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Recalibrating farming systems to secure an artisan niche in the global agri-food value chain

Rapid change is coming to the agri-food sector. Some of it is being driven by regulatory change, but much of it is about adapting to technological evolution and changes in consumer preferences. Every day spent watching puts the industry a day further behind.

Agri-food sector entering period of unprecedented change

Change is nothing new. The world has always evolved driven by innovation, natural events (such as floods,droughts and disasters), social pressure and political shifts. The last year has seen more surprises than we have experienced in recent years; think the Executive Orders of President Trump, the lack of a plan for Brexit, the exponential rate of acceleration of artificial intelligence-based technologies, and the declaration of the first drought in Africa in many years in South Sudan. The reality is that in a volatile world those who flourish are those with the greatest ability to detect and respond to change.

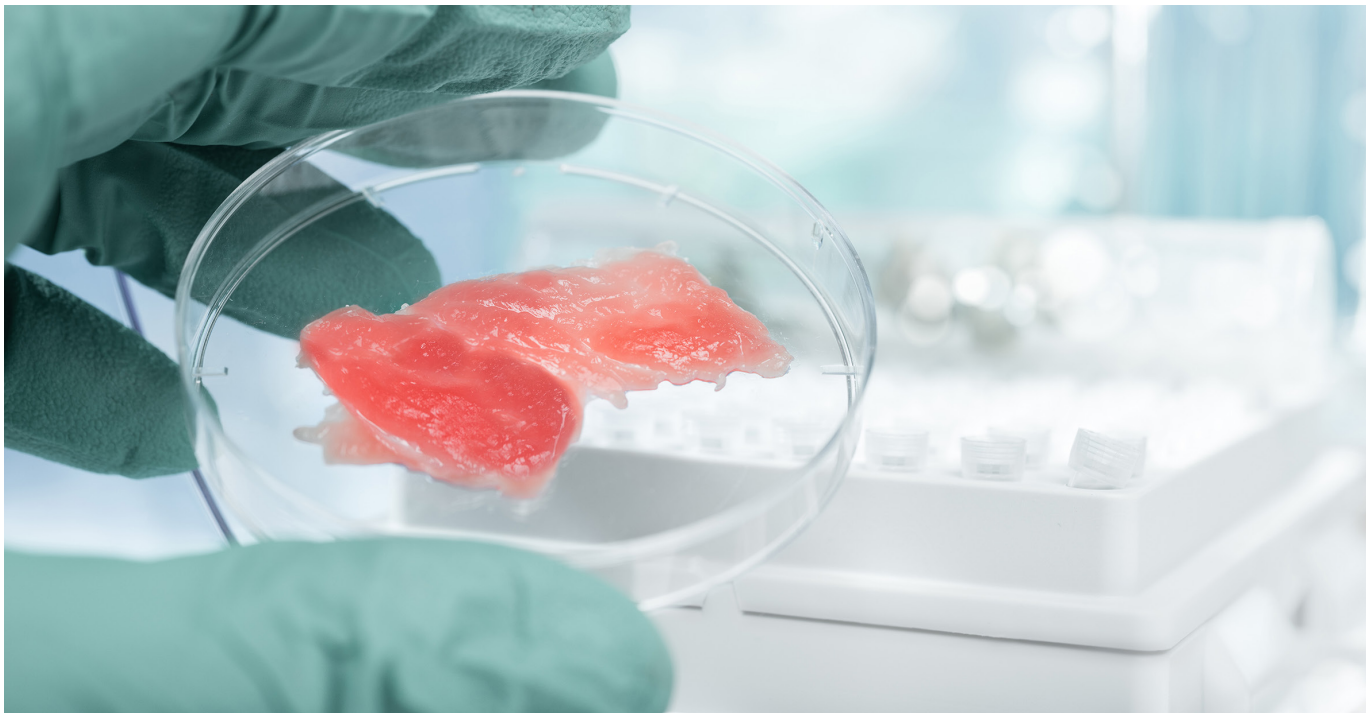
The agri-food sector globally is not immune from change. Innovative people and businesses are shaping new types of farms and new ways of farming. They are growing and processing new types of foods and finding fast, more direct ways to distribute the resulting products to better fit into the day-to-day lives of their consumers. The sector globally has been a relatively slow adopter of new technologies, with large regions of the world still using predominantly feudal, subsistence farming systems. At the same time many farmers in developed regions are still producing the same products on the same land, in largely the same way, that their parents and grandparents did.

It is reasonable to assume that we will see greater change in the agri-food sector than at any point in history, as the industry lends itself to solutions that can be generated by fusing digital, biological and physical technologies (the technology solutions that are underlying the fourth industrial revolution). As a consequence, I believe that the agri-food sector has just passed the start line of the first global agarian revolution.

Complacency – the greatest threat to the future

The major threat to New Zealand's primary sector is complacency. A belief that because we are good at growing high-quality food, fibre and timber products all we need to do is to keep on doing what we have always done and it will generate sufficient wealth to pay for our schools, hospitals and roads. Such a belief is comforting, but built on an erroneous belief that change will exist around us but not materially impact the markets we sell to or the preferences of the consumers who eat our food.

In this article I set out to explain why I consider primary sector complacency is the greatest threat to New Zealand's economic future. I also articulate some ideas around how identifying and responding to the signals of change we are detecting could create a significantly more prosperous future for our country for generations to come.



We are successful ... aren't we?

Determining whether the primary sector is successful really depends on the metrics that you choose to measure success by. Exposing the industry to market forces and removing subsidies, despite the initial pain many experienced, encouraged farmers to focus on improving productivity and on working to find markets for the products they grow. As a consequence, export revenues have grown, land values have risen and the primary sector has out-performed the wider economy on productivity. The traditional metrics used to measure the primary sector tell a good news story.

There are though other metrics that raise fundamental questions about the industry's *prima facie* success that should not be ignored. The environmental outcomes the primary sector has delivered, particularly the degradation of waterways and native ecosystems, is of significant concern to the wider community. The disparities in access to key social infrastructure, unemployment challenges and income differentials in rural areas suggest the benefits of primary sector growth have not been widely distributed. This has created issues with economic inequality and contributed to increasing levels of rural de-population. Issues with animal welfare and labour exploitation present ethical challenges that are inspiring innovators to explore the commercialisation of alternative proteins that offer solutions to these problems.

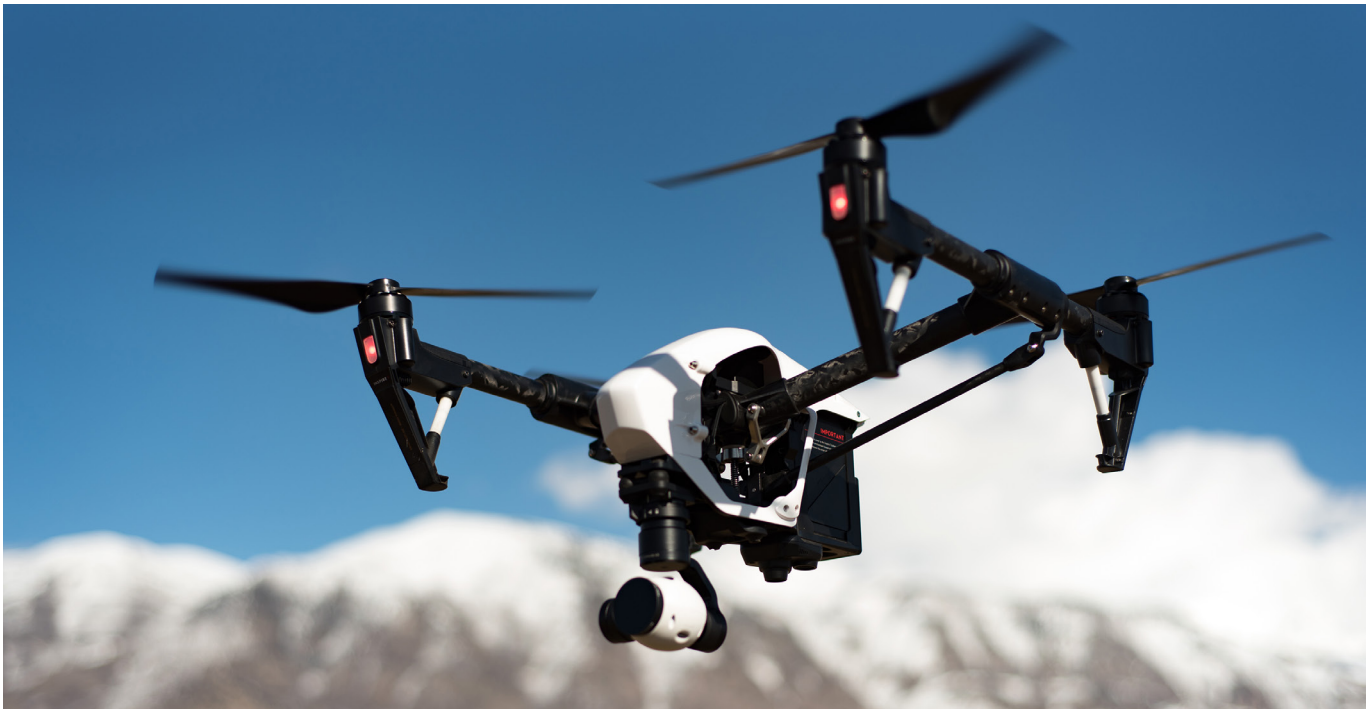
The challenge facing the industry is that these metrics create a far more compelling story and have therefore dominated the mainstream narrative surrounding the primary sector in recent years. This has raised fundamental questions about whether farmers are the best custodians of the environment.

Success can be viewed through an alternative lens as a story of deprivation and destruction. This difference in perspective presents a major threat to the industry and its ability to maximise the contribution it makes to the long-term prosperity of New Zealand. It places the ability of the industry to farm at risk, but also has the potential to turn away the premium consumers that farmers need to be building strong links with. The drivers of historic success will not deliver for us the future we desire. Now is the time to recognise that change is no longer 'nice to have', but 'absolutely necessary', if the industry is going to prosper into the future as an economic force.

Putting today's primary sector into context

We are a tiny cog in the global food system. It is widely accepted that we produce enough food to feed around about 40 million people. Around five million of these people make up the domestic market in New Zealand, including visitors and tourists at any point in time, which means we export enough food to feed around 35 million consumers their full diet. We must therefore be clear in a global food system trying to feed over seven billion people that New Zealand's primary sector (even dairy) is an artisan food-producing sector.

New Zealand's game is not, and must never be in future, unfettered volume. KPMG's analysis suggests that, contrary to popular belief, we grow products that are very effective in creating value. We estimate that the $38 billion of primary sector exports this country currently sends to the world are finally invoiced to their ultimate consumer, be that through the retail checkout, hotel invoice or restaurant bill, for at least $250 billion (i.e. a quarter of a trillion dollars). We are growing the value. Our focus must be on capturing a greater share of the value we grow.



The key determinant of whether an organisation captures a fair share of the value its products create are the positions that it chooses to take along that value chain. Our analysis clearly indicates that organisations that seek to build strong partnerships from input providers through their value chain to the ultimate consumer of their product are more effective in capturing a greater share of the value they create.

Historically, in New Zealand supply chains have been drawn together from the farm forward. They have been created to ensure that the products grown are pushed out to international markets with the hope that someone will buy them at a reasonable price. They have been supply driven, reactive and opportunistic; driven by metrics such as productivity improvement and volume growth. These supply chains have served us well in establishing export-focused sectors, but have left incomes vulnerable to commodity price shifts. They have also encouraged some farmers to test the boundaries of their licence to operate, putting profit in front of their obligations to their environment, animals and community.

A limited future for the good of all

We have in past KPMG *Agribusiness Agenda's* suggested that many farmers feel they are increasingly operating in a fishbowl where their actions are monitored, commented on and used to justify ever tighter regulations. The wider community is becoming increasingly interested in where its food comes from and, as a consequence, is expecting more from farmers each and every day. Whether the industry likes it or not, the reality is that the wider community no longer trusts farmers to act as guardians of our natural environment.

Whether this is based on media-fuelled perceptions or reality is irrelevant; the implicit trust that existed in the past has broken down and regulation is filling the gap. Farmers need to expect that limits will be imposed on many aspects of their farming operations to reduce the intensity of their impact on the natural environment and deliver the outcomes that the wider community seeks, like swimmable rivers and the regeneration of our native floa and fauna.

If the traditional measures of success are applied to farms operating under new regulatory regimes, it is easy to conclude that the imposition of limits is negative and will impact the long-term success of the industry. The need to mitigate nutrient run-off and fence waterways will impact the productive capacity of a farm and likely drive a reduction in stocking rates and production. When success is primarily measured by volume growth, rules that limit growth are seen as unwelcome and a constraint on long-term profitability.

This perspective ignores the artisan nature of New Zealand's primary production sector. We cannot and should not be trying to feed the world; our role is to provide premium products that make up a small component of the diet of the world's most affluent consumers. I generally suggest we should be aiming to deliver 5% of the diet to the 800 million richest consumers in the world and in so doing secure a disproportionately large share of their food and beverage expenditure.

As an aside, it should be noted that although it is not our role to feed the world we do have a role to play in applying our intellectual property and skill in helping the world to feed itself. The global food system and the businesses operating within it cannot be considered to be truly successful until the impacts of under nutrition across the world are addressed. Part of the positioning of New Zealand's artisan agri-food sector must be that the industry is good not only for direct stakeholders and the wider community, but also good for the world.

Farmers are critical participants in their product value chain. They need to recognise that consumers are focused on what is happening inside the farm gate and have expectations about how they manage all aspects of their operations. It is therefore critical that farmers are connected to the consumers of their products. In reality, it is consumer requirements that will establish the true standards that need to be adopted and applied on-farm, not the government, the regulators or the community. Ultimately, consumers will pay for products grown to meet their expectations.

If you accept New Zealand is in reality an artisan food producer on a global scale, it logically follows we must focus on positioning ourselves as the home of the world's farmers' market – a provedore of premium food to the most affluent global consumers. Premium consumers want to understand who produces their food, its provenance and efficacy. With this lens the idea of producing less by choice, but doing it in a way that is better for the community and the environment, makes a lot of sense.

As a consequence, there is a need to design the next generation of farm-to-consumer value chain models. If we are to ever capture the value inherent in our primary sector the design needs to include:

- Unique and controlled intellectual property
- Extensive adoption of emerging technologies
- A balanced, and at times regenerative, use of natural resources
- Open acknowledgement of success and recognition of challenges
- Deep collaboration with carefully selected value chain partners
- Robust authenticity checks to verify product integrity along the supply chain
- Direct consumer connection.

Clues to the future

There are already some clues as to what next generation business models could look like. The Zespri model was intentionally designed 20 years ago to encompass many attributes expected to drive future success. In particular, the foundation of the industry on controlled intellectual property, integrity assurance embedded into the supply chain, long-term business relationships with value chain partners, and a deep understanding of regular and occasional consumers of kiwifruit have helped to drive grower returns.

As a consequence of the business model adopted by Zespri, kiwifruit growers consistently capture a higher percentage of the retail value of their fruit at the orchard gate than other farmers and growers achieve (Zespri estimate about 23% of retail value is returned to the orchard gate for gold growers). However, disruption creates opportunities for Zespri to lift its game, particularly in how digital technology is integrated into its value chain and how environmental standards that orchardists are expected to meet are continuously enhanced.

Other companies integrate elements of next generation requirements into their business models:

- New Zealand Merino has taken a lead in customer engagement and worked very hard to connect farmers to consumers, using this to create a premium for their growers
- Greenlea Premier Meats has focused on how it can use technology to enhance operating efficiency and deliver more tailored product specifications to its consumer
- Synlait Milk has created farm verification systems that provide assurance to consumers about how milk is produced and incentivise farmers to achieve continuous improvement in how they run their business
- There are also many farmers who recognise the need to manage their land sustainably and who have continuous investment programmes to improve their performance in a variety of areas, including environmental management, water and employment standards.

To date, we have yet to come across a value chain that has been designed to deliver on all aspects of a next generation farm-to-consumer operating model. It raises a question of whether it is possible to adopt such a system and still be sustainable. I question whether it will be possible to retain long-term economic sustainability if such initiatives are not pursued.

A next generation system will be higher cost, something that can seem unnecessary when in the long run most producers have regular, albeit at times marginal, profitability and enough customers to sell their products to.

The key question is whether these customers will continue to seek out our products as the agri-food sector experiences unprecedented disruption delivering a plethora of new choices to traditional customers. It is reasonable to expect that a significant number of these customers will substitute for better, cheaper or more sustainable alternative products, leaving our farmers competing in lower-value and increasingly commoditised markets (think the coarse wool industry over the last 40 years).

What might this mean for our animal protein sectors?

There is no question in my mind that our traditional animal protein sectors face significant disruption in the near future from emergent technologies that offer alternatives to traditional meat, milk and eggs. To date, these new forms of food are being targeted at premium consumers. However, their future is more likely to be directed at providing 'animal-like' proteins to those who cannot afford or source the constrained supplies of natural products available. The natural products that are produced will increasingly be directed towards premium consumers who are prepared to pay for storied experiences, proven health benefits and absolute efficacy in production.

This vision of the future undoubtedly presents some challenges to our animal protein sector, but also suggests it could have an exciting and vibrant future if it is prepared to start changing. If natural protein is substituted in its lower-value applications by alternative forms of food, but becomes more valuable to premium consumers, it is sensible to take steps now to secure a niche in key high-value markets. In such a world, quality will be more important than volume. For the dairy sector, this may mean rewarding farmers based on the quality of the milk they supply rather than the volume to ensure a product is delivered that could be sold in liquid form.

The changes from a shift to liquid milk are significant. A focus on selling liquid milk will challenge the industry to address an installed capital asset base of dryers and processing equipment that becomes redundant. It will demand the development of new supply chain solutions to handle very different product formats. Work would be needed to digitally connect a product from the farmer who grew it, while brands will need to evolve to tell the story of New Zealand's artisan farmed, grass-fed, 'free-from' milk.

Such a world also presents opportunities for farmers who wish to connect directly with consumers. We have identified farmers in the US who are using technology to connect with customers and, as a consequence, are growing products to meet specific orders. This model is delivering significant price premiums to the farmer for the food they produce. The premium reflects the tight alignment of the product offer to consumer need and the provision of total visibility around the authenticity of their products.

The future starts now

The only certainty is that the future for each and every farmer in New Zealand will be different to the realities they face today. Markets will evolve as innovation brings new product options to consumers. However, embracing change, recognising New Zealand's niche, artisan role in the global food system, and focusing on the reality that we produce food eaten by real people around the world means that the next 20 years have the potential to be consistently more prosperous than the last few decades. Realising the inherent potential will take hard work, investment and focus on all aspects of the value chain. That work needs to start today. Every day you delay change puts you a day further behind your competitors.

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