their population. However, an already complex world became significantly more complicated on Thursday, 24 February 2022, when Russian tanks rolled across Ukraine's border, triggering the most significant geopolitical crisis the world has faced in decades.

The immediate human cost of the conflict on the citizens of Ukraine has been catastrophic. However, with no obvious pathway to a ceasefire in the foreseeable future, the consequences of the war on the global food system will ultimately impact every citizen of the planet in many different ways:

Already stressed food supply chains will be put under further pressure as exports from Ukraine and Russia significantly reduce, increasing food prices and creating a driver for reformulating products or introducing novel new ingredients.

The impact will extend beyond plant-based products; with the cost of grains used for stockfeed increasing, the supply of animal proteins will be materially reduced, further increasing food prices, and making novel protein products more cost-competitive.

The region also exports fertiliser products around the world. The supply of crucial farm inputs will reduce; prices will increase, incentivising farmers to explore lower input systems accelerating the expected transition towards regenerative farming systems.

Ukraine was a major supplier to the UN World Food Programme, which supplies food to the world's most vulnerable people. The loss of this supply can't be easily replaced, potentially leaving more than 1 billion people facing greater food insecurity than they did last year.

China's reaction to the war has been muted, as the country has dealt with major Omicron flare-ups. However, at the time of writing, it has not directly supported Russia's military actions either. Should it do so, the political pressure to take sides between China and Western allies will grow, putting profitable Chinese markets at risk.

Supply chain disruptions experienced over the last two years will be further compounded by the war, with ports being disrupted, and more notably, the restrictions that sanctions place on ship owners using Russian crews to operate their vessels.

State of the nation

A refreshed priority survey to reflect the rapidly changing world we live in.

This is the 12th year we have completed the KPMG Agribusiness Industry Leader's Priority Survey, but with the world changing so rapidly, we have taken this opportunity to update the priority statements in the survey to ensure they remain relevant to the world we live in today.

Consequently, one item (relating to the provision of funding for an overarching industry body for food and fibre) has been removed from the survey because such a body currently does not appear to be on any agenda across the sector. If anything, the opposite is true with discussions touching on how industry governance and leadership structures could be streamlined to enable the industry to speak and engage with a more unified voice.

We reviewed the wording of each priority statement and fine-tuned the language of 11 statements to ensure they remain relevant. Last year three specific priorities arising from the pandemic (supply chain, people, and digitalisation) were included in the survey - the Covid-19 questions. These have been retained with a broader focus relating to long term priorities (resilient supply chains, aligning immigration settings with resourcing needs and investment in transformational digital technologies). Other refined priorities included:

- Freshwater quality.
- Support for land-use change.
- Enhanced collaboration with customers.
- Discussing gene-editing technologies.
- Funding rural infrastructure.
- Circular food systems.

We also added five new priorities to the survey this year, reflecting emerging issues that would help us understand how industry leaders and influencers are thinking on these matters. We have analysed the results for these new priority statements on page 22.

Overall, the average priority scores recorded across the 97 valid responses received to the survey continued to fall. The overall average fell just under 1% to 7.07 out of 10. Once again, our male contributors attached lower priorities to the items than average, while Generation-X contributors saw more priorities as urgent than they have in the past. The big movement, however, was in our millennial contributors. They saw the average priority score fall by 14%, as they appeared less likely to sit on the fence, instead preferring to attach high or low scores to each item.

Survey methodology

We once again used an online survey tool to obtain industry leaders' views on the most pressing priorities for New Zealand's food and fibre sectors. We asked contributors to rank a range of priority items on a scale of 1 to 10, with 1 being an item they consider to be of no priority for the industry and 10 requiring immediate attention and action. We received more than 90 valid responses which we categorised into demographic groups using gender and generation identifiers. As in previous years, the full survey results will be made available on the KPMG Agribusiness Agenda page of our website.

AVERAGE SCORE GIVEN TO A PRIORITY

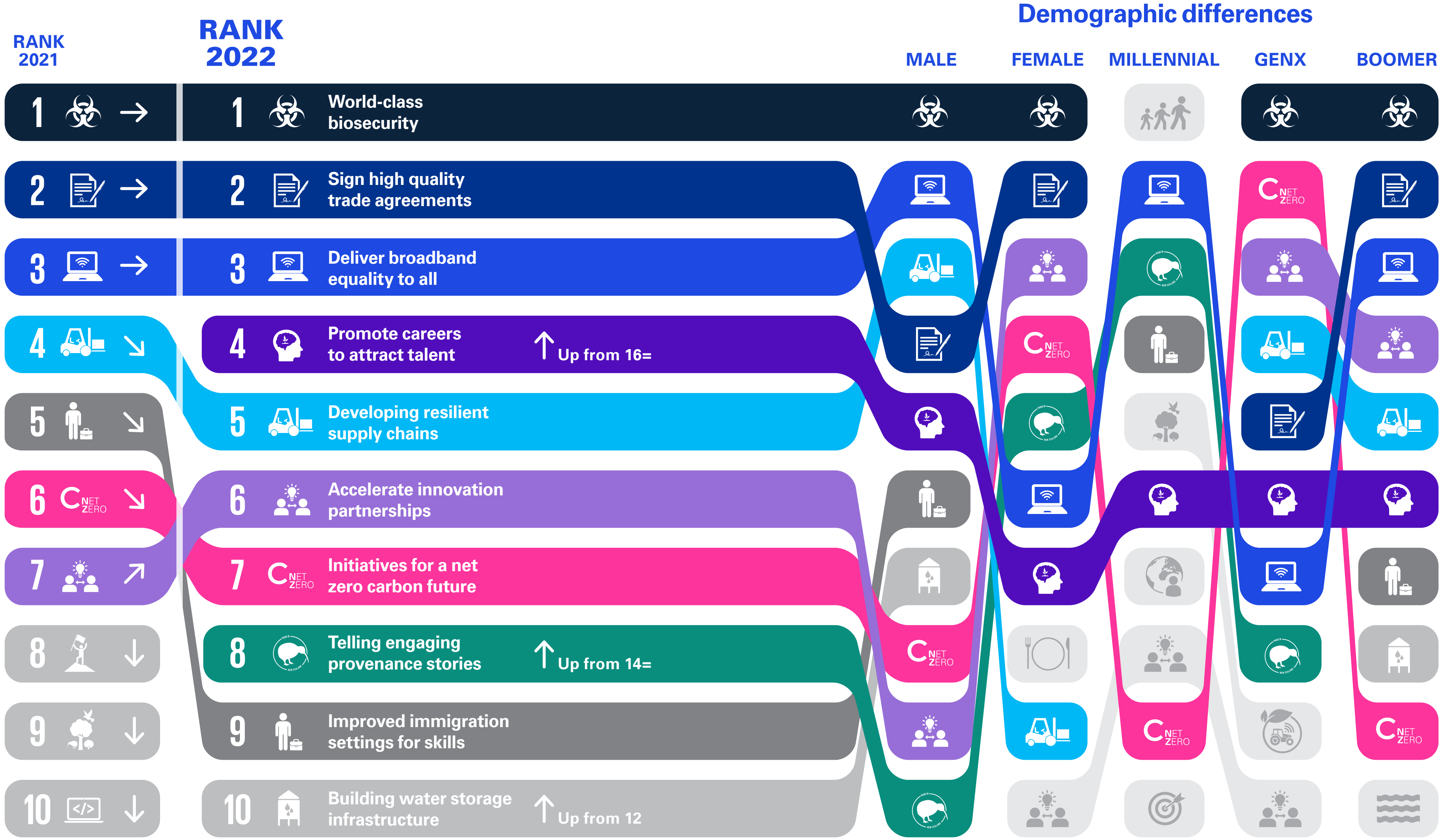
	OVERALL	MALE	FEMALE	MILLENNIAL	GEN X	BOOMER
Average Priority Score 2021	7.14	7.04	7.35	7.24	6.98	7.37
Average Priority Score 2022	7.07	6.91	7.37	6.22	7.30	6.87
Movement	(0.07)	(0.13)	0.02	(1.02)	0.32	(0.50)

The Top 10 priorities

A comparatively stable Top 10 with Biosecurity again taking the top spot.

It will surprise nobody that for the 12th year in a row, world-class Biosecurity has taken the overall #1 spot. In fact, there is no change in the top 3 with signing high-quality trade agreements and delivering broadband equality to all, again taking #2 and #3 respectively.

Compared to the turnover in the top 10 in the last few years, there are only three new priorities this year (promote careers to attract talent, telling engaging provenance stories and building water storage infrastructure), all of which have returned to the Top 10, having fallen out last year. It is also worth noting that two of the three priorities we introduced last year due to the pandemic have retained their Top 10 places with their fine-tuned wording (developing resilient supply chains at #5 and improved immigration settings for skills at #9).



Top ten priorities 2022

RANK 2022	RANK 2021	ACTION	PRIORITY SCORE 2022 / 2021
1	1	World-class biosecurity	8.76 / 9.33
2	2	Sign high quality trade agreements	8.14 / 8.41
3	3	Deliver broadband equality to all	8.13 / 8.33
4	16=	Promote careers to attract talent	7.96 / 7.49
5	4	Developing resilient supply chains	7.95 / 8.21
6	7	Accelerate innovation partnerships	7.92 / 7.85
7	6	Initiatives for a net zero carbon future	7.90 / 7.90
8	14=	Telling engaging provenance stories	7.71 / 7.56
9	5	Improved immigration settings for skills	7.67 / 8.07
10	12	Building water storage infrastructure	7.61 / 7.64

Three new entrants in the Top 10 mean three priorities dropped out. The most significant being the third of last year's Covid-19 priorities, relating to digital investment to drive business outcomes, which surprisingly has fallen to #28, despite the focus placed on the importance of digital innovation during our roundtable conversations.

Equipping leaders with the skills to lead has fallen to #17 as leaders focus on attracting talented people who can hit the ground running. The urgency of resourcing needs does not currently allow time to develop talent in- house. Support for land-use change has also dropped out of the Top 10; although being ranked at #13 it is still seen as important, particularly as the need for equitable decarbonisation pathways become more critical.

Priorities that have fallen out of the Top 10 in 2022

RANK 2022	RANK 2021	ACTION	PRIORITY SCORE 2022 / 2021
17	8	Equip future leaders with skills to lead	7.33 / 7.84
13	9	Supporting land owners to change land use	7.42 / 7.78
28	10	Digital investment to drive business outcomes	6.88 / 7.72

Biosecurity – out of sight, out of mind?

Despite retaining the top-ranking, world-class Biosecurity recorded its lowest ever priority score (8.76) this year, coming in below the 8.90 it recorded in our 2011 survey, which was conducted around the time when the full impacts of the PSA outbreak in kiwifruit were becoming apparent. It has been a relatively benign year in respect of high-profile Biosecurity incursions, with the borders remaining largely closed and good progress being made towards eradicating Mycoplasma bovis. In fact, for the first time, no substantive comment relating to Biosecurity was noted during any roundtable conversations.

It is an issue that is currently quite simply out of sight and, with everything else that is happening, out of mind for many leaders. In the past, concerns have been expressed about reaching this position as it could become more likely we drop the ball. Our history with food safety provides a parallel of what happens when a critical strategic platform for the industry is relegated to a compliance cost to be managed, (the strategic importance of food safety priority fell again this year to #19, having dropped out of the Top 10 last year for the first time since 2014 and the WPC 80 recall). It was pleasing to see the Government continuing to invest in enhancing biosecurity preparedness, with an investment of $42.9 million in Budget 2022.

Trade – use the good times to get off the commodity rollercoaster

A feature of this year's roundtables was the lack of time spent talking about markets, despite three of the Top 10 priorities relating to engagement with markets, customers, and consumers. With the issues that leaders face, it is not surprising that top of mind issues are those day-to-day, operational and regulatory challenges that have been taking up so much of their bandwidth.

We are also winning on the commodity roller coaster currently. There are customers to buy what we produce who are willing to pay good prices, but in a world as volatile as the one we live in, we need to recognise this could change quickly and dramatically.

Given everything the industry does is about delivering a food or fibre product to a consumer, be they in Aotearoa or elsewhere, the focus must remain on using every available tool to partner with our consumers substantively. It is great to see three consumer-related priorities in the Top 10 as it gives us confidence these items are not as overlooked as we would have concluded from our discussions. As one contributor noted, when times are good we should be getting off the roller coaster and building relationships that will stand the test of time, so we can worry less about what is around the next bend in the track.

Demographic differences

Only three priorities make the Top 10 of all of our demographic cohorts.

We have again analysed the survey results across five demographic cohorts Once again, the millennials prioritised a Top 10 that differed most significantly from the overall survey results, including a Top 10 that does not include world-class biodiversity for the first time in Agenda history. There are only three priorities in every cohort's Top 10; broadband equality for all, promoting careers to attract talent and initiatives to deliver a zero-carbon future.

The other noticeable feature is that multiple demographic cohorts had prioritised a national conversation around gene-editing technologies in their Top 10 in the last two years. This year, despite extensive discussions across the industry on the urgency of initiating this conversation, the priority does not feature in any cohorts' Top 10, falling in the overall rankings from #17 equal to #21. It may be that leaders considered the conversation as already initiated in completing the survey, but as discussed on page 35, this issue featured more extensively in Roundtable conversations than it has done before.

RANK 2022	ACTION	MALE	FEMALE	MILLENNIAL	GEN X	BOOMER
1	World-class biosecurity	1	1	22=	1	1
2	Sign high quality trade agreements	4	2	11=	5	2
3	Deliver broadband equality to all	2	6	2	7	3
4	Promote careers to attract talent	5	7	6=	6	6=
5	Developing resilient supply chains	3	9=	11=	4	5
6	Accelerate innovation partnerships	9	3	31=	3	4
7	Initiatives for a net zero carbon future	8	4	9=	2	9
8	Telling engaging provenance stories	10=	5	3	8	15
9	Improved immigration settings for skills	6	17=	4=	13=	6=
10	Building water storage infrastructure	7	21	11=	12	8

Higher priority (10 or more above overall)	Higher priority (5 to 9 above overall)	Higher priority (within 4 of overall)	Consistent priority rank	Lower priority (within 4 of overall)	Lower priority (5 to 9 below overall)	Lower priority (10 or more below overall)

It is not surprising that the male cohort most closely mirrors the overall Top 10, given that men still dominate leadership roles across the industry (and make up just under two-thirds of those who completed the survey). Their Top 10 features a reorganisation of the order of priorities, with the only noticeable difference in the rankings being the addition of farm system change for swimmable rivers as #10 equal. This priority was 11th in the overall rankings, consistent with last year and, as discussed later in the report, is a key focus that the industry seeks to articulate what is involved in farming in balance with nature.

Our female contributors prioritised a more differentiated Top 10, relegating improved immigration settings to source skills and building water storage infrastructure out of their top priorities. They again placed a much higher priority on working to reduce food insecurity in our communities, ranking it at #8 this year (compared to #9 last year) and well ahead of our male contributors, who ranked it #29. They also focused on building

		DEMOGRAPHIC RANK 2021	PRIORITY SCORE 2022	OVERALL RANK	OVERALL SCORE
MALE CONTRIBUTORS	Farm system change for swimmable rivers	10=	7.44	11	7.57
FEMALE CONTRIBUTORS	Work to reduce food insecurity in NZ	8	8.00	20	7.18
	Seek partnerships to bring diversity	9=	7.91	12	7.49
MILLENNIAL CONTRIBUTORS	Equip future leaders with skills to lead	1	7.75	17	7.33
	Supporting land owners to change land use	4=	7.38	13	7.42
	Recruit in market to connect with customers	6=	7.25	27	7.01
	Seek partnerships to bring diversity	8	7.13	12	7.49
	Clear market signals to trigger change	9=	7.00	22	7.12
GEN X CONTRIBUTORS	Supporting land owners to change land use	9	7.98	13	7.42
	Seek partnerships to bring diversity	10	7.83	12	7.49
BOOMER CONTRIBUTORS	Sustainably maximising the use of the oceans	10	7.52	18	7.31

partnerships to bring greater diversity into the industry. The overall impression of the female contributors Top 10 is of a desire to create an industry that is more inclusive, more willing to work with a broader cohort of stakeholders and more accountable for its impact on the climate and our environment.

For our Millennial cohort, the #1 priority is equipping future leaders with leadership skills, which contrasts with this priority being ranked #19 by the group last year. As noted previously, the Top 10 does not include world-class biosecurity. It also excludes high quality trade agreements, resilient supply chains, accelerating innovation partnerships and building water storage. The priorities that replace these in the Millennial Top 10 include:

- Supporting landowners to change land use.
- Recruiting in-market to connect with customers.
- Seeking partnerships to bring diversity.
- Using clear market signals to trigger change.

The priorities appear focused on developing an industry much more closely connected to its markets and committed to accelerating the transition to a more sustainable future.

There are few variances between the Top 10 of the Generation-X and Baby Boomer cohorts in the overall rankings. The most interesting variance thrown up by these cohorts was the replacement of telling provenance stories to the world with sustainably maximising the use of our oceans in the Baby Boomer Top 10. Given the transformational potential inherent in our oceans it is exciting that this cohort, the members of which are often occupying senior governance positions, is considering this area a high priority.

We hope we will now see the boards that they are part of being willing to lean into the opportunity inherent in the oceans and start making some exploratory investments.

The big movers

15 increases, 23 decreases but it is the priority with the same score that is most notable.

This year, there were sizeable increases and decreases in priority scores across the survey. We saw 15 priorities record an increase, one with no change and 23 items which have recorded decreases.

The most significant increase, 9.86%, was recorded for restricting foreign land and agribusiness ownership, which remains the lowest ranked priority even with a large increase. This is a priority that, given the low score it records, varies significantly every year. We heard no evidence during our conversations that there was a material change in the industry's preference for a more open foreign investment environment. That said, concerns were raised about the purchase of land by overseas investment for carbon farming purposes, so it will be interesting to see how the score of this priority evolves in the coming years if the carbon farming trends continue to accelerate.

While there were many priority score decreases, the biggest fall was recorded by one of the fine-tuned Covid-19 priorities introduced last year, relating to digital investment to drive improved internal and external outcomes. Last year the priority referred specifically to digital acceleration to connect with customers. This year the priority referenced broad digital investment to improve internal operation and external customer engagement, effectively lifting the digital capability of an organisation. As noted previously, it is surprising to see such a large fall in the score of this priority, given the future for the sector is undoubtedly digital.

The priority which recorded the same score in 2021 and 2022 was accelerating initiatives to transition to a net-zero future (ranked #7 this year). Given increased recognition of the urgency of the climate challenges that we face, it is surprising that this priority did not record a significant increase. In fact, it went back one place in the overall ranking by standing still. The perspectives of industry leaders around decarbonisation are discussed on page 30.

LARGEST INCREASES IN PRIORITY SCORE	RANK 2022	RANK 2021	SCORE 2022	SCORE 2021	CHANGE ON 2021
Restricting foreign land and agri ownership	44	40	5.53	5.03	9.86%
Promote careers to attract talent	4	16=	7.96	7.49	6.26%
Work to reduce food insecurity in NZ	20	27	7.18	6.80	5.51%
Recruit in market to connect with customers	27	29	7.01	6.70	4.63%
Creating an open access data platform	35	35	6.45	6.18	4.43%

LARGEST DECREASES IN PRIORITY SCORE	RANK 2022	RANK 2021	SCORE 2022	SCORE 2021	CHANGE ON 2021
Enable intergenerational levy investment	43	36	5.84	6.12	(4.58%)
Improved immigration settings for skills	9	5	7.67	8.07	(4.96%)
World Class Biosecurity	1	1	8.76	9.33	(6.11%)
Equip future leaders with skills to lead	17	8	7.33	7.84	(6.51%)
Digital investment to drive business outcomes	28	10	6.88	7.72	(10.88%)

The new priorities

The need to seek diverse perspectives stands out amongst the new priorities of 2022.

The survey included five new priority statements this year. The highest ranked priority, with an overall rank of #12 (and making the Top 10 of three cohorts), related to seeking out and developing partnerships with organisations that bring diversity of thought, knowledge and action to the food and fibre sector. We included this priority because our work suggests the sector will be more successful if it is able to look at the world through many eyes and engage with varied stakeholders across the food system. It is pleasing industry leaders have recognised this as important, particularly at a point in history when there are often multiple interpretations of the 'facts' in front of us.

RANK 2022	ACTION	MALE	FEMALE	MILLENNIAL	GEN X	BOOMER
12	Seek partnerships to bring diversity	15=	9=	8	10	20
18	Sustainability maximising the use of the oceans	14	23=	20	21=	10
34	Managing geopolitical risk attached to China	35	28	25=	31=	37
39	Aspiring to lead in bioproducts globally	39	38	41	40=	29
42	Requiring lending to be made sustainably	43	34=	31=	42	41

Higher priority (10 or more above overall)	Higher priority (5 to 9 above overall)	Higher priority (within 4 of overall)	Consistent priority rank	Lower priority (within 4 of overall)	Lower priority (5 to 9 below overall)	Lower priority (10 or more below overall)

It was also pleasing to see leaders placing a high priority on sustainably maximising the use of our oceans.

As discussed on page 36, the opportunities to add resilience to our food system and to supercharge our decarbonisation efforts, increase the need to have a much bolder vision and plan for how we unlock the full potential of oceans for the benefit of every New Zealander.

Other questions included a priority related to actively managing the geopolitical risk attached to China. It was surprising to see this only being ranked #34 given the level of uncertainty surrounding China's zero Covid strategy and its relationship with Russia.

It was also surprising to see the aspiration to lead in bioproducts only being ranked #39, despite the size of the opportunity available to New Zealand and the need to create more circular solutions to manage and extract value from the biomass we grow (this is discussed further on page 40). It may be for many leaders that waste biomass is not a significant issue for their organisation currently and there are other priorities offering easier opportunities to capture value before they turn their minds to biomass.

The lowest ranked of the new priorities was requiring all lending to be made sustainably which came out at #42, suggesting that leaders believe the decision of an organisation to enter a sustainability linked debt product should be a commercial one between bank and lender, rather than being mandated as a lever to accelerate our transition towards more sustainable outcomes.

PEOPLE AND PARTNERSHIPS

Building the right team

Accelerating towards the future of work

Labour shortages will change the way the sector works forever.

Given the labour challenges organisations currently face across the country, it's not surprising that we noted comments on people issues during every roundtable. It was acknowledged that we cannot be food secure if organisations don't have the labour (and more importantly, talent) certainty they need to survive and thrive - something most contributors indicated we are not close to at this time.

Good people keep the industry's engine running day-to-day. With all the distractions of the last two years, it can be easy for leaders to fail to regularly acknowledge their teams' contributions and the talents that each of them bring to their organisation. While some roles have traditionally been considered unskilled, our contributors stressed that whether it is picking fruit, pruning vines, or milking cows, doing these roles well to support our premium market positioning means that every person in their team brings their skills and experience to work every day. Key talent exists throughout an organisation, and the industry needs to be proactive in recognising this.

Delays in decision-making around the Recognised Seasonal Employer (RSE) scheme have recently frustrated the industry. While acknowledging the risk associated with reliance on migrant labour, it was suggested the long-standing relationships that employers have with the Pacific Island communities they work with means RSE workers are anything but transient. The scheme is critical to these communities, and underpins New Zealand's geopolitical relationship with Pacific nations. The call was made for decisions on the future of the RSE scheme which will provide long term certainty for workers and employers.

A strong theme in this year's conversations related to the role automation will play in removing repetitive tasks that can (or will be able to) be performed by robots. It was apparent that investment in this area has accelerated in the last year, particularly in packhouses and processing facilities. While the timeframe for commercial application of robotics on orchards remains closer to 2030, higher labour costs mean the economics now make sense. Automation will transform the industry, with one commentator suggesting it could remove 50 to 60% of shift roles, ultimately making the change self-perpetuating.

Motivating and leading a new generation of talent needs leaders with the ability to listen and connect with their teams in different ways.

The future of management is inclusive, enabling people across an organisation to bring their authentic selves and ideas to work every day.

Recruiting and retaining talent

The industry is battling every sector of the economy for talent – new approaches are necessary.

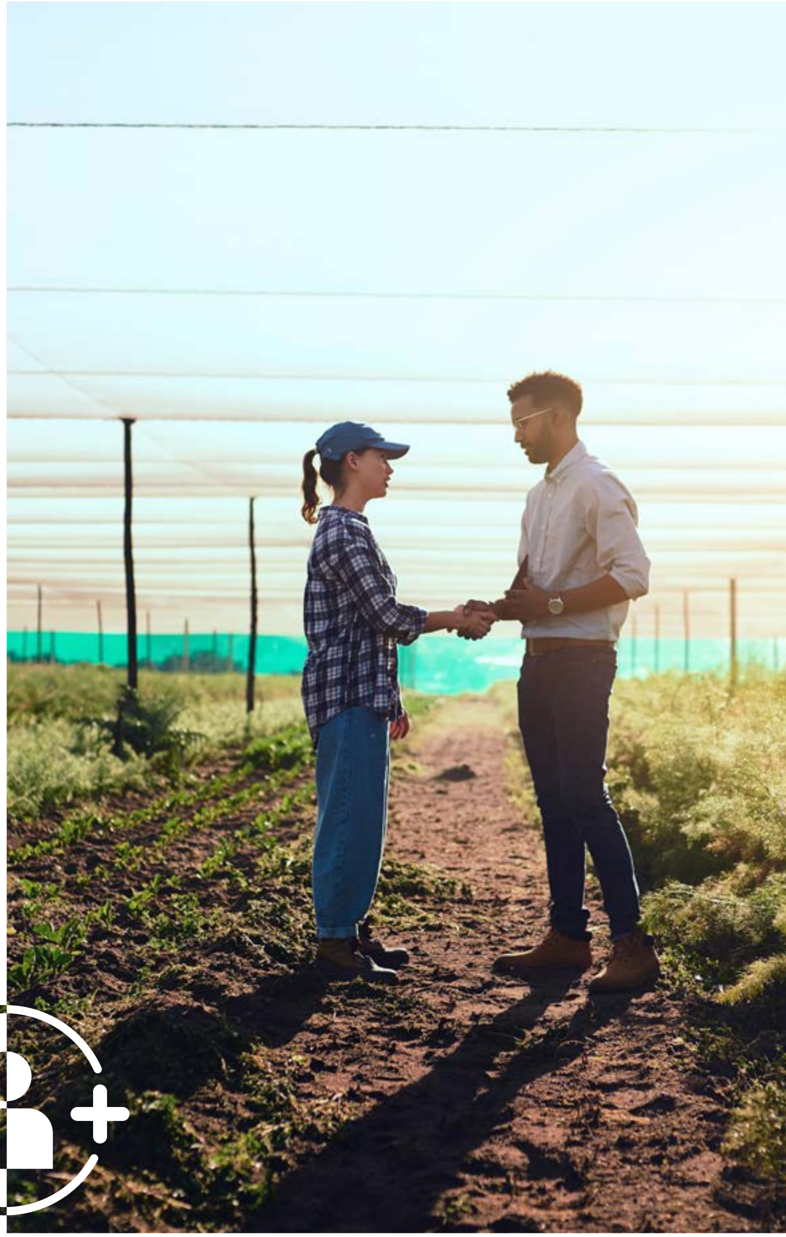
Border closures have created significant labour shortages. The tactical responses to these challenges have provided some respite to labour shortages, particularly MPI's Opportunity Grows Here campaign, which has presented a pan-industry perspective of career opportunities across food and fibre. While some sectors were reticent about joining the initiative, concerned it was not exclusive to their sector, there is now wider engagement, and sectors are benefiting from promotion to a broader audience than any individual campaign would have delivered.

The industry has work to do to attract a new generation of talent. The point was made that urban kids don't aspire to join the industry; the jobs are perceived as hard rather than sexy. Connecting with students on topics they are passionate about – food security, environmental regeneration, animal welfare – is critical. It is necessary to show that the sector offers the opportunity to turn a passion into a fulfilling career. This requires stronger links between business and schools. How can companies endow agribusiness teachers' positions, provide internships and sponsor schools that have demonstration farm facilities? The industry needs to invest in its future talent pipeline urgently.

A key issue raised relates to the tension between the industry's desire for seasonal flexibility against a potential employee's aspiration for a full-time role. A contributor talked about opportunities to transform low-cost seasonal work into full-time work with more comprehensive benefits through rethinking how and when work is done across the year. They noted that the industry has historically accepted a risk around seasonal worker availability. The last two years have demonstrated life when seasonal workers don't appear. Creating substantive jobs that lift people out of poverty is the right thing to do, but it also mitigates a risk that has the potential to derail the industry's future.

The need to grow people already in the industry through enhancing their skills and capability was raised by contributors.

With uncertainty surrounding how Primary ITO will integrate into Te Pūkenga, the new vocational training entity, there is less certainty about how skills learning will evolve. A review of the entity's structure reveals limited sector experience amongst governors and leadership, raising questions about its ability to understand the industry's needs at a critical time. Consequently, some contributors indicated that given the importance of investing in their talent, they are exploring ways to enhance their employee experience by providing their people with technical and life skills programmes in-house, rather than relying on the industry solutions they have looked to in the past.



Partnering substantively with Māori

Benefits will accrue for all from greater Māori engagement in the sector's leadership.

With the debate around the intention of some of the Government's proposals to introduce Māori co-governance in the media in recent months, it was not surprising that the issue arose during our conversations. Many contributors qualified their comments with the acknowledgement that they do not yet have a detailed understanding of the proposals being put forward, but there was broad recognition that building more profound, more substantive partnerships with Māori will benefit all New Zealanders.

It was suggested that efforts to date to partner with Māori have usually been half-hearted and driven by a desire to tick a consultation box. A contributor indicated that attempts to involve Māori in co-creating solutions to critical challenges, like decarbonising the food and fibre sector, have failed mainly because the mainstream participants have been largely focused on finding solutions that enable them to keep doing what they have always done.

When you take a 100 year or more view to assess the implications of an action, you will reach different conclusions on how land is used than if you are thinking about the renewing your levy arrangements in three- or five years' time. Contributors highlighted that Māori agribusinesses are leading in bringing the next generation of their people into the sector and can be expected to lead in adopting climate-resilient farming practices. If the industry wants to truly partner with Māori, then industry leaders need to open their minds to doing things in fundamentally different ways or pass the baton to a new generation of leaders willing to take a longer-term perspective.

Allowing time to really understand the perspectives of Mana Whenua and involving them in decision making will enable us to get the best long-term outcome more consistently for the environment and the community.

This will require changes in how decisions are made so that those that represent their people have the necessary time to seek input from their communities.

The point was made that the markets we operate in are moving faster than they have ever done, and timely decision making is essential to capture opportunities. The accountabilities of governance require all governors to act in the best interests of the entity they lead. Consequently change will require compromise from all. Industry leaders will need to be open to changing their business model, while there will be a need for traditional Māori consultation processes to evolve to enable their representatives to contribute constructively at a faster cadence than they have traditionally worked to.

Transformational collaboration

We collaborate well in a crisis – why can't we collaborate like this every day?

It currently feels every issue has the potential to become polarised and political, with people taking staunch positions at either end of a continuum, whether it relates to masking up, gun control or climate change. Discussion around the future of forestry has become a debate around trees or no trees, missing all the subtleties of the benefits and limitations of thoughtfully planned forestry.

Despite this polarisation in perspectives, we instinctively collaborate when faced with a crisis. Over the last two years, the industry has come together to find ways to work safely and productively through the pandemic. A recent example is the efforts of the kiwifruit sector to collectively redesign the season rules to optimise packhouse productivity and enable as much fruit as possible to be picked and packed, given the labour constraints faced. We also witness broad collaboration when faced with an immediate crisis; one contributor reflected on the response to the recent East Coast floods, noting that we don't care about what background we come from at times of real pressure. Everybody just works for the good of all.

The more time spent on industry politics, the more enthusiasm we suck from ourselves and others, and the more the emotional connections to the things that matter the most break down. While there are great examples of collaboration, they are the exception rather than the rule.

Contributors suggested that we are not as collaborative as we think and most definitely not as collaborative as we need to be.

Transformation means doing things in radically different ways. It comes with a high cost and with a greater risk of failure. In the short term, it incentivises organisations to hold onto conventional practices for as long as possible. However, numerous contributors suggested that we should be accelerating efforts to think beyond today's issues and seek to solve tomorrow's big challenges now, while times are good. We will have an arsenal of game-changers up our sleeves to grow markets, respond to new products and meet environmental obligations when needed.

One contributor pointed to the red meat sector renaissance as an example of transformational collaboration. A new generation of leaders, increased recognition of the sector's role in society and acknowledgement that more of the same is not enough, have made conversations on opportunities where combining scale might unlock wider benefits for all, possible.

Enable transformational innovation

We need a science system with a mission and secure funding to transform our food system.

The Government funded science system structure is under review, with decisions pending on Te Ara Paerangi (the Future Pathways programme led by MBIE). This uncertainty around key elements of the national innovation system was raised in several conversations. The challenges of the existing system have been discussed in previous Agendas; the competitive nature of the funding, research overlaps between institutes, limited connection of research to commercial need and a failure to commercialise much of the science that is done. There is uncertainty about how the Government decisions will respond to these issues.

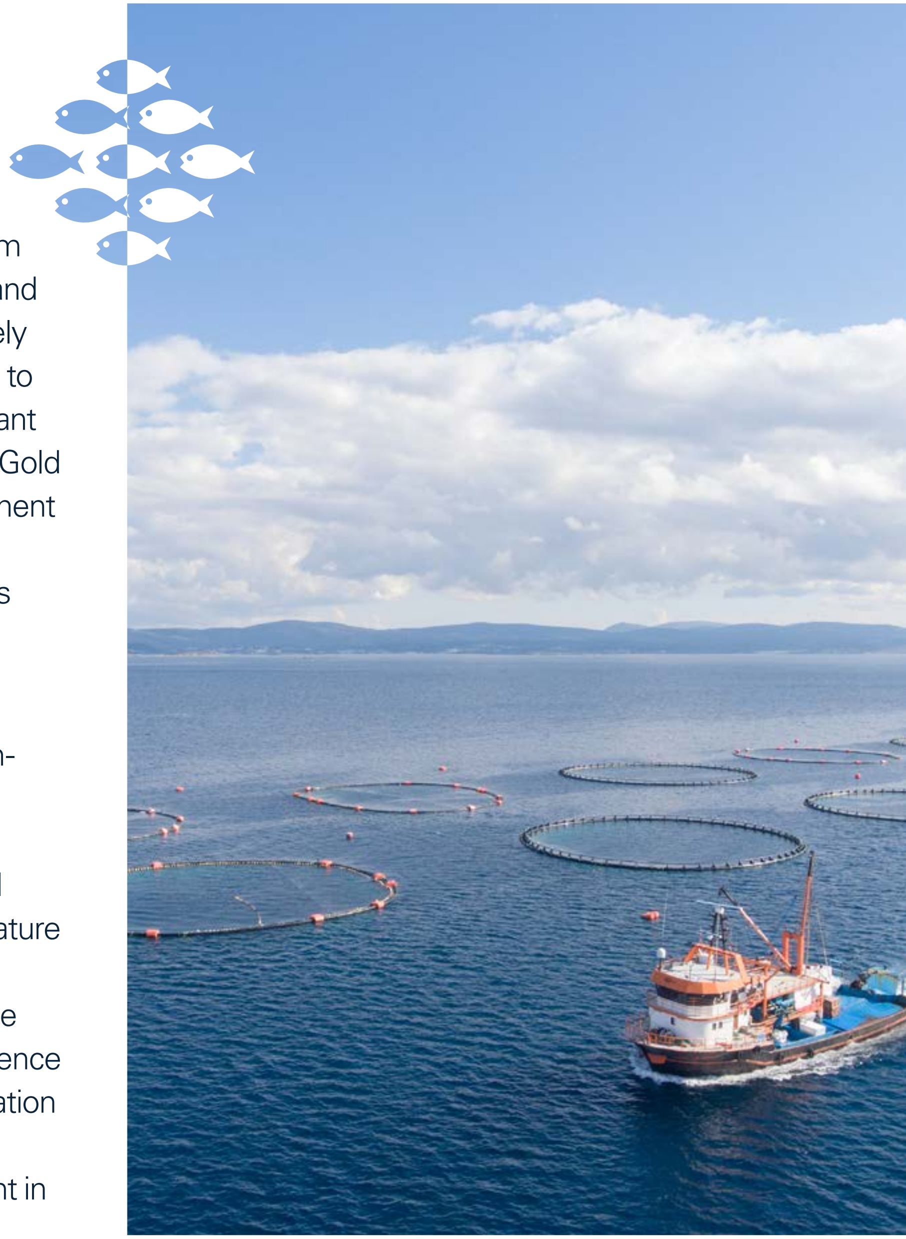
Innovation programmes deliver step changes when sectors work in a joined-up way, with commercial, industry-good and science organisations partnering to achieve a common goal. What is also clear is that success depends on committed funding so that a programme can explore all avenues associated with the objective. The challenge is that transformational innovation comes with risk. This is something publicly funded organisations tend to approach with trepidation, given that a publicly funded programme that fails to deliver can quickly become political theatre.

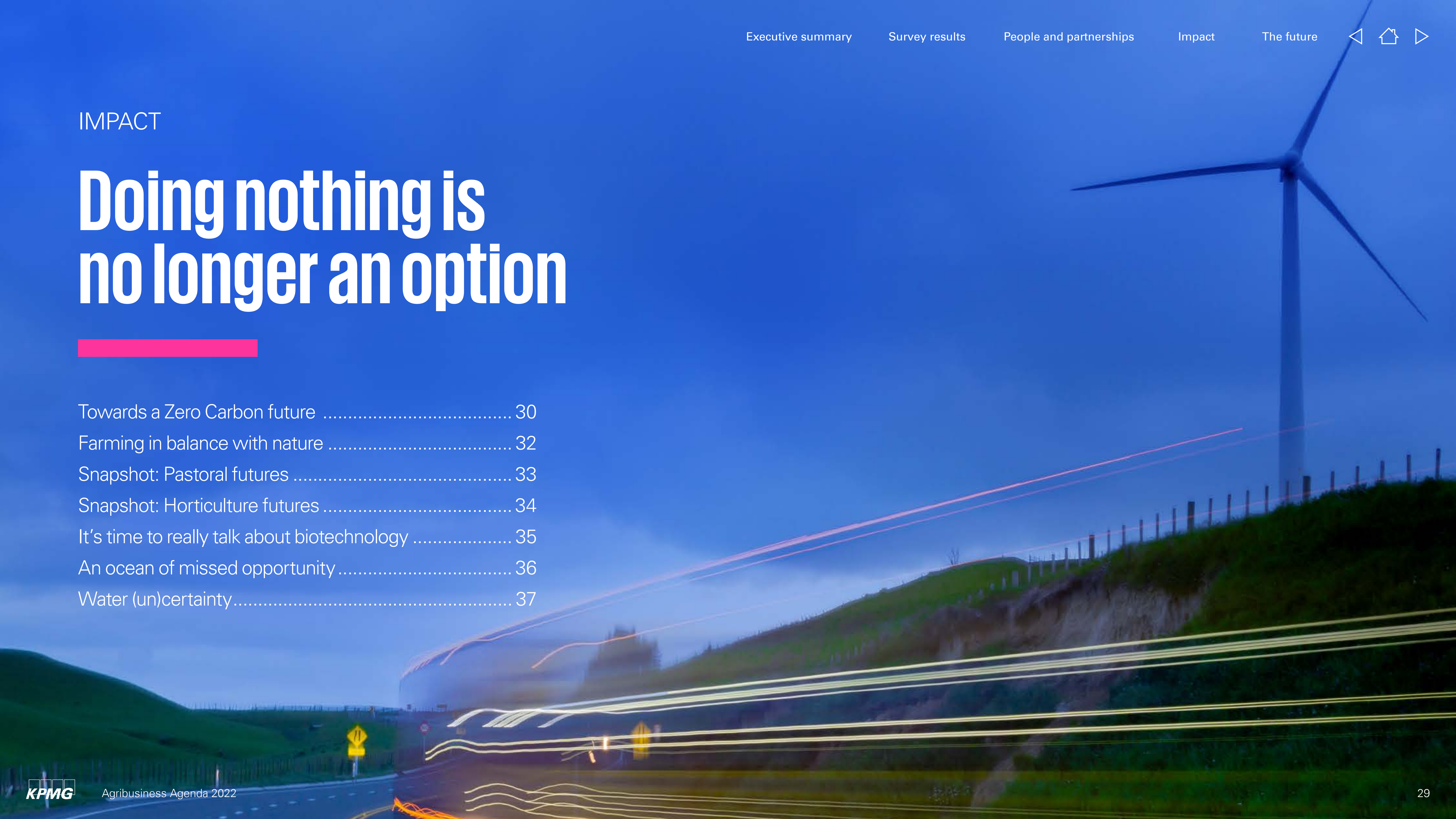
Contributors suggest the system review should be focused on providing science organisations with the confidence to invest alongside industry in transformational innovation programmes.

The big bets that will set New Zealand up for the next century are; open ocean aquaculture, ocean-based plants, zero-carbon dairy genetics, bioproduct innovation and the like.

This means that our science organisations require the funding certainty to enable them to invest in these long-term programmes and an ability to sign contracts that will ultimately reward the taxpayer for the risk connected to their investment. The license payments Plant and Food Research receive on the G3 SunGold kiwifruit reward the taxpayer for its investment into the kiwifruit cultivar programme and demonstrate that risk and reward sharing is possible.

The National Science Challenges have highlighted the benefits of taking a mission-led research approach. The funding for the challenges expires in 2024, meaning there is no certainty that mission led science will continue beyond this date. The complex nature of our food system lends itself to taking an integrated, mission-led approach to science that would connect production system science with health and nutrition, novel food innovation and other themes to seek innovations that deliver better outcomes to every participant in the food system.





IMPACT

Doing nothing is no longer an option

Towards a Zero Carbon future

Weather challenges are making climate change real; acting with urgency turns risk into opportunity.

A key point made in many conversations is that the need to decarbonise the industry is not coming from government policy. It is being driven by the expectations of our consumers and our markets. More importantly, it is being driven by the changes we are experiencing in our climate.

One contributor noted that their farming business has been materially impacted by the weather over the last year; crops have been lost when the economics were looking good, harvests have got later making weather more volatile at key times, and production is migrating south down the country. Their conclusion: weather changes are making farming ever harder to navigate. This perspective was supported by many contributors, who talked about the preparations that they are making to enhance the climate resilience of their farming systems and what they expect they will have to do to change into the future. There was wide acknowledgement that doing nothing is no longer an option.

While submissions have been made on the He Waka Eke Noa proposals, the primary focus of our conversations was not the expected outcomes from that process but the practical actions that need to be taken now to enable the industry to convert the climate challenges being faced into opportunities. Significant time and energy to date has been invested into discussing how emissions should be priced and how the industry might be integrated into the Emissions Trading Scheme. The perception is that, rather than invest our time and energy into reducing emissions, priority is being given to finding ways to retain as much of the status quo as possible.

Our contributors were supportive of more ambitious action.

Measure and report

To start any journey, you need to be clear on where you are and where you are going. For a decarbonisation journey that means being clear what emissions are today, calculated using a transparent standard the world recognises (such as the GHG Protocol) at the most appropriate level for measurement and reporting (which contributors believed will ultimately be the farm, orchard, trawler, cold store, or processing facility). It was stressed during several conversations that He Waka Eke Noa must set a clear direction that emissions will be required to be measured and reported at the farm level.

Incentivising those that do the right thing

There is not a single pathway to decarbonisation of a farm, orchard, or any other food growing, collecting, or processing business. Equally there is not one pace at which organisations will move towards a lower-emissions future. It was highlighted that recording emissions at the farm level would enable incentive structures to be introduced, connected to market attributes of a product, that reward those that are prepared to take action to enable them to move faster along their decarbonisation track.

Accelerating access to transformational technologies

A key theme across our conversations on decarbonisation was the need to move quickly to fill the industry's toolbox with technologies that will enable farmers to reduce emissions, both carbon dioxide and methane, from their farming system. The range of technologies that are required is immense – animal genetics, pasture cultivars, feed supplements, wearable technologies for animals, data measurement tools, artificial intelligence applications, farm vehicles, irrigation and effluent management systems, off-grid energy options amongst many any other needs. Farmers also need to be supported to implement these tools within their farming system and in some cases they will need specific assistance to enable them to transition their land use to system which is less intensive on the climate.

It was pleasing to see in Budget 2022 funding of nearly $339 million to accelerate the development of high-impact technologies and other practices to reduce emissions including the establishment of the new Centre for Climate Action on Agricultural Emissions. This is a very significant down payment for the innovation that needs to be done; however, much more funding will be required over the next two decades. The point was made that the scale of the investment needed to provide all the technology that will be required across our diverse food and fibre production systems is beyond the funding ability and capacity of New Zealand's science system. It was suggested that it is critical that we build international partnerships and attract foreign investment so we can scale our efforts to create a zero-carbon future as quickly as possible.

Accessing (sustainable) finance

The industry will need the support of financiers to fund its decarbonisation journey. The banks themselves also need to head towards net zero by 2050, which means that their lending portfolio will need to be net zero, including the food and fibre portfolio. While banks are currently viewing sustainable lending facilities as a commercial negotiation between borrower and bank this will change over time, and banks will only be prepared to lend when the borrower has a clear pathway to net zero.

As this pathway becomes clearer those farming businesses that are willing to lead in decarbonising their business will have opportunities to access preferential financing deals.

Farming in balance with nature

Land uses that are economical only through depleting nature will not be allowed to continue.

A key threat to the industry currently is uncertainty about what the future look likes for farmers and growers; they are not yet clear on what their carbon number means, whether water will be available, or whether they will be allocated the RSE people they need. They feel threatened because what has been OK historically is not going to be acceptable in future. Fundamentals on which they have built and operated their business are changing rapidly.

While some hold the Government accountable for change, contributors were clear that change would be happening with or without regulation as it is what our communities and our consumers are demanding. As one contributor suggested, farmers face a stark choice: adapt or ultimately die. They noted the one place we cannot afford to end up is the grey zone between low cost, industrialised farming, and emerging modern, regenerative food production systems, which is the space where we have carved out a comfortable (and largely profitable) niche.

There was a consistent message from contributors that we have maxed out the planet's capacity to support us using current practices. While it was recognised that change is hard, the need to reframe the mindset that surrounds it was considered critical, from being driven by regulation to being the stepping stone to securing our place in markets that want high-attribute, sustainably produced, nature-positive food and fibre products. This reframing of change offers the best opportunity to keep the work of past generations from being planted in trees and retain a thriving food and fibre sector into the future.

It was highlighted that farming in greater balance with nature will create opportunities to monetise ecosystem services that farmers provide to the wider society. Being able to do this effectively does require the right type of production being undertaken in the right place.

For some this will mean making difficult decisions about the products they grow and the farming systems they use across all or part of their land.

As major system change often requires significant investment, it was noted that regulatory consistency, particularly from councils, will be critical. This will provide the certainty needed to transform how we utilise and regenerate the land, soils, water, and oceans that the industry relies on to create wealth for the country.

Snapshot: Pastoral futures

Diversification of pastoral farmland will be necessary for economic and environmental resilience.

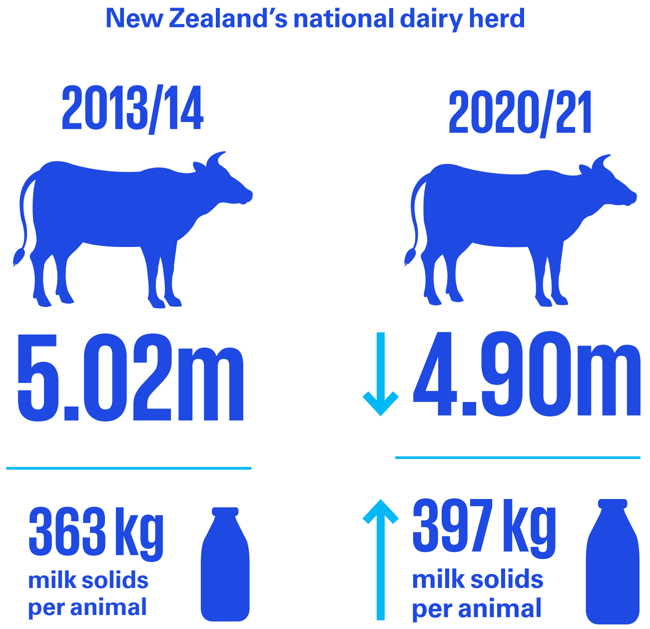
Higher costs for everything from labour to fuel, energy, fertiliser, animal medicines, and stockfeed will be the reality for pastoral farmers in future seasons (even PKE prices will increase as it becomes an affordable fuel option in international markets). This step-change in operating costs, together with significantly higher interest rates, will have a material impact on the economics of pastoral farming businesses, with one contributor suggesting this season's profitability could mark a high point for the industry. Current product prices will need to rise above the already high market prices today to maintain margin and profitability in the future.

Economics will likely become a greater driver of change for pastoral farmers in the coming years.

Some of the changes in systems may be visible - for instance, farmers diversifying their land use to grow crops, including potentially more of their feed requirements, as they look to integrate their feed and grazing supply chain. It may result in farmers rethinking how they utilise their dairy support units, an issue which will be brought into even sharper focus as the intensive winter grazing regulations come into operation as part of the National Environmental Standard on Fresh Water.

Contributors suggested that the combination of challenging economics and environmental regulation could well accelerate the reduction in the national dairy herd, which peaked in 2013/14 at 5.02 million cows and has slowly drifted down to 4.90 million in 2020/21 according to DairyNZ and LIC's New Zealand Dairy Statistics report.

The pastoral sector has continuously lifted productivity over the last few decades (by way of example, milk solid production per animal reached a new high of 397 kg per in 2020/21); however, the annual increase has generally been incremental. Contributors suggested this rate of gain in productivity will not be sufficient in the future to sustain the pastoral farming sector. There is an urgent need to deliver whole of system innovation, with turnkey solutions that integrate biological, physical, and digital elements to enable farmers to deliver exponential gains in productivity. Output gains of 1% need to become 5 or 10% a year even as the use of farm inputs fall. Only with a step-change in productivity will farming businesses deliver an economic return from raising animals, making growing food a better option than planting the land with permanent forest crop for ETS credits.



Snapshot: Horticulture futures

Sort labour, water, and domestic produce supply to enable significant long-term growth.

The horticulture sector has been a growth engine of New Zealand's food and fibre exports over the last decade, and expectations are that strong growth will continue. Researchers suggest that about 8% of the land suitable for horticulture activities across Aotearoa is currently used for horticulture, meaning there is no land constraint. The growth in kiwifruit plantings has demonstrated no shortage of capital for an economically proven proposition. The sector has shown its ability to build consumer-led businesses.

The key risks to the sector raised in our discussions, water and labour availability, are significant enough to be giving investors cause for concern, resulting in them slowing the pace of investment. These issues are canvassed elsewhere in the Agenda but they are resolvable through a combination of regulation, infrastructure, and innovation.

Consequently, the key question posed on the sector's future is not whether it will continue to grow but where the growth is going to come from.

Will it all come from kiwifruit and apples, the existing globally scaled sectors? Will it come from growth across the second-tier sectors; avocados, summerfruit, potatoes and onions or emerging, new sectors? One contributor suggested growth would come from sectors that are prepared to back themselves to create differentiated offers in the market that consumers will pay a premium for. This means that growth will come from sectors that have leaders with the energy and appetite to make this investment. Our contributor suggested that the future of horticulture is constrained only by its ability to attract the right leaders.

The sector is also very attuned to domestic consumer concerns around the current pricing of fruit and vegetables in New Zealand. Recent price inflation has attracted significant media attention. There was a feeling that consumers tend to accept price increases across many product categories but expect their fresh produce prices to remain static. The cost of growing food has increased markedly in recent years, meaning grower margins are being squeezed. While the export sector has substantial growth prospects, many domestic produce growers lack financial resilience and question why they keep growing. Ensuring these growers are viable and able to supply the domestic market with affordable produce is critical to protecting the horticulture sector's licence to operate, which underpins its export growth.

It's time to really talk about biotechnology

There is now broad support for a comprehensive conversation on gene-editing.

We have done well over many decades in advancing genetics in both animals and plants using traditional and widely accepted breeding techniques. There is no question that gains will continue using these techniques, given our scientific organisations' deep knowledge and capability in this space. The question raised during many of our conversations this year centred on whether our traditional approach will deliver the step gains we need fast enough to retain our ticket play and remain competitive into the future.

It was recognised in many roundtables that the regulatory environment and consumer acceptance of modern biotechnologies, like gene-editing, is rapidly evolving around the world. While there is less certainty about whether it will be possible to deploy a gene-edited cultivar in a branded, consumer-focused product, there are no questions that genetic technologies are already embedded in many commodity product streams.

It was also noted that the technologies could be used in ways that will enable us to better manage the environment (controlling wilding pines being an often-cited example), ultimately making New Zealand a more sustainable food producer.

While the general mood of our contributors was that the conversation around biotechnology needs to be ignited as a matter of urgency, as was proposed by the New Zealand Productivity Commission, there was recognition that the issue remains polarising. One contributor suggested that genetic technologies currently feel like the nuclear-free conversation for the 2020s. Some believed genetic technologies would undermine our competitive advantage, impact market access, and place our environment at risk. Others in favour of using the technologies suggested that non-adoption could have the same impacts on our food and fibre sectors.

Many contributors had no strong opinion in favour or against using the technologies, but they were very clear on the need for clarity on New Zealand's direction of travel. Consequently, there was broad support for a comprehensive national conversation on the diverse technologies currently categorised as genetic engineering, informed by science, and supported by detailed market analysis and an education programme for the wider community. It was also recognised that Māori must be central in shaping this conversation, given the complexity of the issues when viewed through a te ao Māori lens.

An ocean of missed opportunity

Our oceans should be a driver of our future, but we need to remember they exist.

It has been a tough year for aquaculture. It is one of the few food and fibre sectors that is yet to recover to pre-pandemic activity levels. The sector is not only reacting to the labour and supply chain challenges facing all organisations but is having to open new channels to market (to reflect changes in where consumers eat their products) and, most significantly, adapt to rising water temperatures, a lead indicator of our warming climate.

Through wild catch fishing, deep water aquaculture, algae, and sea plant cultivation, our oceans offer a massive opportunity to enhance domestic and export food systems and make a material contribution to decarbonisation. There is no dispute about the potential in our oceans (which make up 93% of New Zealand's exclusive economic zone), but there is little progress in unlocking the opportunity. Regulatory challenges make consenting water space prohibitively expensive. There are treaty questions that need to be clarified regarding the rights of Māori (and consequently other New Zealanders) to explore, develop and commercialise the opportunities that exist in deep-water ocean areas.

While uncertainty persists, the chance to lead the world in intelligent, sustainable management of our oceans is being lost as investors pass on the opportunity, favouring sectors that provide greater certainty. Numerous contributors talked about the scale of the opportunity inherent in the oceans, an opportunity which dwarfs the $3 billion aspiration for 2035 included in the 2019 aquaculture strategy, but they also highlighted the size of the investments needed to unlock this potential. It was suggested that a $1 billion research investment into ocean management and development could make the country climate positive in 15 to 20 years while enhancing social licence and delivering more food for domestic and export consumers.

Policy uncertainty surrounding our oceans must be addressed urgently. Practical collaboration between Māori and commercial operators should be supported so that investors, who are comfortable with risk and have the capacity to write the necessary cheques, can lead the country towards a bigger, 'bluer' future that benefits all New Zealanders.

The silence in New Zealand's decarbonisation strategy on the role that our oceans play must also be addressed and this should be a key scientific mission, given it can be a transformative driver of our future.

Water (un)certainty

While water has taken a backseat this year, contributors believe the big debates are still to come.

The last few months have seen floods on both the East Coast (North Island) and West Coast (South Island), while the southernmost regions of the South Island have been in a deep drought. Another year, another series of extreme weather events making news and highlighting how important our approach to capturing, storing, and managing water across the country is to long-term industry resilience.

Several contributors suggested now is the time for a 'think big' perspective on water storage. The suggestion was that we need to store as much water as possible to support farmers looking to sequester carbon in their soil and iwi looking to optimise the use of their land, while providing the wider community with improved water resilience.

Our changing climate does not provide us with decades to make decisions on water storage; the point was made that now is the time for action.

Several contributors suggested the key driver underlying this need for urgent action was the impending replacement of the Resource Management Act (RMA). The Government has started work on the Natural and Built Environments Bill that will replace the RMA, with concerns expressed that the new legislation could make the construction of new water storage and irrigation infrastructure more challenging. Concern was noted about the lack of MPI representation on the Executive Strategic Planning Board that has been established to oversee the development of the Bill.

Concern was also expressed about the impact Three Waters will have on the industry's water resilience, particularly with councils having to notify decisions on changes required to a range of regional and district plans by December 2024 to implement the Essential Freshwater reforms. While collaborative work continues in catchments across the country on local water management issues, it was highlighted that tensions could again surface as we head towards 2024, and people are again forced to think about the impacts water availability and allocation has on land use and, therefore, land values and wealth.

While there appears to be greater maturity around water storage and allocation conversations than in the past, the discussion is still focused on the benefits water delivers to farmers. While we have moved beyond name-calling, the industry must now focus on the benefits reliable water management and availability will deliver to the whole community as we start to adapt to our new climate realities.

THE FUTURE

Growth from resolve and resilience

Digitalising the industry

While agri-food will never be digital native, there is evidence it is becoming digitally comfortable.

Contributors commented that the uptake of digital technologies to enhance efficiency, output, and accountability has notably accelerated this year. While some remote farmers still face connectivity challenges, services such as Starlink now mean that low latency connectivity is technically within reach of most people living in rural areas (at a price).

The increased uptake of digital solutions indicates farmers and growers are recognising that increasing value from their business requires both tangible and intangible investments. This is pleasing to hear, given many Agendas over the years have suggested that the industry, historically, has been far more comfortable investing in land and stainless steel than digital innovation, brands, and experiences. We have consistently argued that it is the intangible attributes that ultimately differentiate our products in global markets.

That said, contributors noted that much remains to be done for the industry to become truly digitally enabled. Too many software tools and solutions exist in their silos, unable to integrate external data or share information with other tools. Consequently they don't deliver the value they have the potential to. Establishing a data integration platform or exchange was identified as an urgent priority to accelerate the sector's digitalisation. A contributor suggested that we can't afford to be precious about data ownership. The emphasis should be on accelerating work to develop consistent data standards and eliminate rules that prevent organisations from sharing data.

It was noted that the Agritech Industry Transformation Plan (ITP) had moved the sector forward over the last two years. However, praise was qualified as, to date, there is limited evidence of genuine transformation. The concept of the ITP is strong, and it still could fully deliver on its promise if the leadership of the programme can be consolidated into a single government agency. The devolution of responsibility across multiple agencies is seen as a weakness. No agency sees it as a high priority, and workstreams are delegated to officials who lack the ability to mobilise the necessary resources.

We have no shortage of ideas and no shortage of capital. We lack pioneers that can clearly articulate how their business will scale and become globally relevant.

We need to be clear on the 'tech' we want to lead the world in, be that PastureTech, ClimateTech or OceanTech, and get on with building a world-class specialist tech sector that proudly calls Aotearoa home.

Kickstarting the transition to a circular bioeconomy

A bioeconomy that enhances the sustainability and resilience of the industry is possible.

Decarbonising the economy requires every opportunity to replace a fossil fuel-based product with a bioproduct alternative to be vigorously pursued. Prior Agendas discussed the potential, inherent in the diverse range of biomass, fibre, and co-products we grow in New Zealand, to position us as the "Saudi Arabia" of the bioproducts sector. Despite the scale of the opportunity, our Roundtable conversations suggest the only significant step we are taking towards becoming a bioeconomy is being driven by international investors looking to farm trees for carbon.

Contributors commented that given the prices that financial and corporate investors can pay for large farms, we are heading towards a permanent shift in land use in many regions, leaving rural communities looking different, and our role in the global food system diminished.

While it is recognised that planting trees is integral to our decarbonisation journey, there is general unease about large scale carbon farming on land that can produce quality food. The point was made that many farmers have opportunities to integrate trees into their production system to complement their existing business. However, this needs high-quality information on farm forestry to be easily accessible to farmers. We hope this will be a strong focus of MPI's extension activities that have been funded in recent budgets.

The question was raised whether there is a need for a more ambitious plan to accelerate the transition towards becoming a bioeconomy.

While 5,000 farm forestry blocks of 40 hectares and five blocks of 40,000 hectares cover the same area, the operational efficiencies that come from larger blocks, and their ability to underpin supply to support new processing infrastructure, suggest we are at a point where the planned creation of new national forests should be explored. This will underpin a fit-for-purpose, future-focused forestry sector.

However, a bioeconomy needs more than forestry. It was noted that there is an urgent need to explore the value that exists in all the resources we grow across the country, much of which are overlooked once the food is extracted. If we can join up what we grow with innovative knowledge (both mātauranga and modern science) and appropriately scaled processing, we have the chance to create a world-class, circular bioeconomy that is inherently incremental to our existing businesses.

A sustainable food system for Aotearoa

Now is the time to ensure that our food system works for all New Zealanders.

After pandemic delays, the UN Food Systems Summit happened in September last year. Like many UN conferences, there was plenty of earnest talking, but we consider that the summit made progress. It has shifted the way the food industry thinks about food systems. It highlighted the complex and interconnected nature of food systems, the diverse range of interested stakeholders, and that solutions to address the challenges we face will come from alliances between organisations that are not natural collaborators.

In New Zealand, the food insecurity within our society highlighted by the pandemic is being compounded by food price inflation and supply chain issues (caused by weather, shipping, and labour shortages). We are further away from feeding our five million than we were when we first discussed the issue in the 2019 Agenda.

What has changed is that more senior leaders across the sector recognise the risk to our premium export positioning that comes from failing to provide sustainable, accessible, affordable, and nutritious food options to every New Zealander.

They are now also clear that we have two food systems in New Zealand.

One system is world-leading, efficiently producing high-quality food that is meticulously handled to deliver premium food to global consumers. Then there is the second system. This combines excess export grade products with imported food, food grown by farmers scaled to supply the domestic market (many vegetables, pork, and poultry products for example), product that did not meet export standards, and food from community initiatives. The two systems are fundamentally distinct; they have different access to capital, talent, innovation and supply chains. The export system is highly responsive to the needs of the end consumer. The domestic system is geared to meet the needs of the supermarket duopoly. We talk proudly about one. We hardly mention the other. This must change.

We need one food system that works for New Zealanders.

The major players in our food and fibre industry recognise this and some are substantively supporting the community organisations that address food insecurity in our society. But we need different business models to effectively supply the domestic market, enhance the resilience of farmers that supply this market, and ensure that quality nutritious food is accessible and affordable for New Zealanders.

The Mana Kai Initiative has been working for the last two years to describe a food system that we can all aspire to be part of. In August 2022, KPMG is looking forward to being involved in sharing the results of this work and explaining how you can join the movement to ensure our food system works better for everybody.

Rethinking succession

The time is coming for families to separate land investments from their farming business.

With carbon farmers paying a premium for land and a belief that there is an unavoidable wave of change coming, many farmers and growers are actively thinking about retirement. Consequently, retirement is not happening on or after 65, but more people are choosing to exit earlier than they have in the past – generally in their late 40s and 50s. However, Mum and Dad's decision creates tension in families and requires a rethink of traditional succession models.

Succession issues were raised during numerous conversations, with it being noted that challenges are now being felt beyond dairy, with the value of sheep and beef land and kiwifruit orchards making succession a challenge across many sectors. It was also highlighted that in many cases, the kids are not ready, or have no plans to step into farm ownership and management, yet they don't necessarily want to see the land sold, recognising its importance to their parents and its legacy to the family. The point was made that if the parents must leave most of their capital in the business to enable transition, then existing models are not delivering true economic succession.

The current generation of farmers and growers has done well from property investment (enjoying large capital gains). However this has made it hard for the incoming generation to raise funds to buy the land and the business. With rising interest rates and new RBNZ capital requirements, it will only get harder to secure the funding. It was suggested that the time is rapidly approaching for the industry to transition from one where an integrated business model has predominated, to one where the property investment business is separated from the farm operating business.

Such an approach will enable the family to stay connected to their land while enabling a motivated young operator to build a successful farming business. Such a model creates a clear pathway for young people into the industry and into business leadership, even if the goal of land ownership is out of reach in the initial years. Such a model could be enhanced by thinking about how KiwiSaver could be used not just for purchasing a house but investing in a farm business.

If succession is not resolved, the inevitable outcome is more farms planted in trees for international carbon offset.

And finally ... our customers and markets

To remain relevant to customers, we need to reconnect and ensure we are able to meet their evolving needs.

A standout feature of this year's roundtables was how little time was spent talking about markets, customers, and consumers. As one contributor noted, the hermit kingdom mindset is embedded with our traditional global focus being replaced by immediate, domestic challenges. This is concerning as the world is quickly making up for two wasted years. With borders now reopened, our companies must get back overseas and reconnect with key in-market relationships, to understand the innovation and consumer trends that have emerged.

That said, contributors also recognised that the opportunity available to the sector is bigger than it has ever been. The recent FTA signed with the UK was noted as a positive development, although taking full advantage of the agreement will require companies to invest in cultivating relationships in Britain, connections that have been mothballed for decades.

Contributors talked about the work they are doing to open new markets in the UK and Europe, the US, Vietnam, and India to diversify their footprint. There was strong recognition that the current geopolitical uncertainty surrounding China makes market optionality more important today than it has been in the past. While Chinese customers continue to pay higher prices for our products, they will remain critical commercial partners. However, the discussion around "how much is too much to be sent to China" is again taking place around board tables across the country.

Supply chain challenges continue making life difficult every day for logistics teams. Getting the right equipment, ships skipping calls, and port delays have delivered a perfect storm which shows no sign of blowing out anytime soon. These challenges have come with significant cost increases (which will be further compounded by global inflation), but there are not many alternatives unless new ships, containers, and crews suddenly become available.

As new supply chain capability is easy to ask for and hard to deliver, organisations are critically examining their supply chains to ensure tasks are performed in optimal locations. One contributor noted that this could mean organisations exploring a wide range of options, from restructuring pricing, through in-market storage, to growing offshore. The analysis needs to recognise that there are some things that are best done in Aotearoa to support the customer value proposition; organisations should be clear on what these are and invest in optimising them.

Contributors

The 2022 KPMG Agribusiness Agenda reflects the opinions of agri-food sector leaders across New Zealand and the world through survey insights, group discussions and one-on-one interviews, we're grateful to all 132 of them.

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FOOD & FIBRE INSIGHTS SHORT COURSE

We're excited to announce the public launch of registrations for our second cohort of the Food & Fibre Insights course, in collaboration with the University of Waikato.

The 7-week course sees participants exploring topics from bio-innovation and value chains to global consumers and the future of nutrition. Bringing together academic and industry thought leaders from New Zealand and around the world, the course includes pre-readings, videos, weekly live-discussion events and one final half-day in-person workshop.

The course is designed as a part-time 4-5 hour per week commitment. Registration spaces are limited to ensure we can maintain quality engagement between our participants and speakers, so registrations are on a first-in, first-serve basis.

What did our first cohort have to say?

"Great speakers, insightful and expert content. An excellent quality executive course, with opportunities to connect and learn with/from peers at the top of their game."

"Food & Fibre Insights has completely opened my eyes to so many things that are applicable to our own business and wider industry moving forward."

"This course quickly became the highlight of my week."

REGISTER HERE

Get in touch with the event organiser:

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