

# Agribusiness Agenda 2022

CHAPTER 2

**Growth from resolve and resilience – insights to action** 

November 2022

kpmg.com/nz

The first chapter of the KPMG Agribusiness Agenda identified six priorities to drive growth and resilience:



Agribusiness Agenda 2022

KPMG

# 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 around the world.

# Accelerating towards the future of work

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Current labour shortages will change the way the sector works forever. The industry will face continuing competition for talent making 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.



# 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.

# 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.

# 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.



# **Contents**

Foreword	5
Taking control of reconnecting with the world	3
Accelerating towards the future of work 1	9
Capturing the unique opportunity in decarbonisation2	5
Collaborating substantively	2
Bold steps now to benefit future generations	6
A food system that works for all New Zealanders	2
Contacts4	8

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One thing has not changed since we published the first chapter of this year's KPMG Agribusiness Agenda in June, it remains hard to know where to start in writing the foreword for Chapter 2.

#### FOREWORD

# Growth from resolve and resilience insights to action



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

**KPING** Agribusiness Agenda 2022

5

# Foreword

# Collaborating to achieve resilience and growth

The world remains very volatile at many levels – whether it is North Korea randomly firing off cruise missiles, China's continuing lock downs as it attempts to retain its 'Covid free' status or the deepening of the evidence base that we are increasingly facing the realities of climate change and degradation of natural capital and biodiversity.

In such a volatile world, there are two particular attributes that I believe organisations need to be very attuned to at the current time to ensure resilience and growth.

# The deepening fragmentation of global society

In recent months we have seen Italy elect its most right-wing leader in recent history, The Philippines elect the son of the country's former dictator, Ferdinand Marcos, and Brazil re-elect a former president that has been convicted and pardoned of corruption. We have also seen the US mid-term elections reenforce the polarising divisions that have become embedded in that country's political system and society.

The 'hidden' vote for 'make my life better' was a shock in 2016 when Britain voted for Brexit and the US elected Donald Trump as president. It is now a well-established trend and reflects the disconnection many feel with prevailing societal norms, leaving them feeling that society is offering them nothing, while looking after its own interests and disrespecting everything important to them.

We have seen the consequences of a fragmenting society here in New Zealand this year, particularly in the occupation of the Parliamentary grounds and the subsequent riots. New Zealand is not immune to the societal pressures that are encouraging people around the world to look for candidates offering MAGA ('Make Anything Great Again') promises and solutions. As we move into Election 2023, we can expect battlegrounds to appear around areas of political tension. It is reasonable to expect our food and fibre sector will become a campaign battleground given existing tensions in the sector (particularly in relation to climate policy) which brings with it the risk of entrenching divisions amongst farmers and growers across the country and between urban and rural communities.



The reality is that organisations need to be recognising the realities of the two (or more) speed society that we are experiencing around the world, and carefully thinking through what this does to organisational strategy – the impact on marketing and sales assumptions, workforce plans and recruitment, the articulation of organisational purpose and values and the actions that need to be taken to maintain equity across the workforce.

It also requires organisations to be thinking carefully about plan B (and C, D, E) should the unexpected (or the impossible) happen – something the last couple of years has demonstrated is possible. One example, which is high on my radar, is the plans organisations should be developing for a potential mass and sustained social unrest event in the US in the short to medium term. With such a deeply fractured society and little likelihood of politicians moving to build cross party consensus, history tells us the pressure release is often civil unrest. Given the Black Lives Matter protests and the January 6th insurrection were not sufficient shocks to reset US the system, the question becomes should organisations now be planning for an event closer to civil war?

# The economic outlook has materially deteriorated since June

There is no big news here for anybody following global data being reported for inflation, interest rates, employment levels and the issues central banks are facing taking stimulus out of over stimulated economies. These challenges are being faced by many countries around the world and are being compounded by the very significant cost and geopolitical implications arising from Russia's invasion of the Ukraine.

We wrote in 2020 that the initial Covid recession was unusual. It was short, sharp and came from supply being artificially constrained by lock downs rather than the usual drop in demand driven by higher prices, job losses and mortgage rate hikes. There was no playbook for a pandemic driven recession, so all governments borrowed to stimulate demand and kick start growth on the basis that growth would reduce the percentage of GDP they had borrowed. The trouble was the pandemic was not over as quickly as hoped and the stimulus stayed in place for years rather than months.

The consequence is that 2023 is looking like it will be a tough year economically as the

world goes through a much more traditional demand driven recession which will be longer lasting than the initial supply side shock the pandemic created.

A further relevant factor we should be cognisant of is the changing impact that China is likely to have on the global economy in coming years. China's growth over recent decades has been deflationary to the global economy. As they scaled manufacturing capability and drove down the cost of the goods, we have all benefited, however the growth dividend is waning as the Chinese economy becomes more mature, operating costs start to trend upwards and efficiency gains become smaller. While other countries have transformational growth potential, which could partly replace China's deflationary impact, none currently has the same scale. With China's transformational growth increasingly looking like it is in the past, this will shift the dynamics of the Chinese market, its relationships with both international customers and suppliers, and is a trend that needs to be carefully monitored by our exporters.

# **GG** Food and fibre organisations will have to adapt quickly to the likely changes any sustained recession will bring to the purchasing power of consumers around the world to ensure the resilience of their businesses.

#### This could include:

- working through options for repacking and resizing products;
- reassessing price points for products;
- looking to enhance the value proposition being delivered to consumers; and
- exploring alternative channels to service consumers.

The work organisations do to support consumers during the tough times will go a long way to building loyalty to our products and our brands to support future growth. We have seen this to be the case in the returns we have delivered over the last two years, having demonstrated the willingness and capability to support our consumers in the period of initial shock as the world locked down in response to the pandemic.

# Learning from those thriving in volatility

The first chapter of this year's Agenda, released in June, identified six priorities from our conversations with industry leaders to drive growth and enhance resilience for New Zealand's food and fibre sectors. Members of our KPMG Propagate<sup>™</sup> team have taken those themes and talked to a range of organisations from across the sector to find out about the actions they have taken to not only survive but grow and prosper over the last three pandemic impacted years. The challenge I gave the team was to identify learnings from those organisations that are thriving despite the volatility that we have all been dealing with over the period.

#### Inherently collaborative

One of the six priorities we identified was collaborating substantively on an ongoing basis. This was about building on the broad collaborative activities that have occurred in response to the pandemic and seeking deeper, more profound collaboration with Māori organisations. Although one of the team has talked with Agrisea to specifically understand how they have embedded collaboration into their organisational DNA, the biggest take away I have from all the case studies is that collaboration is inherent and central to the each and every one of the companies. It is critical in enabling each organisation to deliver on their goals and aspirations.

What is clear is that successful collaboration is not just about finding somebody that can do a job well, it is about finding organisations that have the passion to go above and beyond, creating better outcomes for all. It was apparent, that organisations that take collaboration seriously are most definitely not jumping into a relationship with the first organisation to come along. Significant due diligence is performed, not just on technical competency but also on key intangibles, such as the alignment on values and purpose, the insights they could bring to a venture, the innovation they are doing in and on their own business and the networks a partner could provide introductions to.

It was also very apparent that there is recognition that not every collaboration works. Having the confidence to know when to call a halt to a venture that is not delivering is critical, as is having the confidence to say no if something does not feel right or aligned, even if the potential partner appears to have all the required resources and a rolodex of high value contacts. It was also highlighted that sometimes the time is just not right to collaborate with an organisation even if there is alignment on purpose and values. It then becomes important to find ways to keep the door open and the relationship deepening until it is the right time.

One of the challenges we have often written about in the Agenda is how collaboration is often left to peripheral, lower risk and return areas of the business. The case studies highlight that effective collaboration is viewed as a necessary and critical extension of an organisation which means it must relate to the highest risk parts of a business and, as a consequence, needs to be as actively managed as any other business critical activity. As we have stated previously, it our belief that the emerging leaders in the sector are much clearer on this as the education system has inherently taught them to understand and manage the risks and benefits that come from collaboration through group work and projects rather than the exam-based systems that those of more mature years worked through at school and university.

#### My takeaway from the case studies is that effective collaboration is a science but there is an intangible element to it, an artistic element that also needs to be present.

When collaboration works it can make two plus two equal 10 or more but it may also only create 4.1, and that could very well be a sufficient gain to enable the partners to shift to another level together.

#### Enabling a new type of growth

The first chapter of the Agenda highlighted the importance of ensuring intergenerational investment is being made today to build the platform for ongoing success, in much the same way we have benefited from the investments made into pasture and genetics by previous generations of farmers.

When this was written, we were thinking about getting on with doing foundational work now to build our bio and blue economies as well as advancing the conversations around biotechnology.

Working through the case studies, a key theme for me was that the investments that need to be made to support long term growth and prosperity will be very different to the intergenerational investments made in the past, which largely focused on enhancing the yield and quality of the products that we grow. Moving into the future, the intergenerational platforms we need to build must put the infrastructure in place to secure and enhance the sector's license to operate with our environment, the local community and consumers around the world.

This is necessary to maintain our relevance to the premium markets that we will have to continue to supply to create the wealth and prosperity that Aotearoa as a country needs to enhance quality of life across our community. If we fail to invest in our license to operate and let it slowly erode over time, it will be close to impossible for future generations to restore this.



Our intergenerational investment needs to future proof the value chains that we participate in so they align with the needs of our community and our consumers into the future. A key part of this is not continuing to pass on the hard, emotive discussions that will enable the industry to evolve into new products, sectors and experiences. Biotechnology is the obvious area for immediate discussion as this is no longer an intergenerational issue. There is also a need to address the way our regulatory systems respond to a dynamic and rapidly changing world, so that we remove constraints that are slowing our ability to explore and develop new protein markets. One of critical importance is designing a regulatory framework so we can collaboratively and sustainably utilise our oceans for the benefit of all New Zealanders in to the future.

## Being transparent about progress on climate change

In the first chapter of the Agenda we made the point that climate change is not being done to the industry by the government, it is nature's response to the lifestyle that we have evolved globally over the last 200 years.

The case studies in this Agenda highlight the practical steps entrepreneurs are taking to build businesses using different models and technologies that recognise and respond to the climate challenges we face in a substantive way. These are exciting and inspirational stories.

However, the challenge in front of the sector is bigger than this.

We have to find a way to transition an industry that has a long history of growth and success, well established and globally regarded businesses and brands, and decades of investment into highly efficient processing assets, in an equitable manner into a lower carbon future.

This requires leadership with foresight, vision and a willingness to move first, which I have confidence from my conversations is emerging across the sector. It also requires organisations that are prepared to be honest about the challenges they face and the opportunities in front of them, the plans they must enact to facilitate their transition and the timeframe for taking these steps. The key word is being honest as there are real concerns about climate claims being made by many organisations around the world (as was highlighted in a recent UN report released at COP27, which noted the many challenges with unsubstantiated net zero climate claims being made by companies).

The journey towards a zero-carbon future is intergenerational, there is technology we need that we do not yet have, collaborations across the industry and with international partners that are still to be formed and many stretch milestones. The claims we make about our journey and our products should be based on the reality of the opportunities and challenges in front of us rather than trying to gain a shortterm market advantage through strategies such as poor-quality carbon offsetting, that do little to transition us towards the future we need. Our policy settings should reflect this, our reputation will be harmed not boosted if we continue to accelerate towards becoming a South Pacific carbon equivalent of a tax haven.

#### A final point on food security

This Agenda report will be released on the first day of the unique summer National Fieldays 2022 at Mystery Creek. We are very pleased to be able to return to our regular slot on the first morning of the event, however, we recognise many other significant contributions to future of our food and fibre sector will also be released over the four days of the Fieldays.

To me one of the most important, and one that I and KPMG have been significantly involved in for the last two and a half years, is the launch of the purpose and values paper for Aotearoa New Zealand's food system which has been prepared as part of the Mana Kai Initiative. food security for the wider community, but it is about the industry playing its part through committing to a more equitable food system and being prepared to work with partners that they would not normally engage with to evolve a more equitable, inclusive, accessible, sustainable and prosperous food system that works for every kiwi. At the core of this, again, is a willingness for organisations being prepared to seek new ways to

We talked in the first chapter of the Agenda about the importance of the industry leaning

in to ensuring that we have one food system

This is not about the industry solely funding

in Aotearoa that works for all New Zealanders.

collaborate, new ways to contract, new partners to engage with.



**Ian Proudfoot** National Industry Leader – Agri-Food & Global Head of Agribusiness **GG** It is incredibly clear from the case studies in this Agenda, that collaboration and partnership lie at the core of the food and fibre sector achieving new growth, while having the resilience to weather further shocks that are bound to come our way.



Case study from: First Light Foods

# Taking control of reconnecting with the world



**Ella Beatty** Senior Advisor KPMG Propagate™



Pratik Bhanage Advisor KPMG Propagate™



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# Taking control of reconnecting with the world

How many times can the world change in a way that blindsides the population? For Jason Ross, CEO and Co-Founder of First Light Foods, the answer over the past 24 months has been many times. Jason is an advocate for building solid foundations, and this has been the key underlying factor to survive and thrive in international markets when uncertainty strikes.

From humble beginnings, three Hawkes Bay friends had the simple desire to connect New Zealand grass feed Wagyu with the world and established the business First Light Foods. The three founders, Jason Ross, Gerard Hickey and Greg Evans, realised they each had unique skills in each of farm system; operations, marketing and commercial – key ingredients to a high-performing founder team, in Ross's words, "feasibility, desirability and viability". Their business, First Light Foods, sought to transform the beef-eating experience for meat-loving consumers in the United States of America (USA). These consumers were accustomed to the marbling texture of feedlot beef, but First Light wanted to reinvent what was a largely flavourless commodity offering by providing a delicious and premium pasturebased product from New Zealand – leveraging Wagyu genetics to retain the marbling properties expected by the consumer base.

Collaboration has been engrained in the company's DNA. Written throughout the past twenty years of First Light Foods' history are examples of strong relationships. They are established across the value chain, from the farmers in New Zealand to the in-market retailers and restaurants.

# <sup>CC</sup> When there is no instruction manual, relationships are the strongest form of resilience."

Jason Ross, CEO and Co-Founder of First Light Foods



NEW YORK STRIP STEAK



#### **Foundations to resilience**

As pioneers in Aotearoa's Wagyu beef industry, First Light Foods has experienced the highs and lows of various economic and environmental shocks. A key transformation was a strategy shift after the Global Financial Crisis in 2009, which saw market demand from restaurants for premium beef collapse, leaving First Light highly exposed. Instead of continuing to focus on the volatile food service distribution channel, the company pivoted into retail. This pivot catered for the independent and higher-end natural grocery channel.

The new model involved a "buy long and sell long" strategy, which simplified the business and benefited both the company's producers and retailers. For farmers, longer contracting provides a hedge on the commodity market while also satisfying the need retail partners have for certainty in product procurement. The transparent nature of pricing strengthens relationships between all stakeholders in the value chain, which proved crucial to First Light Foods' success in years to come.

#### **Brand significance**

Developing a trusted brand takes time and expertise. Ross's advice is patience. "The investment in brand has paid dividends, as a brand name product can take advantage of inflationary pressures". First Light Foods found that their target consumers could adapt to price increases as the product was trusted. First Light Foods has invested two decades of time and resources into developing a solid relationship with consumers to build a reputable brand.

In times of uncertainty, generally, consumers tend to gravitate towards familiarity. Ross explains that "with a 10,000 km gap between where the product is grown and where it is sold, logistical disruptions are to be expected. To ensure the First Light Food brand made it onto supermarket shelves abroad, they leveraged the relationship established before the pandemic, which helped their product remain a priority throughout the supply chain.

By adopting the best FMCG (Fast Moving Consumer Goods) management practices (forecasting, product development, product portfolio, joint business plans with retailers, promotional programs, and sales representatives), the First Light Foods brand is equipped with the supply chain attributes the US consumer values.

15

#### Lessons from the challenges

Recent challenges faced by First Light Foods are not unique. The complexities of global supply chain logistics and labour shortages are testing the resilience of many New Zealand businesses. International markets account for 90% of First Light Foods sales, with 70% concentrated in the USA. Ryan Bell, General Manager of Sales, highlights the challenges of exporting a highly perishable premium product. To remain connected to the world, First Light Foods has recognised the significance of relationships and the importance of a strong labour force.



## Relationships as a defendable position

In a bid to maintain its market share, First Light Foods identified deep relationships from producer to retailer, forged before the pandemic, as pivotal when navigating logistical challenges. Ross and Bell emphasise that relationships are their biggest defendable position. The attribute that reduces the product's exposure to competitors – they suggest this is the equivalent of "closing the gate" on competitors, created through innovation or first mover advantage.

Another important factor of success is the full-time operations team based in the US. As "in-market" employees, their responsibilities included maintaining and developing relationships. And consistently providing ongoing insight into consumer trends, business culture and other factors which are sensed more rapidly when there are "feet on the ground". This is a significant competitive advantage compared to those attempting to operate across country borders, especially when those borders are closed.

#### Labour as an asset

Labour is an industry-wide challenge, and First Light Foods has used the challenge to measure its success throughout the pandemic. Ross explained "people vote with their feet", with the employees exercising their right to choose their working conditions and experience. First Light Foods recognise their people are their biggest asset. The company offers flexible working environments and allows individuals the opportunity to grow into their roles.

Ross proudly explained that their company has had many of the sales people involved since the beginning of the business. Throughout the pandemic, First Light Foods maintained a staff retention rate of 100%. In comparison, the wider agri-food sector in New Zealand reported staff retention of around 60% in 2021. When questioned about the proudest moment, the team quickly answered, "when a business endures such a period, to come out the other end and you haven't lost anyone, it confirms you have people who want to come to work." First Light Foods understands that value is generated through good people, which ripples throughout the business. With this low staff turnover, First Light Foods can add the learnings from each challenge they have faced to their toolkit, this value is retained in the business and is a critical component of futureproofing. Ross emphasises,

## "building a resilient business means creating an environment that fuels individuals' prosperity to benefit the entire team."

#### **Remaining connected to world**

First Light Foods has learned from both their successes and mistakes as they head towards 2035 and has the vision to remain connected with consumers and producers alike. There are some key growth areas which will make up their next focus.

## A true commitment to value over volume

Sustainability is at the core of First Light Foods. The company has made the decision that "the world does not need more animals" by introducing a capped supply model (capping the number of cattle processed annually). Ross explains, "there is a temptation to achieve growth by increasing the herd size, however, but by capping supply, it drives innovation and increases efficiency."

Instead, the value will come from alternative avenues such as by-product channels (encapsulated liver nutraceuticals, pet food and collagen) and value add qualities such as certifications (animal welfare, non-GMO). To remain competitive on the global stage, the value will need to be extracted to maximise margins but with smaller herd sizes. This forms the "Value over Volume" model. It will involve a complete mindset change for consumers and producers to increase the competitive advantage around the world.

First Light Foods identified their advantage as the unique Wagyu genetics and their relationships. They understand their farmers may need to reduce the number of animals they farm in the future, which has prompted action to help commercialise other products from their farms.

For example, a project with an Iwi partner in Rotorua, Ngāti Whakaue, who have a Trufferie. First Light Foods can aid trade by leveraging the existing relationships they have with American retailers and restaurants to support farmers like Ngāti Whakaue to successfully diversify their business. This mindset facilitates growth and builds a more resilient farming business by developing secondary revenue streams which continue to enhance the connection between New Zealand and the world.

#### Success in 2035

**GG** The future we are designing for has fewer, more deeply engaged traditional protein consumers. Those who have chosen to opt-in on natural, ahead of more cost effective and readily available 'from the lab' protein, are demanding more. First Light in 2035 is an emotional, physical, and virtual connection to natural food production. A direct source of delicious natural protein. A defendable position for those who have opted in. And an essential source of high quality, bioavailable micronutrients."

Jason Ross, CEO and Co-Founder of First Light Foods

#### **Innovation & Technology**

Moving towards 2035, agri-food will create value by linking innovation and technology to strengthen value-added relationships along the supply chain and across continents. This will present itself by integrating information between suppliers, production, and consumer.

However, First Light Foods does not stop there, new relationships will evolve between health providers and technology-tracking companies to meet the demands of a growing population. Future consumers will likely have new and stronger preferences with changing dietary requirements. Health will become a key driver for consumption patterns and influence food production. Innovation and technology are not mutually exclusive, as New Zealand continues to grow its international market share, and innovation and technology will form the foundation for a strong competitive advantage.

An example, First Light Foods has a vision for "automated micronutrient fulfilment". A wearable health device will notify First Light their customer is low in Zinc, prompting delivery of a First Light micronutrient to the consumer's home. As businesses grow more connected with consumers, there will be an intersection between innovation and technology. Identifying emerging trends early gives a "first mover advantage", which has worked well for First Light Food in the past.

Overall, these relationships between traditional food systems and consumer-driven demands will be a key focus to connecting producers with international markets.

As the world navigates the new economic reality with a cautious sense of optimism, First Light Foods are grounded in its attitude. Ross describes First Light Foods' achievements as a "payback of longterm investment." With relationships at the core of their business, their passion for a premium product and their constant desire to challenge the status quo sets a blueprint for connecting with the world. Case study from: T&G Global Limited

# Accelerating towards the future of work



Lincoln Roper Senior Advisor KPMG Propagate™



Matthew Lancaster Advisor KPMG Propagate™



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# **GG** Is the future of food and fibre an automated mechanised workforce driven by artificial intelligence software? Or is it diverse, dynamic, and empowered human individuals that can work efficiently and effectively while enjoying doing so?

The answer is likely both.

# Accelerating towards the future of work

T&G Global Limited ('T&G') are doing a lot of work to explore the amalgamation of automation and human capital to understand the future of the workforce.

T&G is a New Zealand-based, publicly listed, vertically integrated fresh produce specialist supplying the domestic and global markets. Their products include apples, berries, tomatoes, citrus and an extensive array of root crops and seasonal fruit and vegetables. T&G's operations encompass plant variety rights and growing, right through to sales, marketing and exports. They employ over 2000 people, including specialists in 13 countries, helping to supply consumers in over 60 countries with fresh produce.

Wendy Burton and Emma George are passionate and talented leaders actively working within T&G's Apples division. Wendy is T&G's Head of Apple Supply, and Emma is Head of New Zealand Post Harvest, with a combined experience of over 30 years in agribusinesses, spanning supply chain, human resources and sustainability roles.

Wendy and Emma reflected that the past few seasons have been very difficult for apple growers. They highlighted from a workforce perspective how the constrained labour market had impacted the ability to harvest and pack fruit, and with crop maintenance programmes. The pair see compounding factors such as record low unemployment and increased competition for talent continuing to place further pressure on the existing workforce that T&G has historically employed.

Ongoing labour challenges have required innovative recruitment and incentive programmes to attract and support people into roles. Still, they have also signalled that it is increasingly critical that automation investments align with future labour market expectations and the company's growth strategy.

#### **Partnerships and collaboration**

#### "We're looking to partner with people who can build and supply cutting-edge technology"

To overcome recent labour challenges, T&G has needed to be agile and innovative in everything they've done and continues to do so. To meet future global consumer demand, the future of its apples category is centred around the best plant genetics and intellectual property ('IP'), and world class growing and post-harvest systems. Wendy shared that as part of its 10-year growth strategy for apple growing, in 2022, 97 hectares of orchards were replanted with the marketleading Envy<sup>™</sup> variety on new future-proofed 2-Dimensional (2D) structures. The 2D planting systems increase fruit quality, consistency, and yield. T&G owns and leases orchards in New Zealand, totalling 728 hectares, of which 249 hectares are now in the 2D format, with further redevelopment planned over the next three years.

Wendy illustrated that future thinking isn't always motivated by crisis, sharing that next-





generation growing systems have been on their radar for many years and part of their 10-year plan. The lead time for an apple tree to become fully mature and productive is approximately nine years, resulting in significant capital investment and lead time to change systems. Wendy believes, looking forward ten years, that apple growing, maintenance and harvesting will change vastly in the next decade, especially for trees being planted today. For Wendy, the excitement about the future is not only about the structures themselves and the resulting fruit quality but also the opportunities to use automated picking platforms and, in time, unmanned robotic harvesters, mowers, and sprayers. In Wendy's eyes, these systems are best-in-class when T&G partners with worldclass developers of cutting-edge technology.

#### "We knew there was no way we could scale up old school without automation."

Hand in hand with T&G's ambitious apple growing goals, modern post-harvest facilities are critically important to enable increased volumes to find their way into the market in excellent condition. Emma shared that T&G is currently constructing a world-class packhouse in Hawke's Bay, integrating leading automation and technology throughout the process. It is designed to pack more than 125 million kilograms of apples a season, representing twice the volume of apples currently packed with a similar number of employees.

In Emma's experience, T&G has invested heavily to understand how to integrate automation into their packhouse effectively. They traversed the globe to understand best practices from leading domestic and international organisations and studied the constraints and intricacies of a packing line. Emma shared that integrating automation into a process needs to focus on two foundational variables, Sensibility and Capability.

For Emma, sensibility begins with understanding, interpreting, and leveraging data. Drilling down to granular levels to understand the variables occurring in the packhouse. This helps illustrate the areas in which it makes sense to implement automation, from incoming fruit variables to packaging. It also helps inform the underlying fundamentals for testing and measuring 'capability'.

Emma noted that automation technology is continually undergoing a significant rate of

improvement and change, meaning there is no limit or bound to opportunities. She mentioned that T&G was conscious of wanting to be 'cutting edge, not bleeding edge.' From Emma's perspective, this meant these cuttingedge technologies needed to be applied in a New Zealand packhouse environment to trial and stress test them, ensuring their capability.

These trials and studies result in a world-class packhouse, automated at the necessary stages, through a rigorous methodology and in areas that simply, make sense. The new packhouse goes beyond simply a building; it is a place to bring growing teams together to form a convivial atmosphere while connecting with the whenua. Emma reflected on the entire packhouse project, sharing that,

"It's simply doing more with our great people, but it's also about giving people a place that they can feel connected to; it's their place and sharing the history of the land of which its built."

Emma and Wendy can't wait to unveil the new facility in 2023 in time for the next harvest.

#### **Vocational pride**

Partnerships and collaboration also extend far beyond cuttingedge technologies and into human capital. Wendy and Emma both described the vast array of initiatives and programs that T&G have underway to help attract, retain, and grow its people.

One initiative that the pair was particularly excited about was their partnership with the Ministry of Social Development and Māori Wardens, centred around supporting solo parents to enter or re-enter the workforce.

The programme, He Huarahi Hou, empowers people by offering pastoral care and support provided by Māori Wardens to programme participants to prepare them for work and support them in balancing their work and family life. The programme also incorporates teaching fundamental budgeting skills and assisting employees in getting their driver's licence, for example. The program is structured so that employees can work during school hours, with transport support to and from work, and help to get children to education facilities.

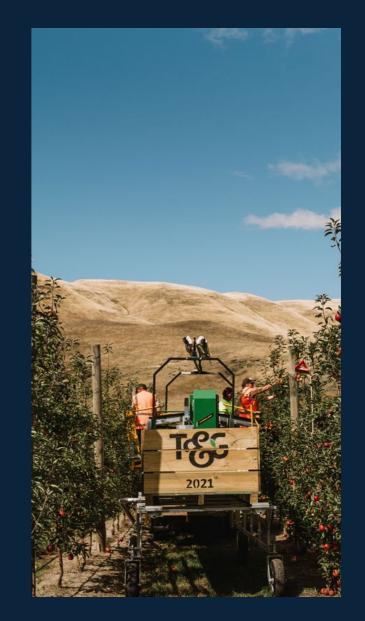
T&G also launched a workforce initiative recognising the opportunity to create full-time employment while upskilling employees across both parts of its apples operation. Employees move through harvest and post-harvest roles, developing a thorough understanding of both operational and growing processes, this includes spending time developing T&G's 2D orchards as part of its automation roadmap. On reflection, Emma and Wendy both recognised that the new initiative was only successful because of the collaboration between the post-harvest and growing teams, flexing as and when it was needed to accommodate each other's workforce needs. At a strategic level, the new roles help deliver future growth objectives whilst attracting new talent into the sector, providing permanent roles to some of its casual and contract team members, and further building their skill set and capabilities within T&G.

Emma and Wendy both agreed that supporting people in their roles has resulted in many

benefits, noticeably building people's selfesteem, comradeship, capabilities and pride in their horticultural careers. Emma described their motivation for undertaking these initiatives as,

### "a focus within T&G on building people's pride and connection with us as a corporate and as their employer."

These are excellent examples of moving further and faster through partnerships with other organisations with aligned objectives. It also illustrates the value of collaboration across an organisation and working better together. Other companies can take the lessons here to accelerate the development of their future workforce by seeking out key strategic partnerships and opportunities for collaboration.





#### 2035: Leveraging all of New Zealand to the world

"Leveraging all the benefits of New Zealand Inc to the world."

In discussions with T&G CEO Gareth Edgecombe, he shared that T&G's 2035 vision is focused on leveraging the best attributes of New Zealand Inc and sharing that with the world, including people's skills, kiwi IP, technology and their partner's expertise. Then integrating locally into the world's large economies with key brands across their range of products, from apples to berries.

Practically, T&G's continued focus on IP and genetics requires the creation and development of capability fluent in technical areas of breeding but also the skills needed to lead a more diverse workforce. T&G's commitment to supplying key markets with fresh and healthy produce results in the need for larger local teams working in markets and understanding global nuances and cultures.

Emma and Wendy's perspective on the future workforce supports Gareth's vision, with an accelerating trajectory towards greater inclusivity in the workforce and encouraging people to bring their whole self to work. Emma shared that the more inclusivity grows, the richer the workplace becomes, and that environment is where cutting-edge idea generation stems from.

To achieve this vision, it is clear that T&G will continue to seize opportunities to continually improve and protect the natural environment and its resources, integrating world-class technology in post-harvest operations and developing its high-performing, diverse and inclusive culture. Case studies from: New Zealand Zero; Chia Sisters; and Lake Hawea Station

# Capturing the unique opportunity in decarbonisation



Paulette Elliott Senior Manager KPMG Propagate™



# Capturing the unique opportunity in decarbonisation

The organisations we have talked with in writing this article are all creating pathways to a lower carbon future; the passion for decarbonising their business was evident and demonstrated through their values-led activities. It was also clear that their efforts enabled them to realise market premiums for their products.

#### **New Zealand Zero**

Mike and Rebecca Casey founded Forest Lodge in 2019 when they returned to New Zealand and bought land near Wanaka. They were motivated to establish a business positively impacting climate change and planted 9,300 cherry trees on their property to take advantage of the 3.8T of carbon the trees would sequester. However, it became evident that running the orchard would emit 60-80T of carbon, initiating their drive towards carbon neutrality. Forest Lodge is now believed to be the world's first 100% electric zero fossil fuel orchard, with their initial cherry harvest hitting the market last summer under the New Zealand Zero (NZ0) brand – a product that Mike refers to as "electric cherries".

Cherries are a challenging fruit with a 6-week season and short shelf life, resulting in a small revenue-generating window and the need to airfreight their product to offshore markets to capitalise on high seasonal prices that are available in international markets.





Mike's background in engineering allowed him to create a software tool that analyses electricity spot prices to determine if the power has been generated using renewable sources. This enables the Casey's to draw power when it is renewable and export renewable energy surpluses back to the grid, which "in our small little way helps to increase the renewability of the grid, " and the outcome is a very close to net zero energy bill. While initially installing solar panels was altruistic, the payback period over diesel has reduced dramatically since installation to under seven years, now making it a "no brainer" for a green-field development. In Mike's opinion, New Zealand is well positioned to grow zero-carbon produce, given its highly renewable electricity grid.

Consumer willingness to pay a premium for carbon-zero products was tested in a market trial with Farro Fresh in Auckland. The product was sold at a premium and still achieved the same sales volumes as the incumbent cherries. Trials in other markets will continue to determine the value consumers in other countries place on fruit grown without fossil fuels and with all emissions offset. NZ0 is offering their export quality cherries for presale in New Zealand, targeting domestic consumers and lowering emissions from transport to offshore markets for a portion of their crop.

Mike and Rebecca are supported in the growing operations by Euan White, and together with AsureQuality (and AGMARDT funding), they have created a <u>certification</u> for food produced without the use of fossil fuels, which will be launched soon for other users to adopt. Forest Lodge is looking to keep it simple for growers and auditors while providing clarity of certification on packaging for consumers by making it clear that any fossil fuel has been eliminated.

Their reward is a pathway for other producers to lift productivity while simultaneously decarbonising. They aspire for NZO to be the most reputable NZ export brand and certification, known and trusted globally. As Mike said, NZ0 is "trying to enhance gate returns to farmers that choose to go down a path of doing the right thing by the climate by offering a unique and different food category and brand".

They have demonstrated that with creativity, determination and effective Agritech solutions, the need for fossil fuels on orchards can be eliminated and translated into a certification programme that can be used to extract a premium for zero fossil fuels agricultural products.



#### **Chia Sisters**

Chia Sisters was established in 2013 by Florence and Chloe Van Dyke in Nelson, blossoming from their father's use of hydrated chia seeds to support highintensity training and recovery. Chloe's background as a neuroscientist led her to look at the nutrient value of the ingredients, test some blends with blackcurrants and create the first Chia Sisters prototype.

Chia Sisters is built on fundamental values of sustainability, nutrition and innovation, which stem from an upbringing cementing the need for the business to be environmentally and socially responsibly focused.

Driven to support consumers looking for a healthy on-the-go option, Florence said, "innovation has been really important" and has enabled the company to grow into a business which now produces a range of beverages, including fresh juices, sparkling water, superfood smoothies and most recently an immunity tonic showcasing Mānuka honey. A very supportive local community enabled their pathway to success, stocking their drinks on-shelf, allowing them to test products and learn about consumer drivers.

The supportive local food innovation ecosystem in Nelson was also important, with one collaborative example being the cooperation between Chia Sisters, Pic's Peanut Butter, Pete's Lemonade, Proper Crisps and Yum Granola to fill a container to Singapore for a Supermarket customer. This reduced the freight cost and supported business expansion for the group.

Export markets for Chia Sisters continue to grow with customers in Singapore, Hong Kong, Australia and most recently, the US. While in the longer term, products may be made under contract in the market, at present, they are made in Nelson and exported. Since their products can be stored in ambient conditions and are long shelf life, Chia Sisters can eliminate airfreight, reducing their products' carbon emissions.





Florence said, "it's 50 times less carbonintensive to sea freight bottles from Nelson to San Francisco than flying them". Florence recommended that New Zealand exporters looking to grow to focus on ambient products that can be shipped and markets based near port cities to reduce emissions and enable export growth without increased carbon emissions.

Chia Sisters took the plunge and moved to their own factory when their contract manufacturer went into liquidation at short notice two years



ago. This came with challenges but allowed the freedom to accelerate their zero-carbon journey while creating cost savings. Changes included installing solar panels, making them New Zealand's first solar-powered juicery and measuring their total carbon footprint made operational decisions available, like shifting to electric vehicles, insulating bottling lines and eliminating food waste from the production process. Any carbon used is offset to 120% (making Chia Sister's carbon positive) through contributing to an indigenous forest in the Rameka in the Golden Bay area, a certified carbon emissions trading scheme carbon sink.

Florence was clear that messaging to consumers needs to be authentic and genuine around carbon effects and delivered in a way that is understood and valued. Chia Sisters reports their emissions on their website and has zero-carbon certification through Ekos. Florence feels their efforts are being rewarded. Our team is our number one asset, and having strong business values means that we have attracted the very best talent. Our goal to decarbonize, and put people and planet at the core of our business, is a journey our team is on together. Success for us is leading a movement in Aotearoa and globally to support all businesses to transition to new business models, where the impact to the environment is considered in business decisions. We are well aware that we are a small business. The biggest impact we can have is influencing others because when it comes to climate change, the world will win the race to a climate-safe future when the last player crosses the net-zero finish line.

The business has been challenged by having limited access to capital compared to overseas. That being said, businesses in the ESG space, like Chia Sisters (certified B Corp), have been shown to be more resilient and can now access green finance at lower interest rates than would otherwise be available.

"Measuring and reducing carbon emissions must be the focus. Only once a business has a transparent reduction plan implemented should it look to offsets that are durable and incorporate wider biodiversity credentials."

Florence Van Dyke, Chia Sisters



Chia Sisters' journey to date has been directed by their desire to do business differently with less impact on the environment and better outcomes for their workforce. It is steeped in community support, realised in the collaborations with local businesses, their support for an indigenous regional forest and their willingness to share lessons with other New Zealand Food businesses.

Florence's advice to anyone starting a business is to grow your business in a way that reflects your personal values, because when the going gets tough, it is your values that will keep you motivated.

#### Lake Hawea Station

Lake Hawea Station (LHS) is a 16,000 Acre sheep and beef station owned by Geoff and Justine Ross and supported by their children Finn and Gabriel. LHS is primarily focused on farming merinos for fine wool. They work progressively through partnerships with other organisations on biodiversity and climate change mitigation projects. They have dual motives of running a profitable farm and pioneering a regenerative farming system that positively impacts the planet.

"I think farmers and New Zealand are increasingly recognising that there are consumers around the world who are looking to pay a premium for sustainability credentials, and so we've been selling our Merino fibre direct to high-end fashion brands overseas and achieving a premium for our product based on our own branding and environmental credentials."

Finn Ross, Lake Hawea Station

This has been enabled through establishing strong customer relationships, which include carbon negative clothing companies like Sheep Inc. and Maggie Marilyn.

Based in London, Sheep Inc is a carbonnegative clothing brand (the values are declared on the website) whose clothing includes a tag on the bottom of their products, allowing a consumer to link their product back to the farm and even name a Sheep on the farm. Having a social media page and using storytelling to share content of their on-farm activity and promoting the brand has been one area that helped create success for LHS. The site has enabled end consumers to connect to LHS and provided brand partners with content, a key selling point to marketers.

While they are achieving a premium and receiving recognition for their activities, it is the improvements in biodiversity and forest recovery that Finn sees as the biggest reward. He notes that "being custodians of a pretty decent slice of New Zealand when you revisit parts of the farm after a few years and see the planting, it's a really cool change".





Extreme success for the business would be an improvement in biodiversity and climate change metrics, no use of fossil fuels, more regenerating native bush and improvement of tons of carbon sequestered.

Their pathway to success has been enabled by the entrepreneurial passion of the Ross family and the drive to farm well and utilise their progressive values. Comfortable with experimentation and happy to share learnings with other farmers, LHS are open about the projects and collaborations they have undertaken, believing that others can use knowledge and experiences gained to accelerate the sector's decarbonisation. This is particularly valuable while science and data around regenerative farming are still being collected.



A key achievement for Lake Hawea Station has been becoming the first farm in Australasia to be awarded the Carbon Zero certification for the farm through Toitū, which at the time could not provide farm-level positive ratings.

To go beyond the requirements for Carbon Zero and become Carbon Positive, the farm planted thousands of trees, retired areas of farmland, initiated pest control programmes and created stock exclusion zones for regenerating native bush.

LHS has created their own carbon clear brand to help communicate its carbon-positive status and is currently sequestering twice as much carbon and greenhouse gases as they emit. LHS have a longer-term goal to be 10x carbon positive. They also believe that Carbon Zero will soon become the minimum requirement to operate and retaining a carbon-positive status will keep them ahead of the mob. Lake Hawea Station has worked hard to make changes on the farm so that it is carbon positive. They are willing to experiment with practices and crops, sharing these learnings, encouraging farmers to understand their sequestration and eligibility for carbon credits, and engaging with other farmers to learn from their experiences. The ability to extract a premium for their wool is due to their connection to the end user of the product and the deep relationships they have developed with their customers, supported by transparent messaging and certification of their Carbon Zero status.



#### Summary

While the decarbonisation activities of these three businesses were often initiated altruistically, many have co-incidentally transformed into unique product and brand attributes that align with consumer needs. Activities have included those frequently adopted, like planting trees, utilising renewable energy and eliminating waste, and more challenging initiatives like redesigning agricultural equipment and testing new farming methods and crops. This signals that there are many possible approaches to decarbonisation and determining the best fit for an individual business is critical.

With a focus on doing the right thing, all businesses articulated obstacles were encountered forging new paths in existing industries, but these were surmountable. Our interviewees relied on their entrepreneurial attitudes, determination, hard work and the support of communities to achieve these changes.

Collectively they evidence the possibilities of decarbonisation in the food and fibre sector, and New Zealand can benefit from the experiences and lessons they willingly share. Case study from: AgriSea

# Collaborating substantively



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**KPING** Agribusiness Agenda 2022

32

# **Collaborating substantively**

Tane and Clare Bradley are the secondgeneration leading their award-winning family business, AgriSea. They specialise in the manufacture of high-nutrition seaweed products for primary industries. The Bradley family have been in the seaweed space for 26 years; AgriSea was originally started by Chief Innovation Officer Tane's mother and her partner, with CEO Clare marrying into the family 17 years ago. They lead an incredibly busy organisation, collaborating across many projects in partnership with various organisations – government, Crown Research Institutes, small-owner operators, and substantial commercial businesses. Close collaboration with their local community and ivvi is very important to them, too -

## "it's about partnership and participation."

Many times, meeting and connecting with one person has led to a partnership and collaboration. As Tane puts it, "there are so many people on my radar where I know one day, we're going to do cool things together... you don't know what it is yet, but you just know someday it will happen." An example is their award-winning novel seaweed hydrogel partnership with Scion, sparked from a casual conversation over dinner.

Alternative protein work with Agresearch led to another meeting of minds and values – they met a 'food engineer mad scientist chef' called Dale. He invited them down to Wellington to meet other interesting people he knew. Further connections and introductions led to another collaboration resulting in seaweed beers, gin, and now a seaweed vodka.

The diversity of their collaborations is as broad as the organisations they work with. Current partnerships include the 3-year alternative protein project with Agresearch, work trialling seaweed for bio-remediation using seaweed tanks on land to absorb the excess phosphorus and nitrogen from waterways, and a significant collaborative research project they are hosting - <u>Rere ki uta, Rere ki tai</u>.

Funded by Our Land and Water National Science Challenge, the research pilot seeks to revitalise soil, sea and society by bringing together indigenous knowledge and regenerative agriculture principles to create an approach to farming that focuses on oneone (soil) as the centre of an interconnected cycle. They hypothesise that if we start to understand the mana and mauri of soil, we will start changing our farming practices. This research sees them partnering with ten different farmers, Tangata Whenua, farm consultants, social scientists, and three research institutions.

Ultimately for AgriSea, at the heart of all they do is always seaweed, future generations, and innovation.







## "We want to know them as people, not just the business-life façade"

When Clare and Tane reflect on how and why some partnerships and collaborations are more successful than others, the secret may lie in the depth of relationships and values.

They put the critical success factors down to thinking about the bigger picture, authenticity, transparency and, most significantly, trust. Building a meaningful connection as the foundation for solid collaborative relationships is an important theme for AgriSea; Clare shared that "we want to know them as people, not just the business-life façade". Their advice for others wanting to have successful collaborations is, to be honest upfront about what you want to achieve.

According to the Bradleys, successful collaboration is won or lost at the very start. Time spent initially seeking to understand the other party's perspective and listening and getting to know the other entity are critical to determining if the collaboration suits both. Once trust exists, it can speed up the process, and in AgriSea's case, many of their best collaborations grow organically as all parties are clear on the vision.

While AgriSea has had many successful partnerships, the Bradleys felt it important to highlight that only some collaborations are always successful. When things haven't gone well previously, it has usually been through a lack of transparency, creating mistrust. According to Tane, "What we do find when that does happen, the easiest way is to call a hui. A hui is a great way to get people in a room, to put aside time to tackle the hard questions, in a really healthy space to get the outcomes."

"Start with the big picture, then work together so that 1 + 1 makes 3, not 2." For Clare, it's important to define what is or isn't collaboration; too often, we use the word when all we are talking about is an exchange of services. From her perspective, it's far greater than just each partner wanting something from the other. At AgriSea, quite often, they take themselves out of the equation and try to understand first what is needed to help the sector or our farmers; then, once that's determined, they'll re-insert themselves to see if it's a match. One of their filtering questions to determine if a project is suitable for their business is, "are we the best people to do this?" If it's not, they know who the right people might be. They are happy to facilitate those connections,

## "it doesn't always have to be about us."



#### 2035: A world where seaweed, and AgriSea as a catalyst, are helping thousands to thrive

A big mission fuels AgriSea "we want to grow a healthier future for our grandkids, we want this planet to be able to support their life, and we use seaweed as the vehicle to do that". Their ethos is all about doing good along the way – they want to be distributive while they grow, not at the end when they've grown a big pot of money.

When they think of what the future 13 years from now could be, Clare and Tane envision one where "Thousands of communities across the coastal globe are well and healthy because they are growing and utilising seaweed (whether grown in oceans or land) and that AgriSea is a catalyst for those communities to live well and healthy through its innovation."

The Bradleys are clear that partnerships will be key to making this happen – and it's all about finding the right people. AgriSea has always been driven by wanting to do good, which hasn't always featured strongly in traditional western capitalist business models. However, the people they collaborate with need to align with those values. As Clare explained, "We want to work with people [who believe] when you're baking a cake, it's got to be cut evenly". Changing how we value businesses and ceasing only to consider financial metrics is a starting point in their eyes to making their 2035 vision a reality.

#### "New Zealand is too small not to work together. Let's build the value of what we have to offer the world"

In Part One of the KPMG Agribusiness Agenda 2022, contributors suggested that we are not as collaborative as we think and most definitely not as collaborative as we need to be. This is a sentiment shared by AgriSea leadership. Tane reflects on attending conferences where four people independently presented the same information and research. "We need to go at it differently. Reach out and see if there is any overlap. If so, let's talk". He acknowledges this won't work for every business, and there are challenges around intellectual property, market share and getting products out to market. He encourages people to challenge the status quo "where they can get out of the silos, open up the hatch and collaborate".

Clare says it's essential to recognise the areas of the food and fibre sector where change needs to happen, to understand the barriers that exist, but that "you don't necessarily need to smash the barriers – you can try to find ways to go around them." If we're going to change our sector and collaborate substantively, we must be prepared to do things differently, think outside the square, and become comfortable with the uncomfortable.

# What can others do to bolster true and genuine collaboration

AgriSea's model may not work for every organisation in the sector. However, it does provide simple collaboration lessons that are open to all. Firstly, establish shared values and be clear on the goals and ambitions of all partners from the onset. Secondly, step back to consider the bigger picture of what we are seeking to achieve, and don't be afraid to say we're not the right fit for this one, but let's connect you with someone who is.



Case studies from: Ārepa and AgResearch

# Bold steps now to benefit future generations



Jack Keeys Senior Manager KPMG Propagate™

KPING Agribusiness Agenda 2022

36

**GG** What does an established research institute with 100 years of history have in common with dynamic **10-year-old scale-up? Both are investing** in world-leading innovation, and both are taking courageous steps to benefit the national food and fibre sector of the future.

# Bold steps now to benefit future generations

In exploring organisations that are taking bold steps now to benefit future generations, we talked to neuroscience-backed brain nutrition company <u>Ārepa</u>, and Crown Research Institute <u>AgResearch</u>'s biotechnology team, to understand what ideas and opportunities are helping them to shape a future Aotearoa.

## Boldness in biotechnology and brain research

While biotechnology research is challenging in New Zealand, AgResearch has continued to innovate with investment by government and industry in this field. The strategic rationale behind this decision was explained by AgResearch's Director of Strategy and Communications, Marie Bradley, sharing,

"There's an understanding across the world that modern biotechnologies will continue to evolve over time, as will the magnitude of impact that they're able to achieve around the world."

Marie Bradley, Agresearch's Director of Strategy and Communications

The most well-known output from AgResearch's research into genetically modified organisms (GMOs), developed for NZ's grass-based agricultural system, is the High Metabolisable Energy (HME) ryegrass. Modern biotechnology tools were used to increase the dietary energy of



the grass, targeting higher grazing animal performance and reduced methane and nitrogen emissions. This is part of a trifecta of pasture-based innovations. AgResearch has also developed a complementary genetically modified white clover with increased condensed tannin concentration to benefit animal nutrition, reduce methane, and increase health and welfare. Gene edited endophytes are the third innovation, designed to reduce seasonal impacts on animals while also increasing their range and effectiveness of insect control – de-coupling what is usually a divergent relationship to enable both benefits simultaneously.

All three innovations have been developed concurrently, some field trials have been conducted in the US, and future trials are anticipated to start in Australia to gather the final evidence and data required to support any Environmental Protection Agency application in New Zealand. Though the combined benefit of this triple biotechnology innovation is not yet qualified for New Zealand farming systems, the evidence so far suggests a significant reduction in methane emissions, reductions in nitrogen waste in urine, and an increase in animal productivity, which would deliver significant environmental and economic benefits to the sector.

#### "The use of genetic technologies in combination with traditional breeding methods means that a trait that may have taken 20 years of breeding to develop and disseminate into a new plant variety can now be done in just four years, with the new variety being free of any genetic modification."

Richard Scott, Agresearch's Science Team Leader in plant biotechnology

This unlocks an accelerated opportunity for environmental, production and value-add benefits across farming systems.

For Ārepa, boldness has also taken the form of investing in leading-edge research to deliver intergenerational impact, but here it is focused on clinical trials. Clinical trials are known for their complexity and expense and, consequently, have often been considered inaccessible to a New Zealand early scale-up business. However, Ārepa has flipped this model and instead doubled down on their investment of time and resources to maximise the number of domestic and international trials being conducted. Importantly, trials have centred not just on source ingredients but using the Ārepa end-product. 'Hustling' to have hundreds of phone calls (not emails!) provided a foot in the door and a chance for the Ārepa team to create several co-designed research trials with neuroscience academics worldwide.

Two additional investments further empowered this success: Firstly, investing the equity and salary in hiring a leading neuroscientist Andrew Scholey as Chief Science Officer and secondly, developing their own product, a taste-match placebo, which required significant investment but removed a large hurdle for researchers considering a trial.

#### "This approach has meant burning through a lot of investment capital, but the investment has paid dividends"

Angus Brown, Ārepa CEO

Amongst other successes, the company has recently been awarded an AUD\$700,000 'mega-dementia' study because of this multipronged research strategy investment.

## Developing intergenerational relationships

It was evident for both Årepa and AgResearch that multidimensional collaboration has been one of the most critical factors for their success.

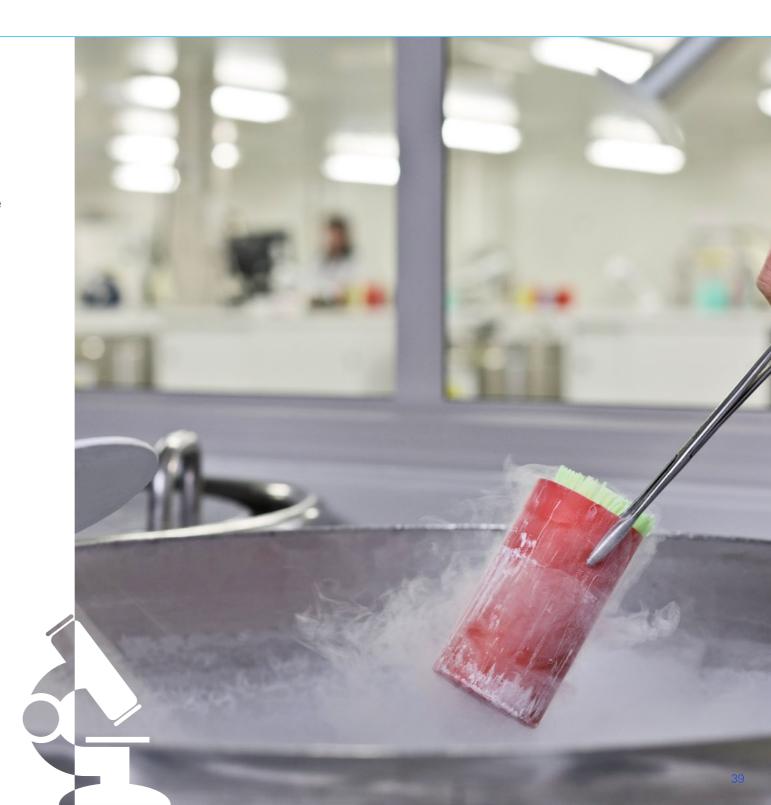
Both organisations repeated an almost identical core message:

# *anything but genuine collaboration is simply a transaction.*

For collaboration, all relationships should be developed with a long-term intergenerational mindset. According to both, a collaborative approach may increase complexity, but that's always outweighed by the additional value, with the past few years especially highlighting that point. While lockdowns meant that scientists couldn't always access facilities, some experiments had to pause, and in-person relationship building was stalled – leveraging existing relationships and the power of technology allowed AgResearch to thrive. The AgResearch biotechnology teams continued to connect with plant breeding experts in New Zealand, working alongside partners and contractors internationally and maintaining solid relationships with stakeholders across the community. It was the combination of these relationships that has facilitated what the team refers to as trust-centred success,

"While our scientific partnerships enabled us to continue technical best-practice, our relationships with industry bodies and innovators provided some of the most insightful value, offering different world-views that have enhanced the development and delivery of our science."

Marie Bradley, Agresearch's Director of Strategy and Communications





Engaging in project co-design from the very inception of an initiative, enabling a range of stakeholders to engage, and ensuring continuity in those relationships are all important lessons that can be applied by any organisation in the food and fibre sector, whether seeking to expand an existing project, set-up a new business unit, or launch a new product.

For Ārepa, collaboration has looked a little differently, with stand-out areas in distribution and marketing. CEO Angus Brown explained, "we want our products to have true market diversification, available to customers everywhere they turned". As a result, the company is tactically establishing a wide range of relationships across retail platforms, from petrol stations to pharmacies and supermarkets to their own e-commerce store. By treating these parts of the supply chain as long-term partners rather than just sellers, Arepa has been able to understand the needs of each relationship and achieve some great successes, including becoming BP's top small supplier and the highest value health drink in New Zealand supermarkets. These partnerships have complemented the business's marketing approach, which aims to educate potential

consumers and take a relentless approach to push advertising spending even when competitors are pulling back.

While ensuring content achieves the balance of beauty, emotional connection, and strong visuals, the building of consumer communities has also been a key success factor for Arepa. This involved more than a targeted social media presence and some advertising spending. Instead, Ārepa has ensured that alongside constant engaging online content, they have hosted meaningful in-person activities, such as brain breakfasts, Arepa exercise classes, and mental health education events. Across all of this marketing, the connection and collaboration with individual influencers, media, and other third parties have turbo-charged awareness and growth leading to a 270% increase in online sales in 2019 and a doubling in online sales every six months since.

Long-term ambition requires long-term thinking when it comes to Ārepa consumers and the community. Being able to leverage the advantages of instantaneous online connection while creating complementary in-person activity showcases a new way of using social media. A foundation for long-term connection has been formed on platforms often criticised for superficial relationships.

We often think that being brave is the role of a single individual or team, but our case study participants demonstrate that failing alone is easy and winning alone limits both the lifespan and total reward of success.

True bravery is demonstrating a willingness to lead others on that uncertain journey with you, where a leader increases their reputational and relational vulnerability. Still, the size, sustainability and sharing of successes then increase exponentially.

40

#### 'Extreme' success in 2035

AgResearch's biotechnology team aspire to see their organisation as a world leader in agricultural biotechnology solutions that are good for the world – delivering economic, environmental and societal benefits.

Output-based regulation is an important step to enable success, with the assessment on genetic traits rather than on the technology tool. To achieve this vision, an evolution is required in both public perception and industry demand to understand what biotechnology is, how it works properly, and the implications of its use.

"The biotechnology teams don't see their role as necessarily leading or changing opinions on biotechnology but providing the highest quality research in parallel with clear and accessible communication so that all stakeholders can form informed opinions."

Jarred Booker, AgResearch's External Communications Manager



For Ārepa, extreme success is,

"Being recognised as the world's #1 brain-health brand, known for its global impact in creating enhanced productivity and life-improvement gained through the consumption of its products. Ārepa would also have a library of Neuroberry® Blackcurrants grown in New Zealand and worldwide while achieving the highest mental wellness score across its staff and customers."

A combination of clever capital raising, international expansion and ongoing partnerships were identified as critical to achieve this success. With the right people in place, Ārepa is ambitious for a billion-dollar valuation by 2030.

#### **The Future**

Whether scale-up or centuryold, biotechnology or brainhealth, research innovator or product entrepreneur, there are several common themes to future success.

While being bold is a key to unlocking the door, substantive collaboration, a future-focused mindset, and a genuine impact-driven approach are the modern ingredients to deliver transformational change.

As technology accelerates, global shocks increase in frequency and consumer expectations become more dynamic – Aotearoa will require many bold businesses across the food & fibre sector to lead us into a resilient and prosperous future. Case studies from: Meat the Need and The New Zealand Food Network

# A food system that works for all New Zealanders



Ainslie Ballinger Manager KPMG Propagate™

# A food system that works for all New Zealanders

#### A new kind of subsistence farming to ensure calories, nutrients and profit

Undeniably, there have always been far too many New Zealanders experiencing food insecurity – and with the rising cost of food and living and the pandemic's impacts not far behind us, more of us will be struggling to eat nutritious food each day. The food and fibre sector is working together to support those in need and continually finding ways to do more.

### Where there are challenges, there are always opportunities.

Meat the Need and the New Zealand Food Network masterfully gather food and redistribute it to those in our community who need it most. Both organisations are founded on a drive to help out fellow citizens in tough times. Still, there are many other benefits in preventing New Zealand's quality produce and goods being entirely sent for export or from being ultimately destined for landfill.

The New Zealand Food Network was set up at pace to match the escalating food insecurity impacting New Zealanders as a result of the COVID-19 pandemic, with the benefits of bringing scale and efficiency to food rescue efforts. Being able to redistribute surplus food benefits those donating businesses – it helps in their commitments to reduce food loss and waste and, in turn, their emissions footprints. The food and fibre sector is working together to support those in need and continually finding ways to do more.

# HELPING FAMILIES ACROSS THE COUNTRY

feed out

meat the need

The organisation facilitates the collection of quality surplus and donated food and distributes it to iwi, social service agencies and food security charities – centralised distribution centres receive, sort and store food where it is then distributed to 'food hubs'. The 'food hubs' have the capacity to receive pallets of food and distribute it locally.

Founders Wayne Langford and Siobhan O'Malley formed an early concept of Meat the Need well before the pandemic, but once COVID-19 arrived on our shores, Wayne and Siobhan worked to accelerate the scaling up and out of Meat the Need. Our country's farmers heeded the call, and within weeks, thousands of packs of mince were making their way to food banks across the motu.

Meat the Need is evolving from its successful partnership with Silver Fern Farms. Miraka and Fonterra are now working with the Meat the Need team to replicate the model, but with milk, together launching 'Feed Out'. Meat the Need and Feed Out provide export quality meat and milk to those who otherwise may not have the resources to be purchase it. Force majeure has led to collaborative efforts in the food and fibre sector.

## Navigating complexity for the benefit of many

The New Zealand Food Network and Meat the Need view their mission to provide food to those in need as one that also delivers necessary calories but, importantly, essential vitamins and minerals – quality and nutritious food, as we know, supports our health. "Everyone has the right to quality and nutritious food, and we produce plenty of it here. We only have to keep the processing machines on for a few extra minutes daily, and we can make a huge difference to some people. It's a no-brainer", says Wayne.

Quality and nutritious foods are likely to be perishable foods such as fruit, vegetables, dairy and meats and storing perishable foods add complexity to the day-to-day running of the New Zealand Food Network, particularly when you cannot predict the types and amounts of donated food.

The New Zealand Food Network can flex its storage and delivery capability – it has 61 dedicated food hubs receiving food each week, but it can increase this to 100 when required.



After setting up a reliable, dynamic and extensive network infrastructure, the number of businesses approaching the New Zealand Food Network to distribute surplus continues to climb with a 30% increase over the last 12 months. This means the Food Network needs to adapt and innovate accordingly, but it also needs to try and match the surplus to demand – the need is estimated to have potentially doubled since pre-pandemic times.

"The New Zealand Food Network team is working hard to develop solutions to transform perishable foods into pantry staples with a long shelf life. Gavin Findlay, CEO of the New Zealand Food Network, says pasta sauces have been identified as options for using bulk, surplus perishables - the challenge for the Network at the moment is finding suitable infrastructure, associated costs and managing food safety protocols.

The Network is exploring standing up a reduced-cost retailer with some input from the Ministry of Social Development. "Social supermarkets are not sustainable business models, so we are looking into how we can provide food to communities with no or a limited margin. "We think this would be an online retailer and have access specifications similar to those MSD uses. Any revenue generated from our pasta sauces and soups could go back into the reduced-cost retailer", explains Gavin.

The New Zealand Food Network is also working on better matching the need with surplus type and the amount and having an indepth understanding of those who ultimately receive the food. Having data on cooking skills, access to cooking and preparation equipment, cultural preferences, nutrition requirements, commonly eaten meals and their ingredients, and the generations within the whanau.

For Meat the Need, initial challenges centred on the supply chain, but Wayne and Siobhan remained steadfast in finding a solution to food insecurity whilst also not creating new systems that would require investment to be sought and infrastructure to be built.

"The pandemic really propelled us forward and forced us to look at how we could leverage existing supply chain infrastructure. Silver Fern Farms thankfully came on board, and they now pack and distribute all donated meat for us. "What really sticks with me is that we don't need to create new things to have an impact, we can tweak what we already have available to us, and we can do this when the pressure's on too".

Gavin and Wayne both emphasise that opportunities abound across the food and fibre sector if we look at what's already available to us – changing the mindset of the sector to leverage existing infrastructure, capability and relationships will force us to innovate at an accelerated pace, whether that's solving issues like food insecurity or biodiversity loss or developing our next export offering.

Changing mindsets on this will also allow us to fully understand the 'true value' of growing and producing food – not just the economic cost and benefit, but the cost to nature, the benefit and cost to our health and wellbeing, cultural and social benefits.

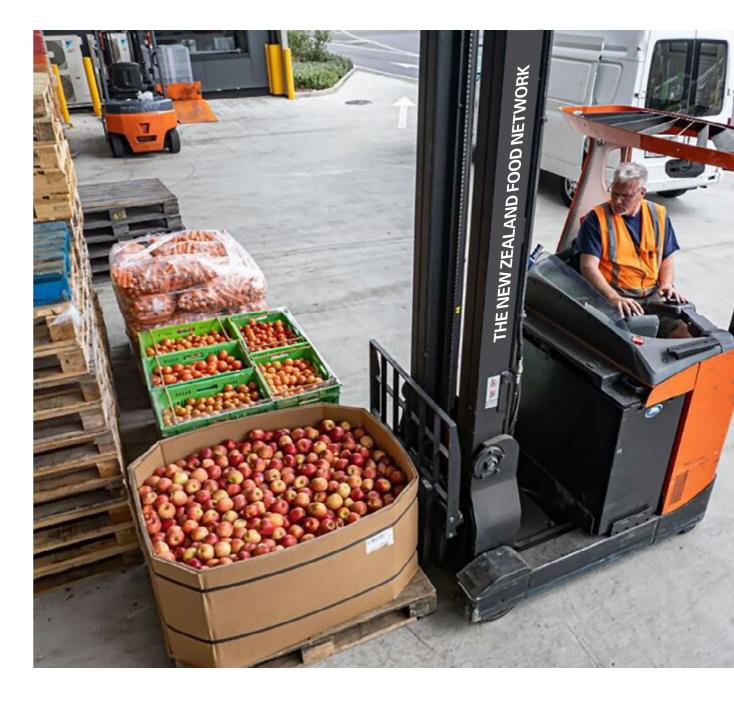
#### The public and private sectors can work together on common ambitions

There is a multitude of common ambitions between the private and public sectors. In reaching these ambitions, the sectors need to get better at working together.

Of course, ultimate success in the eyes of Gavin Findlay and Wayne Langford would be a food system that doesn't produce surplus and where all New Zealanders have access to affordable, nutritious, and quality food – "That's subsistence farming really, where each of us grows enough to eat for our families and communities. But the challenge for us now is, how do we take the concept of subsistence farming and adapt it to large urban populations, addressing health inequities and climate change". There is a pressing need for the country to have data on what we eat and how much of it – the last time we gathered this information was in 2008. This information provides the health sector with intelligence on diet-related diseases in New Zealand.

By the time 2035 rolls around, the food and fibre sector could be using technology and data to provide time-sensitive intelligence on mapping food requirements based on health needs – health will likely be one of the biggest drivers of purchasing behaviour.

A future food system for New Zealand could harness data on the health of our people to map and shift levels and types of food production – and by doing this, food waste and loss are likely to reduce too.



**GG** Collaboration and partnership lie at the core of the food and fibre sector achieving new growth, while having the resilience to weather further shocks that are bound to come our way.

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