



AGRIBUSINESS

Field Notes

Weekly news update from the KPMG Agribusiness network



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Agenda 2020**

16 December 2020 – This week's headlines



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Peering into 2021

Forecasting isn't about identifying one single exact future but understanding the multiple potential future scenarios which may occur and preparing with the resilience and agility to adapt to those. From scientific breakthroughs to geopolitics, from environmental challenges to spontaneous consumer trends – the future will be decided by a range of interconnected and independent variables and leaders must prepare for any of several different combinations to occur.

Building on recent articles from across our KPMG Agri-food team, here are some of my expectations for food and fibre in 2021, and what opportunities that may bring for New Zealand.

Innovation in distribution will accelerate.

As noted by Ian Proudfoot's recent [article](#), one thing that has become clear in 2020 is that the global distribution network which transports the world's goods is not fit for purpose, and the inefficiencies are contributing to global emissions, food waste and economic loss. Whether this is a courier van having to make a return visit to a drop-off address, or a shipping container spending half its life empty on one-way trips around the world. The necessity of transport networks to maintain food supply and

economic stability will push both regulatory and economic incentives for transport innovations.

The opportunity?

New Zealand can focus on its specific distribution challenges and develop innovative solutions for ourselves within our domestic food system and our role as food exporters, with the opportunity to then sell some of these solutions to the world. Emissions free transport has a massive value proposition both for environmental benefit and market demand, whether that be wind-powered sailing, a concept already used by [Tres Hombres](#) or perhaps new innovative solutions such as multi-drone delivery networks, one-way bio-containers made from timber or other biomass which can be further processed upon arrival in market, or even solar-powered semi-submerged automated submarines!

Investment in cultured meat will double... again

From 2018 to 2019, investment in cultured meat increased over 120%. By July 2020, investment in all alternative proteins for the calendar year so far reached over \$1.1 billion, doubling the 2019 value – despite the global pandemic. After [Singapore became the first country to open the door to cell-based meat](#) last week in the form of chicken nuggets, this is the first of a slow-moving domino effect that will only further boost investor confidence and

no doubt see the increased investment of global capital flowing to large and small players in the emerging proteins space.

The opportunity?

As discussed in my [article](#) last month, New Zealand could position itself as the destination of choice for innovation investment in cellular agriculture. Scaled cellular ag requires significant energy demand. New Zealand can leverage its latent renewable energy potential as an incentive for international investment. This coupled with our Covid-free status, reputation for safety and quality, and resource availability combine to make us an excellent location for this future food opportunity. Next steps: Further national investment in renewable energy, ensure legislation incentivises this investment and reduces regulatory barriers, communicate the opportunity worldwide.

Global price volatility will grow

Supply chain challenges discussed above; worker shortages ([as experienced in the New Zealand horticulture sector](#)), international trade tensions (such as [the current experiences between Australia and China](#)), Pests and diseases (including [African swine fever](#)) and climate change impacts will all see food prices rise and fall to varying degrees, in different sectors and across different parts of the world. The current market value of the global food system is USD\$10 trillion, but the “hidden costs” of this system including impacts on health (e.g. obesity and undernutrition), environment (including greenhouse gas emissions and other pollution) and the economy total USD\$12 trillion. That leaves a USD\$2 trillion shortfall between prices paid and world impact.

The opportunity?

New Zealand can use a combination of our diversification (in export location, production systems and product types) in addition to a focus on pricing strategy (as discussed by Andrew Watene’s recent [article](#)) to incorporate

not only the ‘true price’ of what is being produced, but also the value of the positive societal impacts our nutritious and environmentally friendly products can deliver. This must be embedded in the New Zealand story as we communicate to the world, to articulate the true value represented in our production systems and goods.

If 2021 is anything like 2020, then we need to be prepared for consumers getting used to ‘waves’ of lockdowns, less extreme demand surges, reduction or removal of Government subsidies and perhaps a maturing of letting some industries ‘die’. It will be a telling year and one where efficiencies may separate the successful from the unsuccessful. This year has produced few winners and many losers, but it has also highlighted areas that require accelerated innovation while presenting opportunities to the economy, the community and the planet for doing so. As we close the door on 2020, and start peering through towards 2021, we don’t need to make a single perfect plan for achieving success, but to position ourselves for resilience and agility for the many different futures that next year may bring.

Jack Keeyes

Agri-food research & insights analyst
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Agri-Tech

[Downside of using robots on-farm](#) [14 December, Farmers Weekly]

The use of robots in agriculture could undermine the human relationship to food, nature and farming systems, professor Robert Sparrow and Dr Mark Howard from Monash University say. The researchers acknowledged that robotic tech could help with efficiency and traceability, but the concerns are the highly capital-intensive nature of robotic systems may lead to more intensive and monocultural production units, while subscription and contract conditions may disempower smaller-sized farmers.



Alternative Proteins

[Plant & Bean opens Europe's 'largest' plant-based meat factory](#) [09 December, Food Navigator]

UK-based contract manufacturer Plant & Bean has opened Europe's largest plant-based meat production facility. It is an important milestone for the company's strategic journey to establish a global plant-based manufacturing platform. Located in Boston, Lincolnshire, the 65-acre site will have an initial capacity of 55,000 tonnes and will serve markets across Europe.



Animal Welfare

[New docking rules coming](#) [10 December, Farmers Weekly]

New sheep tail-docking regulations, along with others covering a variety of surgical procedures carried out on a wide range of animals, are set to take effect on May 9 next year. With the aim to improve sheep welfare by clarifying how tail-docking should be done and who can carry it out, the regulations require that a sheep's tail cannot be docked shorter than the distal end of the caudal fold. It also introduced new offences and penalties for breaches of the rules.



Dairy

[Synlait on-farm emissions reduced 5 per cent over the past year](#) [07 December, Stuff]

Synlait's independently audited sustainability report shows the dairy company has reduced on-farm greenhouse gas emissions by 5% in the last year and by 7% since 2018, while off-farm emissions have reduced by 16% as compared to 2018. Synlait is targeting a 35% reduction in its on-farm emissions per kilogram of milk solids by 2028, and a 50% reduction in its off-farm emissions per kilogram of product by 2028.

[Fonterra Australia leaks milk](#) [09 December, Farmers Weekly]

Fonterra Co-operative Group's Australia market share has declined from 20% to 16% of the domestic industry over the past decade. Managing director Rene Dedoncker said it was strategic and not alarming. "Fonterra has decided to focus on a value-add product mix, coupled with an unseasonal wet spring which has hampered peak milk volumes," he said.

[Charges laid against nine raw milk suppliers after 12-month investigation](#) [11 December, Stuff]

The Ministry for Primary Industries laid charges against nine raw milk suppliers for putting consumer health at risk this week, following a 12-month investigation. Unpasteurised milk carries more risk of food poisoning and has been linked to gastrointestinal outbreaks. Coordinated raids were carried out by ministry staff in December 2019, which shut down several sales of raw milk from dairy farms in Manawatū, Horowhenua, Auckland, Hawke's Bay, Nelson and Southland.

[NZ dairy production hits record in 2020, despite lower cow numbers](#) [15 December, The Country]

New Zealand dairy production has increased over the 2019/20 season despite a decline in cow numbers, demonstrating the improved outcome from farmer's focus on cow productivity and environmental efficiency, according to DairyNZ. Statistics from DairyNZ and Livestock Improvement Corp showed 21.1 billion litres of milk containing 1.90 billion kg of milk solids were processed - up 0.6% from the previous season. Average milk production per cow increased from 381kgMS to 385kgMS, while the number of milking cows decreased by 0.5% to 4.921 million.

[Small rise in prices for 2020's final Global Dairy Trade auction](#) [16 December, The Country]

Prices are up in the latest Global Dairy Trade auction to end 2020 on a high note. The index across the board had the third consecutive lift of 1.3% and all products on offer recorded increases. Butter had the biggest increase of 6% to an average of US\$4,221/MT. Whole Milk Powder had a smaller 0.5% rise to an average US\$3,210/MT; while Skim Milk Powder rose by 1.2% to an average US\$2,930/MT.



Farming Systems

[Scientists press to put regenerative agriculture to test](#) [14 December, The Country]

With the recent 'hype' around regenerative agriculture, New Zealand Institute of Agricultural and Horticultural Science (NZIAHS) is calling for project proposals to investigate and explore the area further. NZIAHS said in a statement that it was "concerned about the dearth of sound science underpinning the hype surrounding regenerative agriculture". With the aim to have projects underway by mid-2021, successful proposals will receive support from the Ministry for Primary Industries' Sustainable Food and Fibre Futures co-investment fund.



Food Innovation

[Flavorchem opens taste innovation center](#) [10 December, Food Business News]

Flavorchem Corporation announced the opening of the SRS Center for Taste Innovation at its campus in Downers Grove, the US. The 25,000-square-foot facility features an open marketplace environment equipped with snack stations and a coffee bar, also with specialised R&D centres and more. It is designed to deliver a boutique customer experience that encourages innovation, collaboration and experimentation with trending foods, beverages, flavours and ingredients.



Food Marketing

[How lockdown has changed Kiwis' shopping and eating habits](#) [13 December, Stuff]

The shopping habits Kiwis adopted during lockdown - such as baking at home, shopping online, and increasing sustainability awareness - have continued, Countdown's general manager for merchandise Steve Mills shares. Along with increased sales of frozen food and coffee, an emphasis on wellness has boosted sales of products with low-sugar and low-carb, products that foster gut health, and gluten-free products. Demand for meat has not slowed despite the growth in plant-based food and vegan products.



Food Security

[Anchor backs Christmas appeal](#) [09 December, Rural News]

Fonterra Co-operative Group's Anchor milk is partnering with the charity New Zealand Food Network to fill and distribute Christmas food hampers to families in need. Anchor has donated \$100,000 retail value in dairy products including milk, cream, custard, cheese and butter to kickstart the appeal. Fonterra Co-operative Groups is one of the founding corporate members of the New Zealand Food Network, along with fellow partners including T&G Fresh, Sanitarium, and Griffins who are helping subsidise the cost of the food hampers.



Fisheries

[Commercial fishing vessel offences 10-times higher after Ministry for Primary Industries starts tracking location information](#) [13 December, News Hub]

Newly released data shows commercial fishing vessels offences detected have increased 10-fold since December 31 last year when electronic position and catch reporting was made compulsory through MPI's digital tracking system. The offences include fishing in marine reserves, not having an observer, and submitting catch data too late.

[Navy joins fisheries patrols targeting lawbreakers off Northland's east coast](#) [15 December, The Country]

The Royal New Zealand Navy has stepped in to help the Ministry of Primary Industries with inspections of fishing vessels from the Bay of Islands up to the Three Kings. The patrols are conducted several times a year, with the aim to detect and deter illegal fishing, monitor compliance and educate both recreational and commercial fishers. There are measures in place to ensure the sustainability of fisheries, including accurate and truthful catch reporting for commercial fishers.



Horticulture

[Summerfruit industry thanks New Zealand](#) [10 December, Rural News]

As the anticipated horticultural labour shortage has been quickly filled in by locals, Summerfruit NZ is expressing gratitude to New Zealanders for their response to the call for help with this season's harvest. Summerfruit NZ's chief executive Richard Palmer said the summer fruit regions of Hawke's Bay, Marlborough and Central Otago had received more applications than normally expected. "Keeping people on board for the full cherry crop and then the other summer fruit crops is a major concern," Mr Palmer said.

[Strawberry prices drop 43 per cent as glut hits supermarkets](#) [11 December, Stuff]

A glut of strawberries due to border restrictions and increased export costs is driving the local prices down to an average of \$3.45 for 250-gram punnet in November, down from \$6.04 in October, according to newly released data from Stats NZ. Planting decisions were made distinctly before Covid and they were not picked up fast enough for export due to labour shortage, now the industry "hurts like hell", said Michael Ahern, executive manager of Strawberry Growers New Zealand.

[Māori horticulture sector grows 300 per cent in 12 years to be worth \\$220m](#) [14 December, Stuff]

New research shows Māori horticulture sector has grown 300% in the last 12 years and is set to continue its trajectory. The research was conducted by economic consultancy Berl and commissioned by Te Puni Kōkiri, the Ministry of Primary Industries and Horticulture New Zealand. The report estimates that the gross output of Māori horticulture in New Zealand is \$220 million per year; with an estimated 3800 Māori work directly in horticulture, representing around 28% of the workforce in the sector but they occupy only 4% of leadership roles.



Policy & Regulation

[Freshwater reforms may stifle farm profitability by 83% per year - report](#) [11 December, The Country]

A new report shows the government's freshwater reforms may lead to an 83% decline in farm profitability per year across the Ashburton District. The reforms are aimed at improving the quality of waterways and include new rules for winter grazing, nitrogen pollution and farm intensification. "The regulations will challenge existing farming systems with a number of established farm practices needing to change, and new technology and innovation adoption will be required."



Red Meat

['Increasing concern': China targets Aussie lamb in latest trade attack](#) [09 December, The Country]

The Australian federal government is "increasingly concerned" with China's trade policy which imposed sanctions on a long list of Australian export products, including lamb, barley, timber and beef while introducing tariffs on wine for up to 200%. The bans came after Beijing suggested discovery of covid-19 in frozen meat arrived in China that included Australian steaks. Trade Minister Simon Birmingham said the government had raised the concerns directly with Beijing and left open the option of taking a complaint to the World Trade Organisation.

[Lamb numbers up, despite a challenging year for farmers](#) [15 December, Stuff]

The number of lambs this season is near a record high despite tough droughts and meat processing restrictions due to Covid-19. An average of 130 lambs were born per 100 ewes, compared to an average of 124 over the prior ten years, and it was slightly less than in spring 2019 when the number is 131, according to Beef and Lamb New Zealand. It was expected lamb production would decrease by nearly 5% next year, while strong underlying demand for meat was expected to continue and prices forecast remained at similar levels or slightly above the five-year averages.



Research & Development

[Does cocoa make you smarter? The cognitive benefits of flavanols revealed](#) [11 December, Food Navigator]

New research at the University of Birmingham found cocoa drinks containing high levels of flavanols boosted participants' cognitive performance. Flavanol is a type of plant nutrient that can be found in cocoa, tea, red wine, blueberries, apples, pears, cherries, and peanuts. The researchers attributed the improved cognitive results to increased blood oxygenation after consuming flavanol-enriched drinks, and suggested that flavanols might be particularly beneficial for tasks that are cognitively demanding.

[Bumblebee queens could get help from scientists to increase hive life](#) [14 December, Stuff]

A project is researching whether the use of an artificial pheromone that mimics queen bumblebees could extend the life of commercial bumblebee hives, with the hope that bees can then pollinate crops for longer to give better quality fruit. Lead researcher Gunjan Gera of Gourmet Waiuku said the pheromone could extend the life of a hive to at least 15 to 20 weeks.



International

[JollyGut: This new smart food scanner is 'reinventing the shopping experience'](#) [09 December, Food Navigator]

JollyGut is a smart food scanner launching in the UK market with the aim to simplify and personalise consumer shopping experience both online and in-store. Developed by tech start-up 100Nuts, JollyGut has digitised 70% of UK supermarkets to make nutrition labels, allergies and other information accessible through their App. It can also automatically generate grocery carts for customers based on their preferences and budget. JollyGut CMO Dmitry Dubovik said their long-term ambition is to "reinvent the food shopping experience".

[Meat processors send 'stark warning' on Brexit: Trade volumes 'could drop 50-75%'](#) [09 December, Food Navigator]

The UK's largest meat companies have sent a joint letter to Defra Secretary of State George Eustice signalling their urgent concern about the unpreparedness for Brexit and the issues that will hit trade, such as the current lack of vets still remaining not addressed. The letter also highlighted the 'hidden damage' that the new customs certification process will inflict on animal-based product exporters, regardless of whether the UK secures a deal with the European Union.

[China's Dalian exchange starts simulated trading for live hog futures](#) [10 July, Reuters]

China's Dalian Commodity Exchange started trading simulation for its live hog futures contract on 10 July, with the aim to help establish the rules and regulations for the formal listing as well as to help market participants become familiar with the trading mechanism. China's Securities Regulatory Commission said the country's pig industry was worth nearly 1 trillion yuan (\$143 billion) and the futures contract would help market players manage risk. It would become the world's second after the lean hog futures contract in the United States.

[World Food Program receives Nobel Peace Prize in Covid-proof ceremony](#) [10 December, NBC News]

The 2020 Nobel Peace Prize has been awarded to the World Food Program for "its efforts to combat hunger, for its contribution to bettering conditions for peace in conflict-affected areas and for acting as a driving force in efforts to prevent the use of hunger as a weapon of war and conflict." Usually held in Oslo and Stockholm, the award ceremony was replaced by an online, socially distant event due to Covid-19 restrictions.

[World Food Program receives Nobel Peace Prize in Covid-proof ceremony](#) [10 December, NBC News]

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[FDA Approves First-of-its-Kind Intentional Genomic Alteration in Line of Domestic Pigs for Both Human Food, Potential Therapeutic Uses](#) [14 December, PR Newswire]

The US Food and Drug Administration (FDA) approved an intentional genomic alteration (IGA) in a line of domestic pigs, referred to as GalSafe pigs. The IGA is intended to eliminate alpha-gal sugar on the surface of the pigs' cells in order to reduce the allergic reactions from people with Alpha-gal syndrome when consuming red meat. This is a first-of-its-kind IGA approved by the FDA for the purpose of food consumption and as a source for potential therapeutic uses.

Organisations referenced in this week's Field Notes include

100Nuts
Anchor milk
Australian federal government
Beef and Lamb New Zealand
China's Securities Regulatory Commission
Countdown
DairyNZ
Dalian Commodity Exchange
Defra Secretary of State George Eustice
European Union
Flavorchem Corporation
Fonterra Co-operative Group
Global Dairy Trade auction
Gourmet Waiuku Ltd.
Griffins
Horticulture New Zealand
Livestock Improvement Corp
Ministry for Primary Industries
Monash University
New Zealand Food Network
New Zealand Institute of Agricultural and Horticultural Science
Nobel Peace Prize
Plant & Bean
Royal New Zealand Navy
Sanitarium
Stats NZ
Strawberry Growers New Zealand
Summerfruit NZ
Synlait
T&G Fresh
Te Puni Kōkiri
University of Birmingham
US Food and Drug Administration
World Food Program World Trade Organisation

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